

**Sensory Beliefs about “Light” and “Low Tar” Cigarettes Influence the Belief that
“Light” and “Low Tar” Cigarettes are Less Harmful: Evidence from Canada, the United
States, the United Kingdom, Australia, and China**

by

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Abstract

“Light” and “low tar” cigarettes have been designed by the tobacco industry to allay smokers’ concerns about the health risks of smoking. Few studies have examined which factors lead smokers to believe that “light” cigarettes are less harmful. In particular few studies have addressed whether the belief that “light” cigarettes are smoother predicts the belief that “light” cigarettes are less harmful. There is some evidence that this relation should exist especially given that the belief that “light” cigarettes are smoother has been used to market these cigarettes and there is a natural association between smoother and less harmful. I conducted 7 studies to examine various aspects of the relation between the sensory belief that “light,” “low tar” or your own brand of cigarettes is smoother and the belief that “light,” “low tar” or your own brand of cigarettes is less harmful. Study 1 used Wave 1 to Wave 2 longitudinal data from the International Tobacco Control Four Country Survey (ITC-4) to demonstrate that smokers in Canada, the United States, the United Kingdom, and Australia who believe that “light” cigarettes are smoother at Wave 1 are significantly more likely to believe that “light” cigarettes are less harmful at Wave 2 ($p=0.002$, OR=1.59 95% CI 1.19-2.12). Study 2 used Wave 1 cross-sectional data from the International Tobacco Control China Survey (ITC China) to demonstrate that smokers in China who believe that “light” and/or “low tar” cigarettes are smoother are significantly more likely to believe that “light” and/or “low tar” cigarettes are less harmful ($p<0.001$, OR=62.86 95% CI 47.65-82.91). Study 3 used Wave 1-Wave 2 longitudinal data from the ITC China Survey to demonstrate that smokers in China who believe that “light” and/or “low tar” cigarettes are smoother at Wave 1 are significantly more likely to believe that “light” and/or “low tar” cigarettes are less harmful at Wave 2 ($p=0.02$ OR=1.63 95% CI 1.10-2.43). Study 4 used Wave 3 cross-sectional data from the North

American Student Smoking Survey (NASSS) to demonstrate that adolescent smokers in North America who believe that “light” cigarettes are smoother believe that “light” cigarettes are healthier ($p < 0.001$, OR=3.96 95% CI 2.92-5.36), and in a separate model, that the belief that “light” cigarettes are less harsh also predicts the belief that “light” cigarettes are healthier ($p < 0.001$, OR=5.45 95% CI 4.34-6.84). Study 5 used Wave 3 to Wave 4 longitudinal data from the North American Student Smoking Survey (NASSS) to demonstrate that adolescent smokers in North America who believe that “light” cigarettes are less harsh at Wave 3 predicts the belief that “light” cigarettes are healthier at Wave 4 ($p = 0.02$, OR=1.72 95% CI 1.08-2.72). Studies 6 and 7 examined how the personalized belief that your own brand of cigarettes is smoother related to the belief that your own brand of cigarettes is less harmful. Study 6 used cross-sectional data from Wave 6 of the ITC Four Country Survey in Canada only. Study 6 demonstrated that smokers who believed that their own brand of cigarettes is smoother were significantly more likely to say that their brand of cigarettes is less harmful ($p = 0.004$, OR=2.23 95% CI 1.29-3.86). Study 7 used cross-sectional data from Wave 2 of the ITC China Survey to demonstrate that smokers who believed that their own brand of cigarettes is smoother believed that their brand of cigarettes is less harmful ($p < 0.001$, OR=5.10 95% CI 3.69-7.03). The findings from this dissertation demonstrate the importance of implementing tobacco control policies that address cigarette design and marketing that provide the impression that a cigarette is smoother and therefore less harmful.

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CHAPTER 1: INTRODUCTION

Tobacco is the only legal consumer product that kills its consumers when used as intended. Tobacco kills one third to half of all smokers and the average loss of life for a smoker is 15 years (WHO, 2008). At present, tobacco causes 1 in 10 deaths among adults worldwide which totals more than 5 million people each year (WHO, 2008). If current trends continue, this figure will rise to more than 8 million people every year by 2030 (WHO, 2008).

The fact that smoking causes lung cancer has been publicly accepted since the 1964 Surgeon General's report reviewed the existing evidence accumulated and concluded that cigarette smoking was indeed a cause of lung cancer (U. S. Department of Health, Education, and Welfare, 1964). This was a significant event in the history of cigarette smoking because it drew increased public attention towards the fact that cigarette smoking was dangerous. Consequently, the rate of smoking began to decline and has continued to decline since the publication of the report (U.S. Department of Health and Human Services, 1989).

Beginning in the 1950's (even before the release of the Surgeon General's report) the tobacco industry knew from the epidemiological studies (Hammond & Horn, 1958; Doll & Hill, 1952, 1954; Wynder & Graham, 1950) that smoking was a health risk and they would therefore need to provide health reassurances to smokers so that they would continue to smoke. They began to develop changes in their products and accompanying advertising, promotions, and marketing that would assuage smokers' fears of the health hazards of smoking. Thus, in the 1950's tobacco companies introduced filtered cigarettes which were purported to be less harmful and therefore should decrease smokers' health concerns (Pollay & Dewhirst, 2002). These arguments were bolstered by endorsement claims by authorities in the health field (i.e.

doctors). This strategy was effective, and by 1997 filtered cigarettes held 98% of the market (Federal Trade Commission, 1999).

1.1 Introduction of “Light” and “Low Tar” Cigarettes

In the 1960’s and 1970’s low tar cigarettes were introduced in Western countries. “Low tar” cigarettes were supposed to provide less tar than regular cigarettes. Because tar is unhealthy, the concept was that “lower” tar should mean less harmful. Marketing terms such as “light,” “mild,” “ultra-mild” etc. were also attached to this type of cigarettes mainly because they felt lighter when smoked and because “light” implied less harm (Kozlowski & O’Connor, 2002). Tar ratings were often provided to the consumer either in advertising or on the side of the cigarette package. These tar ratings were measured using the Federal Trade Commission (FTC) machine testing method in the United States or the similar International Organization for Standardization (ISO) tar rating method, which is used in Canada.

1.2 Compensation by Smokers of “Light” Cigarettes

The ISO and FTC tar ratings, however, are not accurate measures of actual tar delivered to the smoker. These tests are inaccurate because tar levels are reduced in “low tar” cigarettes predominantly through the addition of filter vents (O’Connor et al., 2008; Kozlowski, Mehta et al., 1998). These filter vents dilute smoke with air and thus reduce tar, nicotine, and carbon monoxide constituents measured by the testing machines.

However, typically smokers don’t want to reduce their nicotine levels because they are addicted to the nicotine. As described below, smokers therefore alter their smoking behaviour to obtain more nicotine (and at the same time, more tar) (Kozlowski & Sweeney, 1997). The

behaviour of altering smoking behaviour depending on the machine yield tar level of cigarettes in order to maintain the level of nicotine dose is referred to as “compensation” (Benowitz, 2001).

Tobacco industry documents indicate that the tobacco companies knew that if low tar cigarettes were truly low in tar smokers might not get their nicotine fix. Eventually this might make it easier to quit smoking. As a result, the tobacco companies developed a cigarette that: “...can be machine smoked at a certain tar band, but which, in human hands, can exceed this tar banding” (cited in Burns et al., 2001). Thus, these cigarettes have “elasticity of delivery.” These cigarettes make it possible to change the nicotine delivery from the cigarette by allowing the individual to vary the way in which the cigarette is smoked in order to obtain the nicotine that they desire (Burns et al., 2001). The filters on “low tar” cigarettes are designed to facilitate the augmentation of nicotine dosage. These vents are located right where the smoker is liable to place his or her lips or fingers. When these vents are blocked the level of nicotine and tar increases. Smokers can block these vents either consciously or subconsciously. The individual can use his or her, lips, tongue, fingers, or even using tape to cover the vents and therefore increasing the nicotine dose. Smokers can also simply smoke more cigarettes to obtain the desired “hit” (Kozlowski et al., 2001; Maron & Fortmann, 1987; Kozlowski & Sweeney, 1997). One of the key mechanisms by which smokers compensate, however, is to increase puff volumes and frequency of puffs (Hammond et al., 2006). These cigarettes have been deliberately engineered to facilitate smokers’ ability to draw greater puff volumes therefore increasing the nicotine delivery while avoiding an increase in irritation on the throat (Kozlowski & O’Connor, 2002).

In fact, studies conducted both by the tobacco industry, as well as other researchers have demonstrated that smokers who are switched to “lower tar” cigarettes will alter their smoking behaviour (by puffing more frequently, more intensely and for a longer duration) to increase their nicotine delivery (Hammond et al., 2006; Hammond et al., 2005). One such study found that “low” and “medium” tar cigarettes delivered between 2.6 to 1.9 times more tar and 2.5 to 2.2 times more than the levels of tar and nicotine obtained using the FTC testing method (Djordjevic et al., 2000).

1.3 Health Consequences of Smoking “Light” Cigarettes

Given that smokers alter their smoking behaviour and therefore obtain more tar and nicotine than is measured by the FTC and ISO testing methods, it is no surprise that epidemiological evidence also supports the finding that “low tar” or “light” cigarettes are just as harmful (Thun & Burns, 2001). Lung carcinogens and nicotine uptake is no different among “light,” “ultra light,” or “regular” cigarette smokers (Hecht et al., 2005). A prospective cohort study also found no differences in lung cancer mortality rates among “light,” “ultra light,” and “regular” cigarette smokers (Harris et al., 2004).

1.4 Marketing “Light” Cigarettes

Despite research evidence demonstrating that “light” cigarettes are no less harmful, “light” cigarettes have been and continue to be marketed as less harmful and therefore targeted towards health-concerned smokers. This advertising is intended to address smokers’ inner conflicts about continuing to smoke despite the known health risks of smoking. Reassurance is

provided “by claimed low deliveries, by the perception of low deliveries, and by the perception of ‘mildness’” (Pollay & Dewhirst, 2002).

According to advertising researcher Richard Pollay, the tobacco companies use three tactics in marketing “light” cigarettes as less harmful: copy tactics, image tactics, and packaging tactics. Copy tactics refer to the use of language such as “light” and “mild,” with the emphasis given by “extra,” “ultra,” “special,” “select,” “deluxe”; or other language that has health implications, e.g., “soft” (Pollay, 2002). This language assures the smoker that by switching to this brand he or she won’t have to quit in order to preserve his or her health. The second tactic is the use of images. The image tactics used by Canadian tobacco companies, for example, included the use of pictures of health and natural settings such as the wilderness. Many campaigns included sports and themes of independence and identity formation which appeal to a youthful audience (Pollay, 2002). Finally, the tobacco companies use packaging strategies. These strategies focus on the variability of the package. Within a brand family, there will often be a difference in the packaging of the carton in order to distinguish regular from light. For example, the Player’s Regular package is blue with a distinctive blue chevron, whereas the Player’s Light package is lighter in colour. The Player’s Extra Light package is even paler in colour and only part of the chevron is blue (Pollay, 2002). The package design differences are meant to convey to the consumer that the three brand varieties vary in their health hazard. These marketing strategies therefore position cigarettes on a gradient of health risk with the assumption that there are certain brands that are less harmful than others.

1.5 Smokers Beliefs About “Light” Cigarettes

Due to tobacco industry advertising and marketing campaigns, “low tar” (or otherwise known as “light”) cigarettes appeal strongly to health-concerned smokers. Studies have demonstrated that despite evidence that these cigarettes are no less harmful, many smokers continue to believe that “light” cigarettes are less harmful than regular cigarettes. This has been demonstrated across samples in: Canada, the United States, the United Kingdom, and Australia as well as adolescents in the United States (Pollay, 2000; Shiffman et al., 2001a; Borland et al., 2004; Kropp, & Halpern-Felsher, 2004).

Among smokers in both a U.S. and Massachusetts survey, the belief that “light” cigarettes would reduce health risks was listed as a very important reason for why they smoked “light” cigarettes. Thus, reduced health risks were important for 38% of “ultra-light” smokers and 19% of “light” smokers in the national sample as well as 50% of “ultra-light” smokers and 22% of “light” smokers in the Massachusetts sample (Kozlowski, Goldberg et al., 1998). In fact, the “lighter” the purported level of tar an individual smokes, the more likely that individual will believe that “low tar” cigarettes are healthier. Thus, smokers of “ultra-light” cigarettes attribute less risk to “light” cigarettes than those who actually smoke “light” cigarettes. Smokers of “light” cigarettes in turn, attribute less risk to smoking “light” cigarettes than smokers of regular cigarettes. Overall 20.7% of smokers believed that “ultra-lights” were closer in risk to not smoking than to smoking regular cigarettes. Those who smoked “ultra-lights” were more likely to endorse this claim (27.1%) (Shiffman et al., 2001a). As a whole, smokers believed that “light” cigarettes reduced risk by 25% and “ultra-lights” by 33% compared to regular brands. Smokers of “light” cigarettes were more likely to view their

cigarettes as safer, delivering less tar and nicotine, and producing milder sensations than regular smokers.

Research also suggests that “light” cigarettes may prevent smokers from quitting (Gilpin et al., 2002). Kozlowski, Goldberg et al. (1998) asked respondents whether they would quit smoking if it were revealed that one “light” cigarette gave them the same amount of tar and nicotine as one regular cigarette. In the national sample, one-third of “ultra-light” smokers indicated that they would be at least somewhat likely to quit smoking. Among “light” smokers, one in four indicated that they would be at least somewhat likely to quit smoking. In a Massachusetts state sample, one in four “light” and “ultra-light” smokers also agreed that they would be at least somewhat likely to quit smoking. Those who had listed their reasons for smoking “light” cigarettes as a step toward quitting or to reduce tar, nicotine, and risks to health were more likely to say they would quit smoking if they were to learn that “light” cigarettes gave the same amount of tar and nicotine as regular cigarettes. A study by Hyland et al. (2003) found that smokers who had switched from “regular” to “light” cigarettes were no more or less likely to intend to quit smoking. However, given that these individuals are more likely to be health-concerned and switching to “light” cigarettes may lower their health concerns, it is possible that these individuals would be more likely to intend to quit smoking if “light” cigarettes were not available.

1.6 How Marketing Influences the Belief that “Light” Cigarettes are Less Harmful

Tactics used to market “light” cigarettes reinforce the belief that these cigarettes are less harmful. Several experimental studies (Hammond & Parkinson, 2009; Hammond, et al.,

2009) demonstrate the effectiveness of “copy tactics” (i.e., the descriptors on cigarette packages) and “packaging tactics” (i.e., the variability in colours on the package).

In a study of Canadian adult smokers and non-smokers researchers asked respondents to compare two packs of cigarettes and choose which cigarettes they thought would lower health risks. The majority of respondents said that the cigarettes in packages with descriptors such as “light” or “mild” were more likely to lower health risks than packages that had a descriptor of “regular” or “full flavour” (Hammond & Parkinson, 2009).

A further study was conducted using the similar methodology to examine how different package designs and descriptors that would be allowed under bans on “light” descriptors would influence perceptions of harm. In a study of both adult smokers and youth smokers and non-smokers in the United Kingdom (following the UK ban on “light/mild” descriptors), researchers asked respondents to compare two packs of cigarettes and choose which cigarettes would lower health risks or whether the cigarettes were “no different.” Package colouring was an important factor in influencing beliefs about the relative harm of cigarettes. Cigarettes in packages that were light in colour (e.g., a white Marlboro with gold lettering) compared to those that were dark in colour (e.g., red Marlboros) were believed to “lower health risks” in the majority of adult smokers (53%) and in 29% of youth (Hammond et al., 2009). Similarly, in the Hammond & Parkinson (2009) study of adult smokers and non-smokers in Canada, the majority of adult smokers (79%) believed that cigarettes in a light blue package would lower health risks compared to cigarettes in a darker blue package (Hammond & Parkinson, 2009).

Other packaging features that led the majority of respondents to say that the cigarettes would lower health risks were: white symbols vs. grey symbols, product design features (i.e.,

charcoal filters), numbers (e.g., “6” seen as lowering health risks compared to “10”), and descriptors that would still be permitted under a ban on “light” descriptors (e.g., silver vs. full flavour) (Hammond & Parkinson, 2009).

Descriptors such as “smooth” are not covered under bans on “light” cigarette descriptors. However, the majority of respondents in the UK (52% of adult smokers and 54% of the youth sample) and in Canada (80% of adult smokers and non-smokers) indicated that cigarettes in the package with the “smooth” descriptor would lower health risks (Hammond & Parkinson, 2009; Hammond et al., 2009).

Plain packaging (removal of colours and designs) was effective at reducing the belief that one cigarette was more likely to reduce health risks compared to another cigarette. Plain packaging also eliminated differences in perceived attractiveness of one brand cigarette over another (Hammond et al., 2009).

These studies demonstrate that cigarettes in packages with descriptors such as “light” and “mild” are perceived to be less harmful among both smokers and non-smokers. They also demonstrate that bans on these descriptors alone may not be effective at reducing the perception that certain cigarettes are less harmful. Packaging colours, designs, and descriptors such as “silver” would not be covered under a ban on “light/mild” descriptors, however, they also convey that such cigarettes are less harmful. Indeed, research evaluating the impact of bans on “light/mild” descriptors has suggested that these bans are not effective, at least in the short term (Borland et al., 2008). These experimental studies certainly provide reasons why these bans may not be effective.

1.7 The Possible Role of Perceived Smoothness on Beliefs about “Light” Cigarettes

However, I would argue that the elimination of packaging that conveys the impression that “light” cigarettes are less harmful is not sufficient to change beliefs about “light” cigarettes. “Light” cigarettes will continue to feel smoother and less harsh. Therefore the impression that “light” cigarettes are less harmful will continue to be reinforced even without marketing to create this impression.

“Light” or “low tar” cigarettes are highly engineered to be as acceptable as possible to the consumer. The tobacco industry has to produce cigarettes that taste good or smokers won’t smoke them even if they are less harmful (Cummings et al., 2006). One issue with cigarettes is that the chemicals in the cigarettes can cause irritation through stimulation of the olfactory and trigeminal nerves (Carpenter et al., 2007).

The trigeminal nerves detect chemical stimuli in the mouth, nose, and eyes. Their function is to respond to potentially life threatening substances by engaging physiological responses (e.g. bronchodilation, increased epinephrine secretion, etc.) (Silver & Maruniak, 1981). These protective reflexes are designed to minimize exposure of the potentially dangerous stimuli to the lungs and protect the body from further exposure (James & Daly 1969; James & Daly, 1972). I would therefore expect, that there should be an inherent link between the perception that a cigarette is irritating (or harsh) and the belief that that cigarette is harmful because the body responds as though the irritant is a life threatening substance.

The tobacco industry conducted extensive research to understand how nicotine and other chemicals in cigarettes stimulate the trigeminal nerve (Megerdichian et al., 2007). It was understood that there was a perception that irritation was associated with perceptions of health

risk as noted by Kozlowski and O'Connor (2002) a confidential memo to tobacco industry executives in 1956, stated: "decreased irritation is desirable not only from the subjective viewpoint but also as a partial elimination of a potential cancer hazard." Significant tobacco industry money was invested in research and product development aimed at manipulating the sensory characteristics of cigarettes including reducing irritation (Carpenter et al., 2007).

The tobacco industry therefore engineered cigarettes that would be more acceptable because they would be less irritating (smoother). These cigarettes were given terms such as "light" or "low tar". There are several ways in which these cigarettes have been designed to be less irritating (to be smoother). One strategy was to increase filter ventilation. One might wonder how cigarettes can feel smoother if smokers compensate for their nicotine delivery by blocking the filters. Shouldn't blocking the filters increase the feeling of harshness of a cigarette because there is less air to dilute the smoke? Kozlowski and O'Connor (2002) explain that indeed cigarette vents that are more fully blocked do taste harsher. However, few smokers completely block the filter vents. Typically ventilation levels are diminished by 25-50%. More importantly, the main mechanism by which smokers compensate is to use filter vents to increase puff volumes. The tobacco industry has therefore engineered "light" or "low tar" cigarettes so that smokers can increase puff volumes to compensate their nicotine dose while the cigarette continues to taste lighter. A second strategy is to design the cigarette to mask the irritation through chemical additives that feel smooth (such as analgesics, ammonia etc.), tobacco blend, cigarette circumference, and moisture level.

How "light" or "low tar" cigarettes taste is not solely reliant on actual experience, perceptions about "light"/"low tar" cigarettes can also be influenced by the cigarette packaging. In fact, the tobacco industry tested a range of colours and designs to determine

which would be most effective at convincing consumers that the cigarettes in that particular pack were “mild” or lower in strength (Wakefield et al., 2002). Lighter package colours were deemed lighter in taste. Tobacco documents demonstrate that when smokers were given cigarettes in a red package (which is associated with a stronger taste), cigarettes were rated as being stronger than the same cigarettes from a white package (Pollay & Dewhirst, 2002). Additionally, cigarettes in softer packs were perceived as stronger than cigarettes in hard packs (Wakefield et al., 2002). This suggests that perceptions of smoothness may be related not only to the type of cigarette but rather the perception of how these cigarettes taste could also be derived by the package colour, hard vs. soft pack, descriptors, etc. We would therefore anticipate that smokers of “regular” tar cigarettes may also believe that “light” cigarettes are smoother than regular cigarettes whether or not they have smoked these brands.

Package design could therefore reinforce the sensory experience of a “light” or “low tar” cigarette. Although lighter package colours may be rated “lighter” or “milder” overall, if the cigarette were extremely harsh, over time the smokers’ own experience would discount the impression that the cigarette was smoother. It is therefore important for regulations to address both package and cigarette designs that create the impression that a particular cigarette is smoother or less harsh.

1.8 Research Linking the Belief that “Light” Cigarettes are Smoother with the Belief that “Light” Cigarettes are Less Harmful

As Hammond & Parkinson (2009) and Hammond et al. (2009) demonstrate, cigarettes that are labelled with a descriptor such as “smooth” are perceived to be less harmful. A nationally representative study of smokers in each of Canada, the United States, the United

Kingdom, and Australia using data from the International Tobacco Control 4 Country Survey (ITC-4) found that the factor most associated with the belief that “light” cigarettes confer health benefits (they are less harmful, they deliver less tar, they make quitting easier) was the belief that “light” cigarettes are smoother on the throat and chest (Borland et al., 2004).

Addressing perceptions of the smoothness of “light” cigarettes also appears to be the most effective way to change smokers’ perceptions about the relative harm of “light” cigarettes. A study by Shiffman et al. (2001b) tested three different antismoking messages to see which message would be most effective at changing smokers’ perception of “light” cigarettes. The outcome was measured by determining whether smokers would choose “light” and “mild” cigarettes as their prize after hearing the message. The most effective strategy was an ad addressing the sensory experience of “light” cigarettes. Respondents in this condition heard a message acknowledging that “light” cigarettes feel smooth, however, it went on to explain that this sensation was deceptive because these cigarettes are actually no less harmful. Smokers in this condition were less likely to choose “light” cigarettes as their prize (Shiffman et al., 2001b).

Shiffman et al. (2001a) also conducted a study among smokers in the United States measuring which factors contributed to the belief that “light” cigarettes were safer. The belief that “light” and “ultra light” cigarettes delivered less tar and nicotine, and that they were less harsh each independently predicted the belief that “light” cigarettes were safer. The studies by Borland et al. (2004) and Shiffman et al. (2001a) established the link between the belief that “light” cigarettes are smoother and the belief that these cigarettes are less harmful. However, the importance of this link was not highlighted and the implications for future tobacco control policies were not elucidated.

1.9 Exploring the Link between Beliefs about Smoothness and Less Harm:

Implications for Future Tobacco Control Policies

Recent tobacco control policies addressing the issue of “light” cigarettes have focused on banning “light” and “low tar” descriptors in countries such as the United Kingdom (in September 2003), and in China (in April 2004). Article 11 of the Framework Convention on Tobacco Control (FCTC), the world’s first public health treaty, calls for effective measures to:

“ensure that: (a) tobacco product packaging and labelling do not promote a tobacco product any means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, including any term, descriptor, trademark, figurative or any other sign that directly or indirectly creates the false impression that a particular tobacco product is less harmful than other tobacco products. These may include terms such as ‘low tar,’ ‘light,’ ‘ultra-light,’ or ‘mild.’”

(World Health Organization, 2003)

However the regulations recommended in this article do not specifically address the association between the perception that “light” cigarettes are smoother and that they are less harmful. Hammond & Parkinson (2009) found that other descriptors that would be allowed under a “light/low tar” ban (i.e., smoother, silver), low numbers on packages (e.g., 6 vs. 10), white waves, lighter colours, and product designs (e.g., carbon activated filters) conveyed the perception that that brand of cigarettes was smoother (and as mentioned previously that the brand of cigarettes was less harmful). To eliminate the impact of cigarette packaging on the perceptions that a particular brand is smoother or less harmful research suggests that tobacco control policies should introduce plain packaging of all cigarettes (Hammond et al., 2009).

The focus of regulation on “light” and “low tar” cigarettes has therefore been on the package. Yet the introduction of plain packaging alone is not sufficient. The fact remains that “light” or “low tar” cigarettes are designed to taste smoother. Therefore, to truly eliminate the association between the sensory characteristics of “light” cigarettes and the perception that these cigarettes are less harmful, there would also need to be regulations on the cigarette design because this is the source of misperceptions that will remain. Articles 9 and 10 of the FCTC pertain to regulation of the contents of tobacco products. These articles could be used to regulate any aspects of the cigarette design that create the perception that a particular cigarette is smoother and therefore less harmful. These cigarette design features could include (but are not limited to): ventilation, analgesics, flavouring and other additives (e.g., menthol), tobacco blends, cigarette circumference, moisture level, tipping paper, paper porosity, etc.

1.10 Summary

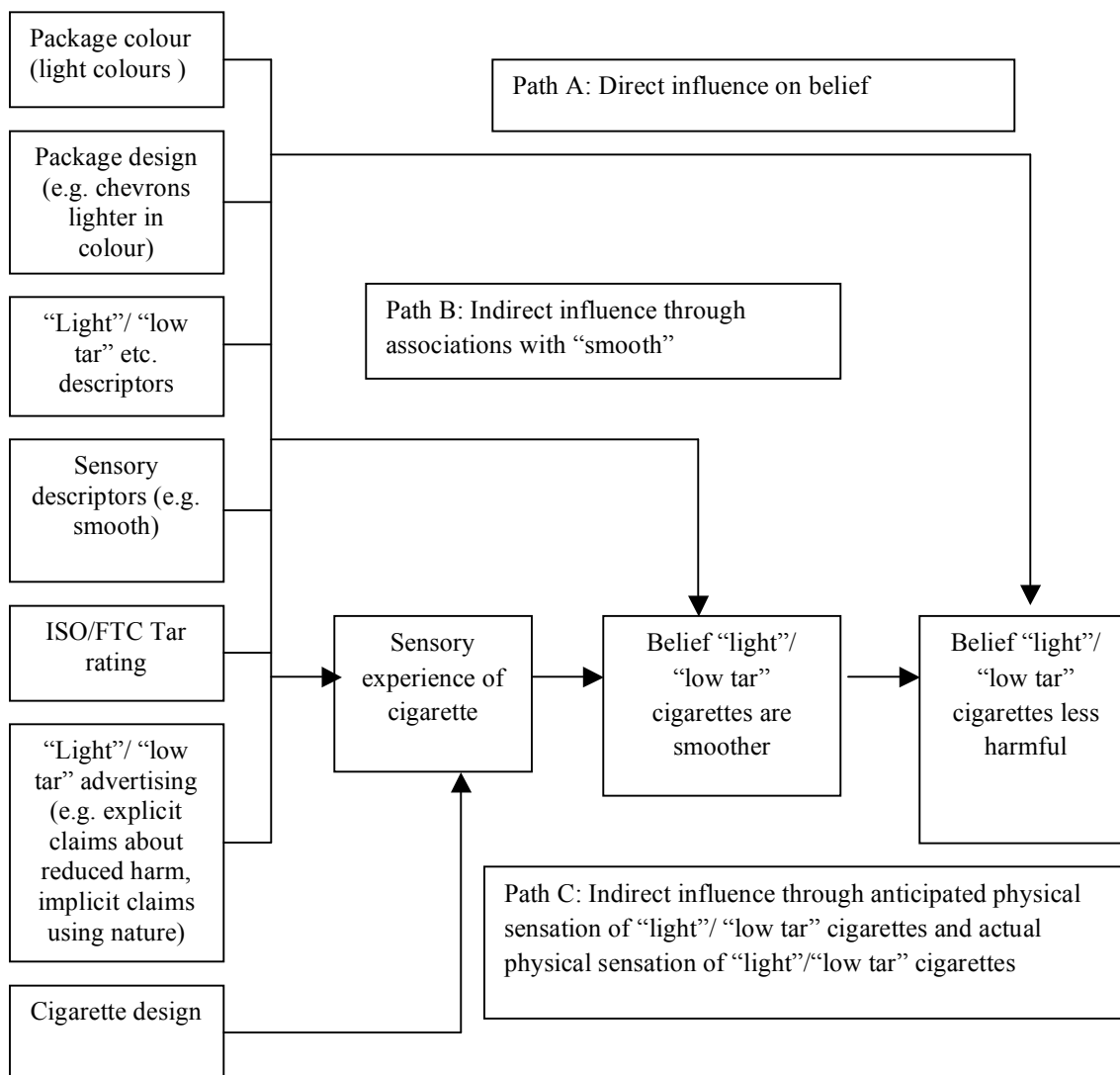
“Light” and “low tar” cigarettes were developed to reassure smokers about their health risks from smoking. The terms “light” and “low tar” will be used in this dissertation interchangeably because these concepts are essentially the same. “Light” is a marketing term used to describe cigarettes and “low tar” typically refers to cigarettes that are purported to be lower in tar according to their ISO measured tar yields. However, typically “light” descriptors are used on “low tar” cigarettes.

Figure 1 presents a model describing how “light” and “low tar” cigarettes are marketed and designed to influence the belief that “light” and “low tar” cigarettes are less harmful. Pollay (2002) characterizes “light” marketing as follows into three categories of tactics: Copy tactics, image tactics, and packaging tactics. However, there are other ways in which “light” or

“low tar” cigarettes specifically influence the belief that “light” cigarettes are less harmful.

Package colour and package design features (as noted by Pollay, 2002) provide the impression of being less harmful (and also as other research demonstrated as being smoother) through the use of lighter colours, lighter chevrons, etc.

Figure 1: How “Light”/ “Low Tar” Cigarettes Influence Belief that “Light”/ “Low Tar” Cigarettes are Less Harmful



Pollay (2002) also discusses the influence of descriptors (which he labels as copy tactics but which I would suggest are also part of packaging tactics) such as “light” or “low tar” in marketing these cigarettes. I would also add descriptors focusing on the sensory experience of these “light” cigarette brands (e.g., smooth) can influence the belief that these cigarette brands are smoother and less harmful. Sensory descriptors are in a separate category because they are typically seen as a product descriptor not covered under existing “light/low tar” descriptor bans.

Although ISO or FTC tar ratings were initially added to cigarette packages as a way of providing information about the relative tar levels of cigarettes, we know that these tar levels are misleading because they suggest that one cigarette brand delivers less tar and is therefore less harmful than another cigarette brand. Tar levels could therefore provide the impression that a particular cigarette brand would be smoother (because it has less tar) and would be less harmful. The tobacco industry used tar levels in many of their advertising campaigns to reinforce this perception of relative harm. I would therefore argue that tar ratings on cigarette packages (or in advertising) are also a marketing strategy.

Finally, Pollay (2002) discusses marketing of “light” cigarettes through the use of image tactics (e.g., pictures of health and natural settings). These images do provide the implicit impression that “light/low tar” cigarettes are less harmful. However, in the past (and currently in China) there have been advertising campaigns that make explicit claims that “light” cigarettes are less harmful or that they are smoother. I have therefore included the influence of both explicit and implicit advertising for “light” cigarettes in this model.

As noted in this model, all of these marketing strategies for “light” cigarettes can have a direct influence on the belief that “light” cigarettes are less harmful (Path A). However, these marketing strategies can also have an indirect influence on the belief that “light” cigarettes are less harmful by providing the impression that these cigarettes are smoother (Path B).

Wakefield et al. (2002) demonstrated that the tobacco industry used lighter package colours and softer packages to provide the impression that a particular cigarette was lighter in taste.

Borland et al. (2004) demonstrated that smokers believe “light” cigarettes are smoother on the throat and chest. Cigarettes with the descriptor “smooth” should also be perceived as smoother. Tar ratings are associated with the number of vents in the cigarette and therefore the amount of air that is possible to enter the cigarette. Therefore tar ratings could also provide smokers with a sense of the relative “smoothness” of a particular cigarette. Finally, (although this has not yet been demonstrated in the literature) it seems likely that advertising demonstrating a flowing river would be associated with a less harsh cigarette. Explicit advertising can also mention the fact that “light” cigarettes are smoother.

These marketing strategies therefore influence the belief that “light” cigarettes are smoother should be associated with the belief that “light” cigarettes are less harmful. There is an inherent evolutionary link between smoother and less harmful that the tobacco industry has capitalized on to promote a “safer” cigarette.

It is important to note that all of these strategies can influence the perception that “light” cigarettes are smoother and that these cigarettes are less harmful without a smoker having to actually try these cigarettes. Simply looking at the package or the advertisement can already create this impression. It is therefore likely that all smokers regardless of brand could believe that “light” cigarettes are smoother and that “light” cigarettes are less harmful.

For smokers of “light” cigarettes, however, the design of these cigarettes can also lead smokers to believe that “light” cigarettes are smoother and therefore less harmful. These design characteristics (e.g., ventilation, analgesics, flavouring and other additives, tobacco blends, cigarette circumference, moisture level, tipping paper, paper porosity, etc.) have been missing in many examinations of the influence of “light” cigarettes on the perception that “light” cigarettes are less harmful. As noted in Figure 1, the physical experience of “light” cigarettes can also reinforce the expectation of the physical experience of “light” cigarettes provided by the package design, descriptors, etc.

The research evidence therefore supports the idea that “light” cigarettes are designed and marketed to create the perception that “light” cigarettes are smoother and that “light” cigarettes are less harmful. Tobacco control policies have attempted to address smokers’ misperceptions that these cigarettes are less harmful by removing “light” and “low tar” descriptors. However, I would hypothesize that removing these descriptors may not be a completely effective strategy because other factors such as: package colours, other descriptors such as smooth, and the sensory experience that these cigarettes are smoother, continue to provide the impression that a particular cigarette is smoother and less harmful.

Discussions about future tobacco control policies focus on implementing plain cigarette packaging. However, I would hypothesize that without addressing the sensory experience that these cigarettes are smoother, smokers may continue to have the impression that the brand they are smoking is less harmful. A few cross-sectional studies have demonstrated the link between the belief that a particular cigarette is smoother and the belief that that cigarette is less harmful (Borland et al., 2004; Shiffman et al., 2001a). Further evidence is needed across multiple countries and age groups both cross-sectionally and longitudinally to demonstrate that the

belief that “light” or “low tar” cigarettes are smoother predicts the belief that these cigarettes are less harmful. This evidence would establish the importance of implementing tobacco control policies regulating both marketing and product characteristics that create the impression that “light” or “low tar” cigarettes are smoother and therefore less harmful.

1.11 Primary Dissertation Goal: Establishing the link between the Belief that “Light”/ “Low Tar” Cigarettes are Smoother and the Belief that “Light”/“Low Tar” Cigarettes are Less Harmful

The goal of my dissertation is therefore to demonstrate that believing that a particular brand of cigarettes is smoother leads to the perception that that cigarette is less harmful. I will demonstrate the connection between the belief that “light”/“low tar” cigarettes are smoother and the belief that “light”/“low tar” cigarettes are less harmful across adult smokers in five countries: Canada, the United States, the United Kingdom, Australia, and China. I will also demonstrate the presence of this relation among North American adolescents.

The first series of studies focuses on establishing that smokers who believe that “light/low tar” cigarettes are smoother also believe that they are less harmful. The association between having the belief that “light” cigarettes are smoother and that “light” cigarettes confer health benefits was established for the ITC Four Country Survey in a previous cross-sectional study by Borland et al. (2004). However, Study 1 of this dissertation focuses longitudinally on the relation between the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harmful.¹ This study demonstrates that the relation between smooth and less harm is not just correlated, but predictive in our four countries surveyed.

In China, there has been no research demonstrating a link between the belief that “light” and/ or “low tar” (LLT)² cigarettes are smoother and the belief that they are less harmful. The majority of the world’s smokers live in China and intentions to quit smoking are significantly lower (Jiang et al., in press; Yang et al., 2001). However, there is great need in China to decrease smoking rates and consequently rates of smoking related death and diseases. China has ratified the WHO Framework Convention on Tobacco Control (FCTC) and has therefore made a commitment to implementing stringent tobacco control policies. The findings of this research are highly relevant to the development of future tobacco control policies in China in accordance with the FCTC. These research findings addressing beliefs about LLT cigarettes will become particularly important as more smokers in China become aware of the health risks of smoking and consider quitting. It is imperative that measures be taken to reduce the likelihood that smokers would switch to LLT cigarettes as a “harm reduction” strategy rather than quitting.

Therefore, Study 2 examines whether the belief that LLT cigarettes are smoother is associated with the belief that LLT cigarettes are less harmful cross-sectionally in China. Study 3 extends the findings from Study 2 with a longitudinal analysis demonstrating that the belief that LLT cigarettes are smoother predicts the belief that LLT cigarettes are less harmful longitudinally in China.

A few studies have demonstrated that adolescents do hold the belief that “light” cigarettes are less harmful (Kropp, & Halpern-Felsher, 2004; CTUMS, 2003). To date, however, no studies among adolescents have demonstrated a link between the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are healthier. Demonstrating that the belief that “light” cigarettes are smoother or that “light” cigarettes are

less harsh predicts the belief that “light” cigarettes are healthier would provide further evidence of the near universality of this phenomenon across age as well as culture. It would also provide even more credibility to the fact that factors affecting the belief that “light” cigarettes are smoother must be addressed in order to change the belief that these cigarettes are less harmful. Study 4 therefore examines whether the belief that “light” cigarettes are smoother or the belief that “light” cigarettes are less harsh is associated with the belief that “light” cigarettes are healthier among adolescent smokers cross-sectionally using data from the North American Student Smoking Survey. Study 5 extends the findings from Study 4 with a longitudinal analysis to determine whether the belief that “light” cigarettes are smoother or the belief that “light” cigarettes are less harsh predicts the belief that “light” cigarettes are healthier among North American adolescents.

These studies are consistent with previous research examining beliefs about the relative harmfulness of cigarettes in that these studies address the general concept of “light” and “low tar” cigarettes being less harmful. However, it is more powerful to determine how a smokers’ perception of their own brand’s smoothness relates to the belief that their own brand is less harmful. It is interesting to know whether regular cigarette smokers, for example, think that “light” cigarettes are less harmful because it may influence a regular cigarette smokers’ future smoking behaviour. Yet the belief that “light” cigarettes are less harmful is much more relevant to a “light” cigarette smoker and therefore has much more potential to influence smoking behaviour. The problem is that by asking about “light” cigarettes generally, we are not asking about what is relevant to the smoker. How does the smokers’ own experience influence their beliefs? In addition, we would anticipate smoking a “light” or “low tar”

cigarette should increase smokers' perceptions that their brand is smoother and therefore less harmful.

Studies 6 and 7 therefore examine whether the belief that your cigarettes are smoother is associated with the belief that your cigarettes are less harmful cross-sectionally. Study 6 examines this relation among smokers in a high-income country, Canada, whereas Study 7 examines this relation among smokers in a developing country, China.

1.12 Secondary Dissertation Goals

A secondary goal of this dissertation is to examine the prevalence of the belief that LLT cigarettes are less harmful across each of the studies. Are smokers in China (where “light” and “low tar” cigarettes are less prevalent) more likely to have false beliefs about “light” cigarettes, compared to countries such as Canada and the United States where the majority of smokers smoke a “light” or “low tar” cigarette? Does the belief that LLT cigarettes are less harmful also differ according to whether you smoke a “light” or “low tar” cigarette compared to a regular or “high tar” cigarette? One might expect that the belief that LLT cigarettes are less harmful should be more relevant to “light” or “low tar” cigarette smokers and may even be a reason to smoke these brands. However, research by Borland et al. (2004) found that whether you were a “light” or regular cigarette smokers did not predict having the belief that “light” cigarettes conferred any health benefits. Indeed, as suggested by the model I have proposed in Figure 1, marketing for “light” cigarettes can reach all smokers (and even non-smokers) and does not necessarily rely on the actual experience of smoking “light” cigarettes to create the perception that “light” cigarettes are less harmful.

Another goal of this dissertation is to establish whether the belief that your own brand of cigarettes are smoother differs according to whether you smoke a “light” or “low tar” cigarette compared to a regular or “high tar” cigarette. As noted in Figure 1, the impression that “light” or “low tar” cigarettes are smoother can come from sources other than the experience of smoking a “light or “low tar” cigarette. However, this impression could be reinforced by the actual smoking experience. I therefore expect that “light” or “low tar” cigarette smokers should be more likely to say that their brand of cigarettes is smoother because “low tar” cigarettes are designed to be smoother. Further, I expect that the belief that your brand is smoother mediates the relation between smoking a “light” or “low tar” cigarette smoker and believing that your brand is less harmful. I anticipate that “light” or “low tar” cigarette smokers are more likely to believe that their brand of cigarettes is less harmful if they believe that their brand of cigarettes is smoother.

As noted in Figure 1, the belief that “light” cigarettes are less harmful is not necessarily influenced solely by the belief that “light” cigarettes are smoother. However, all of the marketing for “light” cigarettes does have the potential to create the impression that these cigarettes are smoother and therefore less harmful. I would therefore expect to find a partial rather than a full mediation between being a “light” or regular cigarette smoker and having the belief that your brand is less harmful depending on whether you believe that your brand of cigarettes are smoother. These studies will, for the first time, link the sensory experience of your brand of cigarettes to the belief that your cigarettes are less harmful. These hypotheses will be tested in Studies 6 and 7.

Finally, “light” and “low tar” descriptors were removed from cigarette packages in China between Waves 1 and 2. Study 3 also therefore evaluates whether the ban on these

descriptors led to a decrease in the belief that LLT cigarettes are less harmful. Previous research examining “light” and “low tar” descriptor bans in the United Kingdom demonstrated that there was an initial decrease in the belief that “light” cigarettes confer health benefits immediately following the ban on these terms (9-15 months post ban) but that the belief that “light” cigarettes are less harmful later rebounded (25-28 months post ban) (Borland et al., 2008). The conclusion was therefore that over this time period, the ban on “light” descriptors did not decrease the prevalence of the belief that “light” cigarettes are less harmful and one potential reason was that smokers continued to believe that “light” cigarettes are smoother and may therefore believe that “light” cigarettes are less harmful. I will therefore test whether there is a decrease in the prevalence of the belief that “light” cigarettes are less harmful following the ban on “light” cigarettes or whether (because it is a longer time period than 15 months between Waves 1 and 2) the belief that “light” cigarettes are less harmful remains consistent between waves.

CHAPTER 2: WHAT FACTORS PREDICT THE BELIEF THAT “LIGHT” CIGARETTES ARE LESS HARMFUL LONGITUDINALLY? EVIDENCE FROM THE INTERNATIONAL TOBACCO CONTROL FOUR COUNTRY SURVEY (ITC-4)

2.0 CHAPTER 2 INTRODUCTION

“Light” cigarettes were introduced in the West and have become very popular, particularly because they appeal to health-concerned smokers (and smokers in the West tend to be more knowledgeable about the health consequences of smoking and therefore more health-concerned). The majority of smokers in Canada (60%) smoke a “light” or “mild” cigarette (CTUMS, 2006). Globally retail sales of “low tar” cigarettes grew 32.1% between 1999 and 2004, and “ultra low tar” cigarettes grew by 46.5% (Euromonitor, 2006). In 2003 the United Kingdom banned “light/mild” descriptors on cigarette packages, in 2005 Australia banned “light/mild” descriptors, and tobacco companies in Canada agreed to voluntarily remove these descriptors beginning in 2007.

The majority of research on beliefs about “light” cigarettes has focused on adult smokers in Western countries, with two studies examining beliefs about “light” cigarettes among youth (Kropp & Halpern-Felsher, 2004; CTUMS, 2003). These studies examined whether smokers had false beliefs about “light” cigarettes (e.g., that they delivered less tar, they that they are less harmful, that they make it easier to quit smoking or are a step toward quitting) (Cohen, 1996; Kozlowski et al, 2000; Kozlowski & Goldberg, 1998). These studies did not examine which other factors were associated with having these beliefs beyond whether you smoked a “light” or regular cigarette.

There were, however, two studies that examined which factors were associated with beliefs about “light” cigarettes cross-sectionally in nationally representative studies. Shiffman

et al. (2001a) examined these beliefs among US smokers in a nationally representative survey. This study found that the belief that “light/ultra light” cigarettes delivered less tar and nicotine, and that “light/ultra light” cigarettes produced lighter sensations were both associated with the belief that these cigarettes were safer. The Shiffman et al. (2001a) study was the first to link the perception that “light” cigarettes produce lighter sensations to the belief that these cigarettes were safer.

A study using data from the International Tobacco Control Four Country Survey (ITC-4) examined beliefs about “light” cigarettes among smokers in a nationally representative sample across: Canada, the United States, the United Kingdom, and Australia (Borland et al., 2004). This cross-sectional study examined which factors were associated with misperceptions about “light” cigarettes. Specifically, the study examined what predicted a combination of the beliefs that “light” cigarettes are less harmful, make it easier to quit smoking, and deliver less tar.

The study demonstrated that the majority of smokers in the U.S., the U.K., and Australia, and 43% of Canadian smokers, believed that “light” cigarettes confer at least some health benefits (i.e., “light” cigarettes: are less harmful, make quitting easier, give less tar). The majority of smokers in each of these countries also believed that “light” cigarettes were smoother on the throat and chest.

The strongest predictor of being a “light” cigarette smoker (other than being from the U.K.) was the perception that “light” cigarettes are smoother on the throat and chest (OR=1.62, 95% CI 1.54-1.70). This demonstrates the potential importance of the sensory experience of “light” cigarettes in choosing to smoke “light” cigarettes. The strongest predictor of the belief

that “light” cigarettes confer health benefits was the perception that “light” cigarettes are smoother on the throat and chest (OR=1.45). Moreover, there was a significant relation between the perception that “light” cigarettes are smoother on the throat and chest and that “light” cigarettes are less harmful regardless of whether the smoker was a current “light” cigarette smoker or not. This study clearly demonstrates that the belief that “light” cigarettes are smoother is associated with the belief that “light” cigarettes are less harmful.

There were several limitations of the Borland et al. (2004) study. First, the study was cross-sectional. A stronger study would be to examine whether the belief that “light” cigarettes are smoother on the throat and chest would predict the belief that “light” cigarettes confer health benefits longitudinally because a cross sectional study does not allow any inferences about the directionality of the findings.

Second, the Borland et al. (2004) paper combined the belief that “light” cigarettes are less harmful with the belief that “light” cigarettes make quitting easier and the belief that “light” cigarettes have less tar. However, it is unclear how the belief that “light” cigarettes are smoother on the throat and chest could influence each of these beliefs separately. As discussed in Chapter 1, there is a potential biological reason why a smoother cigarette would be perceived as less harmful (because the irritation does not stimulate the trigeminal nerve). However, it is less clear why the belief that a “light” cigarette is smoother would make you think that “light” cigarettes make it easier to quit smoking. Such an association would be far less inherent and would most likely be associated with other factors (e.g., a smoker might believe: “light” cigarettes are smoother therefore they have less chemicals and are less addictive therefore they make it easier to quit smoking).

Study 1 of this dissertation therefore extends the research by Borland et al. (2004) by examining how the belief that “light” cigarettes are smoother on the throat and chest predicts beliefs about “light” cigarettes longitudinally using data from both Wave 1 (used by Borland et al, 2004) and Wave 2 of the ITC 4 Country Survey (ITC-4). In addition, this study focuses on what predicts the belief that “light” cigarettes are less harmful because this belief is the factor most likely to be associated with the belief that “light” cigarettes are smoother on the throat and chest.

I examine:

- 1) Whether smokers who believe that “light” cigarettes are smoother on the throat and chest at Wave 1 will be significantly more likely to believe that “light” cigarettes are less harmful at Wave 2. This is the main goal of this dissertation.
- 2) The prevalence of the belief that “light” cigarettes are less harmful across each of the four countries.
- 3) Whether “light” cigarette smokers are more or less likely to believe that “light” cigarettes are less harmful compared to regular cigarette smokers.

2.1 STUDY 1 METHODS

Participants

There were 6762 respondents from the ITC 4 Country (ITC-4) Survey recruited in Wave 1 (conducted between October and December 2002) who were successfully recontacted and participated in the Wave 2 survey (conducted between June and August 2003). Note that

the data collected for Waves 1 and 2 were before the September 2003 UK ban on “light/mild” descriptors. Approximately 75% of respondents were successfully re-contacted between Waves 1 and 2. Response and retention rates for Wave 1 and Wave 2 by country are reported in Table 1.

Table 1 Response Rates and Retention Rates by Country (Waves 1 and 2): ITC 4 Country Survey

	Canada	US	UK	Australia
Total N (Waves 1-2)	1679	1344	1865	1876
Response Rate Wave 1	49.5%	25.6%	37.8%	45.8%
Retention Rate Waves 1-2 (estimated)	69.0%	57.0%	69.0%	74.0%

Participants were adult (18 years of age or older) smokers (defined as having smoked at least 100 cigarettes in their lifetime and currently smoking at least once a month). Only those respondents who smoked daily or weekly were included in this sample (we excluded monthly smokers and quitters n=147) and who provided a response indicating that they either currently smoked a cigarette described as “light,” “mild,” or “low tar,” or did not (those who said they didn’t know or refused to answer were excluded n=92, menthol smokers n=591 were also excluded).³ A total of 5932 respondents were therefore included in the final sample for this study.

Procedures

The International Tobacco Control Four Country (ITC-4) Survey is a prospective nationally representative cohort survey of adult smokers from Canada, the United States, the United Kingdom, and Australia. The ITC survey is designed to evaluate the impact of key national-level tobacco control policies on behavioural and psychosocial predictors of tobacco use, including “light/mild” descriptors. The ITC-4 Country Survey is part of a larger international study conducting surveys on smoking behaviour in 20 countries to date.

The ITC cohort was constructed from probability sampling methods with telephone numbers selected at random from the population of each country, within strata defined by geographic region and community size. Eligible households were identified by asking a household informant the number of adult smokers. The Next Birthday Method was used to select the respondent in households with more than one eligible adult smoker (Binson, Canchola, & Catania, 2000).

The surveys were conducted using Computer Assisted Telephone Interviewing (CATI) software and were completed in 2 calls: a 10-minute recruitment call was followed one-week later by a 40-minute main survey. In order to increase recruitment rates, participants were mailed compensation equivalent to \$10 USD prior to completing the main survey (Singer, van Hoewyk, J., & Maher, 2000). All aspects of the interviewer training and calling protocol were standardized across two survey firms (one in North America, another in Australia for the UK and Australian respondents) and closely supervised by the ITC team. A full description of the ITC methodology, sample profile, and survey rates, including comparisons with national benchmarks, is available at <http://www.itcproject.org>. For further details on the methodology

of the ITC 4 Country study see Appendix A: ITC 4 Country Technical Report, and Thompson et al. (2006).

Weight Construction

The sampling design was chosen to provide a random and representative sample of adult smokers within each geographic stratum. However, as with all surveys, the ITC Four Country Survey sample is subject to some disproportionate selection and under-coverage of population subgroups. Survey weights for each respondent were therefore calculated to adjust for any disproportionate selection of adult smokers in subgroups. For the current sample, we used weights for Wave 1 to Wave 2 longitudinal cohort analyses. These weights were constructed using the Wave 1 weights adjusted for attrition within each geographic strata and re-calibrated to the Wave 1 prevalence numbers. Weights were calibrated based on geographic stratum, sex, age, and ethnicity and adjusted using data from existing nationally representative survey (e.g. the census, Canadian Community Health Survey). For further details about the weight construction for this study see Appendix B: Addendum to Technical Reports: Construction and Use of Weights for the International Tobacco Control Four Country Survey.

Measures

The measures used in this study were not exactly the same as those used by Borland et al. (2004) in the cross-sectional study. Borland et al. included measures designed to evaluate predictors of the belief that “light” cigarettes make quitting easier (therefore he had several questions about quitting behaviour, i.e., quit intentions, quitting self-efficacy, etc.) However, the purpose of this study was to examine the belief that “light” cigarettes are less harmful. There is therefore no reason to assume that quitting behaviour predicts believing that “light”

cigarettes are less harmful. It is possible that the belief that “light” cigarettes are less harmful could predict quitting behaviours (e.g., those who think that “light” cigarettes are less harmful are less likely to intend to quit smoking). How the belief that “light” cigarettes are less harmful influences quitting behaviour is certainly an important issue to examine and will be addressed in future research studies.

Other factors that were initially incorporated into the Borland et al. (2004) model included beliefs about how puffing behaviour and how you hold a cigarette can influence tar delivery and self-exempting beliefs (the belief that smoking is no more risky than lots of other things that people do). Again, these measures were excluded because there is no reason to believe that these measures predict having the belief that “light” cigarettes are less harmful. For the full ITC Four Country Surveys see Appendix C: ITC Four Country Survey Wave 1 and Appendix D: ITC Four Country Survey Wave 2.

Dependent Variable

Belief about “Light” Cigarettes

Respondents were given the instructions: “for the following questions I will refer to all types of light, mild, and low tar cigarettes as light cigarettes.” We then asked: “Please tell me if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements about light cigarettes... light cigarettes are less harmful than regular cigarettes.” Responses were on a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” This variable was recoded so that “strongly agree” and “agree” were coded as 1 and “strongly disagree,” “disagree,” “neither agree nor disagree,” and “don’t know” were coded as 0. If the respondent refused to answer this question it was coded as “system missing”

for this variable as well as any other variable in these studies unless otherwise indicated. In the logistic regression equation, belief about “light” cigarettes at Wave 2 was the dependent variable, however we included prior belief about “light” cigarettes (at Wave 1) as a covariate to determine how the belief that “light” cigarettes are smoother predicted beyond the initial belief that “light” cigarettes are less harmful.

Independent variables

Demographics and Smoking Behaviour

Standard demographic measures included: country (Canada, United States, Australia, United Kingdom), sex (female/male), age (categorized as: 18-24, 25-39, 40-54, 55+), ethnicity (minority group, which was coded as non-white/non-English speaking vs. majority group, which was coded as white/English speaking),³ household income per month (categorized as: low, medium, high, no answer),⁴ education (categorized as: low, medium, high).⁵ Measures of cigarette consumption included: daily/weekly smoking, and the Heaviness of Smoking Index (HSI) which is a combination of time to first cigarette and cigarettes per day (range is from 0-6 where a higher score indicates the respondent is more addicted).^{6,7}

Knowledge of Health Effects of Smoking

Respondents were asked whether smoking causes: heart disease, stroke, impotence, lung cancer in smokers, and lung cancer in non-smokers. Responses were coded so that no and don't know=0 and yes=1. Responses were then summed together to form the measure of health knowledge (ranging from 0 to 5). The Cronbach alpha for this measure was 0.64, which was somewhat low, but was based on only 5 items each of which contributed to the measure.

Self-Reported Use of “Light” Cigarettes

The following question was asked to measure self-reported use of “light” cigarettes: “Some cigarettes are described as ‘light,’ ‘mild’ or ‘low tar.’ Do you currently smoke these types of cigarettes?” (no/yes). Respondents who didn’t know whether they smoked a “light,” “mild,” or “low tar” cigarette or who refused to answer this question were excluded from the analyses. We believed that anyone who was unaware of whether their current brand was a “light” cigarette would also be unaware of whether “light” cigarettes are less harmful because “light” cigarettes are not salient.

Health Concerns about Smoking

To assess concerns about the impact of smoking on their health, respondents were asked: “to what extent, if at all, has smoking damaged your health?” and “to what extent, if at all, has smoking lowered your quality of life?” (1= not at all/don’t know 2=just a little 3=a fair amount 4=a great deal). These items were significantly correlated ($p < 0.001$, $r = 0.36$). These items were averaged together to form an overall measure of concern that smoking had damaged health/quality of life.

To assess concerns about the future impact of smoking on their health, respondents were asked: “how worried are you, if at all, that smoking will damage your health in the future?” and “how worried are you, if at all, that smoking will lower your quality of life in the future?” (1=not at all worried 2=a little worried 3=moderately worried 4=very worried). These items were significantly correlated ($p < 0.001$, $r = 0.67$). These items were averaged together to form an overall measure of concern that smoking would damage their health/quality of life.

We also asked smokers to describe their health with response options from 1=poor to 5= excellent. In addition, smokers were asked whether they considered themselves addicted to cigarettes (yes-very addicted, yes-somewhat addicted, not at all). Response options for respondents who said they didn't know whether they were addicted to cigarettes and who refused to answer were coded as "system missing."

Sensory Beliefs

Respondents were given the instructions: "for the following questions I will refer to all types of light, mild, and low tar cigarettes as light cigarettes." We then asked: "Please tell me if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements about light cigarettes... light cigarettes are smoother on your throat and chest than regular cigarettes." Responses were on a five-point Likert scale ranging from "strongly disagree" to "strongly agree," which was recoded so that "strongly agree" and "agree" were coded as 1 and "strongly disagree," "disagree," "neutral," and "don't know" were coded as 0.

Statistical Analyses

SPSS (Version 17) was used for all statistical analyses. A complex samples logistic regression model was used to test which variables were independently associated with the belief that "light" cigarettes are less harmful. All analyses were conducted on weighted data and all variables mentioned previously were employed as predictors. Analyses were conducted in two steps. The first step was to enter the model for all covariates. The second step was to enter a separate model with all covariates and the addition of the main explanatory variable (the belief that "light" cigarettes are smoother). The odds ratios and p values from the first

model are therefore reported for the covariates and then the odds ratio and p value for the belief that “light” cigarettes are smoother is reported from the second model. The values reported therefore demonstrate the unique effect of the belief that “light” cigarettes are smoother after controlling for the covariates. The reported values for covariates are the unique effect of the covariates without controlling for the explanatory variable (that “light” cigarettes are smoother).

2.2 RESULTS

Tables 2 and 3 present the unweighted and weighted sample characteristics (respectively) across each of the four countries. Smoking status and sex were not significantly different across the countries in the weighted sample. There were significant differences across the other countries across each of the variables. Country was therefore included as a covariate in the regression analyses. The majority of all smokers in all countries except the U.K. said that they currently smoked a cigarette described as “light,” “mild,” or “low tar” (Weighted percentages were: Canada: 61.3%, U.S.: 61.9%, Australia: 64.4%, U.K.: 38.9%).

Table 2 Unweighted Descriptive Characteristics for the 4 Countries Respondents from Wave 1 to Wave 2 (n=5932)

Factor	CAN (n=1574)		US (n=974)		UK (n=1732)		AUS (n=1652)	
	n		n		n		n	
Sex	$\chi^2(df=3)=14.94, p=0.002$							
Male	726	46.1%	419	43.0%	771	44.5%	824	49.9%
Female	848	53.9%	555	57.0%	961	55.5%	828	50.1%
Age	$\chi^2(df=9)=165.92, p<0.001$							
18-24	201	12.8%	105	10.8%	114	6.6%	241	14.6%
25-39	495	31.4%	279	28.6%	502	29.0%	601	36.4%
40-54	569	36.1%	335	34.4%	619	35.7%	575	34.8%
55+	309	19.6%	255	26.2%	497	28.7%	235	14.2%
Ethnicity	$\chi^2(df=3)=90.03, p<0.001$							
Majority	1398	88.8%	832	85.7%	1648	95.3%	1436	87.0%
Minority	176	11.2%	139	14.3%	81	4.7%	214	13.0%
Income	$\chi^2(df=9)=44.20, p<0.001$							
Low	453	28.8%	350	35.9%	516	29.8%	452	27.4%
Medium	557	35.4%	347	35.6%	590	34.1%	558	33.8%
High	448	28.5%	216	22.2%	489	28.2%	537	32.5%
Don't Know	116	7.4%	61	6.3%	137	7.9%	105	6.4%
Education	$\chi^2(df=6)=343.01, p<0.001$							
Low	714	45.4%	397	40.8%	1118	65.1%	1096	66.5%
Medium	650	41.3%	440	45.2%	395	23.0%	339	20.6%
High	208	13.2%	136	14.0%	205	11.9%	214	13.0%
Daily/Weekly Smoking	$\chi^2(df=3)=4.69, p=0.20$							
Daily smoker	1456	92.5%	902	92.6%	1617	93.4%	1510	91.4%
Weekly smoker	118	7.5%	72	7.4%	115	6.6%	142	8.6%
HSI	$\chi^2(df=18)=90.84, p<0.001$							
0	209	13.4%	125	12.9%	210	12.2%	244	14.9%
1	152	9.7%	96	9.9%	195	11.4%	183	11.2%
2	291	18.6%	145	15.0%	313	18.2%	241	14.7%
3	413	26.4%	291	30.1%	575	33.5%	432	26.4%
4	311	19.9%	152	15.7%	268	15.6%	287	17.5%
5	145	9.3%	108	11.2%	120	7.0%	181	11.1%
6	44	2.8%	50	5.2%	35	2.0%	69	4.2%

Table 2 Unweighted Descriptive Characteristics for the ITC 4 Country Respondents from Wave 1 to Wave 2 (n=5932) Continued

Factor	n	CAN (n=1574)	n	US (n=974)	n	UK (n=1732)	n	AUS (n=1652)
Currently smoke light/mild/low tar	$\chi^2(df=3)=279.62, p<0.001$							
Yes	1007	64.0%	613	62.9%	713	41.2%	1094	66.2%
No	567	36.0%	361	37.1%	1019	58.8%	558	33.8%

Table 3 Weighted Descriptive Characteristics for the ITC 4 Country Respondents from Wave 1 to Wave 2 (n=5932)

Factor	n	CAN (n=1574)	n	US (n=974)	n	UK (n=1732)	n	AUS (n=1652)
Sex	$\chi^2(df=1.77)=6.71, p=0.13$							
Male	726	55.5%	419	54.8%	771	51.4%	824	58.1%
Female	848	44.5%	555	45.2%	961	48.6%	828	41.9%
Age	$\chi^2(df=5.15)=26.31, p=0.02$							
18-24	201	14.4%	105	13.6%	114	14.6%	241	16.1%
25-39	495	33.5%	279	33.4%	502	32.3%	601	36.8%
40-54	569	34.7%	335	33.0%	619	28.9%	575	32.2%
55+	309	17.4%	255	19.9%	497	24.2%	235	15.0%
Ethnicity	$\chi^2(df=2.01)=110.07, p<0.001$							
Majority	1398	89.5%	832	83.7%	1648	95.0%	1436	87.1%
Minority	176	10.5%	139	16.3%	81	5.0%	214	12.9%
Income	$\chi^2(df=5.09)=89.69, p<0.001$							
Low	453	27.8%	350	33.8%	516	26.2%	452	24.9%
Medium	557	36.6%	347	38.7%	590	34.7%	558	35.2%
High	448	28.0%	216	20.9%	489	31.0%	537	34.0%
Don't Know	116	7.5%	61	6.5%	137	8.0%	105	6.0%
Education	$\chi^2(df=3.59)=226.52, p<0.001$							
Low	714	46.9%	397	43.0%	1118	62.9%	1096	67.7%
Medium	650	40.7%	440	44.8%	395	25.0%	339	20.7%
High	208	12.4%	136	12.2%	205	12.1%	214	11.6%
Daily/Weekly Smoking	$\chi^2(df=1.78)=2.16, p=0.48$							
Daily smoker	1456	93.3%	902	92.9%	1617	93.8%	1510	91.7%
Weekly smoker	118	6.7%	72	7.1%	115	6.2%	142	8.3%
HSI	$\chi^2(df=10.66)=96.22, p<0.001$							
0	209	11.7%	125	12.7%	210	12.4%	244	13.9%
1	152	9.6%	96	9.4%	195	11.9%	183	10.6%
2	291	18.9%	145	15.8%	313	18.3%	241	14.9%
3	413	27.2%	291	28.7%	575	33.6%	432	26.4%
4	311	19.9%	152	15.6%	268	15.6%	287	18.5%
5	145	9.9%	108	11.6%	120	6.1%	181	11.3%
6	44	2.8%	50	6.1%	35	2.0%	69	4.4%

Table 3 Weighted Descriptive Characteristics for the ITC 4 Country Respondents from Wave 1 to Wave 2 (n=5932) Continued

Factor	CAN (n=1574)		US (n=974)		UK (n=1732)		AUS (n=1652)	
	n		n		n		n	
Currently smoke light/mild/low tar	$\chi^2(df=1.77)=217.18, p<0.001$							
Yes	1007	61.3%	613	61.9%	713	38.9%	1094	64.4%
No	567	38.7%	361	38.1%	1019	61.1%	558	35.6%

Beliefs about “Light” Cigarettes

Table 4 presents the overall beliefs about “light” cigarettes among smokers in our sample across each of the 4 countries. Less than half of all smokers believed that “light cigarettes are less harmful” in each of the 4 countries across both Waves 1 and 2. Canadian smokers were the least likely to have this belief whereas smokers in the U.K. were the most likely to have this belief and this pattern was consistent across both Waves (Wave 1 weighted percentages were: Canada: 14.7%, U.S.: 32.0%, U.K.: 43.4%, Australia: 27.1%; Wave 2 weighted percentages were: Canada: 15.0%, U.S.: 28.8%, U.K.: 40.0%, Australia: 29.1%).

The majority of smokers in all 4 countries believed that “light” cigarettes are smoother on your throat and chest than regular cigarettes at Wave 1. Canadian smokers were the least likely to believe that “light” cigarettes are smoother whereas smokers in the U.S. were the most likely to have this belief (Wave 1 weighted percentages were: Canada: 55.3%, U.S.: 68.6%, U.K.: 63.5%, Australia: 63.6%).

Table 4 Weighted Beliefs about “Light” Cigarettes: ITC 4 Country Wave 1 and Wave 2 (n=5932)

Factor	Overall		CAN		US		UK		AUS	
	n	(n=5932)	n	(n=1574)	n	(n=974)	n	(n=1732)	n	(n=1652)
“Light” cigarettes smoother on throat and chest (Wave 1)	$\chi^2(df=1.74)=44.08, p<0.001$									
Disagree	2267	34.0%	705	44.7%	306	31.4%	660	36.5%	596	36.4%
Agree	3664	66.0%	868	55.3%	668	68.6%	1072	63.5%	1056	63.6%
“Light” cigarettes are less harmful (Wave 1)	$\chi^2(df=1.70)=153.28, p<0.001$									
Disagree	4209	67.4%	1329	85.3%	673	68.0%	993	56.6%	1214	72.9%
Agree	1723	32.6%	245	14.7%	301	32.0%	739	43.4%	438	27.1%
“Light” Cigarettes are less harmful (Wave 2)	$\chi^2(df=1.68)=121.02, p<0.001$									
Disagree	4239	70.0%	1318	85.0%	707	71.2%	1039	60.0%	1175	70.9%
Agree	1679	30.0%	250	15.0%	260	28.8%	692	40.0%	477	29.1%

Factors associated with the belief that “Light” Cigarettes are less harmful

Table 5 presents the percentage of smokers in each of the four countries who believed that “light” cigarettes are less harmful across all variables. Table 5 also presents the results of a logistic regression analysis to determine what factors at Wave 1 were independently associated with the belief that “light” cigarettes are less harmful at Wave 2. Before presenting the main analysis examining the relation between the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harmful, I will describe which other variables predicted the belief that “light” cigarettes are less harmful.

Compared to smokers in the U.K., smokers in: Canada (OR=0.40, 95% CI 0.31-0.51) the United States (OR=0.60, 95% CI 0.47-0.77) and Australia (OR=0.73, 95% CI 0.58-0.91) were significantly less likely to believe that “light” cigarettes are less harmful ($p<0.001$).

Smokers who were more knowledgeable about the health risks of smoking were significantly less likely to believe that “light” cigarettes are less harmful ($p=0.008$, OR=0.87, 95% CI 0.78-0.96). Respondents who smoked a “light,” “mild,” or “low tar” cigarette were significantly more likely to believe that “light” cigarettes are less harmful compared to those whose current brand was a “regular” cigarette ($p=0.001$, OR=1.37, 95% CI 1.18-1.51). Respondents who were more health-concerned that smoking had damaged their health were more likely to say that “light” cigarettes are less harmful ($p=0.02$, OR=1.27, 95% CI 1.05-1.53). Predictably, the belief that “light” cigarettes are less harmful at Wave 1 was a significant predictor of the belief that “light” cigarettes are less harmful at Wave 2 demonstrating that this belief is relatively stable over time ($p<0.001$, OR=7.87, 95% CI 6.16-10.06).

The main goal of this study was to examine whether smokers who believed that “light” cigarettes are smoother on your throat and chest would also believe that “light” cigarettes are less harmful. Indeed, the belief that “light” cigarettes are smoother on the throat and chest than regular cigarettes at Wave 1 was also a significant predictor of the belief that “light” cigarettes are less harmful at Wave 2. This belief was significant even after controlling for the Wave 1 belief that these cigarettes are less harmful (and all other covariates in the model). Smokers at Wave 1 who believed that “light” cigarettes are smoother were significantly more likely to believe that “light” cigarettes are less harmful at Wave 2 ($p=0.002$, $OR=1.59$, $95\% CI 1.19-2.12$).

Table 5 Logistic regression of the belief that “light” cigarettes are less harmful: ITC 4 Country Wave 1 to Wave 2

Factor	n	% Smokers Believing “Light Cigarettes are Less Harmful” ^a	Adjusted Odds Ratio (95% CI)	p value
Demographic				
Country				
Canada	1574	15.0%	0.40 (0.31-0.51)	<0.001
United States	974	28.8%	0.60 (0.47-0.77)	
Australia	1652	29.1%	0.73 (0.58-0.91)	
United Kingdom	1732	40.0%	1.00 (reference)	
Sex				
Male	2740	32.0%	1.26 (0.99-1.61)	0.06
Female	3192	27.6%	1.00 (reference)	
Age (years)				
18-24	661	36.8%	1.00 (reference)	0.75
25-39	1877	28.4%	0.80 (0.52-1.22)	
40-540	2098	27.1%	0.82 (0.53-1.24)	
55+	1296	32.2%	0.85 (0.55-1.34)	
Ethnicity				
Majority	5314	30.3%	1.00 (reference)	0.84
Minority	610	27.8%	0.95 (0.60-1.51)	
Income				
Low	1771	31.4%	1.16 (0.83-1.62)	0.73
Medium	2052	27.8%	1.16 (0.85-1.57)	
High	1690	29.6%	1.00 (reference)	
Don’t Know	419	36.8%	1.25 (0.74-2.10)	
Education				
Low	3325	30.2%	1.00 (0.68-1.47)	0.82
Medium	1824	29.2%	0.92 (0.62-1.37)	
High	763	30.7%	1.00 (reference)	
Smoking Behaviour				
Daily/Weekly				
Daily smoker	5485	30.0%	1.16 (0.68-1.99)	0.59
Weekly smoker	447	29.0%	1.00 (reference)	
HSI				
0	788	27.8%	1.03 (0.94-1.13) ^b	0.55
1	626	32.4%		
2	990	29.9%		
3	1711	32.0%		
4	1018	28.6%		
5	554	28.5%		
6	198	24.2%		
Health Knowledge				
0	187	30.1%	0.87 (0.78-0.96) ^b	0.008
1	212	40.6%		
2	465	31.8%		
3	1118	36.6%		
4	2091	29.2%		
5	1846	23.3%		

Table 5 Logistic regression of the belief that “light” cigarettes are less harmful: ITC 4 Country Wave 1 to Wave 2 Continued

Factor	n	% Smokers Believing “Light Cigarettes are Less Harmful” ^a	Adjusted Odds Ratio (95% CI)	p value
Currently smoke light/mild/low tar				
No	2505	24.5%	1.00 (reference)	0.001
Yes	3427	34.1%	1.37 (1.18-1.51)	
Health Concern Worried Smoking has Damaged Health and Quality of Life (average of 2 items where 1=Not at all and 4=A great deal)				
1	1065	28.3%	1.27 (1.05-1.53) ^b	0.02
1.5	1464	31.0%		
2	1353	31.4%		
2.5	829	23.5%		
3	643	32.1%		
3.5	261	31.9%		
4	207	35.2%		
Worried Smoking will Damage Health and Quality of Life				
1	575	22.8%	1.06 (0.91-1.23) ^b	0.46
1.5	450	30.6%		
2	966	35.3%		
2.5	749	24.8%		
3	1235	34.3%		
3.5	567	25.9%		
4	1366	29.4%		
Describe your health				
1 Poor	272	43.1%	1.07 (0.93-1.23) ^b	0.37
2 Fair	1175	26.8%		
3 Good	2497	27.8%		
4 Very Good	1496	31.9%		
5 Excellent	489	35.2%		
Perceived Addiction				
Very	3385	28.0%	0.84 (0.47-1.52)	0.78
Somewhat	2206	32.0%	0.92 (0.53-1.61)	
Not at all	320	35.9%	1.00 (reference)	
Light cigarettes are less harmful (Wave				
Agree/Strongly Agree	1723	60.6%	7.87 (6.16-10.06)	<0.001
Disagree/Strongly Disagree/Neutral/DK	4209	15.1%	1.00 (reference)	
Light cigarettes are smoother				
Agree/Strongly Agree	3664	37.0%	1.59 (1.19-2.12)	0.002
Disagree/Strongly Disagree/Neutral/DK	2267	16.2%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable. Note: All predictors are collected at Wave 1.

2.3 DISCUSSION

Study 1 is the first longitudinal examination of the factors that predict the belief that “light” cigarettes are less harmful; a further advantage is that Study 1 was conducted in nationally representative samples from four countries. In addition, this is the first study to demonstrate longitudinally that the belief that “light” cigarettes are smoother predicts having the belief that “light” cigarettes are less harmful. There was strong support for the main hypothesis: The belief that “light” cigarettes are smoother was a significant predictor of the belief that “light” cigarettes are less harmful at Wave 2 even after controlling for the Wave 1 belief that “light” cigarettes are less harmful. These findings were significant across smokers in Canada, the United States, the United Kingdom, and Australia.

The majority of smokers in our sample were aware that “light” cigarettes are just as harmful as regular cigarettes. Less than half of smokers across Canada, the United States, the United Kingdom, and Australia believed that “light” cigarettes are less harmful across both Waves 1 and 2 in our study. Canadians were the least likely to say that “light” cigarettes are less harmful. This could be due to the fact that leading up to the time of the study, there was an anti-smoking advertising campaign that explained that “light” cigarettes were just as deadly. In addition, Alan Rock, the Health Minister at the time had issued a notice of intent to remove “light” and “mild” descriptors from cigarette packaging. Thus, the deception of “light/mild” cigarettes had garnered a significant degree of media attention.

Despite a ban on “light” and “mild” descriptors a few months after the Wave 2 survey was conducted, respondents in the United Kingdom were the least likely to be aware that “light” cigarettes are just as harmful. This finding has been discussed at length in a paper by

Borland et al. (2008) examining the impact of the ban over time. However, it is worth noting the potential reason why this ban was not effective as it relates to this dissertation. It is possible that the initial impact of the ban on “light” descriptors may not be evident until a longer period of time after the ban.

However, there are several reasons why a ban on descriptors may not be sufficient (as depicted in the model presented in Figure 1): (1) Other factors that directly influence the belief that “light” cigarettes are less harmful would still exist (e.g., descriptors such as smooth, lighter cigarette packages, tar levels on the side of cigarette packages etc.) (2) Other factors can influence the belief that “light” cigarettes are smoother and therefore less harmful. As noted in Chapter 1, descriptors such as “smooth,” package designs such as lighter colours, etc. can also create the impression that “light” cigarettes are smoother and therefore less harmful. In addition, the experience of smoking a “light” cigarette may also increase the perception that these cigarettes are smoother and therefore less harmful.

Indeed, the majority of smokers in the United Kingdom (63.5%) believed that “light” cigarettes are smoother on the throat and chest. Following the ban on “light” descriptors, cigarettes in lighter colour packages, with “smooth” descriptors, that tasted smoother, etc. continued to be produced. Therefore, the inherent link between smoother and less harmful continued to exist. However, to more accurately test this hypothesis we would have to examine whether there were differences in beliefs about one’s own brand of cigarettes and the relative harmfulness of one’s own brand in the UK compared to the other countries before and after the ban on descriptors. Unfortunately, we did not ask about beliefs about one’s own brand of cigarettes until well after the UK ban on “light” descriptors.

“Light” cigarette smokers were more likely to believe that “light” cigarettes are less harmful. This is consistent with the hypothesis that beliefs about “light” cigarettes would be more relevant to “light” cigarette smokers. In particular, “light” cigarette smokers are not only exposed to the marketing suggesting that their cigarettes are less harmful (as are other smokers), but this perception would be reinforced by the sensory experience and the anticipation of the sensory experience of “light” cigarettes. As demonstrated, the belief that “light” cigarettes are smoother is associated with the belief that “light” cigarettes are less harmful. Therefore, actually smoking a “light” cigarette should be associated with believing that “light” cigarettes are less harmful.

The fact that “light” cigarette smokers were more likely to believe that “light” cigarettes are less harmful is also consistent with research demonstrating that smokers often choose “light” cigarettes because they believe that they are less harmful (Kozlowski et al., 1998). However, this finding is in contrast to Borland et al. (2004) who found that in the cross-sectional study of the ITC-4 Country Survey, there was no difference between “light” and regular smokers predicting the belief that “light” cigarettes confer some health benefits. It is possible that these findings differ because we only examined whether “light” cigarette use was associated with the belief that “light” cigarettes are less harmful (and not the belief that “light” cigarettes have less tar/make quitting easier). It is also possible that differences could be due to the fact that we were predicting the belief that “light” cigarettes are less harmful longitudinally and controlling for the existing belief that “light” cigarettes are less harmful.

We also found that a significant factor predicting the belief that “light” cigarettes are less harmful at Wave 2 was the Wave 1 belief that “light” cigarettes are less harmful. This demonstrates that beliefs about “light” cigarettes remain relatively consistent over time.

Overall, the majority of smokers believed that “light” cigarettes are smoother. This was across smokers of both “light” and “regular” cigarettes. As noted in the model presented in Figure 1, there is an inherent association between smoother and less harm. You do not have to smoke “light” cigarettes to know that something that is called “light” or gives the impression of “light” (through lighter package colours, “smooth” descriptors, etc.) should be smoother and therefore less harmful. We would therefore expect that both “light” and regular cigarette smokers would believe that “light” cigarettes are smoother because of the marketing of “light” cigarettes. This is consistent with research by Hammond and Parkinson (2009), which demonstrated that both adult smokers and non-smokers believed that “light” cigarettes had a smoother taste.

Limitations

Respondents were asked to report whether or not their current brand of cigarettes could be described as “light,” “mild,” or “low tar.” It is possible that smokers thought that they were smoking “light” cigarettes when, in fact, they are not. However, if anything, one would expect that smokers who think they are smoking “light” cigarettes may be just as likely to have false beliefs about “light” cigarettes.

Next Studies

In Study 6, I will address the issue of relying on self-reporting of current brand by coding respondent’s actual brands smoked into “regular” and “light” cigarette categories. I will include Canadian respondents only because my familiarity with Canadian brands will allow me to judge whether a cigarette would be considered “light” or regular.

Study 1 focused on smokers in Western countries where the majority of the research on “light” cigarettes has been conducted. However, the majority of smokers are not from Western countries. The majority of smokers in the world are from China. As smokers in countries such as China become aware of the health risks of smoking, the tobacco industry will need to provide reassurance to these smokers to keep them smoking. The tobacco industry will not need to reinvent new strategies if existing strategies are just as successful. Indeed, evidence suggests that the strategy of marketing “light” cigarettes that has been used in the West is also being used in countries such as China. Chapter 3 will therefore examine whether smokers in China believe that “light” cigarettes are less harmful and which factors predict having these beliefs.

CHAPTER 3: WHAT FACTORS PREDICT THE BELIEFS THAT “LIGHT” AND “LOW TAR” CIGARETTES ARE LESS HARMFUL CROSS-SECTIONALLY AND LONGITUDINALLY? EVIDENCE FROM THE INTERNATIONAL TOBACCO CONTROL CHINA STUDY

3.0 CHAPTER 3 INTRODUCTION

It is estimated that there are 320 million smokers in China (World Health Organization, 2007). Approximately 57% of adult males and 3% of adult females in China are current smokers (World Health Organization, 2008). Currently about 1 million smokers in China will die from tobacco-related illnesses per year (World Health Organization, 2007) but is expected to rise to 2.2 million deaths by 2020 (Murray & Lopez, 1997).

The cigarette market in China is dominated by the government controlled Chinese National Tobacco Corporation (CNTC). Although there are some joint ventures between the CNTC and multinational tobacco companies such as Philip Morris, cigarettes produced by the CNTC currently account for over 90% of China’s cigarette volume sales (Euromonitor, 2006).

Currently in China brands with higher levels of filter ventilation and designs that generate low tar under machine tests are less prevalent than the West. There is a lack of domestic production technology in China and a limited presence of foreign brands in the Chinese market to stimulate interest in alternatives to the traditional higher tar cigarette (Euromonitor, 2006).

In China smokers are less aware and health-concerned about the health risks of smoking compared to other countries (Yang et al., 2001; Yang et al., 1999), although this may soon change. As China implements more stringent tobacco control policies in accordance with the Framework Convention on Tobacco Control (FCTC), it is anticipated that there will be an

increase in public education about the health risks of smoking. China has already started to regulate “light” and “low tar” cigarettes in advance of the FCTC. Regulations in 2004 were introduced to prohibit the sale of cigarettes above 15 mgs/stick, and in 2008 another regulation was introduced that prohibited cigarettes above 13 mgs/stick. With the introduction of more stringent tobacco control policies and educational programs, Chinese smokers are therefore more likely to become health-concerned, and it is anticipated that the market share of lower tar brands will increase in response to these rising concerns particularly if Chinese smokers already believe that these brands are less harmful.

Although to our knowledge there is no current research examining whether smokers in China believe that “light” cigarettes are less harmful, there is reason to believe that smokers in China should believe that these cigarettes are less harmful. The belief that “light” cigarettes are less harmful was initially created in Western countries in the 1960’s and 1970’s as smokers became aware of the health risks of smoking. These cigarettes were marketed using advertising and packaging that suggested that these brands were less harmful alternatives to “full flavor” or “regular” brands (Anderson et al., 2006; Pollay & Dewhirst 2002) and therefore appeal to health-concerned smokers (Borland et al., 2004; Kropp & Halpern-Felsher 2004; Shiffman et al., 2001a; Pollay 2000).

Tobacco industry internal documents make it much easier to examine the tobacco industry activities of multinational tobacco companies historically. We know from these documents that multinational tobacco companies have attempted to market “light” cigarettes in China. Tobacco industry documents demonstrate that Philip Morris launched Marlboro Lights in 1994 in major urban centers in the People’s Republic of China. Philip Morris predicted that

young adult smokers would follow the established trend in Hong Kong towards lower tar and nicotine products (Philip Morris, 1992).

However, as previously mentioned, the presence of multinational tobacco companies in China is expected to be limited and the CNTC is more influential. Although we don't have access to internal documents for the CNTC, it is likely that the CNTC will rely on proven strategies of the multinational tobacco companies to promote their products. Indeed, there is evidence that the CNTC is marketing "light" and "low tar" cigarettes in the same way that these cigarettes have been marketed in the West. Figure 2 is an example of a tobacco ad in China that creates the association between "low tar" cigarettes and "lower risk." Tar yield numbers are also printed on the side of many cigarette packages therefore reinforcing the belief that "low tar" cigarettes are less harmful. Anecdotal evidence, however, suggests that the use of terms such as "light" or "mild" to market "low tar" cigarettes has been less common in Mainland China than in Western countries. These terms do appear on some cigarette packages (e.g., Zhonghua Light) but typically use only the English term without the Chinese equivalent. In fact, China has marketed "light" and "low tar" cigarettes in all the ways specified in the model presented in Figure 1 (i.e., through the use of: light coloured packaging, package designs such as light chevrons, "light" descriptors, sensory descriptors, tar ratings, "light"/"low tar" advertising, and cigarette designs that make the cigarette feel smoother).

We would therefore expect that smokers in China should believe that "light" cigarettes are less harmful. However, to our knowledge no research has examined beliefs about the relative health risks of "light" and "low tar" cigarettes compared to "regular" cigarettes among smokers in China. It will be important to know whether these cigarettes are perceived to be "less harmful" and therefore appeal to health-concerned smokers in China. The ITC China

Survey, conducted in 6 Chinese cities among representative samples of adult smokers included a number of survey questions designed to assess beliefs about “light” and/or “low tar” cigarettes (referred to as “LLT”).

Figure 2: Advertising for “Light” Cigarette Brand in China



孩子眼中的世界——一切都高高在上，他们更需要被平等的注视。
请在与他们交流时，放低你的身姿。

低一点，更多关爱！

低危害卷烟给您更多关爱！

中南海始终致力于卷烟低危害技术和产品的研究与开发。每一款产品都凝结了世界领先的低危害卷烟生产技术，为您的吸烟生活提供健康保证。

卷烟，享受与危害的矛盾体。

中南海 LIGHTS

The Chinese text in this advertising says the following:

A little lower means more loving care! Low-harm cigarettes give you more loving care! Cigarettes contain conflicting elements of pleasure and harm. Zhongnanhai has always focused on research and development of low-harm cigarette technology. Every product fuses the world's most advanced low-harm cigarette technology, offering a guarantee of health for your smoking life.(Advertisement for Zhongnanhai Lights Cigarettes published in the September, 2006 issue of the company's monthly magazine Zhongnanhai World.)

The timing of this study was critical to evaluating beliefs about the relative harm of “light” and low tar” cigarettes because China introduced a ban on these descriptors in January 2006 (however, the tobacco industry was given a grace period until April 2006). The Wave 1 survey started in April 2006, so we were not able to compare changes in smokers’ perceptions about “light” and “low tar” cigarette labelling before and after the regulation took effect even though it is likely that some cigarettes with “light” and “low tar” labels were still on store shelves even after the official policy took effect. However, we were able to examine whether smokers’ beliefs about “light” and “low tar” cigarettes changed from Wave 1 (immediately after the ban on descriptors) to Wave 2 (19-21 months after the grace period for removal of descriptors).

We also examined which factors are independently associated with a belief that LLT cigarettes are less harmful relative to full flavoured cigarettes. We focused on beliefs about the sensory experience of LLT cigarettes as a potentially important factor that could lead smokers to believe that LLT cigarettes as less harmful. As discussed in Chapter 1, there is an inherent link between something being smoother or less harsh and the perception that it is less harmful. This association serves an evolutionary need to differentiate between products that are safe or harmful in order to stay alive. This inherent link should therefore be universal and just as applicable in China.

We therefore tested whether the perception that LLT cigarettes are smoother on the respiratory system than regular cigarettes is associated with the belief that these cigarettes are less harmful in China. In countries where “light” and “low tar” descriptors were removed, there was a slight drop in the belief that “light” cigarettes are less harmful but over time

smokers continued to believe that “light” cigarettes are less harmful particularly if they believed that these cigarettes are smoother on the throat and chest (Borland et al., 2008).

The purpose of Studies 2 and 3 was therefore to extend the research that has been conducted in Western countries to China. Study 2 established which factors are associated with the belief that “light” and/or “low tar” (LLT) cigarettes are less harmful cross-sectionally. From now on, the term “light and/or “low tar” will be referred to as LLT. Study 3 will be similar to Study 1 of this dissertation and will examine which factors predict the belief that LLT cigarettes are less harmful longitudinally. Study 3 also examined beliefs about “light” and “low tar” cigarettes immediately, and over one year after a ban on these descriptors. These studies will examine whether the link between the belief that LLT cigarettes are smoother and that LLT cigarettes are less harmful exists beyond Western countries. If such a link exists, it would provide further evidence that countries need to regulate cigarette and package designs so that LLT cigarettes are not perceived as smoother and therefore less harmful. Given the large cigarette market in China, it will be particularly important to address the factors that create the impression that a particular cigarette brand is smoother and therefore less harmful.

3.1 STUDY 2 INTRODUCTION

The purpose of Study 2 is to examine which factors are associated with the belief that LLT cigarettes are less harmful in China cross-sectionally.

I examine:

1) Whether smokers who believe that LLT cigarettes are smoother on the respiratory system will be significantly more likely to believe that LLT cigarettes are less harmful.

This is the main goal of this dissertation.

2) The prevalence of the belief that LLT cigarettes are less harmful in the Wave 1 China sample.

3) Whether “low tar” cigarette smokers will be more likely to believe that LLT cigarettes are less harmful compared to high tar cigarette smokers.

4) Whether smokers who have ever tried “light” or “low tar” cigarettes will be more likely than those who have not tried these cigarettes to believe that LLT cigarettes are less harmful.

3.2 STUDY 2 METHODS

Participants

Respondents were from Wave 1 of the International Tobacco Control (ITC) China Survey conducted in April to August 2006. The ITC China Survey is a prospective, face-to-face, cohort survey of adult smokers (n=4732), and non-smokers (n=1269), 18 years of age or

older. For the purposes of this study, only smokers (respondents who had smoked more than 100 cigarettes in their life and smoked at least weekly) were included. Respondents who did not know the tar level of their current brand of cigarette (n=1763), who provided an invalid tar level (n=35), or who refused to answer this question or skipped this question (n=66) were excluded from analyses. China had previously banned tar levels exceeding 15 mgs and therefore cigarettes above this level were not valid responses. The total sample size for this study was therefore 2868 respondents.

Respondents were from 6 cities in China: Beijing (n=484), Shenyang (n=460), Shanghai (n=525), Changsha (n=392), Yinchuan (n=548), and Guangzhou (n=459). A 7th city, Zhengzhou, was initially included in the study. Wave 1 and 2 data were examined across both waves. Each of the survey interviews were recorded using portable MP3 recorders. A random sample of the survey data and MP3 recordings of survey interviews were reviewed in each city to ensure consistency in responses between waves. In Zhengzhou there was a significant level of inconsistencies between Wave 1 and Wave 2 (e.g., different genders for the supposedly same respondents). There were few inconsistencies in smokers' responses between waves in the other 6 cities. Zhengzhou was therefore removed from the study.

Table 6 presents the Wave 1 cooperation and response rates in China. The cooperation rates and response rates for Shenyang, Shanghai, and Yinchuan are exact. Unfortunately, the project coordinators at the other three cities did not give clear instructions prior to the fieldwork and, as a result, the interviewers did not keep records on the number of refusals and the number of unsuccessful contacts. The cooperation rates and response rates for these three cities are estimates only, with the missing numbers recalled by the interviewers and the Ju Wei Hui staff members who accompanied the interviewers through the entire course of field work.

The cooperation rates are comparable to those in the ITC Four Country Survey, but the response rates are generally higher than the telephone interview response rates in the ITC Four Country Survey.

Table 6 Response Rates and Cooperation Rates for ITC China Survey Wave 1

City	Shenyang	Shanghai	Yinchuan	Changsha	Beijing	Guangzhou
Cooperation	81.2 ^a	84.2 ^a	90.3 ^a	95.0 ^b	80.0 ^b	80.0 ^b
Response	50.0 ^a	61.3 ^a	39.4 ^a	50.0 ^b	50.0 ^b	50.0 ^b

^aExact rates

^bEstimated rates

Procedure

In each of the six cities, the survey team led by investigators at the Chinese Center for Disease Control and Prevention selected 10 Jie Dao (Street Districts), with the probability of selection proportional to size. Within each of these Jie Dao, two Ju Wei Hui (residential blocks) were selected, again with the probability of selection proportional to size. Within each Ju Wei Hui, the addresses of all households were listed and a sample of 300 addresses were randomly sampled without replacement.

Among these 300 households, basic information was collected on every person over the age of 18 to determine eligibility for the survey. From these 300 households, 50 people were randomly selected to participate in the survey (40 adult smokers and 10 adult non-smokers). The Next Birthday Method was used to select the respondent in households with more than one eligible respondent (Binson, Canchola, & Catania, 2000).

The smoker survey was a 40-minute face-to-face survey conducted in Mandarin by experienced survey interviewers specially trained to conduct the ITC China Survey. Respondents were given a small gift (i.e., soap) worth 10-20 Yuan in appreciation for their participation. This compensation is typical for survey participation in China.

The ITC China Survey was constructed with reference to the ITC surveys being conducted in 14 other countries (at that time), including sections on: smoking behaviour and history of cessation, psychosocial predictors of smoking and quitting (e.g., risk perception, knowledge, beliefs, and attitudes), and measures related to all of the demand reduction policy domains of the FCTC (e.g., labelling, advertising and promotion, price and taxation, smoke-free, and cessation support). The survey protocol was standardized across all cities and supervised by members of the local Centers for Disease Control in each of the 6 cities and was coordinated across the cities by the China National Centers for Disease Control and Prevention by the ITC China team and the ITC Project Data Management Centre at the University of Waterloo. Research ethics approval was obtained from: the University of Waterloo, Roswell Park Cancer Institute, the Cancer Council Victoria, and the Chinese National Center for Disease Control and Prevention.

Weight construction

Sampling weights were constructed separately for male adult smokers, female adult smokers, and adult non-smokers. Wave 1 weights were constructed by taking into account the four levels of sample selection: Jie Dao, Ju Wei Hui, household, and individual. The final Wave 1 weight for a sampled individual was the number of people in the city population and the sampling category represented by that individual. For further details on the methodology

for the ITC Wave 1 China project see Appendix E: ITC China Wave 1 Technical Report, and Wu et al. (2009).

Measures

To tailor our research to be culturally and linguistically appropriate, it was necessary to make several changes to the measures used in the ITC Four Country Survey for incorporation into the ITC China Survey. We asked respondents about both beliefs about “light” cigarettes and beliefs about “low tar” cigarettes. Although the term “light” in the West is typically synonymous with “low tar” (because “light” a marketing term typically applied to “low tar” cigarettes), the term is not as well known in China. The term “light” is not typically found on cigarette packages in China except for in English. The ITC China team was concerned because not all respondents would understand the English on cigarette packages and therefore they may not know that the cigarettes were “light” cigarettes. In contrast, the term “low tar” conveyed explicitly in advertising and on packages as well as through the printed tar ratings on some cigarette packages. By asking about both of these concepts separately, we hoped to capture more respondents who would understand these terms. Combining the two items should therefore increase the power of the measure.

Because respondents may not be aware of whether their cigarette has the term “light” on the package, asking the respondent whether they currently smoked a brand labelled as “light,” “mild,” or “low tar” as we had in the Four Country Survey did not seem reliable enough. We therefore asked respondents to give the tar level for the cigarettes they smoked. We used this measure to capture their current “low tar” status (“low,” “medium” or “high tar”). We had also asked respondents whether they had ever smoked a cigarette labelled as “light,”

“mild” or “low tar.” Because “light” cigarettes are less commonly used in China, we believed that asking about ever use of these cigarettes would capture more respondents because it only requires that they had tried these cigarettes at some point in their lives. We therefore included this question in our analyses. We did not include this question in analyses of the ITC Four Country Survey because we had asked about whether the respondent currently smoked a “light,” “mild,” or “low tar” cigarette and it seemed redundant to ask about ever use of these cigarettes particularly given that these cigarettes account for a major segment of the Western market.

The questions about whether “light” or “low tar” cigarettes are smoother were also worded differently in China than other ITC countries. In the ITC Four Country Survey we asked about whether “light” cigarettes are smoother on the throat and chest than regular cigarettes. We intended to ask the same question in China; however, our Chinese translation team suggested that in order to capture the true meaning of our question, the measure would need to be phrased differently. Therefore, we asked whether “light/low tar” cigarettes feel smoother on the respiratory system than regular cigarettes. In Chinese, saying “the throat and chest” would have had a connotation of being outside the throat and chest whereas we were interested in the sensation within the throat and chest. Our translator therefore suggested that the Chinese translation should be “on the respiratory system” because this term was more descriptive of the internal aspect of the throat and chest.

In the ITC Four Country Survey, we were able to calculate the Heaviness of Smoking Index. Unfortunately in China, there were a significant number of respondents who answered “don’t know” or didn’t answer the question about time to first cigarette (n=188). We therefore decided to use the number of cigarettes per day instead so that we would not lose further

respondents unnecessarily. Because the Heaviness of Smoking Index is composed of time to first cigarette and cigarettes per day, there is a high degree of correspondence between these two measures and we felt that using cigarettes per day would be sufficient. Indeed, these two measures at Wave 1 of the ITC China Survey were highly correlated ($r=0.74$). Finally, there were some slight differences in the wording of questions to make them more understandable in Chinese and some questions (e.g., “smoking has lowered your quality of life” and “smoking will lower your quality of life in the future”) were not included in the ITC China Survey and therefore could not be included in the data analyses. For the ITC China Survey see Appendix F: ITC China Wave 1 Survey.

Dependent Variable

Beliefs about “Light” and/or “Low Tar” Cigarettes

Respondents were asked whether they strongly agree, agree, neither agree or disagree, disagree, strongly disagree or don’t know with two statements: (1) “low tar cigarettes are less harmful than regular cigarettes,” and (2) “light cigarettes are less harmful than regular cigarettes.” Responses were recoded so that “strongly agree” and “agree” were coded as 1 and other responses coded as 0. The “low tar” and “light” beliefs (with dichotomized response options) were moderately correlated ($r=0.53$) and therefore combined so that having one or both of these beliefs was coded 1 and having neither of these beliefs was coded 0. The regression model tested below was also tested with the outcome variable as either “light cigarettes are less harmful” or “low tar cigarettes are less harmful.” The results were very similar to those we obtained when combining beliefs about “light” and “low tar” cigarettes.

Therefore, there was sufficient justification to use the combined belief that “light” cigarettes are less harmful and that “low tar” cigarettes are less harmful.

Independent variables

Demographics and Smoking Behaviour

Standard demographic measures included: sex (male/female), age (categorized as: 18-39, 40-54, 55+),⁸ ethnicity (Han vs. other ethnic groups), household income per month (categorized as: low= less than 1000 Yuan per month, medium=1000 Yuan to 2999 Yuan, high=3000 Yuan and higher, don't know), education (categorized as: low=no education or elementary school, medium=junior high school or high school/technical high school, high=college, university or higher), and city. Measures of cigarette consumption included: daily vs. weekly smoking, and cigarettes smoked per day.⁹

Knowledge of Health Effects of Smoking

Respondents were asked whether smoking causes: stroke, impotence, lung cancer in smokers, emphysema in smokers, stained teeth, premature ageing, lung cancer in nonsmokers, and cardiovascular heart disease. Responses were coded so that no and don't know/cannot say=0 and yes=1. The measure of health knowledge was the sum of all 8 responses. The Cronbach Alpha for this measure was 0.79, suggesting that the scale was reliable.

Self-Reported Use of “Light” and “Low Tar” Cigarettes

We asked respondents whether they had ever tried cigarettes that were described as “light,” “mild,” or “low tar” (response options were: yes, no, or don't know). We also asked respondents to provide the tar level of the brand that they currently smoked most often.

Responses were coded as 1 \leq 10 mgs of tar, 2 \geq 11 mgs of tar to \leq 14 mgs of tar, 3=15 mgs of tar. Respondents who did not know the tar level of their current brand or who provided an invalid tar level were excluded from the analyses. Because China banned cigarettes above 15 mgs of tar, any respondent who reported greater than 15 mgs was classified as having given an invalid response; there were only 35 such respondents (1.2%).

We selected these ranges of tar levels based on what would be possible to allow some variability of brands in China. Typically in Western countries, a “very low tar” brand has been characterized as \leq 7 mgs of tar, a “low tar” brand was characterized as 8-14 mgs of tar, a “medium tar” brand was characterized as 15-21 mgs of tar, and a “high tar” brand was characterized as \geq 22 mgs of tar (Harris et al., 2004). The tar ranges used in our ITC China sample therefore differed from this definition of tar levels in Western countries. For example, what would be considered medium tar or less in Western countries (8-10 mgs would be categorized the medium tar category) was considered low tar in our ITC China sample (low tar was 10 mgs of tar or less). Our highest tar level was 15 mgs, which would be on the low end of a medium tar brand in Western countries. We made this decision because in China, there is a restricted range of tar levels because tar levels above 15 mgs of tar have been banned. Use of “low tar” cigarettes is also very low. Only 5% of the respondents in our sample smoked a cigarette that was 8 mgs of tar or less (n=144). We therefore attempted to define “low,” “medium,” and “high tar” categories similar to those in the West but altering the cut points slightly to allow more respondents across each group. However, the main purpose of the “low tar” categories was to provide relative tar levels in the same way that income is designated as “high” “medium” or “low” across countries. “Low tar” cigarettes will therefore always be lower in tar than “high tar” which is our primary interest.

Health Concerns about Smoking

To assess health concern, respondents were asked: “to what extent, if at all, has smoking damaged your health?” and “how worried are you, if at all, that smoking will damage your health in the future?” (not at all/don’t know, a little, very much). We also asked smokers to rate their health with response options from 1=poor to 5= excellent. In addition, smokers were asked to what extent they considered themselves addicted to cigarettes (not at all, a little, somewhat, a lot). Don’t know responses were coded as ‘system missing.’

Sensory Beliefs

Respondents were asked whether they strongly agree, agree, neither agree or disagree, disagree, strongly disagree or don’t know with two statements: (1) “low tar cigarettes are smoother on your respiratory system than regular cigarettes,” and (2) “light” cigarettes are smoother on your respiratory system than regular cigarettes.” Responses were recoded so that “strongly agree” and “agree” were coded as 1 and other responses coded as 0. These belief items (with dichotomized response options) were reasonably correlated ($r=0.50$) and beliefs about “light” and “low tar” cigarettes were therefore combined so that having one or both of these beliefs was coded as 1 and having neither of these beliefs was coded as 0. This was the same principle used to combine the two measures of the belief that “light” cigarettes are less harmful.

Statistical Analyses

SPSS (version 17) was used for all statistical analyses. A complex samples logistic regression model was used to test which variables were independently associated with the

belief that “light” and/or “low tar” cigarettes are less harmful. All analyses were conducted on weighted data and all variables mentioned previously were employed as covariates.

3.3 STUDY 2 RESULTS

Unweighted and weighted sample characteristics across each of the 6 cities are presented in Tables 7 and 8 (respectively). There were significant differences across each of the cities for each of the variables except daily/weekly smoking status and sex (in the weighted analysis). City was therefore included as a covariate in the regression analyses. Overall, the majority of smokers in our sample (51.7%) said that they had ever tried cigarettes described as “light,” “mild,” or “low tar.”

Having ever tried “light” cigarettes varied by city with respondents in Shanghai and Beijing (the two most Westernized cities) being the most likely to have tried these cigarettes, whereas smokers in Changsha were the least likely (weighted percentages were: Beijing: 57.3%, Shenyang: 47.0%, Shanghai: 58.2%; Changsha: 38.6%, Yinchuan: 51.5%, and Guangzhou: 55.2%).

Few respondents (9.7% overall) reported currently smoking a “low tar” cigarette (10 mgs of tar or less). Again Shanghai and Beijing were the cities where respondents were the most likely to smoke these brands whereas Changsha and Yinchuan were the least likely (weighted percentages were: Beijing: 22.1%, Shenyang: 5.0%, Shanghai: 22.5%, Changsha: 1.5%, Yinchuan: 2.3%, and Guangzhou: 3.9%). Overall, the majority of smokers in our sample smoked a medium tar brand (11-14 mgs of tar) (45.9%) followed by a high tar brand (15 mgs of tar) (44.4%).

Table 7 Unweighted Descriptive Statistics for the ITC China Survey Wave 1 (n=2868)

Factor	n	Overall (n=2868)	n	Beijing (n=484)	n	Shenyang (n=460)	n	Shanghai (n=525)	n	Changsha (n=392)	n	Yinchuan (n=548)	n	Guangzhou (n=459)
Sex	$\chi^2(df=5)=21.28, p<0.001$													
Male	2779	96.9%	466	96.3%	449	97.6%	517	98.5%	367	93.6%	536	97.8%	444	96.7%
Female	89	3.1%	18	3.7%	11	2.4%	8	1.5%	25	6.4%	12	2.2%	15	3.3%
Age (years)	$\chi^2(df=10)=133.15, p<0.001$													
18-39	550	19.2%	83	17.1%	71	15.4%	60	11.4%	103	26.3%	168	30.7%	65	14.2%
40-54	1481	51.6%	248	51.2%	287	62.4%	304	57.9%	192	49.0%	241	44.0%	209	45.5%
55+	837	29.2%	153	31.6%	102	22.2%	161	30.7%	97	24.7%	139	25.4%	185	40.3%
Ethnicity	$\chi^2(df=5)=163.73, p<0.001$													
Han	2711	94.5%	453	93.6%	438	95.2%	517	98.5%	388	99.0%	461	84.1%	454	98.9%
Other	157	5.5%	31	6.4%	22	4.8%	8	1.5%	4	1.0%	87	15.9%	5	1.1%
Income	$\chi^2(df=15)=289.49, p<0.001$													
Low	523	18.3%	43	8.9%	130	28.3%	70	13.4%	104	26.5%	127	23.2%	49	10.7%
Medium	1301	45.4%	197	40.8%	259	56.3%	241	46.0%	154	39.3%	276	50.5%	174	37.9%
High	839	29.3%	200	41.4%	55	12.0%	197	37.6%	113	28.8%	103	18.8%	171	37.3%
Don't Know	202	7.1%	43	8.9%	16	3.5%	16	3.1%	21	5.4%	41	7.5%	65	14.2%
Education	$\chi^2(df=10)=137.07, p<0.001$													
Low	322	11.2%	38	7.9%	20	4.4%	27	5.1%	67	17.1%	70	12.8%	100	21.9%
Medium	1916	66.9%	305	63.0%	333	72.5%	403	76.8%	253	64.5%	349	63.8%	273	59.7%
High	626	21.9%	141	29.1%	106	23.1%	95	18.1%	72	18.4%	128	23.4%	84	18.4%
Daily/Weekly Smoking	$\chi^2(df=5)=6.25, p=0.28$													
Daily smoker	2729	95.2%	464	95.9%	440	95.7%	496	94.5%	367	93.6%	518	94.5%	444	96.7%
Weekly smoker	139	4.8%	20	4.1%	20	4.3%	29	5.5%	25	6.4%	30	5.5%	15	3.3%
Cigarettes per day	$\chi^2(df=15)=68.40, p<0.001$													
1-10	885	31.0%	163	33.9%	136	29.7%	177	33.8%	77	19.7%	212	38.9%	120	26.1%
11-20	1494	52.3%	245	50.9%	246	53.7%	261	49.8%	221	56.7%	259	47.5%	262	57.1%
21-30	254	8.9%	42	8.7%	46	10.0%	47	9.0%	36	9.2%	38	7.0%	45	9.8%
31+	224	7.8%	31	6.4%	30	6.6%	39	7.4%	56	14.4%	36	6.6%	32	7.0%
Ever tried light, low tar	$\chi^2(df=10)=61.57, p<0.001$													
Yes	1508	52.6%	282	58.3%	214	46.5%	312	59.4%	164	41.8%	278	50.7%	258	56.2%
No	1230	42.9%	189	39.0%	225	48.9%	202	38.5%	203	51.8%	229	41.8%	182	39.7%
Don't Know	130	4.5%	13	2.7%	21	4.6%	11	2.1%	25	6.4%	41	7.5%	19	4.1%

Table 7 Unweighted Descriptive Statistics for the ITC China Survey Wave 1 Continued (n=2868)

Factor	n	Overall (n=2868)	n	Beijing (n=484)	n	Shenyang (n=460)	n	Shanghai (n=525)	n	Changsha (n=392)	n	Yinchuan (n=548)	n	Guangzhou (n=459)
Tar Level	$\chi^2(df=10)=800.08, p<0.001$													
15 mg	1297	45.2%	202	41.7%	204	44.3%	310	59.0%	38	9.7%	208	38.0%	335	73.0%
11-14 mg	1289	44.9%	169	34.9%	235	51.1%	103	19.6%	349	89.0%	326	59.5%	107	23.3%
10 mg or less	282	9.8%	113	23.3%	21	4.6%	112	21.3%	5	1.3%	14	2.6%	17	3.7%

Table 8 Weighted Descriptive Characteristics for ITC China Survey Wave 1 (n=2868)

Factor	n	Overall (n=2868)	n	Beijing (n=484)	n	Shenyang (n=460)	n	Shanghai (n=525)	n	Changsha (n=392)	n	Yinchuan (n=548)	n	Guangzhou (n=459)
Sex	$\chi^2(df=3.80)=11.94, p=0.130$													
Male	2779	97.3%	466	96.9%	449	97.4%	517	98.5%	367	95.3%	536	98.2%	444	96.8%
Female	89	2.7%	18	3.1%	11	2.6%	8	1.5%	25	4.7%	12	1.8%	15	3.2%
Age (years)	$\chi^2(df=6.83)=158.09, p<0.001$													
18-39	550	20.5%	83	22.0%	71	15.5%	60	11.8%	103	30.9%	168	31.6%	65	12.6%
40-54	1481	49.2%	248	49.0%	287	59.3%	304	53.9%	192	42.4%	241	45.2%	209	44.3%
55+	837	30.3%	153	29.0%	102	25.1%	161	34.3%	97	26.7%	139	23.2%	185	43.1%
Ethnicity	$\chi^2(df=4.26)=148.20, p<0.001$													
Han	2711	94.8%	453	91.5%	438	96.1%	517	98.7%	388	98.9%	461	85.9%	454	99.0%
Other	157	5.2%	31	8.5%	22	3.9%	8	1.3%	4	1.1%	87	14.1%	5	1.0%
Income	$\chi^2(df=10.56)=333.90, p<0.001$													
Low	523	17.8%	43	6.6%	130	27.2%	70	11.0%	104	29.5%	127	22.0%	49	11.6%
Medium	1301	46.2%	197	42.3%	259	57.9%	241	45.5%	154	39.0%	276	50.0%	174	40.4%
High	839	28.7%	200	40.3%	55	12.1%	197	40.6%	113	27.2%	103	19.3%	171	32.8%
Don't Know	202	7.3%	43	10.8%	16	2.7%	16	2.8%	21	4.3%	41	8.7%	65	15.3%
Education	$\chi^2(df=7.34)=176.46, p<0.001$													
Low	322	11.8%	38	6.3%	20	4.1%	27	5.7%	67	20.9%	70	12.4%	100	23.1%
Medium	1916	67.7%	305	65.0%	333	72.5%	403	75.1%	253	65.4%	349	64.2%	273	62.4%
High	626	20.5%	141	28.7%	106	23.3%	95	19.2%	72	13.8%	128	23.4%	84	14.5%
Daily/Weekly Smoking	$\chi^2(df=3.97)=10.91, p=0.401$													
Daily smoker	2729	95.0%	464	93.9%	440	96.1%	496	94.3%	367	94.2%	518	94.0%	444	97.6%
Weekly smoker	139	5.0%	20	6.1%	20	3.9%	29	5.7%	25	5.8%	30	6.0%	15	2.4%
Cigarettes per day	$\chi^2(df=11.33)=79.77, p<0.001$													
1-10	885	30.7%	163	35.3%	136	31.0%	177	31.1%	77	20.1%	212	39.9%	120	24.6%
11-20	1494	52.3%	245	50.8%	246	52.2%	261	50.5%	221	56.6%	259	47.8%	262	57.4%
21-30	254	8.7%	42	7.5%	46	10.8%	47	8.8%	36	9.1%	38	6.3%	45	10.1%
31+	224	8.2%	31	6.4%	30	6.0%	39	9.5%	56	14.3%	36	6.0%	32	7.9%
Ever tried light, low tar	$\chi^2(df=6.55)=77.75, p=0.003$													
Yes	1508	51.7%	282	57.3%	214	47.0%	312	58.2%	164	38.6%	278	51.5%	258	55.2%
No	1230	44.2%	189	40.7%	225	48.4%	202	40.1%	203	57.0%	229	40.7%	182	40.9%
Don't Know	130	4.1%	13	2.0%	21	4.6%	11	1.7%	25	4.4%	41	7.8%	19	3.9%

Table 8 Weighted Descriptive Characteristics for ITC China Survey Wave 1 Continued (n=2868)

Factor	n	Overall (n=2868)	n	Beijing (n=484)	n	Shenyang (n=460)	n	Shanghai (n=525)	n	Changsha (n=392)	n	Yinchuan (n=548)	n	Guangzhou (n=459)
Tar Level	$\chi^2(df=7.24)=798.13, p<0.001$													
15 mg	1297	44.4%	202	38.6%	204	43.2%	310	58.3%	38	9.1%	208	39.1%	335	71.6%
11-14 mg	1289	45.9%	169	39.2%	235	51.8%	103	19.2%	349	89.4%	326	58.6%	107	24.5%
10 mg or less	282	9.7%	113	22.1%	21	5.0%	112	22.5%	5	1.5%	14	2.3%	17	3.9%

Beliefs about “Light” and/or “Low Tar” Cigarettes

Table 9 presents the overall beliefs about LLT cigarettes among smokers in our sample across each of the 6 cities. The majority of smokers (71.3%) believed that LLT cigarettes are less harmful and that LLT cigarettes are smoother on the respiratory system (73.7%).

Table 9 Weighted beliefs about the relative harm and sensory characteristics of “light” and “low tar” cigarettes and inter-item correlations: ITC China Wave 1

Belief	“Light” Less Harmful	“Low Tar” Less Harmful	“Light” and/or “Low Tar” Less Harmful	“Light” Smoother	“Low Tar” Smoother	“Light” and/or “Low Tar” Smoother	% Agree or Strongly Agree with Belief Item	95% CI for Belief Item
"Light" cigarettes are less harmful than regular cigarettes	1						56.0%	52.3-59.5%
"Low Tar" cigarettes are less harmful than regular cigarettes	0.53	1					63.2%	60.4-65.9%
“Light” and/or “Low Tar” cigarettes are less harmful	0.71	0.84	1				71.3%	68.5-74.0%
"Light" cigarettes are smoother on your respiratory system than regular cigarettes	0.77	0.50	0.62	1			61.5%	58.1-64.7%
“Low Tar” cigarettes are smoother on your respiratory system than regular cigarettes	0.48	0.69	0.61	0.50	1		62.4%	59.7-65.0%
“Light” and/or “Low Tar” cigarettes are smoother on your respiratory system than regular cigarettes	0.61	0.63	0.73	0.76	0.77	1	73.7%	70.8-76.4%

Factors associated with the belief that “Light” and/or “Low Tar” Cigarettes are less harmful

Table 10 presents the results of a logistic regression analysis to determine what factors were independently associated with the belief that LLT cigarettes are less harmful. Smokers in the oldest age category were more likely than smokers in the youngest category to believe that LLT cigarettes are less harmful ($p < 0.001$, OR=1.89, 95% CI 1.43-2.51). Smokers from minority groups were less likely than smokers in the majority group to say that LLT cigarettes are less harmful ($p = 0.04$, OR=0.69, 95% CI 0.49-0.99). Compared to people who had the highest level of education, people who had the lowest level of education were significantly less likely to believe that LLT cigarettes are less harmful ($p < 0.001$, OR=0.69, 95% CI 0.49-0.97). Those who had never tried “light,” “mild,” or “low tar” cigarettes were significantly less likely than those who had ever tried these cigarettes to believe that LLT cigarettes are less harmful ($p = 0.02$, OR=0.72, 95% CI 0.57-0.91). Smokers who believed that smoking would damage their health in the future were also significantly more likely ($p = 0.004$) to believe that LLT cigarettes are less harmful (“a little concerned” vs. “not at all concerned/don’t know”): OR=1.52, 95% CI 1.18-1.95; “very concerned” vs. “not at all concerned/don’t know”): OR=1.92, 95% CI 1.23-3.01).

The main goal of this study was to determine whether smokers who believe that LLT cigarettes are smoother on the respiratory system would be significantly more likely to believe that LLT cigarettes are less harmful. This hypothesis was strongly supported. By far, the strongest predictor of the misconception that LLT cigarettes are less harmful was the belief about the smoothness of LLT cigarettes. Smokers who believed that LLT cigarettes are smoother on the respiratory system were much more likely to believe that LLT cigarettes are less harmful ($p < 0.001$, OR=62.86, 95% CI 47.65-82.91). Of the smokers who believed that

LLT cigarettes are smoother on the respiratory system, 91.4% said that these cigarettes are less harmful than regular cigarettes. In sharp contrast, among those who did NOT believe that LLT cigarettes are smoother on the respiratory system, only 14.9% believed that these cigarettes are less harmful.

Table 10 Logistic regression of the belief that “light”/“low tar” cigarettes are less harmful: ITC China Wave 1

Factor	n	% Smokers Believing LLT Cigarettes are Less Harmful	Adjusted Odds Ratio (95% CI)	p value
Demographic				
Sex				
Male	2779	71.5%	1.10 (0.68-1.80)	0.70
Female	89	66.0%	1.00 (reference)	
Age (years)				
18-39	550	69.2%	1.00 (reference)	<0.001
40-54	1481	70.0%	1.11 (0.85-1.44)	
55+	837	74.8%	1.89 (1.43-2.51)	
Ethnicity				
Other	157	64.1%	0.69 (0.49-0.99)	0.04
Han	2711	71.7%	1.00 (reference)	
Income				
Don't Know	202	61.8%	0.76 (0.49-1.16)	0.36
Low	523	71.3%	1.16 (0.85-1.56)	
Medium	1301	72.7%	1.02 (0.82-1.28)	
High	839	71.5%	1.00 (reference)	
Education				
Low	322	61.8%	0.69 (0.49-0.97)	<0.001
Medium	1916	73.4%	1.29 (0.99-1.69)	
High	626	70.6%	1.00 (reference)	
City				
Beijing	484	73.8%	0.88 (0.48-1.60)	0.25
Shenyang	460	77.9%	1.13 (0.68-1.88)	
Shanghai	525	69.0%	0.71 (0.47-1.09)	
Changsha	392	69.1%	0.72 (0.50-1.03)	
Yinchuan	548	67.9%	0.79 (0.56-1.11)	
Guangzhou	459	71.0%	1.00 (reference)	
Smoking Behaviour				
Daily/Weekly				
Daily smoker	2729	71.1%	0.67 (0.42-1.07)	0.09
Weekly smoker	139	74.5%	1.00 (reference)	
Cigarettes per day				
0-10	885	72.1%	1.01 (1.00-1.02) ^b	0.10
11-20	1494	71.7%		
21-30	254	64.5%		
31+	224	74.3%		
Health Knowledge				
0	203	57.2%	1.03 (0.97-1.09) ^b	0.37
1	339	56.4%		
2	299	74.0%		
3	377	72.4%		
4	404	78.5%		
5	472	76.8%		
6	365	75.1%		
7	229	72.4%		
8	163	70.3%		

Table 10 Logistic regression of the belief that “light”/“low tar” cigarettes are less harmful: ITC China Wave 1 Continued

Factor	n	% Smokers Believing LLT Cigarettes are Less Harmful ^a	Adjusted Odds Ratio (95% CI)	p value
Ever tried light, low tar				
No	1230	68.4%	0.72 (0.57-0.91)	0.02
Don't Know	130	62.1%	0.75 (0.43-1.31)	
Yes	1508	74.6%	1.00 (reference)	
Tar Level				
15 mg	1297	69.5%	0.74 (0.55-1.00)	0.12
11-14 mg	1289	72.0%	0.86 (0.63-1.16)	
10 mg or less	282	76.5%	1.00 (reference)	
Health Concern				
Worried Smoking has Damaged Health				0.23
Very	449	77.3%	1.20 (0.81-1.78)	
A little	1230	75.0%	1.30 (0.96-1.77)	
Not at all/Don't know	1186	65.1%	1.00 (reference)	
Worried Smoking will Damage Health				0.004
Very	519	79.9%	1.92 (1.23-3.01)	
A little	1225	74.3%	1.52 (1.18-1.95)	
Not at all/Don't know	1122	63.8%	1.00 (reference)	
Describe your health				0.60
1 Poor	73	64.6%	1.04 (0.90-1.20) ^b	
2	170	67.7%		
3	1370	72.9%		
4	861	71.3%		
5 Excellent	389	68.8%		
Perceived Addiction				0.20
A little	1313	73.5%	1.23 (0.83-1.83)	
Somewhat	879	71.9%	1.03 (0.74-1.44)	
A lot	307	66.4%	0.79 (0.48-1.30)	
Not at all	333	68.8%	1.00 (reference)	
Light/Low Tar smoother				
Agree/Strongly Agree	2023	91.4%	62.86 (47.65-82.91)	<0.001
Disagree/Strongly Disagree/Neutral/DK	843	14.9%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable

3.4 STUDY 2 DISCUSSION

This was the first study to examine beliefs about “light” and “low tar” cigarettes among smokers in China. The study demonstrated that a vast majority of smokers in China believe that “light” cigarettes (56.0%) and “low tar” cigarettes (63.2%) are less harmful and overall nearly 2/3 of respondents had one or both of these beliefs (71.3%). Respondents who had ever tried “light” or “low tar” cigarettes were more likely to believe that LLT cigarettes are less harmful. The belief that LLT cigarettes are less harmful did not vary by the tar level of the current cigarette brand smoked in China.

It is not surprising that the majority of smokers in China would believe that LLT cigarettes are less harmful for several reasons. First, we know that LLT cigarettes are marketed in the same ways in China that they are in other countries and that these marketing strategies can create the impression that LLT cigarettes are less harmful.

Second, just as in the other countries studied, the belief that LLT cigarettes are smoother was associated with the belief that LLT cigarettes are less harmful. This is based on the association between something being smoother and being less harmful and should therefore exist regardless of culture. As noted in the model in Figure 1, the perception that LLT cigarettes are smoother can derive from the sensory experience of smoking these cigarettes or from package designs, descriptors, advertising, and tar levels for these cigarettes. Because smokers in China are just as likely to believe that these cigarettes are smoother as in other countries, we would also therefore expect Chinese smokers to believe that LLT cigarettes are less harmful.

Third, there have been no substantial campaigns in China to address the myth that LLT cigarettes are less harmful. Yet we know that such campaigns can decrease beliefs that these

cigarettes are less harmful. An example is the media campaign used in the UK coinciding with a ban on “light” descriptors. This campaign message was a “nice name doesn’t make something less deadly” and the accompanying photo included animals such as a snake with the name Rosie. This ad was found to be effective at changing attitudes towards “light” cigarettes in the short term (Borland et al., 2008). China should introduce advertising addressing the myths about LLT cigarettes to counteract the fact that so many smokers in China believe that these cigarettes are less harmful.

Fourth, Chinese smokers may be even more likely to believe that LLT cigarettes are less harmful compared to other countries because in addition to having many of the same marketing strategies for LLT cigarettes, marketing for LLT cigarettes in China actually goes further by allowing advertising that actively promotes the perception that LLT cigarettes are less harmful. For example, one Chinese brand, “Zhongnanhai Light” cigarettes, has ads that claim “Every product fuses the world’s most advanced low-harm cigarette technology, offering a guarantee of health for your smoking life.” Another ad claims: “A little lower is healthier! Low-harm tobacco, more technological components, greater loving care for your body!” (Figure 2). The government has allowed tobacco companies to make explicit health claims for these cigarettes, even after the ban on “light” descriptors. We do not know the prevalence of these ads or how frequent smokers in China are exposed to these ads. However, it is likely that having explicit advertising like this that is sanctioned by the government is another way that smokers could come to believe that these cigarettes are less harmful.

“Low tar” cigarette smokers were no more or less likely to believe that LLT cigarettes are less harmful. Although the overall difference is not significant, the overall pattern suggests that there were more “low tar” (10 mgs of tar or less) cigarette smokers who believed that LLT

cigarettes are less harmful compared to “high tar” (15 mgs of tar) cigarette smokers. Also whether or not the respondent had ever tried smoking a LLT cigarette was predictive of having the belief that LLT cigarettes are less harmful. It is possible that we didn’t find any significant differences in beliefs about LLT cigarettes among “low” and “high” tar cigarette smokers because the prevalence of the belief that LLT cigarettes are less harmful is so high among all smokers in China. As noted in the model presented in Figure 1, marketing for LLT cigarettes conveys a perception that LLT cigarettes are less harmful without having to actually experience LLT cigarettes. Although we would expect that the sensation of smoking LLT cigarettes would reinforce the belief that LLT cigarettes are smoother and therefore less harmful for “low tar” cigarette smokers, It is also likely that we did not find any differences because there were so few current “low tar” cigarette smokers and therefore fewer individuals who had actually experienced “low tar” cigarette smokers. There were, however, a majority of smokers who believed that LLT cigarettes were smoother and less harmful. This suggests that the marketing for LLT cigarettes is strong among all smokers.

The fact that LLT cigarettes are seen as less harmful regardless of tar level smoked cross-sectionally in China is also consistent with the cross-sectional data from the ITC 4 Country Survey demonstrating that current “light” cigarette use did not predict having the belief that “light” cigarettes confer health benefits (Borland et al., 2004). It remains to be seen whether current tar level would predict the belief that LLT cigarettes are less harmful longitudinally and therefore consistently with the findings from Study 1 in this dissertation. This analysis will provide more insight into whether there are differences between China and Canada, the United States, the United Kingdom, and Australia in how smoking a LLT cigarette relates to the belief that LLT cigarettes are less harmful.

The majority of smokers believed that “light” (61.5%) and “low tar” cigarettes (62.4%) are smoother on the respiratory system and overall nearly 3/4 of respondents had one or both of these beliefs (73.7%). This was across smokers of “low,” “medium,” and “high tar” cigarettes. This is consistent with findings in Study 1 of the ITC Four Country Survey and previous research by Hammond & Parkinson (2009), which demonstrated that smokers and even non-smokers believed that “light” cigarettes had a smoother taste. This finding also demonstrates that both “light” and “low tar” concepts are perceived as being smoother on the respiratory system. This is also consistent with what we would expect given our model of how LLT cigarettes are marketed. The perception that LLT cigarettes are smoother can be derived from the package design, descriptors, tar level, etc. and should therefore be just as high among smokers of higher tar brands.

The main goal of this dissertation was to determine whether the belief that LLT cigarettes are smoother would be associated with the belief that LLT cigarettes are less harmful. As hypothesized, I found that by far, the factor most strongly associated with the belief that LLT cigarettes are less harmful was the belief that LLT cigarettes are smoother on the respiratory system.

The majority of smokers in China (51.7%) reported that they had tried cigarettes labelled as “light,” “mild,” or “low tar” suggesting that there is an interest in LLT cigarettes. Despite this interest, regular use of LLT cigarettes tends to be more common in Western countries. It is therefore not surprising that reported ever use of “light” and “low tar” cigarettes was higher in more Westernized cities (i.e., Shanghai, Beijing) where smokers may be more likely to follow Western trends. Tobacco industry documents also suggest that Western based tobacco corporations planned to launch lights first in major urban centers

(Philip Morris, 1992). Smokers in these major centers would therefore have more opportunities to try these brands. However, as mentioned previously, the potential impact of the multinational tobacco industry is minor compared to the CNTC because of its limited access to China. As these LLT cigarette brands become more popular in Western cities, it is likely that the use of LLT cigarettes will spread. Philip Morris predicted that young adult smokers especially would follow the Hong Kong trend towards lower tar and nicotine products (Philip Morris, 1992). Indeed, these findings demonstrate an interest in LLT cigarettes (with the majority of smokers having ever tried LLT cigarettes) and we can expect that the use of LLT cigarettes will increase because of more availability and awareness of these brands, and as smokers become more health-concerned about smoking.

There was an association between the concern that smoking would damage your health in the future and the belief that LLT cigarettes are less harmful. This association suggests that health-concerned individuals might be more likely to have these beliefs because they provide reassurances that these cigarettes are less harmful and therefore reduce any possible cognitive dissonance associated with continuing to smoke despite concerns that smoking may damage your health. This finding therefore supports the idea that “light” and “low tar” cigarettes could become more popular as a harm reduction strategy just as has happened in Western countries if regulations to remove these associations are not implemented. This study also demonstrates that the factor most closely tied with the belief that LLT cigarettes are less harmful is the belief that LLT cigarettes are smoother. Therefore, to remove the belief that these cigarettes are less harmful, regulations to remove the perception that a particular cigarette is smoother need to be implemented.

3.5 STUDY 3 INTRODUCTION

Study 2 established that there is an association between the belief that LLT cigarettes are smoother and the belief that LLT cigarettes are less harmful cross-sectionally. Study 3 extends the findings of Study 2 to examine which factors predict the belief that LLT cigarettes are less harmful longitudinally. The main focus of this study is to determine whether the belief that LLT cigarettes are smoother predicts the belief that LLT cigarettes are less harmful among smokers in China longitudinally. Study 3 also examines the impact of a ban on “light” and “low tar” descriptors in China on subsequent beliefs that LLT cigarettes are less harmful.

I examine:

- 1) Whether smokers who believe that LLT cigarettes are smoother on the respiratory system at Wave 1 will be significantly more likely to believe that LLT cigarettes are less harmful at Wave 2. This is the main goal of this dissertation.
- 2) The prevalence of the belief that LLT cigarettes are less harmful in China at Wave 2.
- 3) Whether “low tar” cigarette smokers at Wave 1 will be more likely to believe that LLT cigarettes are less harmful at Wave 2.
- 4) Whether smokers who have ever tried “light” or “low tar” cigarettes at Wave 1 will be more likely than those who have not tried these cigarettes to believe that LLT cigarettes are less harmful at Wave 2.

- 5) Whether a ban on “light” and “low tar” descriptors that was introduced around the time of the Wave 1 survey led to a decrease in the prevalence of the belief that LLT cigarettes are less harmful at Wave 2.

3.6 STUDY 3 METHOD

Participants

Wave 1 of the International Tobacco Control (ITC) China Survey was conducted in April to August 2006 and Wave 2 of the ITC China Survey was conducted in November 2007 to January 2008. Respondents in each of the 7 original cities were re-contacted for Wave 2. As noted before, data quality issues in Zhengzhou discovered after Wave 2 necessitated the removal of this city from our study. To replace respondents who could not be re-contacted for the Wave 2 survey, a replenishment sample of respondents was also recruited. Table 11 presents retention rates for smokers from Waves 1 and 2. The retention rate was calculated by taking the number of respondents who were initially recruited at Wave 1 and successfully recontacted at Wave 2 (both those who were still smoking and those who had quit) and dividing by the total number of respondents at Wave 1 then multiplying by 100.

Table 11 Retention Rates for Smokers: ITC China Study Waves 1 & 2

	Beijing	Shenyang	Shanghai	Changsha	Guangzhou	Yinchuan	Overall
N (Wave 1)	785	781	784	800	791	791	4732
N Recontact (Wave 2)	690	580	693	599	532	616	3710
N Quitter (Wave 2)	38	18	23	49	37	52	217
Retention Rate Waves 1-2	92.7%	76.6%	91.3%	81.0%	71.9%	84.4%	83.0%

For the purposes of this study, only smokers (respondents who had smoked more than 100 cigarettes in their life and smoked at least weekly) were included and those who had quit smoking between waves were excluded. Only those who were present in both Waves 1 and 2 (n=3651) were included.¹⁰ Wave 2 replenishment smokers were excluded from this analysis. Respondents who did not know the tar level of their current brand of cigarette or who provided an invalid tar level were excluded from analyses (n=1392). China had previously banned tar levels exceeding 15 mgs and therefore cigarettes above this level were not valid responses. The total sample size for this study was therefore 2259 respondents.

Procedure

Respondents from Wave 1 were recontacted for the Wave 2 survey. All survey protocols were consistent with Wave 1 (see Study 2). In addition, replenishment samples were collected where smokers could not be recontacted between waves. For the purposes of this paper the replenishment sample was not included and therefore the sampling plan for the

replenishment sample will not be discussed. For further details about the Wave 2 survey protocol including sampling for replenishment smokers see Appendix G: ITC China Wave 2 Technical Report.

Research ethics approval for Wave 2 of this study was obtained from: the University of Waterloo, Roswell Park Cancer Institute, the Cancer Council Victoria, and the Chinese National Centers for Disease Control.

Weight construction

Sampling weights were constructed separately for male adult smokers, female adult smokers, and adult non-smokers. Wave 1 weights were constructed by taking into account the four levels of sample selection: Jie Dao, Ju Wei Hui, household, and individual. The final Wave 1 weight for a sampled individual was the number of people in the city population and the sampling category represented by that individual. The wave 1 and wave 2 longitudinal weights were calculated for sampled individuals who responded at both waves. The longitudinal weights were based on wave 1 cross-sectional weights but adjusted for attrition, so that the total longitudinal weights remained the same as the total cross-sectional weights. This was done at both the household and the individual levels. For further details on the methodology for the ITC Wave 2 China project see Appendix G: ITC China Wave 2 Technical Report.

Measures

Measures for Study 3 were exactly the same as in Study 2. The dependent variable was the belief that LLT cigarettes are less harmful at Wave 2. This item was also constructed by combining the belief that “light” cigarettes are less harmful and that “low tar” cigarettes are less harmful. All covariates used in Study 2 (demographics and smoking behaviour, knowledge

of health effects of smoking, use of “light” and “low tar” cigarettes, and health concerns about smoking) measured at Wave 1 of the ITC China survey were used in this study. Again, the main predictor variable was the smoother belief. The beliefs that “light” cigarettes are smoother on the respiratory system and that “low tar” cigarettes are smoother on the respiratory system at Wave 1 were combined. Finally, the Wave 1 combined belief that LLT cigarettes are less harmful was used to predict the Wave 2 belief that LLT cigarettes are less harmful. This was incorporated to determine whether this belief is consistent across waves, and to determine the unique effect of the belief that LLT cigarettes are smoother on the respiratory system on the later belief that LLT cigarettes are less harmful. For the ITC China Wave 2 Survey see Appendix H: ITC China Wave 2 Survey.

Statistical Analyses

SPSS (version 17) was used for all statistical analyses. A complex samples logistic regression model was used to test which variables at Wave 1 were independently associated with the belief that LLT cigarettes are less harmful at Wave 2. All analyses were conducted on weighted data and all variables mentioned previously were employed as covariates.

3.7 STUDY 3 RESULTS

Unweighted and weighted sample characteristics across each of the 6 cities are presented in Tables 12 and 13 (respectively). Our sample of respondents from Wave 1 who were followed up in Wave 2 was similar in their responses as our original sample of respondents from Wave 1. There were significant differences across each of the cities for each of the variables except daily/weekly smoking status and sex (in the weighted analysis). City was therefore included as a covariate in the regression analyses.

Overall, the majority of smokers in our sample (51.8%) said that they had ever tried cigarettes described as “light,” “mild,” or “low tar”. The fact that this pattern is similar is reassuring because these responses are again from Wave 1 just among only those who continued to be in the study at Wave 2.

Having ever tried “light” cigarettes varied by city with respondents in Shanghai and Beijing (the two most Westernized cities) being the most likely to have tried these cigarettes, whereas smokers in Changsha were the least likely (weighted percentages were: Beijing: 57.5%, Shenyang: 47.7%, Shanghai: 60.1%; Changsha: 37.9%, Yinchuan: 49.9%, and Guangzhou: 53.5%).

Few respondents (9.9% overall) reported currently smoking a “low tar” cigarette (10 mgs of tar or less). Again Shanghai and Beijing were the cities where respondents were the most likely to smoke these brands, whereas Changsha and Yinchuan were the least likely (weighted percentages were: Beijing: 21.5%, Shenyang: 5.5%, Shanghai: 21.0%, Changsha: 1.8%, Yinchuan: 1.7%, and Guangzhou: 3.4%). The pattern in this sample was similar to our Wave 1 sample. Consistent with Study 2, the majority of smokers in our sample smoked a medium tar brand (15 mgs of tar) (45.6%) followed by a high tar brand (11-14 mgs of tar) (44.5%).

Use of LLT Cigarettes in China Compared to the ITC 4 Countries

The use of “light” and “low tar” cigarettes in China was not as high as in the 4 countries. Only 51.7% of smokers in China said that they have ever tried “light” or “low tar” cigarettes at Wave 1 (51.8% at Wave 2). A greater percentage of smokers in Canada (61.3%), the United States (61.9%), and Australia (64.4%) said that their current brand was a “light” or

“low tar” cigarette. Only respondents in the United Kingdom were less likely to say that their current brand was a “light” or “low tar” cigarette (38.9%) but the fact that this was their current brand and not whether they had ever tried these brands suggests that the use of “light” cigarettes in China is quite low compared to the West. Further, there were few current “low tar” cigarette smokers in China (9.7% at Wave 1).

Table 12 Unweighted Descriptive Characteristics for the ITC China Survey Wave 1 to Wave 2 (n=2259)

Factor	n	Overall (n=2259)	n	Beijing (n=416)	n	Shenyang (n=344)	n	Shanghai (n=463)	n	Changsha (n=304)	n	Yinchuan (n=431)	n	Guangzhou (n=301)
Sex			$\chi^2(df=5)=15.67, p=0.008$											
Male	2184	96.7%	400	96.2%	334	97.1%	456	98.5%	285	93.8%	421	97.7%	288	95.7%
Female	75	3.3%	16	3.8%	10	2.9%	7	1.5%	19	6.3%	10	2.3%	13	4.3%
Age (years)			$\chi^2(df=10)=118.79, p<0.001$											
18-39	411	18.2%	71	17.1%	51	14.8%	49	10.6%	71	23.4%	130	30.2%	39	13.0%
40-54	1174	52.0%	217	52.2%	218	63.4%	267	57.7%	155	51.0%	191	44.3%	126	41.9%
55+	674	29.8%	128	30.8%	75	21.8%	147	31.7%	78	25.7%	110	25.5%	136	45.2%
Ethnicity			$\chi^2(df=5)=154.07, p<0.001$											
Han	2130	94.3%	391	94.0%	330	95.9%	456	98.5%	301	99.0%	355	82.4%	297	98.7%
Other	129	5.7%	25	6.0%	14	4.1%	7	1.5%	3	1.0%	76	17.6%	4	1.3%
Income			$\chi^2(df=15)=234.19, p<0.001$											
Low	432	19.1%	37	8.9%	113	32.8%	62	13.4%	83	27.3%	106	24.6%	31	10.3%
Medium	1017	45.1%	173	41.7%	180	52.3%	218	47.2%	116	38.2%	215	49.9%	115	38.2%
High	665	29.5%	169	40.7%	39	11.3%	169	36.6%	90	29.6%	79	18.3%	119	39.5%
Don't Know	143	6.3%	36	8.7%	12	3.5%	13	2.8%	15	4.9%	31	7.2%	36	12.0%
Education			$\chi^2(df=10)=111.94, p<0.001$											
Low	253	11.2%	31	7.5%	17	4.9%	26	5.6%	52	17.1%	55	12.8%	72	24.0%
Medium	1535	68.0%	270	64.9%	253	73.5%	356	76.9%	196	64.5%	281	65.2%	179	59.7%
High	470	20.8%	115	27.6%	74	21.5%	81	17.5%	56	18.4%	95	22.0%	49	16.3%
Daily/Weekly Smoking			$\chi^2(df=5)=8.15, p=0.15$											
Daily smoker	2159	95.6%	404	97.1%	330	95.9%	438	94.6%	286	94.1%	408	94.7%	293	97.3%
Weekly smoker	100	4.4%	12	2.9%	14	4.1%	25	5.4%	18	5.9%	23	5.3%	8	2.7%
Cigarettes per day			$\chi^2(df=15)=61.25, p<0.001$											
1-10	669	29.7%	132	31.9%	95	27.6%	150	32.5%	61	20.1%	164	38.1%	67	22.3%
11-20	1192	52.9%	215	51.9%	188	54.7%	235	50.9%	169	55.8%	200	46.5%	185	61.5%
21-30	215	9.5%	39	9.4%	39	11.3%	41	8.9%	28	9.2%	36	8.4%	32	10.6%
31+	178	7.9%	28	6.8%	22	6.4%	36	7.8%	45	14.9%	30	7.0%	17	5.6%

Table 12 Unweighted Descriptive Characteristics for the ITC China Survey Wave 1 to Wave 2 (n=2259) Continued

Factor	n	Overall (n=2259)	n	Beijing (n=416)	n	Shenyang (n=344)	n	Shanghai (n=463)	n	Changsha (n=304)	n	Yinchuan (n=431)	n	Guangzhou (n=301)
Ever tried light, low tar			$\chi^2(df=10)=60.96, p<<0.001$											
Yes	1194	52.9%	247	59.4%	164	47.7%	285	61.6%	123	40.5%	211	49.0%	164	54.5%
No	964	42.7%	162	38.9%	163	47.4%	167	36.1%	162	53.3%	188	43.6%	122	40.5%
Don't Know	101	4.5%	7	1.7%	17	4.9%	11	2.4%	19	6.3%	32	7.4%	15	5.0%
Tar Level			$\chi^2(df=10)=622.38, p<<0.001$											
15 mg	1027	45.5%	181	43.5%	152	44.2%	276	59.6%	27	8.9%	167	38.7%	224	74.4%
11-14 mg	1009	44.7%	142	34.1%	175	50.9%	95	20.5%	273	89.8%	256	59.4%	68	22.6%
10 mg or less	223	9.9%	93	22.4%	17	4.9%	92	19.9%	4	1.3%	8	1.9%	9	3.0%

Table 13 Weighted Descriptive Characteristics for the ITC China Survey Wave 1 to Wave 2 (n=2259)

Factor	n	Overall (n=2259)	n	Beijing (n=416)	n	Shenyang (n=344)	n	Shanghai (n=463)	n	Changsha (n=304)	n	Yinchuan (n=431)	n	Guangzhou (n=301)
Sex			$\chi^2(df=4.02)=10.53, p=0.14$											
Male	2184	97.2%	400	97.1%	334	96.8%	456	98.6%	285	95.2%	421	98.1%	288	96.4%
Female	75	2.8%	16	2.9%	10	3.2%	7	1.4%	19	4.8%	10	1.9%	13	3.6%
Age (years)			$\chi^2(df=6.88)=138.94, p<0.001$											
18-39	411	19.7%	71	22.4%	51	14.8%	49	11.5%	71	26.2%	130	32.2%	39	11.3%
40-54	1174	49.0%	217	49.2%	218	60.9%	267	53.0%	155	44.3%	191	43.9%	126	40.7%
55+	674	31.3%	128	28.4%	75	24.3%	147	35.5%	78	29.5%	110	23.9%	136	48.0%
Ethnicity			$\chi^2(df=4.27)=124.24, p<0.001$											
Han	2130	94.6%	391	91.8%	330	96.6%	456	98.6%	301	98.7%	355	84.9%	297	98.8%
Other	129	5.4%	25	8.2%	14	3.4%	7	1.4%	3	1.3%	76	15.1%	4	1.2%
Income			$\chi^2(df=10.44)=286.47, p<0.001$											
Low	432	19.0%	37	6.2%	113	31.5%	62	10.9%	83	32.9%	106	23.3%	31	12.5%
Medium	1017	45.6%	173	42.9%	180	53.9%	218	46.7%	116	37.9%	215	49.9%	115	39.1%
High	665	28.8%	169	40.2%	39	11.9%	169	39.8%	90	25.8%	79	18.6%	119	34.3%
Don't Know	143	6.7%	36	10.7%	12	2.7%	13	2.7%	15	3.4%	31	8.1%	36	14.1%
Education			$\chi^2(df=7.45)=139.24, p<0.001$											
Low	253	11.9%	31	5.9%	17	4.9%	26	6.2%	52	21.8%	55	12.7%	72	24.5%
Medium	1535	68.2%	270	66.2%	253	73.6%	356	74.4%	196	64.3%	281	65.9%	179	61.9%
High	470	19.9%	115	27.9%	74	21.6%	81	19.3%	56	13.8%	95	21.4%	49	13.6%
Daily/Weekly Smoking			$\chi^2(df=3.34)=10.52, p=0.38$											
Daily smoker	2159	95.1%	404	94.1%	330	96.7%	438	94.3%	286	94.4%	408	93.9%	293	98.0%
Weekly smoker	100	4.9%	12	5.9%	14	3.3%	25	5.7%	18	5.6%	23	6.1%	8	2.0%
Cigarettes per day			$\chi^2(df=11.13)=68.23, p<0.001$											
1-10	669	29.9%	132	34.3%	95	28.5%	150	30.9%	61	20.8%	164	39.6%	61	20.5%
11-20	1192	52.6%	215	51.2%	188	53.2%	235	51.6%	169	55.3%	200	46.4%	185	61.1%
21-30	215	9.4%	39	7.9%	39	12.2%	41	8.4%	28	9.8%	36	7.6%	32	11.3%
31+	178	8.1%	28	6.6%	22	6.1%	36	9.0%	45	14.1%	30	6.3%	17	7.1%

Table 13 Weighted Descriptive Characteristics for the ITC China Survey Wave 1 to Wave 2 (n=2259)

Factor	n	Overall (n=2259)	n	Beijing (n=416)	n	Shenyang (n=344)	n	Shanghai (n=463)	n	Changsha (n=304)	n	Yinchuan (n=431)	n	Guangzhou (n=301)
Ever tried light, low tar			$\chi^2(df=7.07)=64.55, p=0.001$											
Yes	1194	51.8%	247	57.5%	164	47.7%	285	60.1%	123	37.9%	211	49.9%	164	53.5%
No	964	44.1%	162	47.2%	163	37.9%	167	57.5%	162	42.9%	188	41.6%	122	44.1%
Don't Know	101	4.1%	7	1.4%	17	5.2%	11	2.0%	19	4.5%	32	7.2%	15	4.8%
Tar Level			$\chi^2(df=6.9)=636.47, p<0.001$											
15 mg	1027	44.5%	181	39.4%	152	42.6%	276	59.5%	27	7.8%	167	38.8%	224	73.9%
11-14 mg	1009	45.6%	142	39.1%	175	51.9%	95	19.5%	273	90.4%	256	59.5%	68	22.7%
10 mg or less	223	9.9%	93	21.5%	17	5.5%	92	21.0%	4	1.8%	8	1.7%	9	3.4%

Beliefs about LLT Cigarettes

Table 14 presents the overall beliefs about LLT cigarettes among smokers in our sample across each of the 6 cities. Again, at Wave 2, the majority of smokers (75.0%) believed that LLT cigarettes are less harmful and that LLT cigarettes are smoother on the respiratory system (73.1%). Wave 1 beliefs about LLT cigarettes remained consistent among this sample of only those respondents who were present for both Waves 1 and 2 compared to all respondents in Wave 1.

Beliefs about LLT Cigarettes in China Compared to the ITC 4 Countries

The majority of Chinese smokers said that “light” cigarettes are less harmful (56.0% at Wave 1; 59.2% at Wave 2), whereas a minority of smokers held this belief in: Canada (14.7% at Wave 1; 15.0% at Wave 2), the United States (32.0% at Wave 1; 28.8% at Wave 2), Australia (27.1% at Wave 1, 29.1% at Wave 2) and the United Kingdom (43.4% at Wave 1; 40.0% at Wave 2).

The belief that “light” cigarettes are smoother was comparable across China and the 4 countries. The majority of smokers in: China (60.7%), Canada (55.3%), the United States (68.6%), Australia (63.6%), and the United Kingdom (63.5%) believed that “light” cigarettes are smoother.

Table 14 Weighted beliefs about the relative harm and sensory characteristics of “light” and “low tar” cigarettes and inter-item correlations: ITC China Wave 1 to Wave 2

Belief	“Light” Less Harmful Wave 2	“Low Tar” Less Harmful Wave 2	“Light” and/or “Low Tar” Less Harmful Wave 2	“Light” Smoother Wave 1	“Low Tar” Smoother Wave 1	“Light” and/or “Low Tar” Smoother Wave 1	% Agree or Strongly Agree with Belief Item	95% CI for Belief Item
"Light" cigarettes are less harmful Wave 2	1						59.2%	55.4-62.9%
"Low Tar" cigarettes are less harmful Wave 2	0.52	1					67.3%	64.6-69.8%
“Light” and/or “Low Tar” cigarettes are less harmful Wave 2	0.70	0.84	1				75.0%	71.8-77.9%
"Light" cigarettes are smoother Wave 1	0.24	0.22	0.23	1			60.7%	56.8-64.5%
“Low Tar” cigarettes are smoother Wave 1	0.16	0.21	0.20	0.50	1		61.9%	59.0-64.7%
“Light” and/or “Low Tar” cigarettes are smoother Wave 1	0.19	0.22	0.23	0.76	0.77	1	73.1%	69.9-76.1%

Factors associated with the belief that “Light” and/or “Low Tar” Cigarettes are less harmful

Table 15 presents the results of a logistic regression analysis to determine what Wave 1 factors were independently associated with the belief that LLT cigarettes are less harmful at Wave 2. Consistent with our findings at Wave 1, smokers in the oldest age category (OR=1.87, 95% CI 1.19-2.94) and smokers in the middle category (OR=1.93, 95% CI 1.31-2.85) were more likely than smokers in the youngest category to believe that LLT cigarettes are less harmful ($p=0.01$). Those who did not know whether they had ever tried “light,” “mild,” or “low tar,” were significantly less likely than those who had tried these cigarettes to say that LLT cigarettes are less harmful ($p=0.01$, OR=0.53, 95% CI 0.36-0.77).

Other factors that predicted the belief that LLT cigarettes are less harmful at Wave 1 were no longer significant predictors of this belief at Wave 2 (i.e., minority vs. majority group, high vs. low education, and concern that smoking would damage health in the future vs. no concern). Smokers’ tar level of their current brand did not predict the belief that LLT cigarettes are less harmful ($p=0.28$). However, consistent with the cross-sectional findings at Wave 1, the pattern was such that those who smoked a higher tar brand were less likely than those who smoked a “low tar” brand (10 mgs or less) to say that LLT cigarettes are less harmful.

The belief that LLT cigarettes are less harmful at Wave 2 was a strong predictor of the belief that LLT cigarettes are less harmful at Wave 1. Respondents who had this belief at Wave 1 were more likely to have this belief at Wave 2 ($p<0.001$, OR=3.32, 95% CI 2.40-4.60).

The main goal of this dissertation was to determine whether the belief that LLT cigarettes are smoother would predict the belief that LLT cigarettes are less harmful. This

longitudinal study found that the belief that LLT cigarettes are smoother on the respiratory system at Wave 1 was again a strong predictor of the belief that LLT cigarettes are less harmful at Wave 2. After controlling for all covariates, and the Wave 1 belief that LLT cigarettes are less harmful, this belief remained significant. Respondents who said that LLT cigarettes are smoother on the respiratory system were significantly more likely to say that LLT cigarettes are less harmful at Wave 2 ($p=0.02$, $OR=1.63$, $95\% CI 1.10-2.43$). Of the smokers who believed that LLT cigarettes are smoother on the respiratory system, 81.1% said that these cigarettes are less harmful than regular cigarettes. In sharp contrast, among those who did NOT believe that LLT cigarettes are smoother on the respiratory system, only 58.2% believed that these cigarettes are less harmful.

Table 15 Logistic regression of belief “light”/“low tar” are less harmful: ITC China Wave 1 to Wave 2

Factor	n	% Smokers Believing LLT Cigarettes are Less Harmful	Adjusted Odds Ratio (95% CI)	p value
Demographics				
Sex				
Male	2184	75.1%	1.08 (0.55-2.13)	0.81
Female	75	72.3%	1.00 (reference)	
Age (years)				
18-39	411	64.5%	1.00 (reference)	0.01
40-54	1174	77.1%	1.93 (1.31-2.85)	
55+	674	78.3%	1.87 (1.19-2.94)	
Ethnicity				
Other	129	72.0%	1.03 (0.60-1.77)	0.92
Han	2130	75.1%	1.00 (reference)	
Income				
Don't Know	143	75.0%	1.35 (0.73-2.52)	0.75
Low	432	74.5%	1.00 (0.68-1.46)	
Medium	1017	75.8%	1.12 (0.80-1.57)	
High	665	74.0%	1.00 (reference)	
Education				
Low	253	76.1%	0.94 (0.56-1.58)	0.69
Medium	1535	74.7%	0.87 (0.63-1.21)	
High	470	75.2%	1.00 (reference)	
City				
Beijing	416	73.7%	0.77 (0.45-1.32)	0.76
Shenyang	344	76.5%	0.94 (0.53-1.69)	
Shanghai	463	74.6%	0.90 (0.57-1.40)	
Changsha	304	78.0%	1.32 (0.71-2.45)	
Yinchuan	431	71.8%	0.91 (0.56-1.49)	
Guangzhou	301	76.7%	1.00 (reference)	
Smoking Behaviour				
Daily/Weekly Smoking				
Daily smoker	2159	74.8%	0.98 (0.49-1.96)	0.95
Weekly smoker	100	78.5%	1.00 (reference)	
Cigarettes per day				
0-10	669	72.6%	1.00 (0.99-1.02) ^b	0.81
11-20	1192	75.3%		
21-30	215	79.3%		
31+	178	76.2%		
Health Knowledge				
0	159	69.2%	1.02 (0.95-1.09) ^b	0.66
1	258	71.5%		
2	242	69.2%		
3	301	76.1%		
4	308	76.3%		
5	372	80.5%		
6	287	76.9%		
7	188	77.5%		
8	132	71.8%		

Table 15 Logistic regression of belief “light”/”low tar” are less harmful: ITC China Wave 1 to Wave 2 Continued

Factor	n	% Smokers Believing LLT Cigarettes are Less Harmful ^a	Adjusted Odds Ratio (95% CI)	p value
Ever tried light, low tar				
No	964	75.0%	0.97 (0.72-1.31)	0.01
Don't Know	101	61.6%	0.53 (0.36-0.77)	
Yes	1194	76.0%	1.00 (reference)	
Tar Level				
15 mg	1027	73.8%	0.71 (0.45-1.10)	0.28
11-14 mg	1009	75.0%	0.67 (0.40-1.12)	
10 mg or less	223	80.0%	1.00 (reference)	
Health Concern				
Worried Smoking has Damaged Health				0.19
Very	354	78.1%	1.23 (0.77-1.96)	
A little	958	78.0%	1.32 (0.98-1.78)	
Not at all/Don't know	945	70.8%	1.00 (reference)	
Worried Smoking will Damage Health				0.57
Very	386	79.6%	1.20 (0.82-1.75)	
A little	973	75.6%	1.04 (0.78-1.39)	
Not at all/Don't know	899	72.1%	1.00 (reference)	
Describe your health				0.58
1 Poor	56	73.8%	0.96 (0.84-1.11) ^b	
2	145	73.8%		
3	1074	76.7%		
4	673	74.2%		
5 Excellent	310	71.5%		
Perceived Addiction				0.61
A little	1045	74.1%	0.96 (0.63-1.48)	
Somewhat	691	76.5%	1.05 (0.67-1.64)	
A lot	249	76.7%	1.18 (0.70-2.01)	
Not at all	246	73.3%	1.00 (reference)	
Light/Low Tar less harmful Wave 1				p < 0.001
Agree/Strongly Agree	1582	82.0%	3.32 (2.40-4.60)	
Disagree/Strongly Disagree/Neutral/DK	676	57.6%	1.00 (reference)	
Light/Low Tar smoother				0.02
Agree/Strongly Agree	1637	81.1%	1.63 (1.10-2.43)	
Disagree/Strongly Disagree/Neutral/DK	622	58.2%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable

Note: All predictors are collected at Wave 1.

3.8 STUDY 3 DISCUSSION

Beliefs about the harmfulness of LLT cigarettes remained consistent across Waves 1 and 2, with the vast majority of respondents believing that LLT cigarettes are less harmful (71.3% at Wave 1 and 75.0% at Wave 2). The logistic regression also demonstrated that there was consistency between the LLT less harmful belief over time: the belief that LLT cigarettes are less harmful at Wave 1 was a highly significant predictor of the belief that LLT cigarettes are less harmful at Wave 2.

As our main hypothesis would suggest, the belief that LLT cigarettes are smoother on the respiratory system was a significant predictor of the belief that LLT cigarettes are less harmful. The fact that this was one of the few measures that predicted across waves highlights the powerful influence the belief that LLT cigarettes are smoother can have on subsequent beliefs about the harmfulness of LLT cigarettes. Even more convincing of the importance of the smoothness belief is that it predicted Wave 2 beliefs about the harmfulness of LLT cigarettes beyond the Wave 1 belief that LLT cigarettes are less harmful. The odds ratio of the belief that LLT cigarettes are smoother predicting the belief that LLT cigarettes are less harmful was considerably lower in the longitudinal model compared to the cross-sectional model. However, this is not surprising given that we were modelling having a belief 1 year after the initial belief that LLT cigarettes are smoother and after controlling for the existing belief that LLT cigarettes are less harmful. Thus, we were able to partial out the unique contribution of the belief that LLT cigarettes are smoother.

Few other factors predicted the belief that LLT cigarettes are less harmful longitudinally. In contrast to “light” cigarette smokers from the ITC 4 Country Survey in Study 1, “low tar” cigarette smokers were no more likely to believe that LLT cigarettes are less

harmful longitudinally. Although there was a trend towards “low tar” cigarette smokers being slightly more likely to believe that LLT cigarettes are less harmful, this relation was not significant overall. As discussed in Study 2, this could be due to the fact that the majority of smokers in China believe that LLT cigarettes are less harmful regardless of the type of cigarette smoked. There were also few “low tar” cigarette smokers to have actually experienced smoking LLT cigarettes. Finally, although the relation between being a “light” cigarette smoker and believing that “light” cigarettes are less harmful was significant in Study 1, the fact that we controlled for previous beliefs that LLT cigarettes are less harmful at Wave 1 makes it much more difficult to find factors that would predict the belief that LLT cigarettes are less harmful beyond this initial belief.

In January 2006, China banned descriptors such as: “light,” “ultra-light,” “mild,” “medium/low tar,” and “low tar,” on cigarette packaging and inserts. However, the tobacco industry was given a grace period until April 2006 to comply with this regulation. Even though the industry did comply with the strict tenor of the law, due to a loophole in the regulations, the Chinese terms for “light” etc. were removed; however, the words “light” and “low tar” still remain on Chinese cigarette packages but in English. We were unable to evaluate the initial impact of the ban on beliefs about whether LLT cigarettes are less harmful in our cross-sectional survey because the ban had been too close in time to when we conducted our Wave 1 survey. Wave 2 of our survey was conducted 19-21 months after the grace period (after which time all packages with the Chinese descriptors of “light,” “mild,” “low tar” etc. had to be removed) and therefore allowed us to measure the impact of the ban on the belief that LLT cigarettes are less harmful.

Our findings demonstrate that (at least in the initial period of 19-21 months after the descriptors were removed), smokers continued to believe that LLT cigarettes are less harmful. In our sample of the same respondents who participated in both Waves 1 and 2, a higher percentage of smokers believed that LLT cigarettes are less harmful after the ban. In Wave 1 (conducted April to August 2008 and therefore close to the initial implementation of the ban), 56.0% of respondents said that “light” cigarettes are less harmful whereas in Wave 2 (19-21 months post ban) 59.2% said that “light” cigarettes are less harmful. In Wave 1 63.2% of respondents said that “low tar” cigarettes are less harmful whereas in Wave 2 67.3% of respondents said that “low tar” cigarettes are less harmful. For combined beliefs about LLT cigarettes, 71.3% said LLT cigarettes are less harmful at Wave 1 and 75.0% said LLT cigarettes are less harmful at Wave 2. Our Wave 1 survey was conducted immediately after the ban on “light” descriptors and was therefore not a measure of beliefs before the ban. However, we would expect that if the ban on “light” cigarette descriptors had been effective, the belief that LLT cigarettes are less harmful should have decreased. This was not the case, and in fact these beliefs became slightly more prevalent.

Borland et al. (2008) demonstrated that “light” descriptor bans in the United Kingdom led to an initial decrease in the belief that “light” cigarettes confer health benefits (in the 9-15 months post ban) but 25-28 months post ban, the belief that “light” cigarettes are less harmful rebounded. Wave 1 was conducted immediately following the ban and Wave 2 was conducted in the period between when Borland et al. (2008) found that the prevalence of beliefs that “light” cigarettes confer health benefits began to increase again. Although not directly comparable, our findings are consistent with the idea that over a few months, beliefs about LLT cigarettes do not decrease. In China, beliefs about LLT cigarettes were nearly the same

across Wave 1 and Wave 2. These findings therefore suggest that there was no impact of a ban on “light” descriptors in China. Future research should use Wave 3 data from the ITC China Survey to determine whether beliefs about the harmfulness of LLT cigarettes decreased over a longer period of time following the ban on “light” descriptors.

3.9 CHAPTER 3 GENERAL DISCUSSION

Studies 2 and 3 provide strong evidence of the importance of the belief that LLT cigarettes are smoother on the belief that LLT cigarettes are less harmful. The belief that LLT cigarettes are smoother was a consistently powerful predictor of the belief that LLT cigarettes are less harmful both cross-sectionally and longitudinally.

Study 3 also demonstrated that the ban on “light” and “low tar” descriptors did not have an impact on the belief that “light” and “low tar” cigarettes are less harmful. As noted in the my model, this is most likely due to the fact that the belief that LLT cigarettes are less harmful is conveyed through many other marketing channels besides descriptors. For example: (1) Advertising in China continues to explicitly state that “light” cigarettes are less harmful (2) There were no major media campaigns educating the public about the fact that LLT cigarettes are just as harmful as regular cigarettes (3) Terms such as “light” continue to be printed in English on cigarette packages (4) Deceptive tar levels continue to be printed on the side of cigarette packages (5) Lighter packaging and other terms that connote “light” or “low tar” such as “smooth” continue to be used. Research has demonstrated that package design features such as these, and descriptors such as “smooth” also convey the sense that a particular brand is less harmful (Hammond & Parkinson, 2009; Hammond et al., 2009).

Even if English descriptors were removed, if tar levels were no longer printed on the side of packages, and if advertising was no longer allowed to make health claims about a particular brand, the belief that LLT cigarettes are less harmful would remain. Cigarette packages that convey the belief that LLT cigarettes are less harmful through the use of lighter colour shading, terms such as “smooth” etc. would create the perception that the brand is less harmful. But most importantly, even if plain packages were used, the sensory perception that “light” and “low tar” cigarettes are less harmful would remain. These findings demonstrate the importance of removing the belief that LLT cigarettes are smoother because of its strong association with the belief that LLT cigarettes are less harmful. There are many regulations that can be implemented to counter this belief.

Plain packaging of cigarettes would ensure that colours, chevrons, etc. could not be used to differentiate one cigarette from another in terms of its potential smoothness or harm. Removal of tar levels on cigarette packs would ensure that smokers were not led into believing that the ISO tar levels have any real meaning. It would also ensure that smokers do not use tar levels on packaging to gauge the relative risk of one cigarette compared to another.

China should also move toward banning advertising for LLT cigarettes. This advertising makes explicit declarations that “light” or “low tar” cigarettes are less harmful despite the fact that there is no evidence to support these statements. With the implementation of the Framework Convention on Tobacco Control, we can expect policies to address tobacco control marketing.

To date, the importance of the belief that LLT cigarettes are smoother and therefore less harmful has been overlooked in discussions about which regulations to include in the

Framework Convention on Tobacco Control. These studies provide further evidence that all of the marketing strategies for LLT cigarettes previously mentioned need to be addressed by the FCTC because of their potential to break the association between the belief that LLT cigarettes are smoother and the belief that LLT cigarettes are less harmful. However, another regulation that needs to be included is the cigarette design itself. As long as “light” or “low tar” cigarettes may actually feel smoother, they will be judged as being less harmful regardless of whether they are in a plain package and unadvertised.

Articles 9 and 10 of the Framework Convention on Tobacco Control (FCTC) (WHO, 2003) relate to the regulation of tobacco products and these results point to the need to regulate the product to ban design features (e.g., additives) that make the product smoother and lighter in sensation. Doing so could reduce perceptions of lower harm, which may be a key factor in increasing motivation to quit smoking. The potential for the FCTC to guide tobacco control policies addressing the belief that LLT cigarettes are smoother and therefore less harmful is discussed in further detail in the discussion section of this dissertation.

The implications of this research extend beyond China. Study 1 demonstrated that smokers in Canada, the United States, the United Kingdom, and Australia who believe that “light” cigarettes are smoother are more likely to believe that “light” cigarettes are less harmful. It is unfortunate that we did not ask respondents in the ITC 4 Country Survey about their beliefs about “low tar” cigarettes separate from their beliefs about “light” cigarettes. There were many smokers who had at least one or both of these beliefs in China and it would be interesting to see whether this was also true in these other countries. However, we did ask respondents in the ITC 4 Country Survey whether “light” cigarettes are less harmful after giving them the instruction we refer to all types of light, mild, and low tar cigarettes as light

cigarettes. So the responses to questions about “light” cigarettes should have incorporated respondents’ beliefs about “low tar” cigarettes as well although this was not asked exactly the same as in China. In addition, we would expect that even if smokers in the 4 Country Survey were only referring to the respondents’ belief that “light” cigarettes are less harmful, this belief should be correlated with the belief that “low tar” cigarettes are less harmful.

Comparing the percentage of smokers in China who believe that “light” cigarettes are less harmful with the percentage of smokers in the 4 countries who have this belief, we find that smokers in China are much more likely to believe that “light” cigarettes are less harmful. The majority of Chinese smokers said that “light” cigarettes are less harmful whereas a minority of smokers held this belief in: Canada, the United States, Australia, and the United Kingdom. The vast difference between China and these other countries is most likely due to the fact that China has ads explicitly stating that these cigarettes are less harmful and such advertising is not allowed in these Western countries. It may also be due to the fact that these countries have had more media attention regarding the “light” and “low tar” deception, whereas there is very little information in China about the health risks of smoking let alone why “light” and “low tar” cigarettes are no less harmful.

The belief that “light” cigarettes are smoother was comparable across China and the 4 countries. The majority of smokers in: China, Canada, the United States, Australia, and the United Kingdom believed that “light” cigarettes are smoother. The fact that all smokers regardless of their current brand of cigarettes believed that “light” cigarettes are smoother supports the model presented in Figure 1. Factors that influence of the perception that “light” cigarettes are smoother (e.g., package and cigarette designs) are consistently providing this message to all smokers across each of these countries.

The use of “light” and “low tar” cigarettes in China was not as high as in the 4 countries. Market research also suggests that few smokers in China smoke “low tar” cigarettes, whereas the majority of smokers in Western countries tend to smoke these brands. As previously noted, “light” and “low tar” cigarettes are not currently as popular in China for several reasons: (1) A lack of domestic production technology and (2) a limited presence of foreign brands in the Chinese market to stimulate interest in alternatives to the traditional higher tar cigarette (Euromonitor, 2006). However, as noted, it is most likely the case that “light” cigarettes are not as popular because they are generally targeted to health-concerned smokers. We anticipate that “light” and “low tar” cigarettes will become more common in China as smokers become more concerned about the health effects of their smoking. Smokers in China already believe that these cigarettes are less harmful and as smokers become more aware of the health effects of smoking, these cigarettes will be more appealing. It is therefore imperative that efforts to change beliefs about the harmfulness of “light” and “low tar” cigarettes begin now before smokers start to make the switch to these cigarettes.

The findings of Study 2 and Study 3 demonstrate that tobacco control policies in China need to address the high prevalence of smokers who believe that LLT cigarettes are less harmful. Countries such as: Canada, the United States, the United Kingdom, and Australia have more active media campaigns warning that LLT cigarettes are no less harmful, and the prevalence of the belief that LLT cigarettes are less harmful is much lower in these countries. China can learn from the successes in reducing beliefs about the harmfulness of LLT cigarettes in these countries and adopt similar media campaigns. China could also lower the perception that LLT cigarettes are less harmful much more rapidly than these other countries by avoiding tobacco control policies that have been demonstrated to be ineffective. For example, China

should follow the Framework Convention on Tobacco Control but rather than eliminate descriptors such as “light” or “low tar” (in English to be consistent with the current ban on Chinese descriptors), China should move to more potentially effective strategies immediately such as plain packaging. China should also implement tobacco control policies that would remove the sensory properties of the packaging and cigarette that provide the perception that LLT cigarettes are smoother and therefore less harmful.

Limitations

The findings reported in this study are from six cities in China rather than from a nationally representative sample in China. However, we can see no reason why they would not generalize to other urban Chinese cities as the cities in our study cover a broad range of economic and social conditions. However, there are plausible reasons why the findings might be somewhat different in rural China, where “light” cigarettes may be less likely to be promoted and there may be a smaller range of cigarette brands available. Still, with a starting point of an odds ratio of 62.9 (in the cross-sectional analyses) and 1.63 (in the longitudinal analyses) we believe that it is extremely unlikely that the very strong relation would not hold across a very broad range of locations across all of China.

As with any survey research, there are always concerns about survey non-response and under representation of certain groups. However, this was addressed by using weighted analyses for each city. Although we did have a low number of respondents in the youngest age category (18-24), this is consistent with samples from China’s 1996 National Prevalence Study (Yang et al., 1999).

Smokers in our study provided their own report of the tar level of their current brand. Where possible this was confirmed by having the survey interviewer examine the package. In our Wave 1 to Wave 2 sample, for example, 37.6% of the reported tar levels were obtained by having the interviewer check the pack and 35.3% were obtained by asking the respondent their tar level and having the interviewer check the pack to confirm this response. Tar levels on cigarette packages are voluntary and may not be on all cigarette packages. We had a high number of “don’t know” responses or invalid responses (tar levels higher than 15 mgs) and these responses could be due to the fact that tar levels are not on all cigarette packages. We therefore had to exclude these respondents. Our findings are therefore not generalizable to all smokers in all of China, but to smokers who know the tar level of their current brand of cigarettes. In addition, we would expect that those respondents who were more health conscious would be more likely to notice and remember the tar level on their cigarette packages.

There were also few respondents (9.9% of Wave 1 to Wave 2 respondents) who reported smoking a “low tar” cigarette (10 mgs or less). However, this is consistent with market research suggesting that few smokers in China smoke a “low tar” cigarette (Euromonitor, 2006).

One possible limitation is that the ranges we used to designate “low tar” “medium tar” and “high tar” are somewhat different than the ranges that have been used in Western countries. However, it was necessary to use these ranges because (1) China has banned cigarettes above 15 mgs of tar (which by Western definitions would be considered “medium tar”) and (2) Smokers in China have a preference for higher tar brands (and therefore our “low tar” category had to be high enough to include some smokers). We could have categorized

cigarettes as “low tar” or “high tar” and collapsed the medium tar category in with the “low tar” category (as Western countries typically refer to cigarettes with 8-14 mgs of tar as “low tar”) however, this would have left very little variability (comparing 15 mgs to all other tar levels). Our measure is therefore a relative measure of how cigarettes that have less tar relate to cigarettes that have more tar in China and what matters is that the 15 mg value is higher than the low tar category of 10 mgs or less.

Next Studies

Future studies in this dissertation will attempt to overcome these limitations by asking respondents about the perception of their own brand of cigarettes regardless of what type of cigarette they smoke.

Studies 1-3 addressed how the belief that “light” and “low tar” cigarettes related to the belief that “light” and “low tar” cigarettes are less harmful across adult smokers in 5 countries. However, no research has examined these beliefs among adolescents. Studies 4 and 5 will therefore examine how the belief that “light” cigarettes are smoother relates to the belief that these cigarettes are healthier among adolescents in the North America.

CHAPTER 4: WHAT FACTORS PREDICT THE BELIEF THAT “LIGHT” CIGARETTES ARE HEALTHIER CROSS-SECTIONALLY AND LONGITUDINALLY AMONG ADOLESCENTS IN NORTH AMERICA? EVIDENCE FROM THE NORTH AMERICAN STUDENT SMOKING SURVEY

4.0 CHAPTER 4 INTRODUCTION

It is particularly important to study adolescent smokers because the majority of smokers start smoking before the age of 18 (SAMHSA, 2009). However, there is a lack of research examining the use of and beliefs about “light” cigarettes among adolescents in North America.

Similar to adults, the market share of “light” cigarettes is high among young adults in Canada. Approximately 60% of young adults 20-24 years old report that they “usually” smoke a “light” or “mild” cigarette, with more females (67%) compared to males (54%) smoking these cigarettes (CTUMS, 2003). Because the market share of “light” cigarettes is so high among young adults and adults, we can expect that the market share among adolescents should be similar.

Findings from the Canadian Tobacco Use Monitoring Study (CTUMS) suggest that, consistent with research among adults (Borland et al., 2004), the majority of young adults in Canada do not believe that “light” or “mild” cigarettes are less harmful. 89% believed that “light” cigarettes did not reduce the health risks of smoking without having to quit. 91% did not believe that “light” cigarettes would reduce the health risks compared to regular cigarettes. 84% did not believe that “light” cigarettes reduced the reduced the amount of tar inhaled (CTUMS, 2003). However, this research was conducted on young adults (20-24 years old) and it is not known whether this pattern is the same among adolescents; although we would expect

a similar pattern in Canada, where anti-smoking advertising has highlighted the fact that “light” cigarettes are just as harmful.

Although the majority of young adults in Canada did not believe that “light” cigarettes were less harmful, a small study among 267 adolescents in California demonstrated that some adolescents continued to believe that “light” cigarettes were less harmful. Among both smokers and non-smokers, 38.5% agreed that regular cigarette smokers would be more likely to have a heart attack compared to “light” cigarette smokers, and 40.6% believed that regular cigarette smokers would be more likely to die of a smoking-related disease. Additionally, 31.7% of adolescents believed that it would be easier to quit smoking “light” cigarettes and 35.6% agreed that regular cigarettes are more addictive than “light” cigarettes (Kropp & Halpern-Felsher, 2004).

These studies demonstrate the potential for beliefs about “light” cigarettes among adolescents to be consistent with the research that has examined beliefs about “light” cigarettes among adults. However, these studies also demonstrate the lack of strong existing research particularly large-scale studies among North American adolescents regarding beliefs about and use of “light” cigarettes. Just as we have examined beliefs about “light” cigarettes among adult smokers, it is also important identify the factors that are associated with having the belief that “light” cigarettes are less harmful among adolescents.

None of the existing studies on perceptions of “light” cigarettes among youth address the potential link of the sensory characteristics of “light” cigarettes and the belief that these cigarettes are less harmful. This link has been established in previous studies among adults in both the research literature (Shiffman et al., 2001a; Borland et al., 2004) and this dissertation.

However, it is unknown whether adolescents also perceive these brands as smoother and whether this perception is related to the belief that “light” cigarettes are healthier.

Studies 4 and 5 are the first large-scale North American studies to examine the use of and beliefs about the harmfulness of “light” cigarettes among adolescents. Study 4 examines beliefs about “light” cigarettes among adolescent smokers in North America cross-sectionally. Specifically this study will address whether the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harsh are related to the belief that “light” cigarettes are healthier. This study also examines which other factors are associated with the belief that “light” cigarettes are healthier.

Study 5 examines the belief that “light” cigarettes are less harmful among adolescent smokers in North America longitudinally. This study will address whether the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harsh predict the belief that “light” cigarettes are healthier. This study also examines which other factors predict the belief that “light” cigarettes are healthier longitudinally.

4.1 STUDY 4 INTRODUCTION

The previous studies in this dissertation examined which factors were associated with the belief that LLT cigarettes are less harmful among adults, particularly whether the belief that LLT cigarettes are smoother would predict the belief that LLT cigarettes are less harmful. Study 4 will examine a similar model using cross-sectional data from Wave 3 of the North American Student Smoking Survey. This will be the first study to examine what factors predict the belief that “light” cigarettes are healthier among adolescents in North America.

I examine:

- 1) Whether smokers who believe that “light” cigarettes are smoother on the throat and chest will be significantly more likely to believe that “light” cigarettes are healthier. This is the main goal of the dissertation.
- 2) Whether smokers who believe that “light” cigarettes are less harsh will be significantly more likely to believe that “light” cigarettes are healthier. This is also the main goal of the dissertation.
- 3) The prevalence of the belief that “light” cigarettes are healthier among adolescents in the Wave 3 North American Student Smoking Survey.
- 4) Whether “light” cigarette smokers are more likely to believe that “light” cigarettes are healthier than regular cigarettes.

4.2 STUDY 4 METHOD

Participants

Respondents were from Wave 3 of the North American Student Smoking Survey (NASSS) conducted in the Fall (October-December) of 2001. The response rate for Wave 3 was 74.7%. The North American Student Smoking Survey was a prospective, self-administered cohort survey measuring smoking behaviour among 12,607 high school students in Canada (n=7406) and the United States (n=5201). The NASSS was administered twice a year during three consecutive academic years: 2000-01, 2001-02, and 2002-03. Although the major goal of the NASSS was to evaluate the Canadian graphic warning labels, the survey also included sections that focused on other research questions including perceptions of “light” cigarettes. The survey questions on “light” cigarettes were introduced during the second year of the NASSS (at Wave 3).

For the purposes of this study, only respondents who were in Wave 3 of the study, who were either experimental smokers (those who had smoked a puff, had smoked again since their last cigarette, but smoked less than every week) or established smokers⁸ (those who had tried a puff, had smoked since the first time they had tried a cigarette, and usually smoked every week)⁹ and who reported that their current brand was a “light,” “ultra light” or “extra light,” “mild,” “regular,” “medium,” or “full flavor” cigarettes were included in the analyses. Respondents who said that they smoked a menthol cigarette or another type of cigarettes or who did not provide a response were excluded from the analyses. The total sample size for this study was therefore 2,251.

Canadian Sample

We surveyed all students at 9 high schools in Canada. The high schools were selected to provide an overall sample that is broadly representative of the diversity of the country. From East to West, there were 2 high schools on Prince Edward Island, 1 high school in Ontario, 2 high schools in Manitoba, 2 high schools in Saskatchewan, 1 high school in Alberta, and 1 high school in British Columbia. The Canadian sample thus included schools from the Atlantic Provinces (Prince Edward Island), Ontario, the Prairie Provinces (Manitoba, Saskatchewan, and Alberta), and British Columbia. No school in Quebec was chosen because the primary purpose of the study (of which the current study is a subset) was designed to compare Canada and the United States. As a result, each site in Canada and the U.S. was matched on demographic characteristics. Because the United States has no region that is comparable to Quebec, this province was not represented in the sample.

United States Sample

The U.S. sample consisted of all students 6 high schools in the United States (1 in Maine, 1 in Ohio, 2 in Michigan, 1 in Iowa, and 1 in Colorado) who were surveyed during Fall 2001.

Comparability of Samples and Selection Procedures

Because the initial purpose of the NASSS was to compare Canada and the U.S. these countries were matched on demographic characteristics. Unfortunately, smoking behavior was impossible to compare prior to implementation of the survey; therefore, another predictor of smoking status-- socioeconomic status-- was used as a proxy variable for smoking prevalence

(by obtaining median household income from each region). Further, any regions that were expected to implement tobacco control initiatives were excluded to eliminate possible confounds. This strategy was successful and results from the first year of this study indicated that the regions surveyed in Canada and the U.S. were almost identically matched in terms of smoking background (number of regular smokers, experimental smokers etc.).

Minority Inclusion

The ethnic background of respondents may not have been fully representative of the U.S. population. For the purposes of the study conducted on warning labels, the U.S. sample had to be matched with the Canadian sample. Thus, the resulting schools in the U.S. had a lower proportion of Blacks and Hispanics than the U.S. population.

Procedure

Data Collection

Two weeks prior to the data collection date, parents were sent information letters about the project. All schools allowed passive consent procedures in which parents/guardian would inform the school if they did not wish their child to participate. Students or their parent(s)/guardian(s) who indicated they did not wish the child to participate did not receive a survey, and were provided with an alternative activity.

Survey administration was conducted by the teachers during class time. A Site Coordinator (who was a graduate student or research assistant at a local university specifically recruited and trained by the NASSS Project Director to direct and coordinate the data

collection process) was available at the school to answer any questions. The survey took approximately 40 minutes to complete.

Measures

For the entire North American Student Smoking Survey from Year 2 of the project (which was Waves 3 and 4) see Appendix I: NASSS Wave 3 and 4 Survey.

Dependent Variable

Beliefs about “Light” Cigarettes

We asked respondents: “Below are some reasons that people might give for smoking light or ultra light cigarettes. For each one, please indicate your level of agreement or disagreement with the following statements...light cigarettes are healthier than regular cigarettes.” Responses were on a 5-point Likert scale (1=Strongly disagree to 5=Strongly agree) and were recoded so that 1=Agree/Strongly agree and 0=Disagree/Strongly disagree/In the middle.

For this survey, we asked respondents about whether they thought that “light” cigarettes are healthier than regular cigarettes. This wording was different than what was used in the subsequent ITC 4 Country and ITC China surveys because this study was conducted first. The survey questions were based on existing survey questions that had already been conducted. However, we realized after conducting this survey (with the ITC 4 Country and ITC China surveys) that it would be more appropriate to ask whether “light” cigarettes are less harmful because it would be less biased (because of the connotation “healthier” that implies a cigarette can have some degree of “healthiness”).

Independent variables

Demographics and Smoking Behaviour

Standard demographic measures included: country (Canada/US) sex (male/female), grade (8-OAC in Canada only),¹¹ and ethnicity (majority vs. minority).¹² Measures of cigarette consumption included: experimental vs. established smoking^{13,14} and cigarettes smoked per week.

Knowledge of Health Risks of Smoking

Knowledge about the health risks of smoking was assessed by asking respondents: “Do you believe that smoking is unhealthy?” (not at all unhealthy, slightly unhealthy, somewhat unhealthy, extremely unhealthy).

Self-Reported Use of “Light” Cigarettes

Smokers were asked to indicate the strength of the brand they usually smoke (regular, light, ultra light or extra light, mild, medium, full flavor, menthol, other). Smokers whose reported strength was menthol or “other” were excluded from analyses (see note 3 for an explanation why menthol cigarette smokers were excluded from this dissertation). Smokers whose reported strength was “regular,” “medium,” or “full flavor” were coded as regular cigarette smokers. Smokers whose reported strength was “light,” “ultra light or extra light,” or “mild” were coded as “light” cigarette smokers.

Health Concerns about Smoking

To assess health concern, respondents were asked: “how likely do you think it is that smoking will lead to health problems for you?” (very likely, somewhat likely, somewhat unlikely, very unlikely). In addition, they were asked “have you ever felt like you were addicted to tobacco?” (yes/no).

Sensory Beliefs

In this survey, unlike the ITC surveys, two questions were asked to assess sensory beliefs about “light” cigarettes. We asked respondents: “Below are some reasons that people might give for smoking light or ultra light cigarettes. For each one, please indicate your level of agreement or disagreement with the following statements....” The first sensory belief was: “light cigarettes are less harsh than regular cigarettes” and the second sensory belief was: “light cigarettes feel smoother on your throat than regular cigarettes.” Responses were on a 5-point Likert scale (1=Strongly disagree to 5=Strongly agree) and were recoded so that 1=Agree/Strongly agree and 0=Disagree/Strongly disagree/In the middle.

Statistical Analyses

SPSS (version 17) was used for all cross tabs and frequencies. SAS (version 9.1) was used to run generalized estimating equations (GEE) using the PROC GENMOD procedure. A generalized estimating equation (GEE) was used to test which variables were independently associated with the belief that “light” cigarettes are healthier while adjusting for clustering of responses within schools. Separate models were used to test whether: (1) the belief that “light” cigarettes are smoother on the throat and chest is associated with the belief that “light” cigarettes are healthier and (2) the belief that “light” cigarettes are less harsh is associated with

the belief that “light” cigarettes are healthier. All variables mentioned previously were employed as covariates.

4.3 STUDY 4 RESULTS

Unweighted sample characteristics across Canada and the United States are presented in Table 16. There were significant differences in each category by country except sex. There were more established smokers in Canada than the United States. There were also more high schools sampled in Canada. Over half of the adolescent smokers in our Canadian sample reported currently smoking a “light” cigarette (54.9%) whereas less than half of respondents in our U.S. sample reported currently smoking a “light” cigarette (46.4%).

Table 16 Unweighted Sample Characteristics for NASSS Baseline (Wave 3)

Factor	Overall (n=2251)		Canada (n=1516)		United States (n=735)	
Sex	$\chi^2(df=1)=0.007, p=0.93$					
Male	1105	49.3%	746	49.4%	359	49.2%
Female	1136	50.7%	765	50.6%	371	50.8%
Age (years)	$\chi^2(df=6)=11.55, p=0.07$					
13 or younger	38	1.7%	21	1.4%	17	2.3%
14	206	9.2%	127	8.4%	79	10.8%
15	524	23.3%	363	24.0%	161	22.0%
16	599	26.7%	420	27.7%	179	24.4%
17	606	27.0%	409	27.0%	197	26.9%
18	194	8.6%	127	8.4%	67	9.1%
19 or older	80	3.6%	47	3.1%	33	4.5%
Grade	$\chi^2(df=5)=83.99, p=<0.001$					
8	52	2.3%	26	1.7%	26	3.5%
9	281	12.5%	128	8.5%	153	20.9%
10	562	25.1%	392	26.0%	170	23.2%
11	607	27.1%	417	27.6%	190	25.9%
12	699	31.2%	515	34.1%	184	25.1%
OAC	42	N/A	32	2.1%	10	N/A
Ethnicity	$\chi^2(df=1)=7.65, p=0.006$					
White	1531	75.1%	1077	76.9%	454	71.2%
Minority	508	24.9%	324	23.1%	184	28.8%
Smoking Status	$\chi^2(df=1)=14.57, p=<0.001$					
Experimental	645	28.7%	396	26.1%	249	33.9%
Established	1606	71.3%	1120	73.9%	486	66.1%
Cigarettes per week	$\chi^2(df=7)=42.61, p=<0.001$					
0	387	17.2%	227	15.0%	160	21.8%
1-5	395	17.6%	264	17.4%	131	17.8%
6-10	154	6.9%	103	6.8%	51	6.9%
11-20	211	9.4%	140	9.3%	71	9.7%
21-30	258	11.5%	188	12.4%	70	9.5%
31-50	282	12.5%	220	14.5%	62	8.4%
51-100	245	10.9%	180	11.9%	65	8.8%
100+	316	14.1%	191	12.6%	125	17.0%
Current brand smoked	$\chi^2(df=1)=14.29, p=<0.001$					
Light/Low Tar	1173	52.1%	832	54.9%	341	46.4%
Regular	1078	47.9%	684	45.1%	394	53.6%

Beliefs about “Light” Cigarettes

Table 17 presents the overall beliefs about “light” cigarettes among smokers in our sample across Canada and the United States. Smokers in Canada were more likely to believe that “light” cigarettes are less harsh than regular cigarettes (45.0%) compared to smokers in the U.S. (40.4%). A greater percentage of smokers in Canada believed that “light” cigarettes are smoother on the throat than regular cigarettes (40.0%) compared to smokers in the U.S. (36.5%) however this percentage was not significantly different ($p=0.12$). A greater proportion of smokers in the U.S. believed that “light” cigarettes are healthier than regular cigarettes (28.2%) compared to smokers in Canada (20.5%).

Table 17 Beliefs about “Light” Cigarettes: NASSS Baseline (Wave 3)

Factor	n	Overall (n=2251)	n	Canada (n=1516)	n	United States (n=735)
Light Cigarettes smoother on throat			$\chi^2(df=1)=2.41, p=0.12$			
Disagree	1319	61.1%	885	60.0%	434	63.5%
Agree	838	38.9%	589	40.0%	249	36.5%
Light Cigarettes less harsh			$\chi^2(df=1)=4.14, p=0.04$			
Disagree	1219	56.5%	811	55.0%	408	59.6%
Agree	940	43.5%	664	45.0%	276	40.4%
Light Cigarettes are healthier			$\chi^2(df=1)=15.77, p<0.001$			
Disagree	1677	77.0%	1184	79.5%	493	71.8%
Agree	500	23.0%	306	20.5%	194	28.2%

Beliefs about “light” cigarettes in North American Adolescents Compared to adults in the ITC 4 Countries and China

A lower proportion of adolescents in both Canada (40.0%) and the United States (36.5%) said that “light” cigarettes are smoother compared to adults in our ITC 4 Country Survey in Canada (55.3%), the United States (68.6%), Australia (63.6%), and the United Kingdom (63.5%) and our ITC China Survey (61.5%) at Wave 1 baseline for all groups.

A slightly higher proportion of adolescent smokers in Canada (20.5%) believed that “light” cigarettes are healthier compared to the proportion of Canadian adult smokers (14.7%) in our ITC Four Country Survey at Wave 1 baseline for both groups. A slightly lower proportion of adolescent smokers in the United States (28.2%) believed that “light” cigarettes are healthier than regular cigarettes compared to adult smokers believing that “light” cigarettes are less harmful our ITC Four Country Survey in the United States (32.0%), Australia (27.1%) and the United Kingdom (43.4%) and in our ITC China Survey (56.0%) at Wave 1 baseline for all groups. Overall, adolescents in Canada were less likely than adolescents in the United States to believe that “light” cigarettes are healthier compared to regular cigarettes. Canadian adults were also more likely than adults in the United States to believe that “light” cigarettes are less harmful compared to regular cigarettes.

Factors associated with the belief that “Light” Cigarettes are healthier

Two separate models were constructed to test the generalized estimating equation (GEE) determining what factors were independently associated with the belief that “light” cigarettes are healthier. The first model tested the unique effect of the belief that “light” cigarettes are less harsh on the belief that “light” cigarettes are healthier (see Table 18a). The

second model tested the unique effect of the belief that “light” cigarettes feel smoother on your throat on the belief that “light” cigarettes are healthier (see Table 18b). Because the covariates were entered at step one for both models, results for the covariates were the same. However, I have presented the full model including the results for the covariates each time to be clear about the results and to demonstrate that the models for the belief that “light” cigarettes are smoother and that “light” cigarettes are less harsh were conducted separately. ¹⁵

Table 18a Generalized Estimating Equation Less Harsh Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline (Wave 3)

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	<i>p</i> value
Demographic Variables				
Country				
Canada	1516	20.5%	0.65 (0.49-0.84)	<0.001
United States	735	28.2%	1.00 (reference)	
Sex				
Male	1105	25.3%	1.49 (1.18-1.87)	<0.001
Female	1136	20.6%	1.00 (reference)	
Grade				
8	52	22.9%	0.91 (0.83-1.00) ^b	0.05
9	281	32.5%		
10	562	20.6%		
11	607	23.9%		
12	699	20.4%		
OAC	42	23.8%		
Ethnicity				
White	1531	23.0%	1.00 (reference)	0.83
Minority	508	23.4%	0.97 (0.75-1.27)	
Smoking Behaviour				
Smoking Status				
Experimental	645	23.5%	0.87 (0.66-1.14)	0.31
Established	1606	22.7%	1.00 (reference)	
Cigarettes per week				
None	387	22.1%	1.03 (0.98-1.10) ^b	0.26
1-5	395	25.6%		
6-10	154	20.0%		
11-20	211	24.5%		
21-30	258	22.2%		
31-50	282	20.1%		
51-100	245	19.1%		
100+	316	27.7%		
Health Knowledge				
Do you believe smoking is unhealthy?				
Not at all	196	29.3%	1.06 (0.83-1.37)	0.11
Slightly	226	18.8%	0.70 (0.51-0.98)	
Somewhat	523	26.7%	1.15 (0.90-1.47)	
Extremely	1243	21.2%	1.00 (reference)	

Table 18a Generalized Estimating Equation Less Harsh Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline (Wave 3) Continued

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Currently smoke Light/Low tar cigarette?				
Light/Low Tar	1173	23.9%	1.34 (1.10-1.63)	<0.001
Regular	1078	21.9%	1.00 (reference)	
Health Concern				
How likely do you think it is that smoking will lead to health problems for you?				
Very Unlikely	319	31.4%	1.75 (1.18-2.59)	0.01
Somewhat Unlikely	283	27.5%	1.41 (1.02-1.95)	
Somewhat Likely	774	21.1%	1.09 (0.79-1.51)	
Very Likely	829	20.6%	1.00 (reference)	
Have you ever felt like you were addicted to tobacco?				
Yes	1313	20.8%	0.73 (0.57-0.93)	0.008
No	823	27.2%	1.00 (reference)	
Light cigarettes less harsh				
Agree/Strongly Agree	940	38.7%	5.45 (4.34-6.84)	<0.001
Disagree/Strongly Disagree/Neutral/DK	1219	11.0%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable.

Table 18b Generalized Estimating Equation Smoother Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline (Wave 3)

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Demographic Variables				
Country				
Canada	1516	20.5%	0.65 (0.49-0.84)	<0.001
United States	735	28.2%	1.00 (reference)	
Sex				
Male	1105	25.3%	1.49 (1.18-1.87)	<0.001
Female	1136	20.6%	1.00 (reference)	
Grade				
8	52	22.9%	0.91 (0.83-1.00) ^b	0.05
9	281	32.5%		
10	562	20.6%		
11	607	23.9%		
12	699	20.4%		
OAC	42	23.8%		
Ethnicity				
White	1531	23.0%	1.00 (reference)	0.83
Minority	508	23.4%	0.97 (0.75-1.27)	
Smoking Behaviour				
Smoking Status				
Experimental	645	23.5%	0.87 (0.66-1.14)	0.31
Established	1606	22.7%	1.00 (reference)	
Cigarettes per week				
None	387	22.1%	1.03 (0.98-1.10) ^b	0.26
1-5	395	25.6%		
6-10	154	20.0%		
11-20	211	24.5%		
21-30	258	22.2%		
31-50	282	20.1%		
51-100	245	19.1%		
100+	316	27.7%		
Health Knowledge				
Do you believe smoking is unhealthy?				
Not at all	196	29.3%	1.06 (0.83-1.37)	0.11
Slightly	226	18.8%	0.70 (0.51-0.98)	
Somewhat	523	26.7%	1.15 (0.90-1.47)	
Extremely	1243	21.2%	1.00 (reference)	

Table 18b Generalized Estimating Equation Smoother Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline (Wave 3) Continued

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	<i>p</i> value
Currently smoke Light/Low tar cigarette?				
Light/Low Tar	1173	23.9%	1.34 (1.10-1.63)	<0.001
Regular	1078	21.9%	1.00 (reference)	
Health Concern				
How likely do you think it is that smoking will lead to health problems for you?				
Very Unlikely	319	31.4%	1.75 (1.18-2.59)	0.01
Somewhat Unlikely	283	27.5%	1.41 (1.02-1.95)	
Somewhat Likely	774	21.1%	1.09 (0.79-1.51)	
Very Likely	829	20.6%	1.00 (reference)	
Have you ever felt like you were addicted to tobacco?				
Yes	1313	20.8%	0.73 (0.57-0.93)	0.008
No	823	27.2%	1.00 (reference)	
Light cigarettes smoother on throat				
Agree/Strongly Agree	838	37.7%	3.96 (2.92-5.36)	<0.001
Disagree/Strongly Disagree/Neutral/DK	1319	13.6%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable.

Canadian adolescent smokers were significantly less likely to say that “light” cigarettes are healthier than regular cigarettes compared to adolescents in the United States ($p < 0.001$, $OR = 0.65$ 95% CI 0.49-0.84). Males were significantly more likely than females to say that “light” cigarettes are healthier than regular cigarettes ($p < 0.001$, $OR = 1.49$ 95% CI 1.18-1.87). Older respondents (those in a higher grade) were less likely than younger respondents to say that “light” cigarettes are healthier ($p = 0.05$, $OR = 0.91$ 95% CI 0.83-1.00). Those who reported that their current brand was a “light or low tar” cigarette were significantly more likely to say that “light” cigarettes are healthier compared to those whose current brand was a regular cigarette ($p < 0.001$, $OR = 1.34$ 95% CI 1.10-1.63). Adolescent smokers who did not think that smoking would lead to health problems for them (less health-concerned) were significantly more likely to believe that “light” cigarettes are healthier compared to those who were more health-concerned ($p = 0.01$; very unlikely that smoking would lead to health problems vs. very likely: $OR = 1.75$ 95% CI 1.18-2.59; Somewhat unlikely that smoking would lead to health problems vs. very likely: $OR = 1.41$ 95% CI 1.02-1.95). Respondents who had ever felt like they were addicted to tobacco were significantly less likely than those who had not felt addicted to tobacco to say that “light” cigarettes are healthier than regular cigarettes ($p = 0.008$, $OR = 0.73$ 95% CI 0.57-0.93).

The main goal of this dissertation was to determine whether the beliefs about the sensory properties of “light” cigarettes were significantly associated with the belief that “light” cigarettes are healthier. Indeed, there was a strong association between the sensory beliefs about “light” cigarettes and the belief that “light” cigarettes are healthier. Those who believed that “light” cigarettes are less harsh than regular cigarettes were more likely to say that “light” cigarettes are healthier ($p < 0.001$, $OR = 5.45$ 95% CI 4.34-6.84). Those who believed that

“light” cigarettes are smoother on the throat were significantly more likely to say that “light” cigarettes are healthier ($p < 0.001$, $OR = 3.96$ 95% CI 2.92-5.36).

4.4 STUDY 4 DISCUSSION

This was the first study to examine which factors are associated with the belief that “light” cigarettes are healthier among adolescent smokers in North America. The study demonstrated that consistent with research among adult smokers (Borland et al., 2004) a minority of smokers in Canada (20.5%) and the United States (28.2%) believed that “light” cigarettes are healthier than regular cigarettes. Also consistent with the research among adults, Canadians were significantly less likely to believe that “light” cigarettes are healthier compared to adolescents in the United States. A slightly higher proportion of adolescent smokers in Canada (20.5%) believed that “light” cigarettes are healthier compared to the proportion of Canadian adult smokers (14.7%) in our ITC Four Country Survey at Wave 1 baseline for both groups. A slightly lower proportion of adolescent smokers in the United States (28.2%) believed that “light” cigarettes are healthier than regular cigarettes compared to adult smokers believing that “light” cigarettes are less harmful our ITC Four Country Survey in the United States (32.0%).

Differences in the proportion of adolescents’ beliefs about “light” cigarettes compared to adults in Canada was most likely due to differences in the timing of the measures. The North American Student Smoking Survey Wave 3 was conducted in the Fall of 2001. Health Canada released an advertisement educating about the deception of “light” cigarettes in October of 2001. This would have been during or immediately following the NASSS survey in Canada. The ITC Four Country Survey Wave 1 was conducted in October of 2002. Therefore,

it makes sense that adolescents in Canada were more likely to believe that “light” cigarettes are healthier compared to adults in the ITC Four Country Survey because the NASSS Wave 3 survey was conducted before the advertisement would have any impact and the ITC Four Country Survey was conducted well after the advertisement aired. This advertisement was one example of how the public in Canada learned about the “light” deception. There were also numerous news stories that emerged around the time of this ad because in December of 2001 Health Canada published a notice of intent to regulate the “light/mild” descriptors.

The differences in proportion of adolescent and adult smokers in the United States who believed that “light” cigarettes are healthier/less harmful were much smaller and may have been due to differences in the measures. Adolescents in the North American Student Smoking Survey were asked whether “light” cigarettes are healthier would be a reason for smoking “light” cigarettes whereas adult smokers in the International Tobacco Control Four Country Survey were asked whether “light” cigarettes were less harmful.

A greater percentage of smokers believed that “light” cigarettes are smoother (40% in Canada; 36.5% in the United States) and that these cigarettes are less harsh (45.0% in Canada; 40.4% in the United States). Although these percentages are somewhat lower than what we found among adults in North America, this is the first study to demonstrate that adolescents also believe that “light” cigarettes are smoother or less harsh.

As hypothesized, the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harsh were both predictive of the belief that “light” cigarettes are healthier. Adolescents who believed that “light” cigarettes are less harsh were much more likely to believe that light cigarettes are healthier and in a separate model, adolescents who

believed that “light” cigarettes are smoother on the throat were much more likely to believe that “light” cigarettes are healthier. This was the first study to demonstrate that the powerful link between the perceived sensory characteristics of “light” cigarettes and the belief that these cigarettes are healthier exists even among adolescents in North America.

The model also demonstrated that adolescents who smoked a “light” cigarette were more likely to believe that “light” cigarettes are healthier compared to those who smoked a regular cigarette. This finding was consistent with the ITC 4-Country longitudinal analyses and supports the hypothesis that “light” cigarette smokers would be even more likely to believe that “light” cigarettes are less harmful. As noted in Study 2, and consistent with the model presented in Figure 1, “light” cigarette smokers are exposed to the marketing suggesting that their cigarettes are less harmful and this perception is reinforced by the sensory experience and the anticipation of the sensory experience of “light” cigarettes.

We found that respondents who believed that smoking would not lead to health problems for them (so those who were less concerned about their health) were more likely to believe that “light” cigarettes are healthier. We also found that those who believed that they were addicted to tobacco were less likely to believe that “light” cigarettes are healthier. Because this is a cross-sectional study, we cannot determine the direction of this relation. However, it seems likely that those who believe that “light” cigarettes are healthier would also be less concerned about their health and think that they are not as addicted to cigarettes. This could be because they either currently smoke “light” cigarettes and therefore expect that their health risks are reduced or they know that they can always smoke “light” cigarettes in the future as a risk reduction strategy.

This study was the first to examine factors that are associated with the belief that “light” cigarettes are healthier among adolescents in North America. Most importantly, this study demonstrated the powerful link between sensory beliefs about “light” cigarettes and the belief that these cigarettes are less harmful. These findings, however, are cross-sectional. A stronger study would be to examine whether the beliefs that “light” cigarettes are smoother and that “light” cigarettes are less harsh would predict the belief that “light” cigarettes are healthier longitudinally. This is the focus of Study 5, to which we now turn.

4.5 STUDY 5 INTRODUCTION

Study 4 established that there is an association between the sensory beliefs (that “light” cigarettes are less harsh and “light” cigarettes are smoother) and the belief that “light” cigarettes are healthier cross-sectionally. Study 5 extends the findings of Study 4 by examining which factors predict the belief that “light” cigarettes are healthier longitudinally among adolescent smokers in North America.

I examine:

- 1) Whether smokers who believe that “light” cigarettes are smoother on the throat and chest at Wave 3 will be significantly more likely to believe that “light” cigarettes are healthier at Wave 4. This is the main goal of the dissertation.
- 2) Whether smokers who believe that “light” cigarettes are less harsh at Wave 3 will be significantly more likely to believe that “light” cigarettes are healthier at Wave 4. This is also the main goal of the dissertation.

- 3) Whether “light” cigarette smokers at Wave 3 are more likely to believe that “light” cigarettes are healthier than regular cigarettes at Wave 4.

4.6 STUDY 5 METHODS

Participants

Wave 3 of the North American Student Smoking Survey (NASSS) was conducted in the Fall (October-December) of 2001 and Wave 4 was conducted in the Spring (April-May) of 2002 (the same school year). The same students were surveyed in their classrooms for the follow-up wave. Self generated identification codes were used to match respondents between waves. The response rate for Wave 4 was 71.8%. A total of 7,481 respondents completed the Wave 4 survey.

For the purposes of this study, only respondents who were experimental or regular smokers at both Waves 3 and 4 (n=6454 did not fall into these categories and were excluded), who smoked a cigarette characterizable as “light” or “regular” (n=252 were menthol smokers or didn’t respond to the question about type of cigarettes smoked and were therefore excluded) were included. In addition, to ensure that our respondents were the same individuals across waves, we excluded any respondents who had inconsistent responses (i.e., male at Wave 3, female at Wave 4 or 15 at Wave 3 13 at Wave 4) in age or sex across Waves 3 and 4 (n=47). The total sample size for this study was therefore 787. The retention rate based on these selection criteria for remaining in Wave 3 to Wave 4 was 40.1% in Canada (n=609) and 24.2% in the United States (n=178).

Procedure

Respondents from Wave 3 were re-surveyed in their classrooms for the Wave 4 survey. All survey protocols were consistent with Wave 3 (see Study 4). Research ethics approval for Waves 3 and 4 of this study was obtained from the University of Waterloo.

Measures

Measures for Study 5 were exactly the same as in Study 4. The dependent variable was the belief that “light” cigarettes are healthier at Wave 4. All covariates used in Study 4 (demographics and smoking behaviour, knowledge of health effects of smoking, use of “light” cigarettes, and health concerns about smoking) measured at Wave 3 of the NASSS were used in this study. Again, the main predictor variable was sensory perception which was asked in two different ways (“light” cigarettes feel smoother on your throat than regular cigarettes, and “light” cigarettes are less harsh than regular cigarettes) and evaluated in two separate models. Finally, to determine whether the belief that “light” cigarettes are healthier remains consistent across waves, the Wave 3 belief that light cigarettes are healthier was used to predict the Wave 4 belief that light cigarettes are healthier. This variable was also used as a control variable to determine the unique effect of the belief that light cigarettes are smoother and then in a separate model, that “light” cigarettes are less harsh on the later belief that light cigarettes are healthier. Consistent with Wave 3, all variables examining beliefs about “light” cigarettes were prefaced by the instruction: “Below are some reasons that people might give for smoking light or ultra-light cigarettes. For each one, please indicate your level of agreement or disagreement with the following statements.”

Statistical Analyses

SPSS (version 17) was used for all cross tabs and frequencies. SAS (version 9.1) was used to run generalized estimating equations (GEE) using the PROC GENMOD procedure. A generalized estimating equation (GEE) model was used to test which variables were independently associated with the belief that “light” cigarettes are healthier at Wave 4 while adjusting for clustering of responses within schools. Separate models were used to test whether: (1) the belief that “light” cigarettes feel smoother on your throat at Wave 3 is associated with the belief that “light” cigarettes are healthier at Wave 4 and (2) the belief that “light” cigarettes are less harsh at Wave 3 is associated with the belief that “light” cigarettes are healthier at Wave 4. All variables mentioned previously were employed as covariates.

4.7 STUDY 5 RESULTS

Unweighted sample characteristics across Canada and the United States are presented in Table 19. These characteristics (unless otherwise noted) are the Wave 3 responses for the subsample of respondents who qualified for this study (were established or experimental smokers at both waves, smoked either a “light/low tar” cigarette or a regular cigarette, and did not have any data across waves that was inconsistent, i.e., differences in age, sex, or smoking status that were impossible, for example becoming younger between waves). The samples were similar across Canada and the United States, with differences only in grade and ethnicity (which makes sense given that ethnicity groups in Canada and the United States should be different, and at the time of our survey, OAC still existed in Ontario). In both Canada and the United States, over half of the adolescent smokers in our sample reported currently smoking a

“light” cigarette. The proportion of “light” cigarette smokers in Canada remained higher (58.3%) compared to the U.S. (51.1%).

Table 19 Unweighted Descriptive Characteristics for the NASSS (Waves 3-4) (n=787)

Factor	n	Overall (n=787)	n	Canada (n=609)	n	United States (n=178)
Sex	$\chi^2(df=1)=0.56, p=0.45$					
Male	342	43.5%	269	44.2%	73	41.0%
Female	445	56.5%	340	55.8%	105	59.0%
Age (years)	$\chi^2(df=6)=5.33, p=0.50$					
13 or younger	9	1.1%	7	1.1%	2	1.1%
14	86	10.9%	60	9.9%	26	14.6%
15	224	28.5%	176	28.9%	48	27.0%
16	224	28.5%	180	29.6%	44	24.7%
17	203	25.8%	154	25.3%	49	27.5%
18	38	4.8%	29	4.8%	9	5.1%
19 or older	3	N/A	3	0.5%	0	N/A
Grade	$\chi^2(df=4)=38.72, p<0.001$					
8	0	N/A	0	N/A	0	N/A
9	104	13.2%	56	9.2%	48	27.0%
10	223	28.4%	180	29.7%	43	24.2%
11	231	29.4%	184	30.3%	47	26.4%
12	224	28.5%	184	30.3%	40	22.5%
OAC	3	N/A	3	0.5%	0	N/A
Ethnicity	$\chi^2(df=1)=3.97, p=0.05$					
White	610	81.9%	486	83.4%	124	76.5%
Minority	135	18.1%	97	16.6%	38	23.5%
Smoking Status Wave 3	$\chi^2(df=1)=2.77, p=0.10$					
Experimental	222	28.2%	163	26.8%	59	33.1%
Established	565	71.8%	446	73.2%	119	66.9%
Smoking Status Wave 4	$\chi^2(df=1)=0.00, p=0.99$					
Experimental	199	25.3%	154	25.3%	45	25.3%
Established	588	74.7%	455	74.7%	133	74.7%
Cigarettes per week	$\chi^2(df=7)=8.11, p=0.32$					
0	130	16.5%	100	16.4%	30	16.9%
1-5	150	19.1%	107	17.6%	43	24.2%
6-10	55	7.0%	41	6.7%	14	7.9%
11-20	84	10.7%	66	10.9%	18	10.1%
21-30	100	12.7%	83	13.7%	17	9.6%
31-50	105	13.4%	88	14.5%	17	9.6%
51-100	100	12.7%	77	12.7%	23	12.9%
100+	62	7.9%	46	7.6%	16	9.0%
Current brand smoked	$\chi^2(df=1)=2.88, p=0.09$					
Light/Low Tar	446	56.7%	355	58.3%	91	51.1%
Regular	341	43.3%	254	41.7%	87	48.9%

Beliefs about “Light” Cigarettes

Table 20 presents the overall beliefs about “light” cigarettes among smokers in the selected Wave 3 to Wave 4 sample across Canada and the United States. Overall, none of the differences in beliefs about “light” cigarettes were statistically significant across Canada and the United States. A greater proportion of Canadian high school smokers believed that “light” cigarettes are less harsh compared to regular cigarettes (46.6%) than were high school smokers in the U.S. (42.7%). A greater proportion of Canadian high school smokers also believed that “light” cigarettes are smoother on the throat than regular cigarettes (43.0%) compared to smokers in the U.S. (38.4%).

Consistent with Study 4 findings, a greater proportion of smokers from U.S. sample at Wave 3 believed that “light” cigarettes are healthier than regular cigarettes (28.7%) compared to smokers in Canada (22.4%). This pattern was the same at Wave 4; however, the proportion of smokers who believed that “light” cigarettes are healthier at Wave 4 was significantly less in both Canada (13.3%) and the U.S. (18.0%).

Table 20 Beliefs about “Light” Cigarettes: NASSS Baseline-Follow-Up (Waves 3-4)

Factor	n	Overall (n=787)	n	Canada (n=609)	n	United States (n=178)
Light Cigarettes less harsh			$\chi^2(df=1)=0.83, p=0.36$			
Disagree	415	54.2%	317	53.4%	98	57.3%
Agree	350	45.8%	277	46.6%	73	42.7%
Light Cigarettes smoother on throat			$\chi^2(df=1)=1.17, p=0.28$			
Disagree	444	58.0%	338	57.0%	106	61.6%
Agree	321	42.0%	255	43.0%	66	38.4%
Light Cigarettes are healthier (Wave 3)			$\chi^2(df=1)=2.93, p=0.09$			
Disagree	591	76.3%	469	77.6%	122	71.3%
Agree	184	23.7%	135	22.4%	49	28.7%
Light Cigarettes are healthier (Wave 4)			$\chi^2(df=1)=2.28, p=0.13$			
Disagree	657	85.7%	520	86.7%	137	82.0%
Agree	110	14.3%	80	13.3%	30	18.0%

Factors associated with the belief that “Light” Cigarettes are healthier

Tables 21a and 21b present the results of a generalized estimating equation (GEE) model to determine what factors at baseline (Wave 3) were independently associated with the belief that “light” cigarettes are healthier at follow-up (Wave 4). Once again 2 separate models were constructed to test the unique effect of the belief that “light” cigarettes are less harsh (Table 21a) in the first model and the unique effect of the belief that “light” cigarettes are smoother (Table 21b) on the throat in the second model. Again, because the same covariates were used in each model the results of the covariates were consistent across both models.

Older respondents (respondents in a higher grade) were more likely than younger respondents to say that “light” cigarettes are healthier ($p < 0.001$, OR=1.28 95% CI 1.08-1.51). Experimental smokers were significantly more likely than established smokers to say that “light” cigarettes are healthier ($p < 0.001$, OR=2.57 95% CI 1.48-4.45). Respondents who did not think that smoking was unhealthy were significantly more likely to believe that “light” cigarettes are healthier than regular cigarettes ($p = 0.03$, not at all unhealthy vs. extremely unhealthy OR=3.88 95% CI 1.40-10.77).

Other factors that had been significantly associated with the belief that “light” cigarettes are less harmful at Wave 3 were no longer significant predictors of this belief at Wave 4 (i.e., Canada vs. US, males vs. females, current brand light/low tar vs. regular, health concern, and perceived addiction).

The belief that “light” cigarettes are healthier at Wave 3 was a strong predictor of the belief that “light” cigarettes are healthier at Wave 4. Respondents who had this belief at Wave

3 were significantly more likely to have this belief at Wave 4 ($p < 0.001$, OR=6.12 95% CI 3.80-9.87).

The main focus of this dissertation was to determine whether the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harsh would each predict the belief that “light” cigarettes are less harmful. This study found that beliefs about the sensory properties of “light” cigarettes were not always significant predictors of the belief that “light” cigarettes are healthier at Wave 4. Consistent with the cross-sectional findings from Study 4, those who believed that “light” cigarettes are less harsh than regular cigarettes at Wave 3 were more likely to say that “light” cigarettes are healthier at Wave 4 ($p = 0.02$, OR=1.72 95% CI 1.08-2.72) (see Table 21a). However, those who believed that “light” cigarettes are smoother on the throat at Wave 3 were no more or less likely to say that “light” cigarettes are healthier at Wave 4 ($p = 0.94$, OR=1.02 95% CI 0.68-1.52) (see Table 21b).

Table 21a Generalized Estimating Equation of Less Harsh Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline-Follow-Up (Waves 3-4)

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Demographic Variables				
Country				
Canada	609	13.3%	0.71 (0.45-1.12)	0.14
United States	178	18.0%	1.00 (reference)	
Sex				
Male	342	15.8%	0.95 (0.61-1.49)	0.84
Female	445	13.2%	1.00 (reference)	
Grade				
8	0	0.0%	1.28 (1.08-1.51) ^b	<0.001
9	104	12.0%		
10	223	11.8%		
11	231	18.5%		
12	224	13.2%		
OAC	3	66.7%		
Ethnicity				
White	610	14.8%	1.00 (reference)	0.48
Minority	135	13.6%	0.77 (0.37-1.59)	
Smoking Behaviour				
Smoking Status				
Experimental	222	20.2%	2.57 (1.48-4.45)	<0.001
Established	565	12.1%	1.00 (reference)	
Cigarettes per week				
None	130	22.4%	1.06 (0.93-1.21) ^b	0.35
1-5	150	15.3%		
6-10	55	9.1%		
11-20	84	15.9%		
21-30	100	4.1%		
31-50	105	9.6%		
51-100	100	14.3%		
100+	62	23.3%		
Health Knowledge				
Do you believe smoking is unhealthy?				
Not at all	26	34.6%	3.88 (1.40-10.77)	0.03
Slightly	65	17.7%	1.79 (0.98-3.30)	
Somewhat	208	16.0%	1.25 (0.77-2.03)	
Extremely	481	12.2%	1.00 (reference)	

Table 21a Generalized Estimating Equation of Less Harsh Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline- Follow-Up (Waves 3-4) Continued

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Currently smoke Light/Low tar cigarette?				
Light/Low Tar	446	14.4%	0.97 (0.54-1.73)	0.92
Regular	341	14.3%	1.00 (reference)	
Health Concern				
How likely do you think it is that smoking will lead to health problems for you?				0.15
Very Unlikely	96	22.3%	1.63 (0.61-4.31)	
Somewhat Unlikely	105	24.0%	2.11 (1.04-4.28)	
Somewhat Likely	301	12.2%	1.23 (0.68-2.25)	
Very Likely	281	10.3%	1.00 (reference)	
Have you ever felt like you were addicted to tobacco?				0.67
Yes	464	12.3%	1.15 (0.60-2.21)	
No	285	17.8%	1.00 (reference)	
Light cigarettes are healthier (Wave 3)				
Agree/Strongly Agree	184	34.6%	6.12 (3.80-9.87)	<0.001
Disagree/Strongly Disagree/Neutral/DK	591	8.1%	1.00 (reference)	
Light cigarettes less harsh				
Agree/Strongly Agree	350	20.6%	1.72 (1.08-2.72)	0.02
Disagree/Strongly Disagree/Neutral/DK	415	9.3%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable.

Table 21b Generalized Estimating Equation of Smoother Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline- Follow-Up (Waves 3-4)

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Demographic Variables				
Country				
Canada	609	13.3%	0.71 (0.45-1.12)	0.14
United States	178	18.0%	1.00 (reference)	
Sex				
Male	342	15.8%	0.95 (0.61-1.49)	0.84
Female	445	13.2%	1.00 (reference)	
Grade				
8	0	0.0%	1.28 (1.08-1.51) ^b	<0.001
9	104	12.0%		
10	223	11.8%		
11	231	18.5%		
12	224	13.2%		
OAC	3	66.7%		
Ethnicity				
White	610	14.8%	1.00 (reference)	0.48
Minority	135	13.6%	0.77 (0.37-1.59)	
Smoking Behaviour				
Smoking Status				
Experimental	222	20.2%	2.57 (1.48-4.45)	<0.001
Established	565	12.1%	1.00 (reference)	
Cigarettes per week				
None	130	22.4%	1.06 (0.93-1.21) ^b	0.35
1-5	150	15.3%		
6-10	55	9.1%		
11-20	84	15.9%		
21-30	100	4.1%		
31-50	105	9.6%		
51-100	100	14.3%		
100+	62	23.3%		
Health Knowledge				
Do you believe smoking is unhealthy?				
Not at all	26	34.6%	3.88 (1.4-10.77)	0.03
Slightly	65	17.7%	1.79 (0.98-3.30)	
Somewhat	208	16.0%	1.25 (0.77-2.03)	
Extremely	481	12.2%	1.00 (reference)	

Table 21b Generalized Estimating Equation of Smoother Belief Predicting the Belief that “Light” Cigarettes are Healthier: NASSS Baseline- Follow-Up (Waves 3-4) Continued

Factor	n	“Light” Cigarettes are Healthier^a	Adjusted Odds Ratio (95% CI)	p value
Currently smoke Light/Low tar cigarette?				
Light/Low Tar	446	14.4%	0.97 (0.54-1.73)	0.92
Regular	341	14.3%	1.00 (reference)	
Health Concern				
How likely do you think it is that smoking will lead to health problems for you?				0.15
Very Unlikely	96	22.3%	1.63 (0.61-4.31)	
Somewhat Unlikely	105	24.0%	2.11 (1.04-4.28)	
Somewhat Likely	301	12.2%	1.23 (0.68-2.25)	
Very Likely	281	10.3%	1.00 (reference)	
Have you ever felt like you were addicted to tobacco?				0.67
Yes	464	12.3%	1.15 (0.60-2.21)	
No	285	17.8%	1.00 (reference)	
Light cigarettes are healthier (Wave 3)				
Agree/Strongly Agree	184	34.6%	6.12 (3.80-9.87)	<0.001
Disagree/Strongly Disagree/Neutral/DK	591	8.1%	1.00 (reference)	
Light cigarettes are smoother				
Agree/Strongly Agree	321	18.2%	1.02 (0.68-1.52)	0.94
Disagree/Strongly Disagree/Neutral/DK	444	12.0%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable.

4.8 STUDY 5 DISCUSSION

Consistent with research among young adults in Canada (CTUMS, 2003), the majority of Canadian smokers in our sample at both Waves 3 (54.9%) and Wave 4 (58.3%) smoked “light” cigarettes. Fewer smokers in the US smoked “light” cigarettes at both Waves 3 (46.4%) and Wave 4 (51.1%).

A lower proportion of respondents in our Study 5 sample at Wave 4 believed that “light” cigarettes are less harmful (13.3% in Canada, 18.0% in the US) compared to Wave 3 (22.4 in Canada, 28.7% in the US). As noted in Study 4, the Wave 3 NASSS survey in Canada was conducted in the Fall of 2001, slightly before a media campaign warning about the dangers of “light” cigarettes was launched as well as news coverage of Health Canada’s intent to regulate “light/mild” cigarettes (in December 2001). Wave 4 of the NASSS was conducted after the launch of media campaigns warning about the deception of “light” cigarettes (in the Spring of 2002). Therefore, education about the deception of “light” cigarettes occurred between Waves 3 and 4 in Canada and a subsequent drop in the belief that “light” cigarettes are healthier is not surprising. Further, the percentage of adolescent smokers who believe that “light” cigarettes are healthier (13.3% in Canada) was similar to the percentage of adult smokers in Canada (14.7%) in our ITC Four Country Survey at the same time point (Wave 4 of NASSS was conducted in the Spring of 2002 and Wave 1 of the ITC Four Country Survey was conducted a few months later in October of 2002).

This explanation does not, however, explain the sharp drop in the belief that “light” cigarettes are healthier in the United States, particularly since the belief that “light” cigarettes are less harmful was much higher among adults in our ITC Four Country Survey during a

similar time period. It is possible that asking adolescents about whether “light” cigarettes are healthier heightened awareness about the deception of “light” cigarettes and smokers in both countries were therefore more likely to know that “light” cigarettes are no healthier by the second wave. Another possibility is that the sample in the United States differed between waves because of the low retention rate of respondents in the United States across waves. In Canada, the retention rate was 40.1% whereas in the United States the retention rate was 24.2%. It’s possible that differences between waves therefore reflected differences in the samples across waves particularly in the United States where attrition between waves was greater.

Despite the fact that there were fewer respondents who believed that “light” cigarettes are healthier at Wave 4, the belief that “light” cigarettes are healthier at Wave 3 remained a very significant predictor of the belief that “light” cigarettes are healthier at Wave 4. This suggests the beliefs remain at least somewhat consistent between waves.

As hypothesized, the belief that “light” cigarettes are less harsh was a significant predictor of the belief that “light” cigarettes are healthier. Respondents who said that “light” cigarettes are less harsh at Wave 3 were significantly more likely to say that “light” cigarettes are healthier at Wave 4. Indeed, this relation was significant even after controlling for the existing belief that “light” cigarettes are healthier. The odds ratio of the belief that “light” cigarettes are less harsh predicting the belief that “light” cigarettes are healthier was less in the longitudinal model compared to the cross-sectional model. However, this is not surprising given that we were modelling having a belief approximately 7-8 months after the initial belief that “light” cigarettes are less harsh and after controlling for the existing belief that “light” cigarettes are healthier. Thus, we were able to tease out the unique contribution of the belief

that “light” cigarettes are less harsh. In fact, we may have been over-partialling by including prior beliefs about “light” cigarettes in our model.

In addition, the fact that the belief that “light” cigarettes are less harsh predicted the belief that “light” cigarettes are healthier longitudinally is even more powerful because we had a low retention rate for our sample of only those smokers who remained smokers between Waves 3 and 4. Yet despite the fact that we had a lower sample, we were still able to find a relation between the belief that “light” cigarettes are less harsh and the belief that “light” cigarettes are healthier.

In fact, the fact that we had potential overpartialling of our models (by including the prior belief that “light” cigarettes are healthier), and a low retention rate between waves may explain why the belief that “light” cigarettes are smoother did not predict the belief that “light” cigarettes are healthier longitudinally. The belief that “light” cigarettes are less harsh was stronger cross-sectionally which may be why it predicted the healthier belief longitudinally. However, the belief that “light” cigarettes are smoother was not as significant at Wave 3 and therefore may have been less likely to predict longitudinally after partialling out the effect of the initial belief that “light” cigarettes are healthier at Wave 3 with our low retention rate.

Although it is surprising that the belief that “light” cigarettes are smoother at Wave 3 did not predict the belief that “light” cigarettes are healthier at Wave 4, unlike what was found in the other studies in this dissertation, we still found evidence that sensory beliefs about “light” cigarettes predict the belief that “light” cigarettes are healthier. The belief that “light” cigarettes are less harsh seems to be more closely tied to the belief that “light” cigarettes are healthier at least among adolescents. Unfortunately, we did not ask about the belief that

“light” cigarettes are less harsh among any of our adult samples and we therefore don’t know whether the less harsh beliefs is also more closely linked the belief that “light” cigarettes are less harmful for adults.

Current “light” cigarette smokers were no more or less likely to believe that “light” cigarettes are healthier longitudinally. This is contrary to what was found in Study 1 using data from adults in the ITC 4 Country Survey. There was an association between being a “light” cigarette smoker and believing that “light” cigarettes are healthier cross-sectionally among North American adolescents in Study 4. However, as noted previously, it is possible that this relation was no longer significant longitudinally because the model was over-partialled by controlling for the prior belief that “light” cigarettes are healthier.

Experimental smokers were more likely than established smokers to say that “light” cigarettes are healthier. It is possible that experimental smokers use the belief that “light” cigarettes are healthier as an excuse to try smoking. Over time, established smokers may be less likely to have this belief but continue to smoke because they are already addicted. Future research should examine whether the belief that “light” cigarettes are healthier leads non-smokers to initiate smoking and whether this belief is associated with continuing to smoke regularly. Research should also examine whether smokers who believe that “light” cigarettes are healthier are less likely to try to quit smoking.

4.9 CHAPTER 4 GENERAL DISCUSSION

Studies 4 and 5 were the first studies to examine beliefs about and use of “light” cigarettes among adolescent smokers in both Canada and the United States. These studies found that consistent with research among adults, the sensory belief about “light” cigarettes is a powerful predictor of the belief that “light” cigarettes are healthier. The belief that “light” cigarettes are less harsh was a consistent predictor of the belief that “light” cigarettes healthier both cross-sectionally and longitudinally. The belief that “light” cigarettes feel smoother was associated with the belief that “light” cigarettes are healthier, but only cross-sectionally.

These studies also demonstrated that a minority of adolescents in North America believe that “light” cigarettes are less harmful. Our findings were consistent with those of the adults from Canada and the United States in the ITC 4 Country Survey (which was conducted during a similar time period as the NASSS).¹⁶ Adolescents in the NASSS were asked whether “light” cigarettes are healthier than regular cigarettes whereas adults in the ITC 4 Country Survey were asked whether “light” cigarettes are less harmful. Canadian adolescents (13.3% at Wave 4) were nearly identical in their belief that “light” cigarettes are healthier to Canadian adults belief that “light” cigarettes are less harmful (14.7% at Wave 1) at similar time points. Adolescents in the United States (18.0% in Wave 4) were much less likely than both Wave 1 and 2 US adult respondents (32.0% at Wave 1; 28.8% at Wave 2) to believe that “light” cigarettes are healthier (or in the adult sample that they are less harmful). This may be a reflection of differences in the NASSS adolescent sample in the United States which had a lower retention rate.

Adolescent smokers in our sample were less likely to believe that “light” cigarettes are smoother and that “light” cigarettes are less harsh compared to adult smokers in China, Canada, the United States, the United Kingdom, and Australia. Whereas the majority of smokers in these countries had this belief, 43% of smokers in Canada believed that “light” cigarettes are smoother and 38.4% of smokers in the United States had this belief. There are several possible explanations for these differences. First, it is possible that because adolescent smokers have less experience with smoking cigarettes (and using “light” cigarettes) they are less likely to know whether these cigarettes are smoother or less harsh. Indeed, fewer adolescents in Canada (58.3% adolescents at Wave 4 vs. 61.3% adults at Wave 2 in study 1) and the United States (51.1% adolescents at Wave 4 vs. 61.9% adults at Wave 2 in study 1) reported that their current brand was a “light” cigarette compared to adult smokers. Although package designs for “light” cigarette can convey the perception that the brand is smoother, the experience itself may also be a key component in reinforcing this perception.

This theory, however, would not explain why there were so many smokers in China who believed that their brand of cigarettes was smoother despite the fact that few smokers in China smoked a “light” or “low tar” cigarette. Cigarettes in China and North America may differ in their design (e.g. additives, ventilation, etc.) although research by O’Connor et al. (2010) suggests that Chinese cigarettes are very similar to North American cigarettes. It may be the case that this has more to do with the differences in smoking contexts. In China, advertising for “light” cigarettes is much more explicit and claims may actually say that a particular brand is smoother. The study in China was also conducted much later than the NASSS survey. There may have been more brands with “smooth” descriptors on the market in China during this time compared to North America because the tobacco industry has been

anticipating bans on “light” descriptors more recently. At the time of Waves 3 and 4 of the NASSS, no countries had banned “light” descriptors and discussions about the deception of “light” cigarettes were just beginning in North America. The use of “smooth” descriptors was therefore less important. Therefore the use of “smooth” descriptors, etc. may account for the higher percentage of smokers overall in China believing that “light” or “low tar” cigarettes are smoother compared to our Wave 4 NASSS survey which was conducted 4 years prior to the Wave 1 ITC China survey.

A second (most likely) explanation for the differences in adolescent and adult smokers’ beliefs about the smoothness of “light” cigarettes is that the belief items were measured differently. In the adult ITC 4 Country survey, we asked respondents whether they agreed/disagreed that “light” cigarettes are smoother on the throat and chest than regular cigarettes. In the adolescent NASSS survey, we asked respondents whether the belief that “light” cigarettes are smoother was a reason people might give for smoking “light” or “ultra-light” cigarettes. We would anticipate that reasons for smoking “light” cigarettes should be correlated with one’s own beliefs about “light” cigarettes. However, it is possible that smokers would not identify this as a reason for choosing these brands despite the fact that they may believe that these cigarettes are indeed “less harsh” or “smoother.”

Despite differences in methodology, measures, time periods, and across cultures, Studies 1 to 5 demonstrated a powerful association between the sensory belief that “light” or “low tar” cigarettes are smoother and the belief that “light” or “low tar” cigarettes are less harmful. This association was found both cross-sectionally and longitudinally across adults and adolescents in 5 countries: Canada, the United States, the United Kingdom, Australia, and

China. This finding predicts even above and beyond the prior belief that “light” cigarettes are less harmful (or healthier).

Studies 1 to 5 clearly demonstrate the urgent need to address the sensory properties of “light” cigarettes by regulating aspects of the product and package design that create the impression that a particular brand is smoother and therefore less harmful.

Limitations

These studies used a convenience sample of high school students in Canada and the United States. This sample was meant to provide similar demographic representation to allow for comparisons between Canada and the United States. However, these schools were not randomly selected and certain regions (i.e. Quebec) were not included in the sample. As a result, our findings are not representative of all adolescents in all of North America.

Our Wave 3 to Wave 4 sample may also be biased because we only selected respondents who continued to be smokers between Waves 3 and 4. Individuals who quit smoking between waves were therefore excluded from these analyses. However, in order to be consistent with the other studies in this dissertation, we wanted to focus on respondents who were current smokers. It was therefore necessary to exclude anyone who had quit smoking. We would, however, anticipate that those who quit smoking between waves would be very different in their beliefs about “light” cigarettes. For example, it is possible that those who quit smoking are less likely to believe that “light” cigarettes are healthier and are therefore more motivated to quit smoking to the extent that they are health-concerned. Future research should examine whether this hypothesis is accurate.

The measures developed for the North American Student Smoking Survey were designed before the measures used in the International Tobacco Control Surveys (ITC). Some of the questions were therefore not as optimal as we had asked in the ITC survey. For example, our dependent measure in the North American Student Smoking Survey was whether you believe that “light” cigarettes are healthier. This belief was improved upon by asking instead about whether you believed that “light” cigarettes are less harmful and this new measure was used in the ITC surveys. We hypothesized that respondents would be less likely to agree with the statement that “light” cigarettes are healthier because it is biased. Respondents may be reluctant to agree because of the term healthy when it is clear that cigarettes are not healthy. However, respondents might be more likely to agree that “light” cigarettes are less harmful because it would seem less foolish to have this belief. Overall the belief that “light” cigarettes are less harmful among adults and adolescents were similar in the baseline wave suggesting that these measures are fairly comparable.

The prompts for the measures used to assess beliefs about “light” cigarettes among smokers in the NASSS were also phrased differently compared to the ITC surveys. We asked whether the belief that “light” cigarettes are healthier, that “light” cigarettes are smoother, and that “light” cigarettes are less harsh would be a reason someone might give for smoking “light” or “ultra-light” cigarettes. It is possible that respondents may not think each of the beliefs is a reason someone might choose to smoke these brands but they would believe the statement (that “light” cigarettes are healthier, that they are smoother, that they are less harmful). It is also possible that because these statements are not personalized (we ask whether this is a reason “people might give” not a reason “you might give”), they may think there are people who would smoke light or ultra-light cigarettes for those reasons, even though they would not or do

not believe it themselves. We anticipate, however, that one's own beliefs about "light" cigarettes should be correlated with the belief that others would choose "light" cigarettes.

Next Studies

The focus of Studies 1 to 5 were to examine generally how the belief that "light" cigarettes/LLT cigarettes are smoother related to the belief that "light"/LLT cigarettes are less harmful across adults and adolescents in: Canada, the United States, the United Kingdom, Australia, and China.

Now that we have established the universality of the influence of the belief that "light"/LLT cigarettes are smoother on the belief that "light"/LLT cigarettes are less harmful, it is important to examine beliefs about one's own brand. It is important to know that across smokers of "light" and regular cigarettes, the belief that "light"/LLT cigarettes are smoother predicts the belief that "light"/LLT cigarettes are less harmful. However, linking the perception that your brand is smoother (based on the sensory and marketing aspects of your particular brand) to the belief that your brand of cigarettes is less harmful is the next logical step.

CHAPTER 5: WHAT FACTORS ARE ASSOCIATED WITH THE BELIEF THAT “YOUR OWN BRAND OF CIGARETTES” IS LESS HARMFUL CROSS- SECTIONALLY? EVIDENCE FROM THE INTERNATIONAL TOBACCO CONTROL CANADA AND CHINA STUDIES

5.0 CHAPTER 5 INTRODUCTION

The previous studies extended research demonstrating that adult smokers in 5 countries, and adolescents in North America, believed that LLT cigarettes are less harmful. These studies also demonstrated that in every one of these groups, the belief that LLT cigarettes are less harmful was predicted by the sensory belief that LLT cigarettes are either smoother or less harsh. This link was established across all groups both cross-sectionally and longitudinally.

However, previous research has not addressed the central question which is whether smokers believe that their own brand of cigarettes is less harmful. To what extent do smokers believe that their brand of cigarettes is less harmful? Does the perception that your own brand is smoother predict believing that your brand of cigarettes is less harmful? Then finally, are smokers whose brand is a “light” or “low tar” cigarette more likely to say that their brand is smoother and therefore that their brand is less harmful?

This is the first series of studies to examine beliefs about one’s own brand rather than general beliefs about “light” or “low tar” cigarettes among all smokers. These studies focused on smokers’ general ideas about “light” cigarettes but did not ask smokers about their own brand. Beliefs about smokers’ own brand are even more powerful because these beliefs do not need to rely on the smoker being able to identify the type of cigarette (e.g., “light”) that he/she smokes. It is both personal and specific to relate the smokers’ perceptions of smoking (and marketing) of their cigarette to their perceptions of the relative harmfulness of their own

cigarette brand. This research lays the foundation for future studies to examine product and package characteristics that influence the belief that your brand is smoother and consequently that your brand is less harmful. Additionally, future research can link beliefs about one's own brand of cigarettes to changes in a respondents' behaviour (e.g., quitting, smoking initiation).

Studies 6 and 7 therefore examine the relation between believing that your brand of cigarettes is smoother and believing that your brand of cigarettes is less harmful among smokers in both Canada (a Western country with a long history of "light" cigarette use as well as a history of messages countering the deceptive nature of "light" cigarettes) and China (an Eastern country with a shorter history of "light" cigarette use and continued "light" cigarette advertising with explicit health claims).

In addition, we will examine whether your brand is a LLT cigarette predicts the belief that your cigarette is less harmful. Finally, we will test whether the belief that your brand is smoother mediates the relation between whether you smoke a LLT cigarette and whether you believe that your cigarette is less harmful. Study 6 will examine these research questions cross-sectionally in Canada, and Study 7 will examine these research questions cross-sectionally in China. We are unable to examine these issues longitudinally at this time because the data for the follow-up waves are currently being collected in both of these countries.

5.1 STUDY 6 INTRODUCTION

The purpose of Study 6 is to examine which factors are associated with the belief that your cigarettes are less harmful among adult smokers in Canada cross-sectionally. Canada was

the only country that was selected from the ITC Four Country Survey for Wave 6. I chose only Canada for this study because rather than relying on self reported data about whether the smoker's brand was a LLT cigarette, I used information provided about their cigarette brand and coded it into "light" or "regular" categories. I was able to do this only for because of my familiarity with these brands. There was a voluntary removal by the tobacco industry of "light" and "low tar" descriptors that was introduced immediately before the start of our survey wave (these terms were to be completely removed by August 2007). However, many of the new terms used to describe "light" and "regular" cigarettes were documented in Canada (Physicians for a Smoke-Free Canada, 2007). In addition, many terms such as "light" and "regular" to describe their brand continued to be used by respondents. In the other three countries (the United States, the United Kingdom, and Australia) complete information on brands and whether they were LLT was not available.

Brands in the United Kingdom and Australia were more difficult to code because these terms had been banned many years before our ITC Four Country Survey Wave 6 (in 2003 in the United Kingdom, in 2005 in Australia). There was much more variability therefore, in the terms that were used in these countries and many were unfamiliar (e.g., purple). The brands from the United States did have terms such as "light" and "regular" still on cigarette packages, but again there were brands I was unfamiliar with and therefore unable to code. I therefore decided that for the purposes of this study I would focus only on beliefs about the harmfulness of one's own brand of cigarettes among smokers in Canada only.

I examine:

- 1) Whether smokers who believe that “my brand of cigarettes” is smoother on the throat will be significantly more likely to believe that their brand of cigarettes is less harmful. This is the main goal of this dissertation.
- 2) The prevalence of the belief that “my brand of cigarettes” is smoother on the throat in the ITC Wave 6 survey in Canada.
- 3) Whether “light” cigarette smokers will be more likely to say that their brand of cigarettes is less harmful compared to regular cigarette smokers.
- 4) Whether “light” cigarette smokers will be more likely to say that “my cigarettes” are smoother and therefore that their brand is less harmful. In other words, whether the perception that “my cigarettes” are smoother mediates the relation between being a “light” cigarette smoker and the belief that your brand is less harmful.

5.2 STUDY 6 METHODS

Participants

Respondents were from Wave 6 of the ITC Four Country Survey conducted September 2007 to February 2008. Respondents were either from the recontact sample (from previous waves) or from the Wave 6 replenishment sample. Table 22 provides the recontact and replenishment rates for Wave 6 respondents. As mentioned, for the purposes of this study we only selected respondents from Canada (n=2015) because we wanted to code the respondent’s current brand (into “light” or regular cigarette categories). Respondents who smoked menthol cigarettes (n=80) or whose brands could not be categorized (n=522) were excluded. Only daily

or weekly smokers were selected (n=325 quitters or monthly smokers were removed). The total n for this study was therefore 1,088.

Table 22 Recontact and Replenishment Rates Waves 1-6: ITC Canada

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Recontact Rate (%)	N/A	75.8%	71.2%	74.4%	70.6%	72.4%
Recontact Rate (n)	N/A	1679	1563	1510	1428	1460
Replenishment (n)	N/A	517	545	519	594	555
Overall (n)	2214	2196	2108	2029	2022	2015

Procedures

The procedures used for Wave 6 of the International Tobacco Control 4 Country Survey (ITC-4) were exactly the same as those used at Waves 1 and 2 (see Study 1).

Measures

The measures used in this study were not exactly the same as those used in Study 1. Although in Study 1, I examined beliefs about “light” cigarettes among smokers across the four countries, the main goal of the current study was to examine beliefs about one’s own brand of cigarettes cross-sectionally among smokers in Canada. The results of this study would not be directly comparable to Study 1 in any case. In addition, we wanted this study to be as comparable to Study 7 among smokers in China as possible. We therefore changed some variables to be consistent with our ITC China Survey (Study 7). I have noted where such variables have been changed. For the entire ITC Four Country Wave 6 survey see Appendix J: ITC Four Country Survey Wave 6.

Dependent Variable

Beliefs About the Harmfulness of Respondents' Own Brand of Cigarettes

Respondents were asked: "Based on your experience of smoking, do you think that the brand you usually smoke [current brand], might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands?" Responses were: 1=A little less harmful 2=No different 3=A little more harmful. "Don't know" responses were excluded.¹⁷ This variable was recoded so that 1=A little less harmful and 0=A little more harmful/No different.

Independent variables

Demographics and Smoking Behaviour

Standard demographic measures included: sex (female/male), age (categorized as: 18-24, 25-39, 40-54, 55+), ethnicity (minority group which was coded as non-white vs. majority group which was coded as white), household income per month (categorized as: low, medium, high, no answer), and education (categorized as: low, medium, high). Measures of cigarette consumption included: daily/weekly smoking, and cigarettes per day.¹⁸

Knowledge of Health Effects of Smoking

Respondents were asked whether smoking causes: stroke, impotence, blindness, peripheral vascular disease, mouth and throat cancer, lung cancer in non-smokers, and whether second hand smoke causes asthma in children. Responses were coded so that no and don't know=0 and yes=1. Responses were then summed together to form the measure of health knowledge (ranging from 0 to 6). The Cronbach alpha for this scale was 0.71 which suggests that this scale was reasonably reliable.

Self-Reported Use of “Light” Cigarettes

Respondents who had a brand that they usually smoked regularly were asked to give the name of the brand and the variety. Survey interviewers were given detailed instructions about how to probe to ensure that they got detailed brand information so that brands could be coded according to strength.¹⁹ Brands were initially assigned to one of 44 categories which were then assigned as “light/ultra light,” “regular,” “menthol” or system missing. Menthol categories were removed for these analyses and the final variable was therefore coded as: “light/ultra light” vs. “regular.” Table 23 provides the brand coding for each respondents’ brand.

We did not ask respondents whether they currently smoked a cigarette described as “light,” “mild” or “low tar” at this wave and we therefore could not determine the correlation between this self-ascription and our own categorizations based on their reported cigarette brand. We also did not ask respondents to provide the tar level of their primary brand of cigarettes as we had in the ITC China study. Further, we were unable to code the tar level of each brand because we did not have comprehensive data on ISO tar values by brand name (we had data for 21 of the 214 brands).

Table 23 Brand Coding for Respondents' Current Brand: ITC Canada

Brand Name Contains the Word(s)	Strength Code
'Mild'	'Light'
'Regular'	'Regular'
'Light'	'Light'
'Menthol'	'Menthol'
'Smooth'	'Light'
'Extra Mild'	'Light'
'Light Smooth'	'Light'
'Gold'	'Regular'
'Light Menthol'	'Menthol'
'Extra Light'	'Light'
'Ultra Light'	'Light'
'Ultra Light Menthol'	'Menthol'
'Ultra Mild'	'Light'
'Roll Your Own'	'System Missing'
'Silver'	'Light'
'Special Mild'	'Light'
'Edition'	'System Missing'
'Medium'	'Regular'
'Blonde Regular'	'System Missing'
'Blonde Light'	'Light'
'Special'	'System Missing'
'Medium Light'	'Light'

Table 23 Brand Coding for Respondents' Current Brand: ITC Canada (Continued)

Brand Name Contains the Word(s)	Strength Code
'Slims'	'Light'
'Slims Menthol'	'Menthol'
'Slims extra mild'	'Light'
'Slims extra mild menthol'	'Menthol'
'Medium ultra mild'	'Light'
'Special light'	'Light'
'Mellow'	'Light'
'Blue'	'System Missing'
'Subtle'	'Light'
'Select'	'System Missing'
'Menthol Smooth'	'Menthol'
'Ultra Smooth'	'Light'
'Extra Smooth'	'Light'
'Sapphire'	'System Missing'
'Special Menthol'	'Menthol'
'Black'	'Regular'
'Red'	'Regular'
'Special Mild Menthol'	'Menthol'
'Premiere'	'System Missing'
'Sky'	'System Missing'
'Unknown'	'System Missing'
'N/A'	'System Missing'

Health Concerns about Smoking

To assess concerns about the impact of smoking on their health, respondents were asked: “to what extent, if at all, has smoking damaged your health? (1= not at all/don’t know, 2=just a little, 3=a fair amount, 4=a great deal). To assess concerns about the future impact of smoking on their health, respondents were asked: “how worried are you, if at all, that smoking will damage your health in the future?” (1=not at all worried, 2=a little worried, 3=moderately worried, 4=very worried).²⁰

We also asked smokers to describe their health with response options from 1=poor to 5= excellent. In addition, smokers were asked whether they considered themselves addicted to cigarettes (yes-very addicted, yes-somewhat addicted, not at all). Response options for respondents who said they didn’t know whether they were addicted to cigarettes and who refused to answer were coded as ‘system missing.

Sensory Beliefs about Own Brand

Respondents were asked: “We are interested in the experiences you have with the cigarettes you smoke. Thinking about the cigarettes you usually smoke in relation to other cigarettes, are your cigarettes...Harsher or smoother on your throat?” Response options were: 1=Harsher, 2=About the same, 3=Smoother. Responses were recoded so that 1=Smoother and 0=Harsher/About the same.²¹

Statistical Analyses

SPSS (version 17) was used for all statistical analyses. A complex samples logistic regression model was used to test which variables were independently associated with the

belief that “your current brand” is less harmful. All analyses were conducted on weighted data and all variables mentioned previously were employed as predictors. Analyses were conducted in two steps. The first step was to enter all covariates into the model. The second step was to enter all covariates and the addition of the main explanatory variable (the belief that “your cigarettes” are smoother) into the model. The odds ratios and p values from the first model are therefore reported for the covariates and then the odds ratio and p value for the belief that “your cigarettes” are smoother is reported from the second model. The values reported therefore demonstrate the unique effect of the belief that “your cigarettes” are smoother after controlling for the covariates. The reported values for covariates are the unique effect of the covariates without controlling for the explanatory variable (that “your cigarettes” are smoother).

5.3 STUDY 6 RESULTS

Table 24 presents the unweighted and weighted sample characteristics for respondents from Canada only who participated in Wave 6 of the ITC Four Country Survey. This sample was somewhat different from the Canadian sample of the ITC Four Country Survey at Wave 1 because there were fewer respondents who smoked a “light” or “low tar” cigarette (45.6% in the weighted sample at Wave 6 compared to 61.3% at Wave 1). However, the measure we used to code cigarette brand strength at Wave 6 was more conservative because it was based on standardized coding of brands rather than respondents’ self report of whether they smoked a “light” cigarette.

Table 24 Unweighted and Weighted Descriptive Characteristics for ITC Canada Respondents from Wave 6 (n=1088)

Factor	n	Unweighted	Weighted
Sex			
Male	451	41.5%	53.7%
Female	637	58.5%	46.3%
Age			
18-24	71	6.5%	14.3%
25-39	313	28.8%	33.0%
40-54	441	40.5%	35.0%
55+	263	24.2%	17.7%
Ethnicity			
Majority	976	89.7%	88.9%
Minority	112	10.3%	11.1%
Income			
Low	268	24.6%	21.9%
Medium	385	35.4%	37.1%
High	360	33.1%	35.4%
Don't Know	75	6.9%	5.7%
Education			
Low	465	42.8%	41.7%
Medium	404	37.2%	38.6%
High	217	20.0%	19.7%
Daily/Weekly Smoking			
Daily smoker	1040	95.6	94.7%
Weekly smoker	48	4.4%	5.3%
Cigarettes per day			
1-10	345	31.7%	32.6%
11-20	486	44.7%	44.1%
21-30	221	20.3%	20.1%
31+	36	3.3%	3.3%
Current brand smoked			
Light/Low Tar	509	46.8%	45.6%
Regular	579	53.2%	54.4%

Beliefs About Own Brand of Cigarettes

Table 25 presents the overall beliefs about Canadian smokers' own brand of cigarettes at Wave 6. "Light" cigarette smokers were significantly more likely to say that their brand of cigarettes are smoother (75.3%) compared to regular cigarette smokers (58.7%). "Light" cigarette smokers were also significantly more likely to say that their brand of cigarettes are a little less harmful than other brands (25.5%) compared to "regular" cigarette smokers (8.3%).

Table 25 Beliefs about your brand: ITC Canada (Wave 6)

Factor	n	Overall (n=1088)	n	"Light" Cigarette Smokers	n	Regular Cigarette Smokers
My brand...			$\chi^2(df=2)=33.05, p<0.001$			
Harsher	160	15.4%	52	10.5%	108	19.9%
About the same	186	18.0%	70	14.2%	116	21.4%
Smoother	690	66.6%	372	75.3%	318	58.7%
My brand...			$\chi^2(df=2)=73.68, p<0.001$			
No different	808	75.9%	355	70.8%	453	80.3%
A little less harmful	174	16.3%	128	25.5%	46	8.3%
A little more harmful	83	7.8%	18	3.6%	65	11.5%

Factors Associated with the Belief that Respondents' Own Brand of Cigarettes is Less Harmful

Table 26 presents the results of a weighted binary logistic regression in to determine which factors at Wave 6 in Canada were associated with the belief that "your brand is a little less harmful."

Respondents in the minority group (non-white) were significantly more likely to say that their brand of cigarettes is less harmful than other brands ($p=0.04$, $OR=1.84$ 95% CI 1.05-3.24). Respondents who were more knowledgeable about the health effects of smoking were less likely to say that their brand of cigarettes is less harmful than other brands ($p=0.04$, $OR=0.88$ 95% CI 0.78-1.00). Respondents who were more concerned that smoking would damage their health in the future were more likely to say that their brand of cigarettes is less harmful than other brands ($p=0.008$, “a little” vs. “not at all” $OR=2.54$ 95% CI 1.26-5.15; “a great deal” vs. “not at all” $OR=3.31$ 95% CI 1.49-7.34). “Light” or “low tar” cigarette smokers were more likely than regular cigarette smokers to say that their brand of cigarettes is less harmful than other brands ($p<0.001$, $OR=3.51$ 95% CI 2.26-5.46).

The main goal of this study was to determine whether the belief that your own brand of cigarettes is smoother is significantly associated with the belief that your own brand of cigarettes is less harmful. Indeed we found evidence to support this hypothesis. Smokers who believed that their brand of cigarettes was smoother were significantly more likely to say that their brand of cigarettes was less harmful compared to those who said that their brand of cigarettes was harsher or about the same ($p=0.004$, $OR=2.23$ 95% CI 1.29-3.86).

Table 26 Logistic Regression of belief “your brand is less harmful”: ITC Canada Wave 6

Factor	n	Your Brand Less Harmful^a	Adjusted Odds Ratio (95% CI)	p value
Demographic variables				
Sex				
Male	637	17.9%	0.83 (0.55-1.27)	0.40
Female	451	15.4%	1.00 (reference)	
Age (years)				0.68
18-24	71	13.6%	1.00 (reference)	
25-39	313	15.4%	1.08 (0.43 – 2.71)	
40-54	441	18.0%	1.28 (0.51 – 3.22)	
55+	263	18.5%	1.47 (0.57 – 3.80)	
Ethnicity				0.04
Majority	976	15.5%	1.00 (reference)	
Minority	112	25.3%	1.84 (1.05 – 3.24)	
Income				0.67
Low	268	15.0%	1.87 (0.50 – 1.50)	
Medium	385	16.9%	1.07 (0.65 – 1.75)	
High	360	17.6%	1.00 (reference)	
Don't Know	75	13.3%	0.64 (0.28 – 1.47)	
Education				0.30
Low	465	15.2%	0.69 (0.40 – 1.18)	
Medium	404	15.7%	0.69 (0.41 – 1.16)	
High	217	20.8%	1.00 (reference)	
Smoking Behaviour				
Daily/Weekly Smoking				0.70
Daily smoker	1040	16.6%	1.20 (0.47 – 3.03)	
Weekly smoker	48	17.0%	1.00 (reference)	
Cigarettes per day				0.64
0-10	345	14.6%	1.01 (0.98 – 1.03) ^b	
11-20	486	19.2%		
21-30	221	15.4%		
31+	36	7.8%		
Health Knowledge				
0	34	22.1%	0.88 (0.78 – 1.00) ^b	0.04
1	28	26.4%		
2	38	16.4%		
3	74	16.0%		
4	158	20.9%		
5	260	17.7%		
6	354	15.1%		
7	138	12.1%		

Table 26 Logistic Regression of belief “your brand is less harmful”: ITC Canada Wave 6 Continued

Factor	n	Your Brand Less Harmful^a	Adjusted Odds Ratio (95% CI)	p value
Current brand smoked				
Light/Low Tar	509	25.2%	3.51 (2.26 – 5.46)	<0.001
Regular	579	9.3%	1.00 (reference)	
Health Concern				
Worried Smoking has Damaged Health				0.20
A Great Deal	129	9.9%	0.38 (0.15 – 0.95)	
A Fair Amount	273	16.4%	0.77 (0.39 – 1.54)	
A little	495	17.2%	0.83 (0.46 – 1.50)	
Not at all/Don't know	191	20.0%	1.00 (reference)	
Worried Smoking will Damage Health				0.008
A Great Deal	293	19.5%	3.31 (1.49 – 7.34)	
A Fair Amount	337	13.1%	1.80 (0.83 – 3.89)	
A little	310	19.7%	2.54 (1.26 – 5.15)	
Not at all/Don't know	148	11.7%	1.00 (reference)	
Describe your health				0.79
1 Poor	51	12.4%	1.03 (0.82-1.30) ^b	
2 Fair	187	12.7%		
3 Good	461	17.4%		
4 Very Good	292	19.2%		
5 Excellent	96	14.1%		
Perceived Addiction				
Very	779	15.0%	0.42 (0.12 – 1.46)	
Somewhat	280	20.0%	0.60 (0.18 – 2.04)	
Not at all	27	22.7%	1.00 (reference)	
Your brand smoother				0.004
Smoother	690	21.2%	2.23 (1.29-3.86)	
Harsher or the same	346	9.0%	1.00 (reference)	

^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable

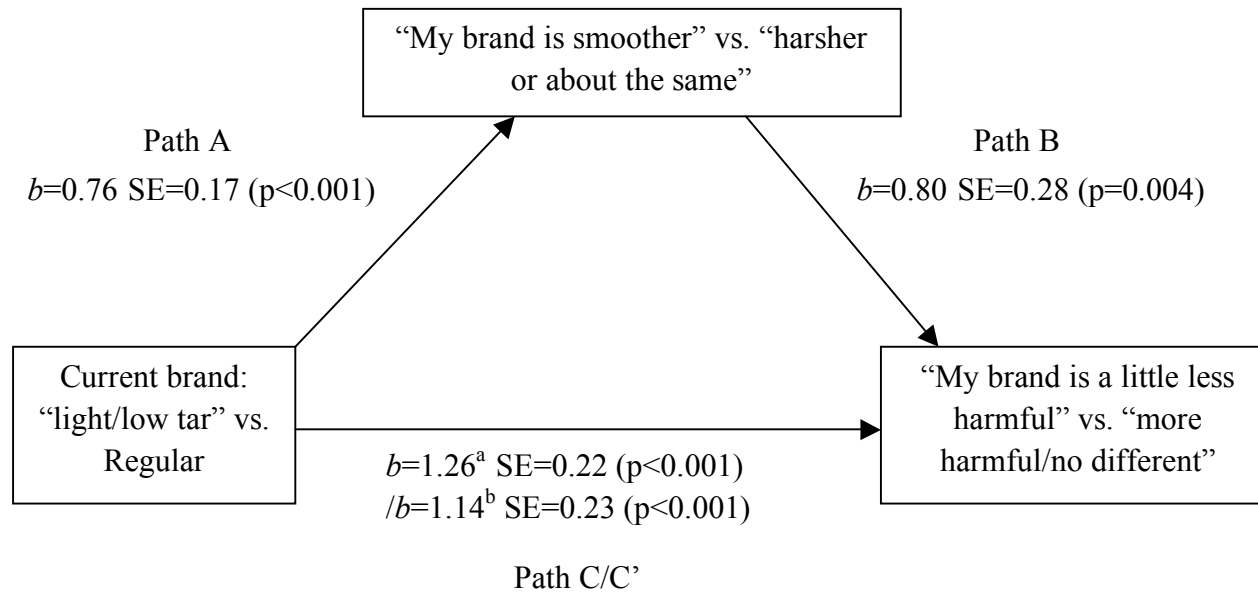
Does the Belief that Respondents' Own Brand of Cigarettes is Smoother Mediate the Relation Between Being A Current "Light" Cigarette Smoker and Believing that Respondents' Brand of Cigarettes Is A Little Less Harmful?

Figure 3 demonstrates the results of a mediation analysis to determine whether the belief that respondents' own brand of cigarettes is smoother mediates the relation between being a current "light" cigarette smoker and believing that your own brand of cigarettes is a little less harmful. We hypothesized that "light/low tar" cigarette smokers would be more likely to say that their brand of cigarettes is less harmful to the extent that they believed that their brand of cigarettes is smoother.

Baron and Kenny (1986) recommend that a mediation model be tested by using the following steps: (1) Regress the mediator on the independent variable; (2) Regress the dependent variable on the independent variable; (3) Regress the dependent variable on both the independent variable and the mediator. The effect of the independent variable on the dependent variable should be significantly lower after controlling for the effect of the mediator. The Sobel Test is used to provide the significance test for the mediational model.

Figure 3

Does the belief that one's brand is smoother mediate the relation between being a current "light/low tar" cigarette smoker and believing that one's brand is a little less harmful?



Sobel Test for Mediation: $z=2.43, p=0.02$

^aThe first coefficient is the relation between current brand and my brand less harmful (controlling for the other covariates in the model)

^bThe second coefficient is the effect of current brand after controlling for the effect of the "my brand is smoother" belief (and the other covariates in the model).

The test of the mediation supported our hypothesis: those who were current “light/low tar” cigarette smokers were more likely to say that their brand is less harmful to the extent that they believed that their brand is smoother. Path A: the regression of the mediator (the belief that your brand is smoother) on the independent variable (current brand of cigarettes “light/low tar” vs. regular) was significant. “Light/low tar” cigarette smokers were significantly more likely than regular cigarette smokers to say that their brand is smoother ($p < 0.001$, $b = 0.76$, $SE = 0.17$). Path C: the regression of the dependent variable (the belief that your brand is less harmful) on the independent variable (current brand of cigarettes “light/low tar vs. regular”) was significant. “Light/low tar” cigarette smokers were significantly more likely than regular cigarette smokers to say that their brand of cigarettes is a little less harmful ($p < 0.001$, $b = 1.26$, $SE = 0.22$). Path B: the regression of the dependent variable (the belief that your brand is less harmful) on both the independent variable (current brand of cigarettes “light/low tar” vs. regular”) and the mediator (the belief that your brand is smoother) was also significant. Those who said that their brand is smoother were significantly more likely to say that their brand is a little less harmful compared to those who said that their brand is harsher or about the same ($p = 0.004$, $b = 0.80$, $SE = 0.28$). Path C’ was also significant: by having the belief that your brand is smoother in the model the effect of current brand “light/low tar” vs. regular on the belief that your brand is less harmful was reduced ($p < 0.001$, $b = 1.14$, $SE = 0.23$). The Sobel test of significance for this mediation model was significant (Sobel=2.43, $p = 0.02$). Therefore, “light/low tar” cigarette smokers were more likely to say that their brand is a little less harmful to the extent that they say that their brand is smoother.

5.4 STUDY 6 DISCUSSION

The majority of smokers in our Canadian sample believed that their brand of cigarettes was smoother than other brands (66.6%). However, “light” cigarette smokers (75.3%) were more likely than regular cigarette smokers (58.7%) to believe that their cigarettes were smoother. As depicted in the model in Figure 1, “light” cigarettes are designed to be smoother (through the use of filter ventilation, additives, etc.) and therefore “light” cigarettes should feel smoother when smoked. This physical experience of smoothness is reinforced by the fact that “light” cigarettes are marketed as smoother in their packaging, descriptors, etc. Although all smokers are exposed to marketing for “light” cigarettes and therefore would understand that “light” cigarettes should be smoother, we would expect that “light” cigarette smokers should be even more likely to believe that their brand of cigarettes are smoother because their physical experience of smoking these cigarettes would be reinforced by their exposure to “light” cigarette marketing.

Some smokers in Canada also continued to believe that their brand of cigarettes were a little less harmful. This was much higher among smokers who smoked a “light” cigarette brand (25.5%) than among smokers who smoked a regular brand (8.3%).

The main goal of this dissertation was to determine whether the belief that your brand of cigarettes is smoother was associated with the belief that your brand of cigarettes is less harmful. Indeed, the belief that your brand of cigarettes is smoother was a powerful predictor of the belief that your brand is less harmful. This study therefore provides evidence that is personal and specific to smokers’ beliefs about their own brand of cigarettes rather than the general concept of “light” cigarettes.

Whether you smoked a “light” cigarette brand was also an important predictor of the belief that your brand of cigarette is less harmful. We therefore tested a mediational model to determine whether the belief that your cigarette is smoother would mediate the relation between whether you smoked a “light” cigarette and whether you believed that your cigarette was less harmful. Indeed, there was evidence of a mediation. “Light” cigarette smokers were more likely to believe that their cigarettes were smoother, and as a consequence, that their brand was less harmful.

The data for this study were collected immediately following a voluntary removal of “light” descriptors in Canada. However, respondents in our survey continued to use terms such as “light” when asked to provide their brand name. “Light” cigarette smokers were also more likely to believe that their brand of cigarettes is less harmful. This suggests that the immediate impact of the removal of “light” descriptors did not eliminate the belief that these cigarettes are less harmful. Future research should examine the long term impact of the removal of “light” descriptors on the belief that one’s brand of cigarettes is less harmful in Canada.

These findings demonstrate the powerful impact of the belief that your cigarettes are smoother on the belief that your cigarettes are less harmful. These findings were the first to link perceptions of the sensory experience of one’s own brand to the belief that your brand is less harmful. These findings also highlight the particular importance of the belief that your brand is smoother for “light” cigarette smokers in predicting the belief that your brand is less harmful. This is further evidence that supports the idea that as long as the sensory perception of one’s brand remains, smokers will have difficulty believing that their brand is just as harmful (Shiffman, 2001a). Eliminating descriptors such as “light” or “low tar” is one strategy to change the belief that these cigarettes are less harmful. However, to truly change beliefs

about the relative harmfulness of cigarettes, other cigarette design features and marketing for “light” cigarettes that conveys the perception that one brand is smoother than another must also be eliminated. In the meantime, media campaigns should also focus on the sensory experience of cigarettes and point out that even if your cigarette feels smoother, it is an illusion that has been specifically engineered by the tobacco industry and, in fact, it is just as harmful.

These findings focused on smokers in Canada, a Western country that has had many media campaigns educating the public about the fact that “light” cigarettes are just as harmful as regular cigarettes. The next study will extend this research by examining whether the same conclusions can be drawn in China, a country where little is known about the health effects of smoking and where the belief that LLT cigarettes are less harmful is much more common.

5.5 STUDY 7 INTRODUCTION

Study 6 focused on Canadian smokers and established that there was an association between the belief that your brand of cigarettes are smoother and the belief that your brand of cigarettes are less harmful cross-sectionally. There was also evidence of a mediation whereby “light” cigarette smokers were more likely to believe that their brand of cigarettes are less harmful to the extent that they believed that their brand of cigarettes are smoother.

The purpose of Study 7 is to extend this research to China to determine whether the belief that your brand of cigarettes are smoother is associated with the belief that your brand of cigarettes are less harmful.

I examine:

- 1) Whether smokers who believe that “my cigarettes” are smoother on the throat will be significantly more likely to believe that their brand of cigarettes is less harmful. This is the main goal of this dissertation.
- 2) The prevalence of the belief that “my cigarettes” are smoother on the throat in the ITC Wave 2 survey in China.
- 3) Whether “low tar” cigarette smokers will be more likely to say that their brand of cigarettes is less harmful compared to “medium” or “high tar” cigarette smokers.
- 4) Whether “low tar” cigarette smokers will be more likely to say that “my cigarettes” are smoother and therefore that their brand is less harmful. In other words, whether the perception that “my cigarettes” are smoother mediates the relation between being a “low tar” cigarette smoker and the belief that your brand is less harmful.

5.6 STUDY 7 METHODS

Participants

Respondents were from Wave 2 of the ITC China Survey conducted in November 2007 to January 2008. Table 27 presents the overall recontact and replenishment rates for respondents in the Wave 1 and Wave 2 ITC China Survey. For the purposes of this study, we selected respondents that were either from the recontact sample from Wave 1 (n=3710) or the Wave 2 replenishment sample (n=917). Only daily or weekly smokers and those who smoked a tar level of 15 mgs or below were included in this sample. Respondents who did not know their tar level were excluded (1723). Because China banned cigarettes above 15 mgs, those who

smoked cigarettes with a tar level of 16 mgs or higher were also excluded because this was an impossible value. We were interested in the strength of one's brand of cigarettes. Therefore, we did not think it was appropriate to include anyone who did not know the tar level of their own brand of cigarettes. The total n for this study was therefore 2904.²²

Table 27 Recontact and Replenishment Rates: ITC China Wave 1 to Wave 2

City	Wave 1	Wave 2 Recontact	Wave 2 Quitter^a	Wave 2 Replenishment	Wave 2 Total^b
Beijing	785	672	38	74	746
Shenyang	781	567	18	200	767
Shanghai	784	680	87	87	767
Changsha	800	599	147	147	746
Guangzhou	791	525	263	263	788
Yinchuan	791	608	144	144	752
Total	4732	3651	915	915	4566

^aRespondent quit between Waves 1 and 2

^bQuitters were removed from this study and therefore the total reflects Wave 2 recontact and Wave 2 replenishment samples only.

Procedures

Respondents from Wave 1 were recontacted for the Wave 2 Survey. All survey protocols were consistent with Wave 1 (see Study 2). In addition, replenishment samples were collected where smokers could not be recontacted between waves. Further details about the Wave 2 Survey protocol including sampling for replenishment smokers can be found Appendix C: ITC China Wave 2 Technical Report.

Research ethics approval for Wave 2 of this study was obtained from the University of Waterloo, Roswell Park Cancer Institute, the Cancer Council Victoria, and the Chinese National Centers for Disease Control.

Weight construction

Sampling weights were constructed separately for male adult smokers, female adult smokers, and adult non-smokers. Wave 2 weights were constructed in the same way as the Wave 1 weights: by taking into account the four levels of sample selection: Jie Dao, Ju Wei Hui, household, and individual. The final Wave 1 weight for a sampled individual was the number of people in the city population and the sampling category represented by that individual. For further details on the methodology for the ITC Wave 2 China Survey see Appendix G: ITC China Wave 2 Technical Report and for the ITC China Wave 2 Survey see Appendix H: ITC China Wave 2 Survey.

Measures

Dependent Variable

Belief about Respondents' Own Brand of Cigarettes

Respondents were asked: "Do you think that the brand you usually smoke might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands?"

Responses were: 1=A little less harmful, 2=No different, 3=A little more harmful. This variable was recoded so that 1=A little less harmful and 0=A little more harmful/No different. Refusal and "don't know" responses were excluded.²³

Demographics and Smoking Behaviour

Standard demographic measures included: sex (male/female), age (categorized as: 18-39, 40-54, 55+), ethnicity (Han vs. other ethnic groups), household income per month (categorized as: low <1000 Yuan per month, medium \geq 1000 Yuan to 2999 Yuan, high \geq 3000 Yuan, don't know), education (categorized as: low=no education or elementary school, medium=junior high school or high school/technical high school, high=college, university or higher), and city. Measures of cigarette consumption included: daily vs. weekly smoking, and cigarettes smoked per day.

Knowledge of Health Effects of Smoking

Respondents were asked whether smoking causes: stroke, impotence, lung cancer in smokers, emphysema in smokers, stained teeth, premature aging, lung cancer in nonsmokers, and cardiovascular heart disease. Responses were coded so that no and don't know/cannot say=0 and yes=1. The measure of health knowledge was the sum of all 8 responses. The Cronbach alpha for this measure at Wave 2 was 0.83, suggesting that the scale was very reliable.

Self-Reported Use of "Light" and "Low Tar" Cigarettes

We asked replenishment sample respondents whether they had ever tried cigarettes that were described as "light," "mild," or "low tar" (response options were: yes, no, or don't know). For Wave 2 recontact sample respondents, we used their responses to this question at Wave 1. We also asked respondents to provide the tar level of the brand that they currently smoked most often. Responses were coded as 1= \leq 10 mgs of tar, 2= \geq 11 mgs of tar to \leq 14 mgs of tar, 3=15 mgs of tar. Respondents who did not know the tar level of their current brand or

provided an invalid tar level were excluded from the analyses. Because China banned cigarettes above 15 mgs of tar, any respondent who reported greater than 15 mgs was classified as invalid.

Health Concerns about Smoking

To assess health concerns, respondents were asked: “to what extent, if at all, has smoking damaged your health?” and “how worried are you, if at all, that smoking will damage your health in the future?” (not at all/don’t know, a little, very much). We also asked smokers to rate their health with response options from 1=poor to 5= excellent. In addition, smokers were asked to what extent they considered themselves addicted to cigarettes (not at all, a little, somewhat, a lot). Don’t know responses were coded as ‘system missing.’

Sensory Beliefs about Own Brand

Respondents were asked whether they strongly agree, agree, neither agree or disagree, disagree, or strongly disagree with the statement: “The brand of cigarettes I usually smoke is smoother on my throat and chest than other cigarette brands.” Response options were on a 5-point Likert scale where 1=Strongly disagree and 5=Strongly agree. Refusal and “don’t know” responses were excluded. Responses were recoded so that 1=Strongly agree/agree/neutral and 0=Strongly disagree/disagree.²⁴

Statistical Analyses

SPSS (version 17) was used for all statistical analyses. A complex samples logistic regression model was used to test which variables were independently associated with the belief that “my own brand of cigarettes is less harmful.” All analyses were conducted on

weighted data and all variables mentioned previously were employed as predictors. Analyses were conducted in two steps. The first step was to enter all covariates into the model. The second step was to enter all covariates and the addition of the main explanatory variable (the belief that “my own brand of cigarette is smoother”) in a separate model. The odds ratios and p values from the first model are therefore reported for the covariates and then the odds ratio and p value for the belief that “my own brand of cigarettes is smoother” is reported from the second model. The values reported therefore demonstrate the unique effect of the belief that “my own brand of cigarettes are smoother” after controlling for the covariates. The reported values for covariates are the unique effect of the covariates without controlling for the explanatory variable (that “my own brand of cigarettes is smoother”).

5.7 STUDY 7 RESULTS

Tables 28 and 29 present the unweighted and weighted (respectively) sample characteristics for respondents from the ITC China Wave 2 sample across each of the 6 cities. The cities were different in terms of sample characteristics except for: sex, smoking status (daily/weekly) and whether the respondent had ever tried a “light” cigarette.

Overall, the majority of smokers in our sample (54.3%) said that they had ever tried cigarettes described as “light,” “mild,” or “low tar.” Having ever tried “light” cigarettes varied by city with a greater proportion of respondents in Shanghai and Beijing (the two most Westernized cities) having tried these cigarettes compared to smokers in Changsha were the least likely (weighted percentages were: Beijing: 56.6%, Shenyang: 41.2%, Shanghai: 61.0%; Changsha: 38.7%, Yinchuan: 50.1%, and Guangzhou: 55.0%). However, this was not significantly different overall.

Consistent with our ITC China Wave 1 sample, few respondents (11.8% overall) reported currently smoking a “low tar” cigarette (10 mgs of tar or less). Again Shanghai and Beijing were the cities where respondents were the most likely to smoke these brands, whereas Changsha and Yinchuan were the least likely (weighted percentages were: Beijing: 21.2%, Shenyang: 6.2%, Shanghai: 16.0%, Changsha: 0.9%, Yinchuan: 1.1%, and Guangzhou: 4.3%). Overall, the majority of smokers in our sample smoked a medium tar brand (11-14 mgs of tar) (51.2%) followed by a high tar brand (15 mgs of tar) (37.0%). Compared to the ITC China Wave 1 sample, we had a greater number of medium tar smokers and fewer high tar smokers.

Table 28 Unweighted Descriptive Characteristics for ITC China Wave 2 (n=2904)

Factor	n	Overall (n=2904)	n	Beijing (n=484)	n	Shenyang (n=457)	n	Shanghai (n=631)	n	Changsha (n=381)	n	Yinchuan (n=521)	n	Guangzhou (n=430)
Sex			$\chi^2(df=5)=22.08, p<0.001$											
Male	2798	96.3%	466	96.3%	437	95.6%	621	98.4%	356	93.4%	509	97.7%	409	95.1%
Female	106	3.7%	18	3.7%	20	4.4%	10	1.6%	25	6.6%	12	2.3%	21	4.9%
Age (years)			$\chi^2(df=10)=87.65, p<0.001$											
18-39	510	17.8%	87	18.2%	78	17.3%	73	11.6%	74	19.9%	140	27.1%	58	13.9%
40-54	1450	50.6%	224	46.8%	258	57.2%	353	55.9%	192	51.8%	241	46.7%	182	43.5%
55+	906	31.6%	168	35.1%	115	25.5%	205	32.5%	105	28.3%	135	26.2%	178	42.6%
Ethnicity			$\chi^2(df=5)=171.86, p<0.001$											
Han	2750	94.7%	457	94.4%	434	95.0%	622	98.6%	378	99.2%	436	83.7%	423	98.4%
Other	154	5.3%	27	5.6%	23	5.0%	9	1.4%	3	0.8%	85	16.3%	7	1.6%
Income			$\chi^2(df=20)=431.18, p<0.001$											
Low	430	14.8%	26	5.4%	145	31.7%	42	6.7%	80	21.0%	107	20.6%	30	7.0%
Medium	1331	45.9%	200	41.4%	245	53.6%	293	46.4%	177	46.5%	246	47.4%	170	39.5%
High	966	33.3%	230	47.6%	62	13.6%	276	43.7%	113	29.7%	122	23.5%	163	37.9%
Don't Know	113	3.9%	18	3.7%	1	0.2%	9	1.4%	9	2.4%	28	5.4%	48	11.2%
Refused	61	2.1%	9	1.9%	4	0.9%	11	1.7%	2	0.5%	16	3.1%	19	4.4%
Education			$\chi^2(df=10)=115.35, p<0.001$											
Low	305	10.5%	35	7.2%	27	5.9%	35	5.5%	53	14.0%	66	12.7%	89	20.8%
Medium	1951	67.4%	301	62.3%	337	73.7%	470	74.5%	237	62.7%	337	64.9%	269	63.0%
High	639	22.1%	147	30.4%	93	20.4%	126	20.0%	88	23.3%	116	22.4%	69	16.2%
Daily/Weekly Smoking			$\chi^2(df=5)=6.46, p=0.26$											
Daily smoker	2753	94.8%	463	95.7%	430	94.1%	597	94.6%	366	96.1%	485	93.1%	412	95.8%
Weekly smoker	151	5.2%	21	4.3%	27	5.9%	34	5.4%	15	3.9%	36	6.9%	18	4.2%
Cigarettes per day			$\chi^2(df=15)=94.60, p<0.001$											
1-10	1027	35.5%	182	37.7%	186	40.9%	238	37.7%	68	17.8%	220	42.5%	133	31.0%
11-20	1455	50.2%	241	49.9%	215	47.3%	303	48.0%	221	58.0%	241	46.5%	234	54.5%
21-30	225	7.8%	29	6.0%	30	6.6%	54	8.6%	45	11.8%	30	5.8%	37	8.6%
31+	190	6.6%	31	6.4%	24	5.3%	36	5.7%	47	12.3%	27	5.2%	25	5.8%

Table 28 Unweighted Descriptive Characteristics for ITC China Wave 2 (n=2904) Continued

Factor	n	Overall (n=2904)	n	Beijing (n=484)	n	Shenyang (n=457)	n	Shanghai (n=631)	n	Changsha (n=381)	n	Yinchuan (n=521)	n	Guangzhou (n=430)
Ever tried light, low tar			$\chi^2(df=10)=107.63, p<0.001$											
Yes	1479	50.9%	281	58.1%	188	41.1%	387	61.4%	146	38.3%	244	46.8%	233	54.2%
No	1295	44.6%	194	40.1%	244	53.4%	227	36.0%	201	52.8%	243	46.6%	186	43.3%
Don't Know	129	4.4%	9	1.9%	25	5.5%	16	2.5%	34	8.9%	34	6.5%	11	2.6%
Tar Level			$\chi^2(df=10)=1197.18, p<0.001$											
15 mg	888	30.6%	49	10.1%	49	10.7%	405	64.2%	32	8.4%	72	13.8%	281	65.3%
11-14 mg	1758	60.5%	327	67.6%	379	82.9%	137	21.7%	346	90.8%	440	84.5%	129	30.0%
10 mg or less	258	8.9%	108	22.3%	29	6.3%	89	14.1%	3	0.8%	9	1.7%	20	4.7%

Table 29 Weighted Descriptive Characteristics for ITC China Wave 2 (n=2904)

Factor	n	Overall (n=2904)	n	Beijing (n=484)	n	Shenyang (n=457)	n	Shanghai (n=631)	n	Changsha (n=381)	n	Yinchuan (n=521)	n	Guangzhou (n=430)
Sex	$\chi^2(df=3.93)=14.58, p=0.07$													
Male	2798	97.4%	466	97.4%	437	96.6%	621	98.5%	356	94.9%	509	98.1%	409	95.7%
Female	106	2.6%	18	2.6%	20	3.4%	10	1.5%	25	5.1%	12	1.9%	21	4.3%
Age (years)	$\chi^2(df=6.86)=108.53, p<0.001$													
18-39	510	18.0%	87	21.9%	78	19.7%	73	12.3%	74	21.9%	140	28.7%	58	13.1%
40-54	1450	48.4%	224	44.4%	258	54.3%	353	52.7%	192	48.4%	241	46.8%	182	38.7%
55+	906	33.5%	168	33.7%	115	25.9%	205	35.0%	105	29.7%	135	24.4%	178	48.2%
Ethnicity	$\chi^2(df=2.45)=221.33, p<0.001$													
Han	2750	94.2%	457	92.3%	434	95.3%	622	98.3%	378	99.3%	436	78.7%	423	98.4%
Other	154	5.8%	27	7.7%	23	4.7%	9	1.7%	3	0.7%	85	21.3%	7	1.6%
Income	$\chi^2(df=7.52)=456.79, p<0.001$													
Low	430	11.7%	26	4.8%	145	29.0%	42	6.2%	80	20.1%	107	21.3%	30	8.4%
Medium	1331	45.9%	200	44.6%	245	55.0%	293	45.0%	177	48.3%	246	44.4%	170	42.5%
High	966	35.8%	230	43.9%	62	15.1%	276	45.4%	113	28.1%	122	23.7%	163	30.8%
Don't Know	113	4.2%	18	3.3%	1	0.2%	9	1.6%	9	2.9%	28	6.4%	48	15.5%
Refused	61	2.4%	9	3.5%	4	0.7%	11	1.8%	2	0.5%	16	4.1%	19	2.7%
Education	$\chi^2(df=5.22)=151.93, p=0.003$													
Low	305	9.8%	35	5.8%	27	5.8%	35	7.1%	53	15.6%	66	12.7%	89	23.0%
Medium	1951	68.0%	301	61.9%	337	72.9%	470	72.3%	237	63.5%	337	65.9%	269	65.7%
High	639	22.2%	147	32.2%	93	21.4%	126	20.6%	88	20.9%	116	21.4%	69	11.3%
Daily/Weekly Smoking	$\chi^2(df=4.05)=7.36, p=0.38$													
Daily smoker	2753	94.4%	463	92.9%	430	94.0%	597	94.2%	366	96.4%	485	95.4%	412	96.4%
Weekly smoker	151	5.6%	21	7.1%	27	6.0%	34	5.8%	15	3.6%	36	4.6%	18	3.6%
Cigarettes per day	$\chi^2(df=5.99)=65.51, p=0.01$													
1-10	1027	36.8%	182	40.3%	186	41.1%	238	36.6%	68	18.2%	220	41.8%	133	30.0%
11-20	1455	49.0%	241	47.4%	215	46.3%	303	49.0%	221	55.7%	241	46.9%	234	54.0%
21-30	225	7.5%	29	4.2%	30	7.3%	54	8.5%	45	12.8%	30	5.8%	37	9.9%
31+	190	6.7%	31	8.1%	24	5.4%	36	5.9%	47	13.4%	27	5.5%	25	6.1%

Table 29 Weighted Descriptive Characteristics for ITC China Wave 2 (n=2904) Continued

Ever tried light, low tar		$\chi^2(df=3.50)=64.49, p=0.14$												
Yes	1479	54.3%	281	56.6%	188	41.2%	387	61.0%	146	38.7%	244	50.1%	233	55.0%
No	1295	42.2%	194	41.7%	244	52.8%	227	36.3%	201	53.8%	243	44.2%	186	42.3%
Don't Know	129	3.5%	9	1.7%	25	6.0%	16	2.7%	34	7.6%	34	5.7%	11	2.7%
Tar Level		$\chi^2(df=5.72)=1102.72, p<0.001$												
15 mg	888	37.0%	49	13.8%	49	10.6%	405	63.6%	32	9.4%	72	13.4%	281	64.5%
11-14 mg	1758	51.2%	327	65.0%	379	83.1%	137	20.4%	346	89.7%	440	85.4%	129	31.2%
10 mg or less	258	11.8%	108	21.2%	29	6.2%	89	16.0%	3	0.9%	9	1.1%	20	4.3%

Beliefs about “my brand of cigarettes”

Table 30 presents the overall beliefs about Chinese smokers’ own brand of cigarettes at Wave 2 by tar level. The majority of smokers said that their brand was smoother on the respiratory system than other brands (56.5%). A greater proportion of “low tar” smokers said that their brand of cigarettes are smoother (59.6%) compared to “medium tar” cigarette smokers (53.2%) but the same proportion of “high tar” smokers (60.0%) also said their brand of cigarettes was smoother. Overall there was no significant difference in the belief that your brand of cigarettes is smoother by tar level.

A minority of smokers in our sample said that their brand was a little less harmful than other brands of cigarettes (33.5%). However, the majority of “low tar” cigarette smokers said their brand was a little less harmful compared to other brands (51.8%). A minority of “medium tar” (27.9%) and “high tar” (35.4%) cigarette smokers said that their brand of cigarettes are a little less harmful.

Table 30 Beliefs about your brand: ITC China (Wave 2)

Factor	Overall (n=2904)		“Low Tar” Cigarette Smokers (n=258)		“Medium Tar” Cigarette Smokers (n=1758)		“High Tar” Cigarette Smokers (n=888)	
	n	%	n	%	n	%	n	%
My brand is smoother			$\chi^2(df=2)=4.85, p=0.09$					
Strongly disagree/disagree /neutral	1194	43.5%	96	40.4%	747	46.8%	351	40.0%
Strongly agree/agree	1572	56.5%	148	59.6%	920	53.2%	504	60.0%
Your brand			$\chi^2(df=4)=56.10, p<0.001$					
No different	1614	61.8%	113	46.1%	1005	65.1%	496	62.3%
A little less harmful	844	33.5%	121	51.8%	466	27.9%	257	35.4%
A little more harmful	126	4.7%	5	2.1%	100	7.0%	21	2.4%

Factors associated with the belief that “my own brand of cigarettes is less harmful”

Table 31 presents the results of a weighted binary logistic regression to determine which factors at Wave 2 in China were associated with the belief that “my own brand is a little less harmful.” Respondents who were older were significantly more likely to say that their brand of cigarettes is less harmful than other brands ($p=0.004$, 55+ vs. 18-24 OR=1.65 95% CI 1.13-2.41). There was an overall effect of income ($p=0.04$); however, each of the income categories were not significant. Respondents who said that they were in better health were significantly more likely to say that their brand of cigarettes is less harmful than other brands ($p=0.03$, OR=1.15 95% CI 1.02-1.31). Respondents who thought that they were “somewhat” addicted compared to those who said they were “not at all” addicted to smoking were less likely to say that their brand of cigarettes is less harmful than other brands ($p=0.04$, OR=0.64, 95% CI 0.45-0.92). Respondents who had never tried “light” or “low tar” cigarettes were significantly less likely than those who had tried “light” or “low tar” cigarettes to say that their brand of cigarettes was less harmful ($p=0.04$, OR=0.80, 95% CI 0.66-0.96). Compared to smokers whose current brand of cigarettes was “high tar” (15 mgs of tar), “low tar” smokers (10 mgs of tar or less) were more likely to say that their brand of cigarettes is less harmful than other brands ($p<0.001$, OR=2.21 95% CI 1.62-3.01).²⁵

The main goal of this dissertation was to determine whether the belief that your brand of cigarettes is smoother is associated with the belief that your brand of cigarettes is less harmful. Indeed, the strongest predictor of the belief that your brand is less harmful was the belief that your brand is smoother. Smokers who agreed that their brand of cigarettes was smoother were significantly more likely to say that their brand of cigarettes was less harmful

compared to those who did not believe that their brand was smoother ($p < 0.001$, OR=5.10 95% CI 3.69-7.03).

**Table 31 Logistic Regression of belief “my brand is less harmful”:
ITC China Wave 2**

Factor	n	My Brand Less Harmful ^a	Adjusted Odds Ratio (95% CI)	p value
Demographic variables				
Gender				
Male	2798	33.4%	0.78 (0.44-1.36)	0.38
Female	106	38.3%	1.00 (reference)	
Age (years)				
18-39	510	30.1%	1.00 (reference)	0.004
40-54	1450	31.3%	1.13 (0.81-1.59)	
55+	906	38.2%	1.65 (1.14-2.41)	
Ethnicity				
Han	2750	33.6%	1.00 (reference)	0.80
Other	154	31.1%	1.08 (0.61-1.88)	
Income				
Low	430	33.0%	1.05 (0.73-1.51)	0.04
Medium	1331	30.9%	0.84 (0.66-1.07)	
High	966	35.7%	1.00 (reference)	
Don't Know	113	31.4%	0.90 (0.58-1.40)	
Refused	61	55.0%	2.68 (0.79-9.05)	
Education				
Low	305	33.2%	0.93 (0.58-1.48)	0.92
Medium	1951	33.5%	1.01 (0.80-1.28)	
High	639	33.3%	1.00 (reference)	
City				
Beijing	484	29.8%	0.65 (0.39-1.07)	0.32
Shenyang	457	27.5%	0.59 (0.33-1.04)	
Shanghai	631	37.3%	0.88 (0.53-1.45)	
Changsha	381	30.8%	0.83 (0.43-1.62)	
Yinchuan	521	31.3%	0.70 (0.43-1.14)	
Guangzhou	430	39.4%	1.00 (reference)	
Smoking Behaviour				
Daily/Weekly Smoking				
Daily smoker	2753	33.3%	1.07 (0.62-1.85)	0.81
Weekly smoker	151	36.1%	1.00 (reference)	
Cigarettes per day				
0-10	1027	38.6%	0.99 (0.98-1.00) ^b	0.15
11-20	1455	31.2%		
21-30	225	27.7%		
31+	190	28.6%		
Health Knowledge				
0	251	26.5%	0.99 (0.94-1.04) ^b	0.62
1	286	34.6%		
2	238	34.0%		
3	273	29.3%		
4	344	37.9%		
5	409	40.5%		
6	405	35.5%		
7	357	28.7%		
8	312	29.4%		

**Table 31 Logistic Regression of belief “my brand is less harmful”:
ITC China Wave 2 Continued**

Factor	n	My Brand Less Harmful^a	Adjusted Odds Ratio (95% CI)	p value
Ever tried light, mild				
No	289	30.7%	0.80 (0.66-0.96)	0.04
Don't Know	13	27.4%	0.66 (0.32-1.34)	
Yes	235	36.0%	1.00 (reference)	
Tar Level				
15 mg	888	35.4%	1.00 (reference)	<0.001
11-14 mg	1758	27.9%	0.78 (0.58-1.04)	
10 mg or less	258	51.8%	2.21 (1.62-3.01)	
Health Concern				
Worried Smoking has Damaged Health				0.32
Very	407	32.2%	1.21 (0.78-1.86)	
A little	1271	34.9%	1.25 (0.93-1.68)	
Not at all/Don't know	1214	32.3%	1.00 (reference)	
Worried Smoking will Damage Health				0.67
Very	578	34.4%	1.20 (0.81-1.78)	
A little	1209	33.8%	1.05 (0.74-1.50)	
Not at all/Don't know	1109	32.5%	1.00 (reference)	
Describe your health				0.03
1 Poor	96	25.6%	1.15 (1.02-1.31) ^b	
2	103	28.5%		
3	1285	32.3%		
4	840	36.0%		
5 Excellent	536	34.9%		
Perceived Addiction				0.04
A little	1443	36.7%	1.01 (0.68-1.52)	
Somewhat	865	27.2%	0.64 (0.45-0.92)	
A lot	259	33.6%	0.99 (0.59-1.67)	
Not at all	323	35.1%	1.00 (reference)	
My brand smoother				
Agree/Strongly Agree	1572	48.0%	5.10 (3.69-7.03)	<0.001
Disagree/Strongly Disagree/Neutral	1194	15.9%	1.00 (reference)	

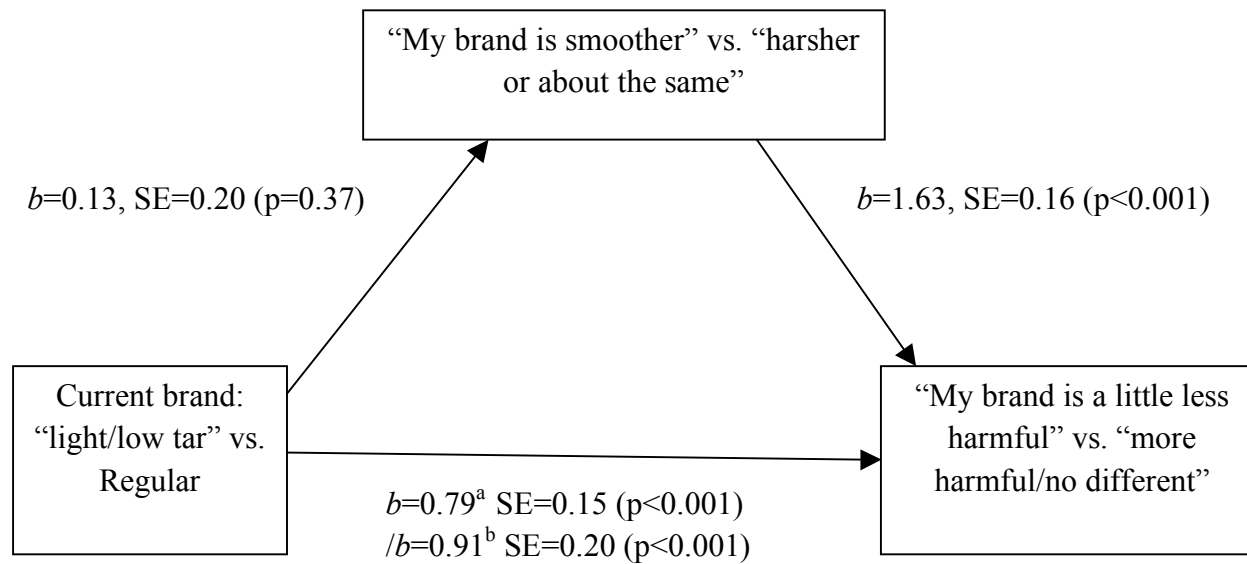
^aThe belief prevalences presented for each response category of each factor are not adjusted for the other predictor variables in the model. ^bContinuous variable

Does “my own brand is smoother” mediate the relation between being a current “low tar” cigarette smoker and believing that “my own brand is a little less harmful”?

Figure 4 reports the results of a mediation analysis to determine whether the belief that “my brand is smoother” mediates the relation between being a current “low tar” cigarette smoker and believing that “own brand is a little less harmful.” We hypothesized that “low tar” cigarette smokers would be more likely to say that their brand of cigarettes is less harmful to the extent that they believed that their brand of cigarettes is smoother.

Figure 4

Does “my brand is smoother” mediate the relation between being a current “low tar” cigarette smoker and believing that “my brand is a little less harmful”?



Sobel Test for Mediation: $z=0.65, p=0.52$

^aThe first coefficient is the relation between current brand and my brand less harmful (controlling for the other covariates in the model)

^bThe second coefficient is the effect of current brand after controlling for the effect of the “my brand is smoother” belief (and the other covariates in the model).

The test of the mediation did not support our hypothesis: those who were current “low tar” cigarette smokers were no more or less likely to say that their brand is less harmful to the extent that they believed that their brand is smoother. Path A: the regression of the mediator (the belief that my own brand is smoother) on the independent variable (current brand of cigarettes “low tar” vs. “high tar”) was not significant. “Low tar” cigarette smokers were no more or less likely than “high tar” cigarette smokers to say that their brand is smoother ($p=0.37$, $b=0.13$, $SE=0.20$) (consistent with the results presented earlier in Table 30).

Path C: the regression of the dependent variable (the belief that your brand is less harmful) on the independent variable (current brand of cigarettes “low tar” vs. “high tar”) was significant. “Low tar” cigarette smokers were significantly more likely than “high tar” cigarette smokers to say that their brand of cigarettes is a little less harmful ($p<0.001$, $b=0.79$, $SE=0.15$).

Path B: the regression of the dependent variable (the belief that my own brand is less harmful) on both the independent variable (current brand of cigarettes “low tar” vs. “high tar”) and the mediator (the belief that my own brand is smoother) was also significant. Those who said that their brand is smoother were significantly more likely to say that their brand is a little less harmful compared to those who did not believe their cigarettes were smoother ($p<0.001$, $b=1.63$, $SE=0.16$) (consistent with the results presented earlier in Table 31).

Path C’: the effect of current brand (“low tar” vs. “high tar”) on the belief that your brand is less harmful after including the belief that your own brand is smoother in the model was more significant ($p<0.001$, $b=0.91$, $SE=0.20$). The Sobel test of significance for this mediation model was therefore not significant ($z=0.65$, $p=0.52$).

5.8 STUDY 7 DISCUSSION

This study demonstrated that overall some smokers in China believe that their brand of cigarettes is a little less harmful compared to other brands (33.5%). There was also a significant difference in the belief that your brand of cigarettes is less harmful according to the respondent's tar level smoked. The majority of "low tar" cigarette smokers believed that their brand was a little less harmful than other brands (51.8%). In contrast, a minority of "medium tar" (27.9%) and "high tar" smokers (35.4%) said that their brand was a little less harmful. This demonstrates that it is mostly the "low tar" cigarette smokers who believe that their cigarettes are less harmful. This is consistent with the fact that in Studies 2 and 3 we found that the majority of Chinese smokers believe that LLT cigarettes are less harmful. Smokers may be choosing "low tar" cigarettes in China as a way to reduce their health risks. Although "medium tar" and "high tar" cigarette smokers are less likely to believe that their brands are less harmful, they may in the future choose a LLT cigarette if they become concerned about health because, as we know from Studies 2 and 3, LLT cigarettes are seen as less harmful.

It is worth noting that beliefs about the harmfulness of your own brand was much higher across all tar categories compared to Canada. In Canada, 25.5% of "light" cigarette smokers said that their brand of cigarettes was less harmful than other brands. In China, even "high tar" (35.4%) and "medium tar" (27.9%) smokers endorsed the belief that their brand of cigarettes was less harmful at a higher rate than "light" cigarette smokers in Canada. We would expect that some people would rate their brand as "less harmful" than other brands even if they did not smoke a "light" or "low tar" cigarette because people are unrealistically optimistic about their health risks and tend to believe that they are at less susceptible to health

risks compared to their peers (Weinstein, 1987; Weinstein, 1982). Brand differences are therefore one factor by which smokers could therefore justify why they would be at a reduced risk compared to their peers.

The majority of smokers in our Chinese sample believed that their brand of cigarettes was smoother than other brands (56.5%). “Low tar” cigarette smokers (59.6%) were more likely than “medium tar” cigarette smokers (53.2%) to believe that their cigarettes were smoother but were just as likely as “high tar” cigarette smokers to have this belief (60.0%). This is contrary to what we had hypothesized. “Low tar” cigarettes are typically smoother because of filter ventilation which dilutes the smoke with air and therefore feels smoother.

In Canada, we had found a difference between being a “light” cigarette smoker and having the belief that your brand is smoother with 75.3% of “light” cigarette smokers having this belief compared to 58.7% of regular cigarette smokers. Why then, did we not find differences in China? I believe that the discrepancies between our findings in China and our findings in Canada are related to how we coded the cigarette brand for “light” status.

In Canada, “light” status was determined by the descriptor used in the brand name to identify a “light,” “low tar,” or specific colour that indicated that the cigarette was a “light” cigarette. Typically these descriptors are found on packages that are lighter in colour and have other design feature that connote “light.” These cigarettes are also typically lower in tar and/or contain additives that provide the sensation of “light” or “smooth.” This marketing strategy (as depicted in the model in Figure 1) is part of the tobacco industry’s attempts to provide the sensation of smooth and less harmful.

In China, we relied on the tar level of the respondent's own brand of cigarettes. There were several potential problems with this measure. First, we assumed that respondents would know their own tar level and would be correct. However, tar level does not appear on all cigarette packages. Indeed, we had numerous respondents who did not know the tar level of their brand of cigarettes. It is also possible that respondents may have incorrectly guessed the tar level of their cigarettes.

The second issue is that tar level is just one component in the concept of "light" cigarettes. Lower tar cigarettes do feel smoother because of the vent holes on these cigarettes. However, there may have been some individuals who were smoking higher tar cigarettes that would be labelled "light" or be in a lighter coloured package. Our categorization of respondents to tar levels was based on a relative level of tar in a range. Yet a cigarette that contains 10 mgs of tar compared to a cigarette that contains 11 mgs of tar probably won't taste dramatically smoother. The 10 mg cigarette would be categorized as low tar whereas the 11 mg cigarette would be categorized as medium tar. Because there is no standard definition of a "light" cigarette, the 11 mg cigarette may be labelled "light" (in English) or may be in a lighter package. Therefore a more appropriate measure would have been to ask respondents whether they smoked a cigarette described as "light" or to code the brand based on its physical design attributes as well as its packaging. Unfortunately this was not possible in China because there was so much variability in the brands offered at the time of our survey.

I would then argue that there was contamination of "light" cigarette smokers in both the "medium" and "high" tar categories. I would therefore expect that these "light" cigarette smokers who had been classified as "medium" or "high" tar cigarette smokers would be more

likely to say their cigarette brands are smoother. Consequently, the percentage of smokers who believed that their brand of cigarettes was smoother was similar across all tar categories.

As previously noted, there were differences by the tar level smoked (in the direction we would expect) in respondents' beliefs about the harmfulness of their own brand of cigarettes where "low tar" cigarette smokers were more likely to believe that their brand of cigarettes were less harmful. I would argue that these differences were found despite the fact that we had a poor measure of strength of brand smoked. Indeed, if we compare the belief that "your brand of cigarettes are less harmful in Canada compared to China, the belief that your brand is less harmful was high among all tar groups even compared to "light" cigarette smokers in Canada. I would hypothesize that with a better measure of current brand strength in China, there would be a lower proportion of "medium" and "high" tar cigarette smokers who believed that their brand of cigarettes was less harmful.

Regardless of the respondents' current tar level, this study demonstrated that the belief that your brand of cigarettes is smoother was significantly associated with the belief that your brand of cigarettes is less harmful. This supports the main hypothesis of this dissertation and is consistent with the Study 6 results in Canada. This finding was also consistent with the previous studies in this dissertation demonstrating the powerful association between the belief that "light" cigarettes are smoother and the belief that "light" cigarettes are less harmful.

The respondents' tar level was also a significant predictor of the belief that your brand of cigarettes is less harmful in China. This association was significant despite the fact that our measure may have been flawed by potentially categorizing "light" cigarette smokers as "medium" or "high" tar cigarette smokers.

We tested a mediational model to determine whether the belief that your cigarette is smoother would mediate the relation between whether you smoked a “low tar” cigarette and whether you believed that your cigarette was less harmful. We found that the mediational model was not significant in China because the tar level of the respondents’ current brand did not predict the belief that your brand is smoother. As noted before, I hypothesize that the relation between the tar level and the belief that your brand is smoother did not predict was due to the fact that our measure for tar level of current brand was flawed.

Overall, these findings confirmed the main hypothesis, that respondents who believed that their brand of cigarettes is smoother were more likely to believe that their brand of cigarettes is less harmful. These findings were the first to link perceptions of the sensory experience of one’s own brand to the belief that your brand is less harmful in China.

Limitations

Research in Western countries has demonstrated that smokers are often unaware of the tar level of their current brand of cigarettes. Chapman, Wilson, and Wakefield (1986) interviewed Australian smokers and found that nearly 70% did not know the tar level of their cigarettes. Cohen (1996) replicated this finding among participants in the United States. This study showed that 79% of smokers did not know the tar level of their cigarettes. Those who smoked brands termed “ultra-light” were most likely to be aware of their tar levels. Thus these individuals smoked 1 to 5 mg cigarettes and reported this correctly 39% of the time. When pressured to make an educated guess, the number of people who responded correctly rose to 50%. Individuals who smoked cigarettes classified as “light” were only able to identify their tar levels 4 to 9% of the time. These individuals could not tell by their brand whether or not

their cigarette truly was low in tar based on the tar level itself. These individuals are therefore relying on the label (“light” vs. “mild,” etc.) to make judgements regarding the tar level and potential health benefits of smoking a particular brand.

Although there has been no research examining this issue in China, we could expect that smokers in China may also be uncertain of the tar level on their cigarette packages. Indeed, cigarettes in China are not required to have tar levels on the side of the package. It is therefore possible that many of our smokers did not accurately report their tar level. Those who said that they didn’t know their tar level or who gave an invalid response were therefore removed. However, It is possible that some respondents thought they knew the tar level of their cigarettes or guessed. This is one potential reason why we may have had smokers of “high” tar cigarettes who thought that their cigarettes were smoother than other brands.

In future waves of the ITC China Survey, we have asked respondents whether their current brand could be described as “light,” “mild,” or “low tar.” We will be able to examine how these responses relate to the respondents’ self reported tar level of their current brand. We will also be able to use this measure of current self-identified “light” cigarette status to determine whether these “light” cigarette smokers are more likely to believe that their brand of cigarettes is smoother and that their brand of cigarettes is less harmful. I would hypothesize that it is not necessarily whether or not you smoke a “light” cigarette that leads to the belief that your brand is smoother and less harmful but rather whether you think that you smoke a “light” cigarette. The concept of a “light” cigarette should be automatically associated with the belief that the cigarette is smooth and the belief that the cigarette is less harmful.

5.9 CHAPTER 5 GENERAL DISCUSSION

These studies were the first to demonstrate the powerful link between the belief that your brand is smoother and the belief that your brand is less harmful across smokers in both Canada and China. These findings were consistent with the previous studies in this dissertation which linked the beliefs that LLT cigarettes are smoother with the belief that LLT cigarettes are less harmful.

In Canada, there was evidence that “light” cigarette smokers believed that their brand was less harmful to the extent that they believed that their cigarettes were smoother. This was consistent with the idea that the sensory experience of smoking “light” cigarettes can reinforce the perception that these cigarettes are less harmful. However, in China this relation was not consistent. Regardless of whether you smoked a “low tar” cigarette, if you believed that your cigarettes were smoother you were more likely to believe that your cigarettes were less harmful. I hypothesize that we did not find any differences in China because the measure we used to determine the strength of the cigarette you smoke was based solely on tar level and was therefore not broad enough. Future research should examine whether a different measure of respondents’ self reported “light” cigarette status in China would predict the belief that your brand is smoother consistent with what was found in Canada.

Limitations

There were also some differences in the ITC Canada and ITC China surveys and therefore these two studies are not completely comparable. For example, in Canada, we asked whether respondents thought that their brand of cigarettes was “smoother, harsher or about the same.” In China, we asked respondents whether they thought their brand was smoother on the

respiratory system than other brands and the response option was a 5 point scale where 1=Strongly disagree and 5=Strongly agree. Respondents in China therefore did not have the option of saying that their brand was harsher or no different. Despite these slight differences in wording, we would expect these items to be correlated if they were to be asked in the same sample of respondents.

CHAPTER 6 DISCUSSION

“Light” and “low tar” cigarettes have been used to allay smokers’ concerns about the health risks of smoking. Consequently, smokers continue to believe that these cigarettes are less harmful and this belief may reassure smokers so that they no longer feel a need to quit smoking. In Figure 1, I presented a model that demonstrates how “light” and “low tar” cigarettes influence the belief that “light” and “low tar” cigarettes are less harmful.

First, the experience of smoking a “light”/ “low tar” cigarette influences the perception that “light”/ “low tar” cigarettes are smoother. The tobacco industry designed these cigarettes to have a smoother sensation which would be more acceptable to the consumer (Cummings et al., 2006). These cigarettes have filter vents that allow the smoke to be diluted with air and the resulting smoke that is inhaled by the smoker feels smoother. Additives such as analgesics and flavourings such as menthol are added to the cigarette to mask the sensory properties of the cigarette. Tobacco blends, cigarette circumference, moisture level, tipping paper, and paper porosity are also factors that can be manipulated to make the cigarette feel smoother. Some cigarettes also have different coloured tipping paper to correspond to strength perception (e.g., white paper is smoother than yellow paper).

Not only are smoother cigarettes more acceptable to consumers, but they also have the potential to be perceived as less harmful. There is a natural evolutionary link between something that is harsh and something that is harmful. By reducing the harshness of their products, the tobacco industry could capitalize on this association. Indeed, the tobacco industry has designed cigarettes that are actually less harmful in terms of reducing cancer causing chemicals but they have been unable to find one that tastes good enough to be

commercially acceptable (Cummings et al., 2006). “Light” and “low tar” cigarettes are therefore the next best solution because they provide the illusion of harm reduction and they are appealing to smokers.

Marketing for “light” and “low tar” cigarettes also communicates information about the sensory properties of these cigarettes and therefore reinforces the experience of smoking these cigarettes. Tobacco industry internal documents demonstrate that the tobacco industry extensively studied which package colours would be more likely to convey the perception that the cigarettes inside were less harsh (Wakefield et al., 2002). Sensory beliefs about “light” and “low tar” cigarettes can also be influenced by other design features on the cigarette package (Hammond & Parkinson, 2009). When tobacco control regulations banned “light” descriptors, the tobacco industry replaced the term “light” with “smooth” because it has the same connotation as “light” (King & Borland, 2005). Brands can also use numbers to represent tar levels or report tar levels on cigarette packages. Tar levels allow smokers to rank their brands in terms of relative harm and smoothness.

Recent advertising for “light” cigarettes in North America has relied on these types of implicit messages to communicate that these cigarettes are less harmful. Nature or sports themes are also typically used to create the impression of reduced harm. In China messages for “light” cigarettes have also explicitly stated that these cigarettes are less harmful.

“Light” cigarettes are designed to be smoother and marketing for these cigarettes reinforces the experience of smoking “light” cigarettes. “Light” cigarette marketing can also influence smokers of other brands and non-smokers to believe that these brands are smoother (Hammond & Parkinson, 2009). It is also clear that there is a link between the concept of

smooth and the concept of harm reduction. However, few research studies had examined whether smokers who believe that “light” cigarettes are smoother would also believe that “light” cigarettes are less harmful and no research studies had attempted to link the perception that your own brand of cigarettes is smoother with the belief that your own brand of cigarettes is less harmful.

Demonstrating a relation between the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harmful provides powerful evidence that tobacco control policies need to address the product design and marketing features of cigarettes that are believed to be smoother.

6.1 Dissertation Goals

I conducted 7 studies to examine various aspects of the relation between the sensory belief that “light,” “low tar” or your own brand of cigarettes is smoother and the belief that “light,” “low tar” or your own brand of cigarettes is less harmful. These studies varied in whether the measures were beliefs about “light” or “low tar” cigarettes (or a combination of the two) or beliefs about one’s own brand. These studies also differed in survey design (cross-sectional or longitudinal), in slight wording differences in the measures, in target populations (adult smokers, adolescent smokers), and across 5 countries (Canada, the United States, the United Kingdom, Australia, and China). Despite the expansive scope of this dissertation, I was able to demonstrate that in every country and respondent type, the sensory belief of a cigarette is related to the belief that that cigarette is less harmful. This was the main goal of the dissertation.

Study 1 examined the relation between the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harmful among smokers in four countries: Canada, the United States, the United Kingdom, and Australia. This was an extension of previous cross-sectional research in these countries to test whether the belief that “light” cigarettes are smoother predicted the belief that “light” cigarettes are less harmful longitudinally.

Study 2 and Study 3 addressed whether the belief that LLT cigarettes are smoother would predict the belief that LLT cigarettes are less harmful in China. These studies were the first studies to examine beliefs about LLT cigarettes beyond Western countries that had a long history of “light” cigarette use and regulations on “light” and “low tar” descriptors.

A few small scale studies had demonstrated that a minority of adolescents also believe that “light” cigarettes are less harmful. However, no studies had examined which factors would predict having the belief that “light” cigarettes are healthier. This was also the first study to examine the relation between sensory beliefs about “light” cigarettes and the belief that “light” cigarettes are healthier among adolescents in North America. Study 4 and Study 5 therefore examined the relation between the belief that “light” cigarettes are smoother or less harsh and the belief that “light” cigarettes are healthier among adolescents in North America using data from the North American Student Smoking Survey.

Whereas Studies 1-5 focused on the link between LLT cigarettes and the belief that LLT cigarettes are less harmful, the focus of Studies 6 and 7 was to address smokers’ beliefs about their own brand (based on their own experience with smoking the brand and exposure to the marketing/packaging for that brand) to understand the respondents’ personal experience. Are smokers who believe that their own brand of cigarettes is smoother more likely to believe

that their own brand of cigarettes is less harmful? These studies examined this issue among smokers in a high-income country, Canada, as well as in a developing country, China.

The second goal of this dissertation was to examine differences in the prevalence of the belief that LLT cigarettes are less harmful across each of the study groups especially differences between China (a country where little is known about beliefs about “light” cigarettes) and our Western countries (where the majority of research on “light” cigarettes has been focused). We also tested whether the belief that LLT cigarettes are less harmful also differed according to whether you smoked a “light” or “low tar” cigarette compared to a regular or “high tar” cigarette.

The third goal of this dissertation was to establish whether the belief that your brand of cigarettes are smoother would differ according to whether you smoked a “light” or “low tar” cigarette compared to a regular or “high tar” cigarette. Further, we tested whether that the belief that your brand is smoother mediates the relation between smoking a “light” or “low tar” cigarette smoker and having the belief that your brand is less harmful.

The fourth and final goal of this dissertation was to determine whether the ban on “light” and “low tar” descriptors in China at Wave 1 was successful in that it led to a decrease in the number of smokers who believed that LLT cigarettes are less harmful at Wave 2.

6.2 Conclusion 1: The Belief that LLT Cigarettes are Smoother/Less Harsh Predicts the Belief that LLT Cigarettes are Less Harmful.

Table 32 summarizes my dissertation conclusions. The goal of this dissertation was to establish the relation between having the belief that a particular brand of cigarettes is smoother

and the belief that these cigarettes are therefore less harmful. Indeed, we found that across smokers in: Canada, the United States, the United Kingdom, Australia, and China, among adults and adolescents in North America, in both cross-sectional and longitudinal analyses, the one factor that consistently predicted having the belief that LLT cigarettes are less harmful was the belief that LLT cigarettes are either smoother or less harsh. We also found that smokers in Canada and China who believed that their own brand of cigarettes was smoother were also more likely to say that their cigarettes were less harmful.

The near universality of this link is striking. It provides further support for what has been depicted in the model in Figure 1. “Light” cigarettes are marketed and designed to provide the belief that “light” cigarettes are smoother. Smokers who believe that “light” cigarettes are smoother are more likely to believe that “light” cigarettes are less harmful. These findings also suggest a natural link between the perception that a brand is smooth and the perception that the brand is less harmful.

Table 32 Dissertation Conclusions

Conclusion	Study 1: ITC 4 Country Survey Waves 1- 2	Study 2: ITC China Survey Wave 1	Study 3: ITC China Survey Waves 1-2	Study 4: North American Student Smoking Survey Wave 3	Study 5: North American Student Smoking Survey Waves 3-4	Study 6: ITC 4 Country Canada only Wave 6	Study 7: ITC China Survey Wave 2
Conclusion 1: The Belief that LLT Cigarettes are Smoother/Less Harsh Predicts the Belief that LLT Cigarettes are Less Harmful	√	√	√	√	√	√	√
Conclusion 2: Smokers Believe that LLT Cigarettes are Less Harmful	√	√	√	√	√	√	√
Conclusion 3: “Light” or “low tar” cigarette smokers are more likely to believe that LLT cigarettes are less harmful	√	X	X	√	X	√	√

√=Findings consistent with this conclusion

X=Findings are not consistent with this conclusion

Grey Boxes indicate that the conclusions were not addressed in that particular study

Table 32 Dissertation Conclusions Continued

Conclusion	Study 1: ITC 4 Country Survey Waves 1- 2	Study 2: ITC China Survey Wave 1	Study 3: ITC China Survey Waves 1-2	Study 4: North American Student Smoking Survey Wave 3	Study 5: North American Student Smoking Survey Waves 3-4	Study 6: ITC 4 Country Canada only Wave 6	Study 7: ITC China Survey Wave 2
Conclusion 4: LLT Cigarette Smokers are More Likely to Believe that Their Brand of Cigarettes are Smoother						√	X
Conclusion 5: The Belief that “Light” Cigarettes are Smoother Mediates the Relation Between Smoking a LLT Cigarette and Believing that LLT Cigarettes are Less Harmful						√	X
Conclusion 6: The Ban on “Light” and “Low Tar” Descriptors on Cigarette Packages in China Does Not Decrease Beliefs that LLT Cigarettes are Less Harmful			√				

√=Findings consistent with this conclusion

X=Findings are not consistent with this conclusion

Grey Boxes indicate that the conclusions were not addressed in that particular study

6.3 Conclusion 2: Smokers in Each of the Countries Believe that LLT Cigarettes are Less Harmful. This Belief is More Prevalent in our ITC China Sample.

The belief that “light” and “low tar” cigarettes are less harmful exists across smokers in: Canada, the United States, the United Kingdom, Australia, and China among both adults and adolescents. However, a much greater proportion of smokers in China have this belief. In contrast the countries in our ITC Four Country survey, in China there have been no attempts to educate the population about the myths of “light” cigarettes. In addition, there have been explicit advertising campaigns claiming that LLT cigarettes are less harmful.

The findings from China are likely to represent the state of beliefs in the vast majority of countries in the world where there have been no information campaigns on the myths of “light” cigarettes. The implications of this finding are that smokers in China (and in many other such countries) need to be educated about the fact that “light” or “low tar” cigarettes are no less harmful. Media campaigns in other countries have proven to have some impact (Borland et al., 2008) and these countries can learn from what has been effective in Western countries. In addition, China should ban any advertising that makes claims about the relative harm of particular cigarettes. Allowing ads that make claims that their “light” cigarettes “offer greater loving care for your body” only makes smokers more likely to believe that these cigarettes are less harmful.

It is particularly imperative that regulations on LLT cigarettes are introduced in China as soon as possible because the LLT market is still small. As smokers in China become more aware of the health risks of smoking and more concerned about the health effects, we can expect that they will look for ways to reduce their health risks without having to quit smoking. LLT cigarettes are already seen as less harmful and therefore are already in place so that these

cigarettes can become the alternative to quitting. However, if the belief that LLT cigarettes are less harmful was debunked before smokers become health-concerned, then smokers may be more likely to quit smoking rather than continue smoking but switching to LLT cigarettes.

6.4 Conclusion 3: “Light” or “low tar” cigarette smokers are more likely to believe that LLT cigarettes are less harmful

“Light” cigarette smokers in Canada, the United States, the United Kingdom, and Australia were more likely to believe that “light” cigarettes are less harmful compared to regular cigarette smokers. This is consistent with previous research suggesting that many smokers choose to smoke “light” cigarettes because they believe they are less harmful (Kozlowski, Goldberg, et al., 1998). The association between being a “light” cigarette smoker and the belief that “light” cigarettes are healthier was also significant among adolescents in North America cross-sectionally but not longitudinally. It is possible that adolescent smokers are less concerned about choosing a cigarette based on whether it is believed to be less harmful. Tobacco industry internal documents demonstrate that adolescent smokers were attracted to “light” and “low tar” cigarettes because they were easier to smoke when first starting (Cummings et al., 2002). The sensory experience of these cigarettes may therefore be the most important aspect of smoking “light” cigarette for adolescents initially. Over time, smokers may become more concerned about their health and because the sensory perception that these brands are smoother remains, adolescents may feel less urgency to quit smoking because of their associations between “light” cigarettes being smoother and “light” cigarettes being less harmful.

It is also possible that the belief that “light” cigarettes are smoother did not predict the belief that “light” cigarettes are less harmful longitudinally because we controlled for previous beliefs that “light” cigarettes are less harmful and the model was therefore over-partialled.

In China, we found an association between having ever tried a LLT cigarette and the belief that these cigarettes are less harmful both cross-sectionally and longitudinally. However, the tar level of the smokers’ current brand did not predict beliefs about LLT cigarettes either cross-sectionally or longitudinally. It is likely that these differences are due to the fact that our measure of “low tar” status was based on self reported tar level of current brand and smokers may not be aware of the tar level of their cigarettes. Tar level is also just one aspect of being a “light” cigarette smoker. However, the finding that those who had tried LLT cigarettes were more likely to believe that LLT cigarettes are less harmful is consistent with our findings in the Western countries.

When we examined beliefs about one’s own brand of cigarettes, we found that in both Canada and China, “light” or “low tar” cigarette smokers were more likely to believe that their brands were less harmful.

6.5 Conclusion 4: “Light” Cigarette Smokers in Canada are More Likely to Believe that Their Brand of Cigarettes are Smoother. “Low Tar” Cigarette Smokers in China are Just as Likely as “Medium” and “High Tar” Cigarette Smokers to Believe that Their Brand of Cigarettes are Smoother.

In Canada, “light” cigarette smokers were more likely than regular cigarette smokers to believe that their brand of cigarettes is smoother. However, in China there was no difference

among “low tar” and “high tar” cigarette smokers in their belief that their own brand of cigarettes is smoother.

However, in China, we asked smokers to report the tar level of their own brand of cigarettes whereas in Canada we were able to code the respondent’s brand information as “light” or regular based on the brand name. Smokers in China may not have known the tar level of the cigarettes they smoke. Indeed, we many smokers responded “don’t know” and were excluded from analyses. The concept of “low tar” is also just one aspect of “light” cigarettes. Package designs, “light” descriptors, etc. could have been found on tar levels above our “low tar” cut off of 10 mgs. The sensory perception between a 10 mg tar cigarette and an 11 mg tar cigarette is probably not dramatically different but these cigarettes would have been categorized as “low” vs. “medium” tar. It is very likely then that our lack of an association in China between the brand smoked and the belief that your brand is smoother was due to a flawed measure.

6.6 Conclusion 5: The Belief that “Light” Cigarettes are Smoother Mediates the Relation Between Smoking a “Light” or “Low Tar” Cigarette and Believing that “Light” or “Low Tar” Cigarettes are Less Harmful in Canada but Not China.

In Canada, the relation between being a “light” cigarette smoker and the belief that your brand of cigarettes is less harmful was mediated by the belief that you brand of cigarettes are smoother. In China, there was no evidence of mediation. “Low tar” cigarette smokers were just as likely as “high tar” smokers to say that their cigarettes were smoother. Although “low tar” cigarette smokers were more likely than “high tar” cigarette smokers to believe that their brand of cigarettes was less harmful in China, the fact that tar level did not predict the belief that your brand of cigarettes are smoother meant that there was no mediation. Again, as

discussed in conclusion 4 this difference in China was most likely due to a flawed measure of strength of cigarette brand smoked.

6.7 Conclusion 6: The Ban on “Light” and “Low Tar” Descriptors on Cigarette Packages in China Does Not Decrease Beliefs that LLT Cigarettes are Less Harmful

There was no immediate impact of a ban on “light” and “low tar” descriptors on the belief that LLT cigarettes are less harmful among smokers in China. In fact, the belief that LLT cigarettes are less harmful rose slightly during this time period. This implies that removal of LLT descriptors alone cannot change beliefs about LLT cigarettes. Messages about the relative harmfulness of LLT cigarettes are conveyed using package designs, advertising, and sensory characteristics. Ignoring these aspects while focusing only on a ban on descriptors will do little to change beliefs about LLT cigarettes.

6.8 Implications for Tobacco Control Policies

In recent court cases in the United States, the tobacco industry has argued that although cigarettes are inherently dangerous, there is nothing in their design that would make them even more dangerous than they might be otherwise (Cummings et al., 2006). The findings from this dissertation demonstrate that this argument is false. The tobacco industry has designed “light” cigarettes to be smoother than regular cigarettes. Smokers who think that their brand of cigarettes is smoother also think that their brand of cigarettes is less harmful. Therefore cigarettes designed to feel smoother are more dangerous than otherwise because they provide reassurance to smokers that their cigarettes are less harmful.

The findings from this dissertation therefore demonstrate the importance of implementing effective tobacco control policies to address those factors that influence the

belief that “light” or “low tar” cigarettes are smoother. To date, countries have attempted to address the misperception that “light” cigarettes are less harmful by banning “light” and “low tar” descriptors. However, research evidence demonstrates that over time in the United Kingdom, a ban on descriptors was not effective at changing the perception that “light” cigarettes confer health benefits (Borland et al., 2008). The results of this dissertation also demonstrate that a ban on “light” descriptors in China was not effective at changing the belief that LLT cigarettes are less harmful.

The problem with bans on “light” descriptors is that “light” cigarettes are marketed as less harmful in many other ways. Comprehensive regulations addressing both the cigarette design aspects that provide a smoother sensory experience and the package and advertising elements that create the belief that “light” cigarettes are smoother also need to be implemented.

One of the most important regulatory frameworks for tobacco control is the Framework Convention on Tobacco Control (FCTC). This global health treaty provides a regulatory strategy for tobacco control and has been signed by 168 countries to date (FCTC, 2010). In the model presented in Figure 1, I present different ways in which “light” cigarettes are marketed. Table 33 demonstrates how specific Articles in the FCTC could be relevant to the development of effective policies on “light” cigarettes.

Table 33 Articles of FCTC Relevant to Policies on “Light” Cigarettes

Marketing	Package Colour/Design	“Light/ “Low Tar” Descriptors	Sensory Descriptors	ISO/FTC Tar Rating	“Light”/ “Low Tar” Advertising	Cigarette Design
Relevant Policies	Article 11 Article 12 of FCTC	Article 11 Article 12 of FCTC	Article 11 Article 12 of FCTC	Article 11 Article 12 of FCTC	Article 12 Article 13 of FCTC	Article 9 Article 10 Article 12

Article 11 of the FCTC: Packaging and Labelling of Tobacco Products

Article 11 of the FCTC relates to the packaging and labelling of tobacco products. This Article currently calls for regulations to counter package designs and “light/low tar” descriptors:

“ensure that: (a) **tobacco product packaging and labelling** do not promote a tobacco product any means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, **including any term, descriptor, trademark**, figurative or any other sign that directly or indirectly creates the false impression that a particular tobacco product is less harmful than other tobacco products. These may include **terms such as ‘low tar,’ ‘light,’ ‘ultra-light,’ or ‘mild.’**” (World Health Organization, 2003)

This article does not, however, specifically address package colours that create the impression that a particular brand is less harmful. Wakefield et al (2004) demonstrated that cigarettes in lighter coloured packages were perceived to be smoother. This dissertation demonstrated that the belief that a cigarette is smoother predicts the belief that that cigarette is less harmful. Therefore, we have evidence that lighter package colours also create the erroneous impression that the cigarette is less harmful and should therefore not be allowed in accordance with Article 11 of the FCTC.

Article 11 in its current form also fails to include sensory descriptors in its list of terms that should be eliminated. Yet terms such as “smooth” have replaced “light” in countries where bans on “light” descriptors have been implemented because of their similar meaning (King & Borland, 2005). Again the research in this dissertation also demonstrates the powerful association between smooth and “less harmful.” Sensory descriptors should therefore be included in Article 11 regulations.

Article 11 also states that: "...package of tobacco products and any outside packaging and labelling of such products shall...contain information on relevant constituents and emissions of tobacco products..." (World Health Organization, 2003). This suggests that Article 11 would require tar levels to be reported on cigarette packages. However, tar levels can be used as an indicator of relative risk for cigarettes and is most likely an indicator for the relative smoothness of a cigarette. This is another example of information that creates an erroneous impression that a particular cigarette is less harmful. Therefore Article 11 should actually regulate that tar levels should not be reported on cigarette packages.

In fact, the most effective policy to address the regulations proposed in Article 11 would be to implement plain packaging on all cigarette products. Recently Australia became the first country to introduce legislation to require plain packaging of tobacco products. This legislation is expected to be gazetted January 1, 2012 for implementation by July 1, 2012 (National Health and Hospitals Network, 2010). The regulation would restrict or prohibit tobacco industry logos, colours, brand imagery, or promotional text on tobacco product packaging other than brand names and product names in a standard colour, font style, and position. Warning labels would continue to remain on cigarette packages. Other countries could follow the Australian example to develop and implement plain packaging of tobacco products to remove the perception that these brands are smoother and therefore less harmful.

Article 12 of the FCTC: Education, Communication, Training, and Public Awareness

Article 12 of the FCTC relates to education, communication, training, and public awareness. This article could address every aspect of the deception of "light" cigarettes as outlined. Article 12 states: "Each Party shall promote and strengthen public awareness of

tobacco control issues, using all available communication tools... public awareness about the health risks of tobacco consumption..."

Parties therefore have a responsibility to educate the public about the deceptive nature of "light" cigarettes. Shiffman et al. (2001b) demonstrated that the most effective strategy to discourage the use of "light" cigarettes was to address the fact that these cigarettes actually do feel smoother but that this perception is misleading because these cigarettes are no less harmful. Similar educational campaigns that include information about why "light" cigarettes are no less harmful and why the aspects of "light" cigarette marketing are misleading should be implemented in accordance with Article 12.

Article 13 of the FCTC: Tobacco Advertising, Promotion and Sponsorship

Article 13 of the FCTC relates to tobacco advertising, promotion and sponsorship. This article proposes a comprehensive ban on all tobacco advertising. This article would therefore include advertising for "light" cigarettes.

Article 9 of the FCTC: Regulation of the contents of tobacco products

Article 9 of the FCTC relates to the regulation of the contents of tobacco products. Article 9 states: "The Conference of the Parties...shall propose guidelines for testing and measuring the contents and emissions of tobacco products and for the regulation of these contents and emissions."

Article 9 could therefore address the regulation of contents that create the impression that the cigarette is smoother (and therefore less harmful). This article does not currently address other cigarette design aspects that could create the impression that that particular

cigarette is smoother and therefore less harmful. For example, recent research has suggested that banning filter vents and regulating low maximum standard tar, nicotine, and carbon monoxide yields would make cigarettes less palatable and may encourage smoking cessation (Kozlowski et al., 2006). Article 9 should therefore include other aspects of cigarette design beyond the cigarette contents.

Article 10 of the FCTC: Tobacco Product Disclosure

Article 10 of the FCTC relates to the regulation of tobacco product disclosures. Article 10 calls for:

“...manufacturers and importers of tobacco products to disclose to governmental authorities information about the contents and emissions of tobacco products...implement effective measures for public disclosure of information about the toxic constituents of the tobacco products and the emissions they produce.”

Article 10 could be used to inform the public about ingredients in the cigarette that are designed to make the cigarette feel smoother and therefore less harmful. If these ingredients were already banned, it would allow the government to make sure that the tobacco industry was not adding anything that could provide the impression that the cigarette is smoother. It would also allow the government to monitor any new substances that were added and provide them with the opportunity to investigate its potential role including creating a perception that the cigarette is less harmful.

Family Smoking Prevention and Tobacco Control Act

In addition to FCTC, a recent law in the United States would also provide the opportunity to address the sensory characteristics of “light” cigarettes. In June 2009, the

Family Smoking Prevention and Tobacco Control Act was signed into law. This act grants the Food and Drug Administration (FDA) the authority to regulate manufacturing, marketing and sale of tobacco products in much the same way that it currently regulates other products such as food, drugs, and cosmetics. Among the provisions in the act are regulations to discourage tobacco marketing and sales to children, larger health warnings on tobacco products, regulation on health-related claims about tobacco products, bans on candy and fruit flavoured cigarettes, bans on “light” and “low tar” descriptors and the power for the FDA to require changes to tobacco products such as the removal or reduction of harmful ingredients (Family Smoking Prevention and Tobacco Control Act, 2009). This would therefore provide the FDA the authority to ban ingredients that are harmful to the extent that they influence smokers’ perceptions that the brand is less harmful.

The findings of this dissertation point to the importance of regulating/eliminating/reducing methods that the industry uses in their production design to make the sensory properties of cigarettes less harsh and smoother. The FDA could therefore regulate cigarettes so that they did not feel smoother or less harsh. Implementation of such regulations could provide models for other countries who have signed on to the FCTC to implement similar regulations in their countries.

6.9 Future Research

We established that cigarettes that are perceived to be smoother are also seen as less harmful. However, this research focused on smokers of “light” or “low tar” cigarettes. Mentholated cigarettes are also designed to provide the impression of a cooler or smoother sensation on the throat. Few research studies have examined beliefs about menthol cigarettes, however, menthol cigarettes are likely to be perceived as less harmful in the same way as

“light” cigarettes because they feel smoother. Research demonstrating that smokers of mentholated cigarettes believe that their cigarettes are less harmful to the extent that they believe their cigarettes are smoother would provide powerful evidence that menthol additives should be removed from cigarettes. The FDA recently banned candy flavoured additives from cigarettes but menthol continues to be allowed. Research demonstrating that menthol cigarettes are perceived as less harmful because they are smoother could convince the FDA to change their decision and ban menthol. In addition, the FCTC could ban menthol under Article 9 which regulates cigarette content.

In the same way that we measured beliefs about one’s own brand of cigarettes among “light” and “low tar” cigarettes in the ITC 4 Country Survey and the ITC China Survey, so too, could we measure beliefs about one’s own brand of cigarettes among menthol smokers. We will therefore examine this relation both cross-sectionally and longitudinally as the subsequent waves of the ITC 4 Country and ITC China Surveys will be finished in the next year.

Now that we have established that the belief that your cigarettes are smoother predicts having the belief that your cigarettes are less harmful, the next step would be to examine how these beliefs relate to actual smoking behaviour. The tobacco industry has argued in court cases in the United States that nothing they have done has kept anyone from stopping smoking (Cummings et al., 2006). However, the research in this dissertation demonstrated that smokers who believe that their brand of cigarettes is smoother are more likely to believe that their brand of cigarettes is less harmful. We would therefore expect that individuals who believe that their brand of cigarettes is less harmful would be less likely to intend to quit smoking.

Prior research by Wilson et al (2009) demonstrated that “light” cigarette smokers were no more or less likely to intend to quit smoking and Hyland et al (2003) found that regular smokers who switched to “light” cigarettes were no more or less likely to make a quit attempt or successfully quit smoking. However, we would anticipate that given that “light” cigarette smokers are more health-concerned, that they should be more likely to intend to quit smoking. The belief that “light” cigarettes are less harmful may therefore reduce smokers’ health concerns and make them no more or less likely to intend to quit smoking. Whether this hypothesis is correct needs to be tested. Data from our ITC 4 Country Survey as well as our ITC China Surveys will allow us to examine how beliefs about the harmfulness of one’s own cigarette might influence smokers to be more or less likely to quit smoking.

Research could also examine the development of beliefs about LLT cigarettes. Specifically, do regular cigarette smokers switch to “light” cigarettes rather than quitting smoking to the extent that they believe that LLT cigarettes are less harmful and that they are more concerned about their health? Or do regular cigarette smokers switch to LLT cigarettes as a step towards quitting but then become reassured by the fact that LLT cigarettes are smoother and therefore less harmful (and then do not quit smoking)?

In addition, no research has examined how beliefs about “light” cigarettes might influence smoking initiation among adolescents. It may be that adolescent non-smokers who believe that “light” cigarettes are less harmful may be more likely to start smoking because this belief may quell any health concerns they may have had that would have prevented them from starting to smoke. We will be able to use our North American Student Smoking Survey to address this research question.

These studies will provide evidence for whether beliefs about “light” cigarettes or one’s own brand of cigarettes can influence future smoking among both adolescents and adults from North America as well as the United Kingdom, Australia, and China. This research can guide future tobacco control policies particularly Articles 9, 10, and 11 of the Framework Convention on Tobacco Control.

6.10 Summary

The results of this dissertation provides powerful converging evidence across 6 countries, at different time points, among adolescents and adults, linking the belief that “light” or “low tar” cigarettes are smoother/less harsh and the belief “light” or “low tar” cigarettes are less harmful/healthier. This study links the personal experience of your own brand being smoother with the belief that your brand is less harmful. This study also demonstrated that existing policies to address the myth that “light” or “low tar” cigarettes are less harmful are effective in the short term. Countries can continue to develop tobacco control policies that slowly whittle away the tobacco industry’s attempts to deceive consumers into believing that some cigarettes are less harmful. Regardless of these attempts, if the cigarette continues to be designed in a way that feels smoother, efforts to convince the smoker that their brand is less harmful will be negated by the ultimate evidence of lower harm; the smoother experience. Therefore changes to the cigarette design should be an immediate priority in tobacco control legislation.

REFERENCES

- Anderson, S.J., Pollay, R.W., & Ling, P.M. (2006). Taking ad-Vantage of lax advertising regulation in the USA and Canada: Reassuring and distracting health-concerned smokers. *Social Science and Medicine*, *63*, 1973-1985.
- Baron, R.M., & Kenny D.A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182.
- Benowitz, N.L. (2001). Compensatory smoking of low-yield cigarettes. In: Risks associated with smoking cigarettes with low machine-measured tar and nicotine yields. *NCI Smoking and Tobacco Control Monograph No. 13* (pp. 39-63). Bethesda, Maryland: National Cancer Institute.
- Binson, D., Canchola, J.A., & Catania, J.A. (2000). Random selection in a national telephone survey: a comparison of the Kish, next-birthday, and last-birthday methods. *Journal of Official Statistics*, *16*, 53-60.
- Borland, R., Fong, G.T., Yong, H.H., Cummings, K.M., Hammond, D., King, B., Siahpush, M., McNeill, A., Hastings, G., O'Connor, R.J., Elton-Marshall, T., & Zanna, M.P. (2008). What Happened to Smokers' Beliefs about Light Cigarettes When "Light/Mild" Brand Descriptors Were Banned in the UK? Findings from the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control*, *17*, 256-262.
- Borland, R., Yong, H.H., King, B., Cummings, K.M., Fong, G.T., Elton-Marshall, T., Hammond, D., & McNeill, A. (2004). Use of and beliefs about light cigarettes in four

- countries: Findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine and Tobacco Research*, 6(Suppl 3), S311-S321.
- Burns, D. M., Major, J.M., Shanks, T. G., Thun, M. J., & Samet, J. M. (2001). Smoking lower yield cigarettes and disease risks. In: Risks associated with smoking cigarettes with low machine-measured tar and nicotine yields. *NCI Smoking and Tobacco Control Monograph No. 13* (pp. 65-158). Bethesda, Maryland: National Cancer Institute.
- Carpenter, C.M., Wayne, G.F., & Connolly, G.N. (2007). The role of sensory perception in the development and targeting of tobacco products. *Addiction*, 102, 136-147.
- Cohen, J.B. (1996). Smokers' knowledge and understanding of advertised tar numbers: health policy implications. *American Journal of Public Health*, 86, 18-24.
- CTUMS. (2003). Smoking in Canada: young adults. Retrieved from: http://www.hc-sc.gc.ca/hc-ps/alt_formats/hecs-sesc/pdf/tobac-tabac/research_recherche/stat/_ctums-esutc_fs-if/2003-youn-jeun-eng.pdf Accessed on: May 29, 2010.
- CTUMS. (2006). Summary of Annual Results for 2006. Retrieved from: http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/research-recherche/stat/_ctums-esutc_2006/ann_summary-sommaire-eng.php Accessed on: May 29, 2010.
- Cummings, K.M., Morley, C.P., Horan, J.K., Steger, C., & Leavell, N-R. (2002). Marketing to America's youth: evidence from corporate documents. *Tobacco Control*, 11(Suppl I), i5-i17.

- Cummings, K.M., Brown, A., & Douglas, C.E. (2006). Consumer acceptable risk: how cigarette companies have responded to accusations that their products are defective. *Tobacco Control, 15*, iv84-iv89.
- Djordjevic, M.V., Stellman, S.D., & Zang, E. (2000). Doses of nicotine and lung carcinogens delivered to cigarette smokers. *Journal of the National Cancer Institute, 92*, 106-111.
- Doll, R., & Hill, A.B. (1952). A study of the aetiology of carcinoma of the lung. *British Medical Journal, 2*, 1271-1286.
- Doll, R., & Hill, A.B. (1954). The mortality of doctors in relation to their smoking habits: A preliminary report. *British Medical Journal, 1*(4877), 1451-1455.
- Euromonitor International. The World Market for Tobacco. (2006). Available at: http://www.euromonitor.com/The_World_Market_for_Tobacco (purchase required). Accessed August 9, 2007.
- Family Smoking Prevention and Tobacco Control Act, H. R. 1256, 111 Cong., 1st Sess. (2009).
- Federal Trade Commission. (1999). 1999 Report on Cigarette sales, advertising and promotion covering 1997. <http://www.ftc.gov/os/1999/07/1997cigarettereport.pdf> Accessed on: May 29, 2010.
- Gilpin, E.A., Emery, S., White, M.M., & Pierce, J.P. (2002). Does tobacco industry marketing of “light” cigarettes give smokers a rationale for postponing quitting? *Nicotine and Tobacco Research, 4*(Suppl 2), S147-S155.

- Hammond, D., Fong, G.T., Cummings, K.M., & Hyland, A. (2005). Smoking topography, brand switching, and nicotine delivery: results from an in vivo study. *Cancer Epidemiology Biomarkers and Prevention*, *14*, 1370-1375.
- Hammond, D., Collishaw, N.E., & Callard, C. (2006). Secret science: tobacco industry research on smoking behaviour and cigarette toxicity. *Lancet*, *367*, 781-787.
- Hammond, D., Dockrell, M., Arnott, D., Lee, A., & McNeill, A. (2009). Cigarette pack design and perceptions of risk among UK adults and youth. *European Journal of Public Health*, *19*(6), 631-637.
- Hammond, D., & Parkinson, C. (2009). The impact of cigarette package design on perceptions of risk. *Journal of Public Health*, *31*, 345-353
- Hammond, E.C., & Horn, D. (1958). Smoking and death rates—Report on forty-four months of follow-up of 187,783 men. II. Death rates by cause. *Journal of the American Medical Association*, *166*, 1294-1308.
- Harris, J.E., Thun, M.J., Mondul, A.M., & Calle, E.E. (2004). Cigarette tar yields in relation to mortality from lung cancer in the cancer prevention study II prospective cohort, 1982-8. *British Medical Journal*, *328*(7431), 72.
- Hecht, S.S., Murphy, S.E., Carmella, S.G., Li, S., Jensen, J., Le, C., Joseph, A.M., & Hatsukami, D.K. (2005). Similar uptake of lung carcinogens by smokers of regular, light, and ultralight cigarettes. *Cancer Epidemiology Biomarkers and Prevention*, *14*(3), 693-698.

Hyland, A., Hughes, J.R., Farrelly, M., & Cummings, K.M. (2003). Switching to lower tar cigarettes does not increase or decrease the likelihood of future quit attempts or cessation. *Nicotine and Tobacco Research*, 5(5), 665-671.

Hyland, A., Borland, R., Li, Q., Yong, H.H., McNeill, A., Fong, G.T., O'Connor, R.J., & Cummings, K.M. (2006). Individual-level predictors of cessation behaviours among participants in the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control*, 15(Suppl 3), iii83-iii94.

James, J.A., & Daly, M. de B. (1969). Nasal Reflexes. *Proceedings of the Royal Society of Medicine*, 62, 1287-1293.

James, J.A. & Daly, M. de B. (1972). Reflex respiratory and cardiovascular effects of stimulation of receptors in the nose of the dog. *The Journal of Physiology*, 220, 673-696.

Jiang, Y., Elton-Marshall, T., Fong, G. T., & Li, Q. (in press). Quitting Smoking in China: Findings from the ITC China Survey. Paper to be published in *Tobacco Control*.

King, B. & Borland, R. (2005). What was “light” and “mild” is now “smooth” and “fine”: new labelling of Australian cigarettes. *Tobacco Control*, 14, 214-215.

Kozlowski, L.T., Goldberg, M.E., Yost, B.A., White, E.L., Sweeney, C.T., & Pillitteri, J.L. (1998). Smokers' misperceptions of “light” and “ultra-light” cigarettes may keep them smoking. *American Journal of Preventive Medicine*, 15(1), 9-16.

Kozlowski, L.T., Mehta, N.Y., Sweeney, C.T., Schwartz, S.S., Vogler, G.P., Jarvis, M.J., & West, R.J. (1998). Filter ventilation and nicotine content of tobacco in cigarettes from Canada, the United Kingdom, and the United States. *Tobacco Control*, 7(4), 369-375.

- Kozlowski, L.T., & O'Connor, R.J., (2002). Cigarette filter ventilation is a defective design because of misleading taste, bigger puffs, and blocked vents. *Tobacco Control, 11* (Suppl 1), I40-I50.
- Kozlowski, L.T., O'Connor, R.J., Giovino, G.A., Whetzel, C.A., Pauly, J., & Cummings, K.M. (2006). Maximum yields might improve public health—if filter vents were banned: a lesson from the history of vented filters. *Tobacco Control, 15*, 262-266.
- Kozlowski, L.T., O'Connor, R.J., & Sweeney, C.T. (2001). Cigarette Design. In: Risks associated with smoking cigarettes with low machine-measured tar and nicotine yields. NCI Smoking and *Tobacco Control Monograph No. 13* (pp. 13-38). Bethesda, Maryland: National Cancer Institute.
- Kozlowski, L.T., & Sweeney, C.T. (1997). Low yield, light, and ultra light cigarettes: Let's understand the product before we promote. In: M. E. Goldberg, M. Fishbein, S. Middlestadt (eds). *Social Marketing: Theoretical and Practical Perspectives* (pp. 231-244). New York: Erlbaum.
- Kozlowski, L.T., Yost, B., Stine, M.M., & Celebucki, C. (2000). Massachusetts' Advertising Against Light Cigarettes Appears to Change Beliefs and Behavior. *American Journal of Preventive Medicine, 18*(4), 339–342.
- Kropp, R.Y., & Halpern-Felsher, B.L. (2004). Adolescents' beliefs about the risks involved in smoking “light” cigarettes. *Pediatrics, 114*(4), e445-e451.
- Mackay, J., Eriksen, M., & Shafey, O. (2006). The Tobacco Atlas, 2nd Edition. *American Cancer Society*: Atlanta, Georgia.

- Maron, D.J., & Fortmann, S.P. (1987). Nicotine yield and measures of cigarette smoke exposure in a large population: Are lower-yield cigarettes safer? *American Journal of Public Health, 77*, 546-549.
- Megerdichian, C.L., Rees, V.W., Wayne, G.F., & Connolly, G.N. (2007). Internal tobacco industry research on olfactory and trigeminal nerve response to nicotine and other smoke components. *Nicotine and Tobacco Research, 9*(11), 1119–1129.
- Murray C.J.L., & Lopez, A.D. (1997). Alternative projections of mortality and disability by cause 1990-2020: Global burden of disease study. *The Lancet, 349*, 1498-1504.
- National Health and Hospitals Network. (2010). *Legislation to require plain packaging for tobacco products*. Retrieved from:
<http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/factsheet-prevention-02>
- Accessed on: May 29. 2010.
- O'Connor, R.J., Hammond, D., McNeill, A., King, B., Kozlowski, L.T., Giovino, G.A. & Cummings, K.M. (2008). How do different cigarette design features influence the standard tar yields of popular cigarette brands sold in different countries? *Tobacco Control, 17*(Suppl I), i1–i5.
- O'Connor, R.J., Li, Q., Stephens, W. E., Hammond, D., Elton-Marshall, T., Cummings, K.M., Giovino, G. A. & Fong, G. T. (in press). Cigarettes Sold in China: Design, Emissions, and Metals. Paper to be published in *Tobacco Control*.

Philip Morris. [PEOPLE'S REPUBLIC OF CHINA 920000 - 940000 PLAN]. (1992). Philip Morris. Bates No. 2504007962 <http://legacy.library.ucsf.edu/tid/rcq19e00>

Physicians for a Smoke-Free Canada. (2007). The continuing saga deceptive descriptors...Filter Tips: A review of cigarette marketing in Canada (6th Ed). Ottawa, Canada: *Physicians for a Smoke-Free Canada*.

Available at: <http://www.smoke-free.ca/Filtertips-6/colourfuldeception.htm>

Accessed on: July 3, 2009.

Pollay, R.W. (2000). Targeting youth and concerned smokers: evidence from Canadian tobacco industry documents. *Tobacco Control*, 9, 136-147.

Pollay, R.W. (2002). 'Light' and 'mild' cigarette advertising: Canadian examples. In: McDonald, S (Ed.) *Putting an end to deception: Proceedings of the International Expert Panel on Cigarette Descriptors. A report to the Canadian Minister of Health from the Ministerial Advisory Council on Tobacco Control* (pp. 37-42). Hull, Quebec.

Pollay, R.W., & Dewhirst, T. (2002). The dark side of marketing seemingly "light" cigarettes: successful images and failed fact. *Tobacco Control*, 11(Suppl 1), i18-i31.

Shiffman, S., Pillitteri, J.L., Burton, S.L., Rohay, J.M., & Gitchell, J.G. (2001a). Smokers' beliefs about "light" and "ultra light" cigarettes. *Tobacco Control*, 10(Suppl 1), i17-23.

Shiffman, S., Pillitteri, J.L., Burton, S.L., Rohay, J.M., & Gitchell, J.G. (2001b). Effect of health messages about "Light" and "Ultra Light" cigarettes on beliefs and quitting intent. *Tobacco Control*, 10(Suppl 1), i24-i32.

- Silver, W.L., & Maruniak, J.A. (1981). Trigeminal chemoreception in the nasal and oral cavities. *Chemical Senses*, 6(4), 295-305.
- Singer, E., van Hoewyk, J., & Maher, M.P. (2000). Experiments with incentives in telephone surveys. *Public Opinion Quarterly*, 64, 171-188.
- Substance Abuse and Mental Health Services Administration. (2009). Results from the 2008 National Survey on Drug Use and Health: National Findings (Office of Applied Studies, NSDUH Series H-36, HHS Publication No. SMA 09-4434). Rockville, MD.
- Thompson, M.E., Fong, G.T., Hammond, D., Boudreau, C., Driezen, P., Hyland, A., Borland, R., Cummings, K.M., Hastings, G.B., Siaphush, M., Mackintosh, A.M., & Laux, F.L. (2006). Methods of the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control*, 15(Suppl 3), iii12-iii18.
- Thun, M.J., & Burns, D.M. (2001). Health impact of “reduced yield” cigarettes: a critical assessment of the epidemiological evidence. *Tobacco Control*, 10(Suppl 1), i4-i11.
- U. S. Department of Health, Education, and Welfare. (1964). *Smoking and health: A report of the advisory committee to the surgeon general of the public health service*. PHS Publication No. 1103. Rockville, MD: U.S. Department of Health, Education, and Welfare, Public Health Service.
- U. S. Department of Health and Human Services. (1989). *Reducing the health consequences of smoking: 25 years of progress*. A report of the Surgeon General. US Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center

for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
DHHS Publication No. (CDC) 89-8411.

Wakefield, M., Morley, C., Horan, J. K., & Cummings, K. M. (2002). The cigarette pack as image: new evidence from tobacco industry documents. *Tobacco Control, 11*, i73-i80.

Weinstein, N.D. (1982). Unrealistic Optimism About Susceptibility to Health Problems. *Journal of Behavioral Medicine, 5*(4), 441-460.

Weinstein, N.D. (1986). Unrealistic Optimism About Susceptibility to Health Problems: Conclusions from a Community-Wide Sample. *Journal of Behavioral Medicine, 10*(5), 481-500.

Wilson, N., Weerasekera, P., Peace, J., Edwards, R., Thomson, G., & Devlin, M. (2009). Misperceptions of "light" cigarettes abound: National survey data. *BMC Public Health, 9*, 126.

World Health Organization. (2003). Framework Convention on Tobacco Control. Geneva, WHO. Retrieved from: http://www.who.int/tobacco/framework/WHO_FCTC_english.pdf (Accessed February 6, 2008).

World Health Organization. (2007). Towards a tobacco-free China. Geneva, WHO. Retrieved from: <http://www.wpro.who.int/china/sites/tfi/> (Accessed 15 August 2007).

World Health Organization. (2008). Report on the Global Tobacco Epidemic, 2008: The MPOWER package. Geneva, WHO. Retrieved from:

http://www.who.int/tobacco/mpower/mpower_report_full_2008.pdf (Accessed 20 June 2008).

Wu, C., Thompson ME, Fong GT, Jiang Y, Yang Y, Feng G, Li Q. (2009). Methods of the International Tobacco Control (ITC) China Survey. *Tobacco Control* doi:10.1136/tc.2009.029900 Accessed on: May 29, 2010

Wynder, E.L., Graham, E.A. (1950). Tobacco smoking as a possible etiologic factor in bronchogenic carcinoma. A study of six hundred and eighty-four proved cases. *Journal of the American Medical Association*, 143, 329-336.

Yang, G., Ma, J., Chen, A., Zhang, Y., Samet, J.M., Taylor, C.E., Becker, K. (2001). Smoking cessation in China: findings from the 1996 national prevalence survey. *Tobacco Control*, 10(2), 170-174.

Yang, G., Fan, L., Tan, J., Qi, G., Zhang, Y., Samet, J.M., Taylor, C.E., Becker, K., Xu, J. (1999). Smoking in China: findings of the 1996 National Prevalence Survey. . *Journal of the American Medical Association*, 282(13), 1247-1253.

NOTES

1. Because we only asked whether the respondent smokes a “light” cigarette in Wave 1 of the ITC 4 Country Survey, we will use Waves 1 and 2.
2. LLT will now be used to refer to “light” and/or “low tar” cigarettes.
3. Menthol cigarettes do feel smoother and therefore have the potential to be perceived as less harmful consistent with this research on “light” cigarettes. However, we excluded menthol cigarette smokers from these analyses because the focus of the research is on “light” and “low tar” cigarettes. Menthol and “light” cigarettes are different and should therefore be analyzed separately. Future research will address whether menthol cigarettes are believed to be smoother and therefore less harmful.
3. Ethnicity was based on definitions for majority and minority ethnic groups in each country consistent with what would be used in the census of each of the four countries. In Canada and the United States, respondents could choose more than one ethnic background and were categorized as exclusively white (people who reported being white only) vs. other (people who reported any other ethnic group, alone or in combination). In the United Kingdom and Australia, respondents could only choose one ethnic background. In the United Kingdom, ethnicity was categorized as exclusively white (people who reported being white only) vs. other (people who reported being from any other ethnic group). In Australia, the census used English as a first language as the definition for the majority group and minority groups. Ethnicity was therefore categorized as: exclusively English speaking (people whose spoken language at home is English only) vs. other (people who speak another language at home in addition to or instead of English).

4. Income was created by categorizing income levels into “low” “moderate” and “high” based on a 1/3rd split of respondents in each category for each country. These categories were then combined into one income variable. Low income was defined as an annual household income of: <\$30,000 per year in Canada, the United States, and Australia; and less than £30,000 in the United Kingdom. Moderate income was defined as an annual household income of: \$30,000-\$59,999 in Canada, the United States, and Australia; and £30,000–£44,999 in the United Kingdom. High income was defined as an annual household income of: >=\$60,000 in Canada, the United States, and Australia; and >=£45,000 in the United Kingdom.
5. Education was created by categorizing each level of education within each country into “low,” “medium,” and “high” categories based on a 1/3rd split of respondents in each category for each country and then combining them into one education variable. Low education level was defined as: completed high school or less in Canada, the United States and Australia. In the United Kingdom the definition was having completed secondary/vocational 3 or less. Moderate education level was defined as: community college/trade/technical school/some university (no degree) in Canada and the United States. In the United Kingdom this was defined as college/university (no degree) and in Australia, the definition was technical/trade/some university (no degree). High education level in each country was defined as: completed university or post graduate studies.
6. Time to first cigarette was initially measured by asking respondents to report the time to first cigarette in either minutes or hours. There were slightly different versions of the time to first cigarette question for daily and non-daily smokers. For each type of smoker, responses were stored in different variables. Values were combined into a single variable

and time to first cigarette was converted into minutes (separately for daily and non-daily smokers). Respondents who didn't know how long they would wait until their first cigarette were excluded. Respondents who answered differently in both minutes and hours were also excluded. If both minutes and hours corresponded to the same category and were consistent with the number of cigarettes smoked per day, the value for minutes was used. If time in hours was an impossible value (e.g. was greater than 24) but time in minutes was a possible value, then time in minutes was accepted as the value for time to first cigarette. If time in hours was 0 or time in minutes was 0 the other was accepted.

Time to first cigarette was then classified into four levels:

0= 61 minutes or longer

1= 31–60 minutes

2= 6–30 minutes

3= 5 minutes or less

Cigarette Consumption was measured using the number of cigarettes smoked per day for daily smokers, and the number of cigarettes smoked per week or month for weekly or monthly smokers (where weekly smokers cigarette consumption= #cigarettes per week/7; monthly smokers cigarette consumption=#cigarettes per month/30.4)

Responses were then converted into a categorical measure with four levels:

0= 0–10 cigarettes per day

1= 11–20 cigarettes per day

2= 20–30 cigarettes per day

3= More than 30 cigarettes per day

The overall score for Heaviness of Smoking Index was therefore calculated by summing up the values for each of the categorical measures (range from 0-6).

7. Borland et al. (2004) used an alternate version of the Heaviness of Smoking Index (HSI). The alternate version of the heaviness of smoking index was computed by taking the square root of daily cigarette consumption minus the natural logarithm of time to first cigarette of the day. The computations for this measure were much more involved. I tested the HSI alternate version in all models and the results were almost exactly the same (no significant differences) whether I used the traditional Heaviness of Smoking Index or the alternate version. I therefore decided to use the simpler and more commonly used Heaviness of Smoking Index.
8. The age categories 18-24 and 25-39 were collapsed into one category due to a low total number of respondents (1.4%) in the 18-24 year old category.
9. Daily cigarette smokers responded “every day” to the question: “Do you smoke every day, less than every day, or not at all?” and weekly smokers indicated that they smoked “less than every day.” Cigarettes smoked per day was calculated by asking daily smokers: “On average, how many cigarettes do you smoke each day, including both factory-made and hand-rolled cigarettes?” and weekly smokers: “On average, how many cigarettes do you smoke each week?” (divided by 7). Impossible per day values (greater than 100) were treated as coding errors and re-coded as 100. In the logistic regression equation, cigarettes per day was centered and treated as a continuous variable.
10. The total sample size for recontact smokers between Waves 1 and 2 was 3710 as noted in the retention rates. However, this sample size was based on the number of respondents who were recruited. The sample size reported for this study of 3651 was based on the

number of respondents who actually qualified to be included in the study after data cleaning. Respondents who were recruited but should not have been because they did not qualify for the survey (e.g. respondents who didn't smoke 100 or more cigarettes in their lifetime) were excluded in this final sample.

11. O.A.C. stands for Ontario Academic Credit. Ontario students attended O.A.C. or a 13th grade of school prior to attending universities. O.A.C. existed until 2003.
12. Respondents were asked to indicate which category best describes their ethnic/racial background (white/black/Latino or Hispanic/Asian-American or Asian Canadian/Native American or American Indian or Canadian Aboriginal/Other). These responses were recoded into 1=Majority group (White) or 2=Minority group (all other ethnic/racial backgrounds).
13. We use the term “established smoker” instead of “regular smoker” to avoid confusion with regular brand cigarette smokers (as opposed to a “light” cigarette smokers).
14. Smoking status was derived using definitions from the Waterloo Smoking Prevention Project.
15. I ran a GEE analyses using a variable that was a combination of the belief that “light” cigarettes are smoother and the belief that “light” cigarettes are less harsh with categories for having neither of these beliefs, one of these beliefs, or both of these beliefs. However, the results of this GEE was similar to what was found in Studies 4 and 5: This belief predicted the belief that “light” cigarettes are healthier cross-sectionally but not longitudinally. Because the belief that “light” cigarettes are less harsh actually did predict the belief that “light” cigarettes are healthier longitudinally when separated out from the

belief that “light” cigarettes are smoother, I decided to keep these belief items separate and run models separately.

16. Wave 3 of the North American Student Smoking Survey was conducted in the Fall of 2001 whereas Wave 4 was conducted in the Spring of 2002. Wave 1 of the ITC 4 Country Survey was conducted between October and December 2002 whereas Wave 2 was conducted between June and August of 2003.
17. This was different than Study 1 where we asked about beliefs about “light” cigarettes. In Study 1 we included “don’t know” responses. In study 1, we could justify keeping “don’t know” responses because we could understand why some people would not know about “light” cigarettes, particularly those who don’t smoke them. In contrast, in Study 6 we excluded “don’t know” responses for the belief about one’s own brand of cigarettes because we would expect respondents should have some opinion about the relative harmfulness of their own brand.
18. We used cigarettes per day instead of heaviness of smoking index (HSI) because we wanted the model to be more consistent with the model we used in Study 7 examining beliefs about your brand of cigarettes in China. As mentioned before, cigarettes per day had to be used in China instead of HSI because there were too many respondents who did not answer the time to first cigarette question.
19. Interviewer Training and Instructions for Brand question: “Emphasize “specific” in the question. If respondent gives a brand name that could fit several different entries in the coded list, probe as necessary for other descriptors, to determine whether any of the listed varieties matches the respondent’s answer. If the response is vague or nonspecific, prompt respondent by saying: “What is the name you use when you ask for your brand in the

store?” Always confirm your choice with the respondent: e.g. “There is a brand on my list that says “Basic Ultra Light Menthol 100s” -- would that be the same as your brand?” or “Would that be the brand you smoke most?” If the respondent’s answer exactly matches the name on the list, simply read back the brand name as confirmation: e.g. “So your brand is Benson & Hedges Methol Mild King Size”. INTERVIEWER TRAINING -- Examples of probing: If respondent gives no strength indication at all, ask “Is your brand any particular strength, or isn’t that part of the brand name?” If respondent says “just regular strength” or “the plain kind” or “full flavour”, confirm that he/she smokes the default strength: “So there’s no mention of strength in your brand’s name?” Sometimes “full flavour” is actually part of the brand name and sometimes it is unmentioned because it is the default strength. This same kind of probing applies also to cigarette length – the shortest length for a given brand family will generally be the default length and may not be mentioned by the respondent, but the interviewer should explicitly confirm this with the respondent: “you didn’t mention what length your cigarette is. Would that be [regular/King size...] that you smoke?” IN UK and AU, strength descriptors have been banned, so manufacturers use other words to discriminate among varieties. The different varieties include colours (blue, white, gold, etc) or words like “Fine” or “Smooth” in their names. Probing for these words can’t mention strength, but rather interviewers should say: “Are there any other words that help identify the name of your brand?” OR “How do you ask for your specific brand in the store?” If the response could fit several different varieties on the list, ask specifically: “Would that be Pall Mall gold or Pall Mall white, or something else?” In the brand lists for UK and AU, these non-strength descriptors have been treated like strength descriptors, in that they immediately follow the brand family’s name in the

variety's listing. If respondent says "ultra light" and the list for that brand family includes only the term "mild," and never "light", then say: Could that be "ultra mild"? If the description offered by the respondent isn't specific enough and therefore fits both menthol and non-menthol entries, probe by saying: "Is that menthol or not menthol?" Similarly, if the description could apply to entries for multiple lengths – e.g. King Size and 100s -- probe by saying: "Do you smoke King Size or 100s, or some other length?" In other words, use the names of the listed entries – within the mentioned brand family -- to probe for details, and thus to narrow down the options and identify the one code that fits the respondent's answer – if there is one. Confirm that variety with the respondent. If no entry matches, or if respondent does not confirm the entry you think is closest, then code "other" and enter respondent's answer as a text response."

20. Again, we did not combine health concerns with concern about lowering quality of life as we had in Study1 because we wanted to keep this model as consistent as possible with the Study 7 ITC China model. Concerns that smoking would/had damaged quality of life were not asked in the ITC China survey.
21. As noted for beliefs about the harmfulness of "light" cigarettes vs. beliefs about the harmfulness of one's own brand, this was different than Study 1 where we asked about beliefs about "light" cigarettes. In Study 1 we included "don't know" responses. In study 1, we could justify keeping "don't know" responses because we could understand why some people would not know about "light" cigarettes, particularly those who don't smoke them. In contrast, in Study 6 we excluded "don't know" responses for the belief about one's own brand of cigarettes because we would expect respondents should have some opinion about the relative smoothness of their own brand.

22. There were 320 people who were missing information for the main dependent variable (my brand of cigarettes is less harmful) and were therefore excluded from the cross tabs and regression.
23. As discussed in Study 6, this was different than when we asked about beliefs about LLT cigarettes (in that case, don't know responses were included) because we could understand why not everyone would know about LLT cigarettes, particularly those who don't smoke them. However, it is reasonable to expect that respondents should have some belief about the relative harmfulness of their own brand.
24. Although we had included "don't know" responses when asking about the belief that LLT cigarettes are smoother in Studies 2 and 3, we believed that smokers should have some idea about whether their own cigarette was smoother. For this study "don't know" responses to this question were therefore excluded.
25. I also tested the difference between low tar cigarette smokers vs high and medium tar cigarette smokers (combined into one category) predicting the belief that your brand of cigarettes is less harmful. This two level measure of tar level of cigarette smoked was also a significant predictor of the belief that your brand of cigarettes is less harmful. Low tar cigarette smokers were significantly more likely to believe that their brand is less harmful compared to the medium/high tar category $p < 0.001$, $OR = 2.34$ (1.78-3.07).

APPENDIX A: ITC FOUR COUNTRY TECHNICAL REPORT

**International Tobacco Control Policy
Evaluation Survey
(ITC 4-Country Survey)**

Wave 1 Technical Report

Acknowledgments

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1.0 Introduction

In the past decade, significant advances have been made in public health policies designed to reduce the health, economic, and societal costs of tobacco use throughout the world. Most notably, the Framework Convention on Tobacco Control (FCTC)—the first-ever international public health treaty—was adopted in May 2003 by all 192 member states of the World Health Organization, representing 95% of the world's population. The FCTC will require signatories to implement a range of tobacco control policies over the coming years. In this context, it is critical to monitor and evaluate the implementation of these key health policies.

The International Tobacco Control Policy Evaluation Survey (ITCPES)¹ is a prospective cohort study designed to evaluate the psychosocial and behavioural impact of key national-level tobacco control policies enacted over a period of four years (2002-2006), in at least one of four countries: the United States, Canada, the United Kingdom, and Australia. Over 2,000 adult smokers were recruited by probability sampling methods in each of the four countries. The first two waves were conducted 8 months apart, but beginning with Wave 3, the survey is being conducted every 12 months. All aspects of the study protocol and survey measures are standardized across the four countries.

This report provides a methodological background and key statistical indicators for Wave 1 of the ITCPE Study. Wave 1 was conducted between October 28 and December 23, 2002 in all four countries. This report provides information on the sampling methods, survey protocol and administration, as well as survey rates, measures of representativeness, and guidelines for data analysis for Wave 1 data.

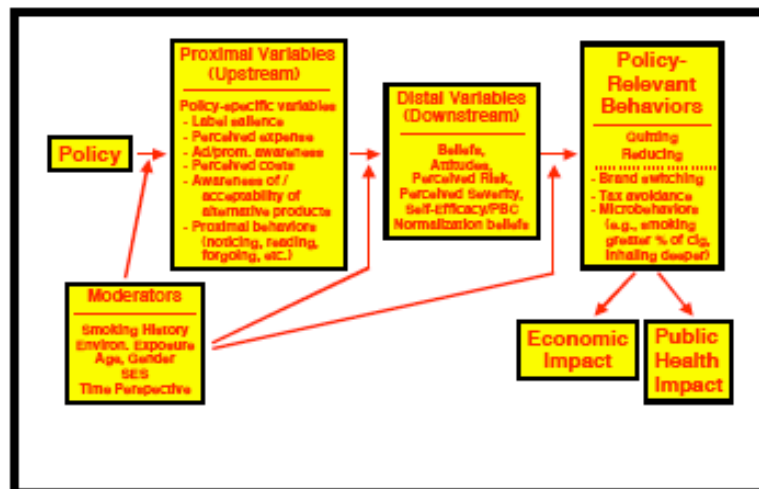
* The ITCPE is also known as the ITC-4 Country Survey (ITC-4), to distinguish it from other national-level tobacco control policy evaluation surveys being conducted by the ITC Project Research Team (e.g., the ITC-Ireland/UK Survey and the ITC-SE Asia Survey).

2.0 Conceptual Framework for Understanding the Effects of Tobacco Control Policies

2.1 Tobacco Control Policies to Be Evaluated and Conceptual Model

The ITCPES is designed to evaluate the psychosocial and behavioural effects of national-level tobacco control policies that will be initiated or are under serious consideration in one or more of four countries— United States, Canada, United Kingdom, and Australia—in the next few years: (1) Enhancement of warning labels on tobacco packages, (2) Restrictions on the use of “light/mild” descriptors of tobacco products, (3) Restrictions on advertising and marketing of tobacco products, (4) Changes in taxation/price, and (5) (Lifting of) Restrictions on alternative nicotine delivery products (e.g., toxicant-reduced cigarettes and smokeless tobacco products). Figure 1 depicts our conceptual model of the processes by which tobacco control policies affect individuals.

Figure 1. Conceptual Model for Effects of Tobacco Control Policies



The following characteristics of this model are worthy of note:

1. Policies are conceptualized as affecting a variety of psychosocial and behavioural variables. The most immediate effects are those on the *proximal variables*, that is, those variables that are most connected with the policy itself. New graphic warning labels should increase salience and noticeability; price should affect perceived expense or costs of cigarettes (e.g., belief that cigarettes have become too expensive), lifting of restrictions on alternative nicotine products, should lead to increased awareness of the availability of those products. These in turn may

increase the likelihood of discrete behaviours such as smokers hesitating, or even forgoing or stubbing out cigarettes.

2. *Distal variables* are those that are more distant from the policy, but are those that have been demonstrated to predict smoking behaviour and changes in smoking behaviour (e.g., quitting). Among these are variables from well-known psychosocial models of health behaviour, including the Theory of Planned Behavior,¹ Social Cognitive Theory,² the Health Belief Model,³ and Protection Motivation Theory.⁴ We believe that policies will affect these distal variables *indirectly*, through their prior effects on the proximal variables.
3. One important aim of our project is to understand the psychosocial processes that explain how and why a given policy may lead to changes in smoking behaviour. Our longitudinal design allows us to explicitly test the causal chain of effects that is depicted in the model; a repeat cross-sectional design would not.
4. Our conceptual model is a general framework for thinking about policies and their effects on a broad array of important psychosocial and behavioural variables, and we understand that there will be important distinctions across different policies in not only *whether* those policies are effective, but also *how* they achieve their effects. We are explicitly testing those commonalities and differences among policies in this regard.
5. The behaviours that we are measuring include those that confer benefits (e.g., quitting) and also important compensatory behaviours that the smoker may engage in that, although responsive to the policy, may not lead to the economic and public health benefits that are ultimately the goal of such policies. For example, in response to price increases, smokers may switch to discount brands, which would confer no public health benefit. Our evaluation efforts are thus attempting to provide a more complete picture of the effects that may result from the implementation of a tobacco control policy.
6. The general conceptual model is a *causal chain model*, and as such, suggests that the proximal variables play a critical mediating role because they reside between the policy and the outcome variables that are so important in public health, for example, quitting behaviour. We assume that policies vary in the psychosocial "routes" that they take to affect behaviour. For example, if switching to graphic warning labels eventuates in increased quitting, we hypothesize that this occurs by *first* increasing their salience, noticeability, and the likelihood that smokers will think about the messages that appear. Thus, the first step in the causal chain is from labels to increases in these label salience variables, that is, in the proximal variables associated with labels. We should *not* expect the same magnitude of change to take place in a proximal variable associated with some other policy (if that policy is not also being affected at the same time); thus, a comparison of changes in proximal variables that *should* change (those associated with the policy that has changed) with changes in proximal variables that should *not* change (those associated with

some other policy that has *not* changed) is the key comparison. This pattern of results would provide further indication that changes in downstream variables are indeed associated with the policy that has changed. This strategy is an application of the principles of construct validity (specifically, of *discriminant validity*) that are central in making causal inferences from data. It should be noted, too, that the presence of control proximal variables is the analog to the presence of control countries in the ITC PES design. In this way, then, the ITC PES provides both *between-country* and *within-country* controls.

The *second* step is that those changes in the proximal variable should be associated with downstream changes in the distal variables (e.g., quit intentions) and ultimately to quit attempts. Thus, rather than conceptualizing policy as affecting proximal variables and also affecting behaviour, we conceptualize policy as affecting proximal variables, which in turn, affect behaviour. Or put in a different way: policy affects behaviour *because* it causes changes in psychosocial variables that are specific to that policy. The design of our study then is guided by the possibility of disentangling the web of alternative explanations and competing forces through the careful selection of specific mediators and applying the principles of causal inference through a combination of convergent and discriminant validity.

A more complete description and elaboration of the mediational models that underlie the ITC Project is available upon request.

3.0 Sampling Protocol

3.1 Overview

ITCPES participants at Wave 1 are current adult smokers (respondents 18 years or older who have smoked more than 100 cigarettes in their life and who have smoked at least once in the past 30 days). Respondents were selected at random from the population of each country using random-digit dialling (RDD) methods within strata defined by geographic region and community size. In three of the countries—Canada, the U.S., and the U.K.—samples were generated by Survey Sampling International (SSI) using their Random B methodology. In Australia, no comparable sample was available; as a result, a probability sampling frame was created using a similar design as for the other three countries (described below).

3.2 Sampling Frame: Canada, United States, and United Kingdom*

SSI begins with a database of all directory-listed households in the country. Using area code and exchange data, this file of directory-listed telephone numbers is subjected to an extensive cleaning and validation process to ensure that all exchanges are currently valid, assigned to the correct area code, and falling within an appropriate set of zip/postal codes. The SSI samples were generated using a database of “working blocks.” A *block* (also known as a 100-bank or a bank) is a set of 100 contiguous numbers identified by the first two digits of the last four digits of a telephone number. For example, in the telephone number 255-4200, 42 is the block. A block is considered to be *working* if one or more listed telephone numbers are found in that block.

The SSI samples were generated using random sampling procedures in the U.K. and stratified sampling procedures in the U.S. and Canada. Stratified sampling divides the population of sampling units into subpopulations called *strata*. A separate sample is then selected from the sampling units in each stratum. Some details on the procedures for generating the samples for each country are provided in Appendix A.

Random B methodology is an SSI term denoting samples of random numbers distributed across all eligible blocks in proportion to their density of listed telephone households. All blocks within the specified geographical stratum (e.g., county) are organized in ascending order by area code, exchange, and block number. Once the quota has been allocated to all regions in the frame, a sampling interval is calculated by summing the number of listed residential numbers in each eligible block within the county and dividing that sum by the number of sampling points assigned to the county. From a random start between zero and the sampling interval, blocks are systematically selected in proportion to their density of listed households. Once a block has been selected, a two-digit number is systematically selected in the range 00-99 and is appended to the exchange and block to form a 10-digit telephone number.

* This overview of Random B methodology has been modified from a description provided by SSI.

3.3 Sampling Frame: Australia

Due to the lack of a commercially available RDD sampling frame in Australia, our ITCPES team worked together with Roy Morgan Research, our survey firm in Australia, to construct a sampling frame from probability sampling methods that we believe is at least as high in quality as the samples obtained in the other three countries. Briefly, a sampling frame of listed residential numbers was generated from one of the Electronic White Pages (EWP) sources. A file of all EWP telephone numbers was then created and sorted into numerical order. A file of all blocks of n_1 numbers containing a minimum of n_2 EWP numbers was then created. From this, an equal inclusion probability sample of appropriate number of blocks was selected. This sample was sufficiently large to avoid the need to repeat the procedure a second time, taking into account the need to replenish the sample at subsequent waves.

A file of potential numbers for sampled blocks was generated, after which Electronic Yellow Pages (EYP) and non-connected numbers were screened out and all non-eliminated numbers were put in a long list. Roy Morgan Research then conducted automated pre-screening of large numbers from the stock of generated non-EWP/EYP numbers beforehand by ringing each number automatically for a short time during the day. Each number in the file was identified as: 1) an EWP number that is not also an EYP (potentially effective) number, 2) an EYP number, 3) a non-connected number, or 4) other (potentially effective). Non-connected numbers were identified, reported, and discarded by the CATI auto-dial equipment. These eliminated numbers consisted of unlisted business numbers, fax numbers, dedicated Internet lines, and unlisted second numbers of listed-number households in addition to the primary unlisted numbers we included in our stock file of numbers.

The stock of telephone numbers to be called was selected from a large equal probability sample of the resulting list of numbers. Finally, the order of stock was randomized to produce numbers to be called within strata determined by state \times (metropolitan vs. non-metropolitan)

3.4 Sampling Design

Within each country, the sample was stratified geographically. That is, quotas were assigned to the numbers of respondents in each of several regions. The numbers in the sampling frame, randomly ordered, were called until these quotas were met. In Canada, the U.K. and the U.S., these quotas were proportional to current estimates of the size of the population 18 and over in the region. In Australia, the quotas were proportional to estimated numbers of telephone households. Some additional details of the sampling design are presented in Appendix A.

3.5 Selecting Respondents From Within Households

Only one respondent was selected from each household. The Next Birthday Method⁵ was used to select respondents in households with multiple smokers. No substitution within household was permitted, except where the selected respondent was known to be unavailable for the entire fieldwork procedure, in which case the person in the household whose birthday is next became the respondent.

3.6 Statistical Power

Power calculations were computed for three representative kinds of effects that span the length of our conceptual model: (1) the effects of a policy change on proximal variables, that is, variables such as label salience; (2) the effects of a policy change on distal variables (that is, those psychosocial variables that have been demonstrated in past research to be predictors and correlates of smoking behaviour (e.g., intentions to quit); and (3) the effects of a policy change on smoking behaviour itself (e.g., quit attempts, successful quitting).

In our power calculations (at $\alpha = .05$, 2-tailed), we assumed: (1) simple random sampling within countries (because ITCPEs employs stratified random sampling in two of the four countries—Canada and the U.S.—the assumption of simple random sampling yields power estimates that may be conservative), (2) uniform proportions over the other three countries that have not experienced a policy change against which the country that has experienced a policy change is being compared, and (3) the characteristics of the attrition and replacement process at each survey wave is independent of behaviour. In addition, none of these power calculations considers the reduction in error variance due to the addition of appropriate covariates, and this also makes the computed power estimates more conservative. Sample size calculations for comparison of more general time-related contrasts between groups are provided by Hedeker et al.⁶ Please note that our original conception of the ITCPEs was for survey waves to take place every 6 months. The time span between Wave 1 and Wave 2 was about 8 months, and Wave 3 and subsequent waves are every 12 months. Thus, some of the power calculations based on 6 months are likely to be conservative.

3.6.1 Effects of a Policy Change on Proximal Variables

In the North American Student Smoking Survey (NASSS⁷), a longitudinal survey of a total of 12,000 high school students in Canada and the U.S., among smokers, label-salience variables rose dramatically in Canada compared to the U.S. over the change in labels: a difference between the two countries of 9% for noticing the warning labels (from a Canadian pre-label level of 85% and a U.S. pre-label level of 70%), 28% for reports of talking to friends about the labels (from a pre-label level of 30% for Canada and 16% for U.S.), and 15% for perceived effectiveness of the labels in pointing out health problems (from a pre-label level of 69% for Canada and 62% for U.S.). Those effect sizes, if obtained in our present study of 1,500 cohort members (75% retention of our target cohort size of 2,000) in the country with the change in the labels (U.K.

between Wave 1 and Wave 2) and the 1,500 respondents in each of the other 3 countries without a change in labels would yield statistical power over 99%.

3.6.2 Effects of a Policy Change on Distal Psychosocial Variables

In the NASSS, quitting intentions increased among Canadian smokers, relative to the U.S. smokers—net change = 5.1% (from a pre-label level of 86.6% for Canada and 85.1% for U.S.). If this effect size were obtained here, assuming a within-individual correlation between successive survey waves of .60, the statistical power would be 99%. We will have 80% power to detect a 2.9% increase in the policy country, relative to the controls, 85% power for a 3.1% increase, and 90% power for a 3.3% increase.

3.6.3 Effects of a Policy Change on Distal Behaviours

Our conceptual model (presented in Figure 1) posits that the effects of policy diminish as one moves further downstream. In the first post-label survey wave of the NASSS, Canadian and American smoking youth did not differ in quit attempts. In the Borland evaluation of the 1996 enhancement of warning labels in Australia among adults,⁸ there was no pre-post difference in quit attempts.

With regard to quit attempts, approximately 44% of smokers attempt to quit in any given year.⁹ Assuming that our survey waves are every 6 months, we assume that half of the yearly rate will attempt to quit within any two survey waves (we assume a correlation of .2 between any two consecutive waves). We will have 80% power to detect a 4.4% increase in quit attempts in the policy country, relative to the three control countries, 85% power to detect a 4.7% net increase, and 90% power to detect a 5.1% net increase. Because our current schedule for survey waves is greater than 6 months, these power calculations are conservative.

With regard to successful quitting, an estimated 3-5% of smokers successfully quit in any one year for at least one year or longer.¹⁰ Assuming that the quit rate is 4% for one year, and thus 2% for a 6M span between survey waves, we will have 80% power to detect a 1.9% increase in successful quitting in the policy country, relative to the three control countries, and 85% power to detect a 2.1% net increase. Again, because our current schedule for survey waves is greater than 6 months, these power calculations are conservative.

4.0 Study Protocol

4.1 Recruitment Into the Cohort

At recruitment into the study at Wave 1, all respondents were contacted twice. At the first contact, the *Recruitment Survey* was conducted to screen for eligibility and ascertain consent. This Recruitment Survey lasted an average of 9-13 minutes. During the recruitment, qualifying respondents (those at least 18 years old who had smoked at least 100 cigarettes and were currently smoking at least once a month) were asked to participate in a 35-minute survey on smoking being conducted by an international group of universities and research institutions in four countries. (This 35-minute survey, which was typically conducted one week after the recruitment call, is known as the *Main Survey*. Respondents were told they would receive a small payment to thank them for their time and were assured that their responses would be kept strictly confidential. Where necessary, additional information was provided on the study, the survey firm, and the research institutions. Interviewers arranged with respondents who agreed to participate in the survey to set up a time for the administration of the Main Survey. Respondents were also provided with contact information in case they had concerns about ethics or privacy. Finally, respondents were told that they would be contacted in approximately 6 months time to complete a second 35-minute survey, for which they would receive a second payment. A complete description of the Recruitment and Main Surveys is provided in Section 5.0.

4.2 Compensation

A compensation letter, containing the compensation, was mailed immediately after the recruitment call, so that it would arrive before participants were called back to complete the Main Survey, which lasted an average of 35-40 minutes. The compensation letter also included information about the ITC research team and provided contact information for two individuals: (1) the Principal Investigator in the participant's country, and (2) the person in the participant's country to whom concerns about ethics/privacy should be addressed.

The amount of compensation was roughly standardized across each of the four countries: \$10 U.S., \$15 CDN, \$15 AUS, or a £7 voucher for Boots shops in the U.K. Over 90% of respondents in each of the four countries had received this compensation one week later, by the time of the Main Survey call. A second cheque or voucher was mailed to respondents who had yet to receive the incentive at this time. Respondents who had not received compensation by the time of the Main Survey call were given the option of completing the survey at that time or at a later date, after the incentive had arrived. This kind of pre-survey incentive (that is, compensating respondents *before* they have completed the survey) has been shown in randomized experiments to increase response rates by over 10%.^{11,12,13}

4.3 Calling Protocol

Several steps were undertaken to maximize response rates. First, to avoid any call-scheduling bias, recruitment calls were conducted at numerous times of the day (e.g., morning, afternoon, and evening) and different days of the week (e.g., weekday vs. weekend). Second, once respondents had completed the Recruitment Survey, every effort was made to follow them up for the Main Survey. In the event that appointments scheduled for the Main Survey were not kept, follow-up calls were made later in the same day, at similar times of the following day, and then on different days at different times. Up to 25 call attempts were made to follow-up respondents for the Main Survey in accordance with this schedule. In addition, respondents could complete the Main Survey during 2 or more calls if necessary. Respondents indicating a desire to terminate the Main Survey were reminded of the importance of their participation and an offer was made to complete the survey at another time. Appendix B provides a detailed description of the calling protocol used in all countries.

4.4 Cohort Replenishment

Once a respondent is included in the cohort at Recruitment, every effort is made to track and recontact him/her at subsequent waves (see Appendix B). At subsequent waves, however, some proportion of the 2,000 respondents in the initial cohort will fail to complete the survey. This will be due to any of a number of factors such as: (a) failure to contact by phone, (b) moved away and no forwarding number, (c) refusal, (d) missed survey call appointment and subsequent inability to contact.

In order to ensure that the number of completed surveys at each wave is at least 2,000 in each country, respondents lost to attrition are replaced. The number of new recruits necessary to replenish lost panel members is estimated after every week of the recontact phases of Waves 2 and beyond. The rate of attrition is used to guide the number of potential recontact respondents that will be recruited starting at Week 3 of the survey period. Replenishment needs are reviewed and updated every week until the end of the survey period. Sampling procedures and calling protocol for replenishment at subsequent waves are identical to those at Wave 1 Recruitment. Finally, data from continuing and replenished respondents are conducted to assess the influence of "time-in-sample" on the outcome variables. Panel attrition at each wave is being modeled as depending on age, gender, education, and health status from previous wave(s). This enables the construction of attrition weights^{14,15} to adjust for respondents who have dropped out.

5.0 Survey Measures

All Wave 1 survey measures are available upon request. They are also available through the ITCPEs website:

<http://www.itcproject.org>

This includes all “raw” measures, as well as a set of key variables (e.g., demographic variables, daily consumption, and measures of dependence) that have been derived from the raw data and standardized for data analysis.

5.1 Survey Questionnaire Development

The ITCPEs Survey was developed by an transdisciplinary team of tobacco control experts across the four countries, with backgrounds in psychology, public health, epidemiology, economics, community medicine, marketing, sociology, and statistics/biostatistics. The survey instrument was developed through a series of more than 30 teleconferences and extensive written communications among members of the ITCPEs research team, including senior representatives from Environics Research Group and Roy Morgan Research. First, critical domains and policy areas were identified. Next, international benchmarks and standardized measures were identified from which ITCPEs measures were drawn and revised, where necessary. Representatives from the survey firms contributed to this process and helped to refine the structure and content of the survey, taking into account interviewer demands and survey administration issues.

5.2 Content of the ITCPEs Survey

The ITCPEs Survey is standardized across the four countries: respondents in each country are asked the same questions, except for minor variations in wording to account for national differences in colloquial speech (e.g., “at the cinema” in the U.K. vs. “at the movies” in the other three countries) and slight differences on a few questions, omitting response options that do not pertain in some countries (e.g., elimination of “military commissaries” in the U.K. and Australia as a source of cigarettes).

The ITCPEs Survey includes questions from the following domains:

1. *Demographic variables*, including age, gender, income, education
2. *Smoking behaviour*, including measures of dependency, quit history, and alternative tobacco use
3. *Warning Labels*, including label salience and perceived effectiveness
4. *Advertising and Promotion*, including self-reported exposure to both messages promoting tobacco products and messages about the dangers of smoking

5. *Light / Mild Brand Descriptors*, including beliefs about the relative risk of such brands
6. *Taxation and Purchase Behaviour*, including brand information, pricing, and purchasing sources
7. *Stop-Smoking Medications and Alternative Nicotine Products*, including Potential Reduced-Exposure Products (PREPs)
8. *Cessation and Quitting Behaviour*
9. *Key Psychosocial Measures*, including intentions to quit, perceived risk, denormalization beliefs, self-exempting beliefs, knowledge of health risks, and other potential moderators (e.g., time perspective and impulsivity).

The survey was developed in English and subsequently translated to French for administration in francophone regions of Canada (i.e., Quebec and New Brunswick). The Environics call centre in Montreal administered survey calls to francophone regions in Canada and upon request from respondents in other parts of Canada. All interviews in the three other countries were administered in English.

Overall, the Recruitment Survey took an average of 9-13 minutes to complete and the Main Survey took an average of 35–40 minutes to complete (see Tables 1 and 2 for average completion times by country).

5.3 Pilot Testing

A pilot survey was conducted in September 2002 to test the study protocol and survey instrument. Approximately 125 participants were recruited in each of the four countries and completed both the Recruitment Survey and the Main Survey. Pilot participants did not participate in the panel study. This Pilot Survey went very smoothly, requiring only minor changes to be made in the protocol and in the survey instrument itself.

6.0 Quality Control and Uniformity

6.1 Survey Firms

The survey was conducted in Canada and the U.S. by Environics Research Group and in the U.K. and Australia by Roy Morgan Research. Both are prominent survey firms who have extensive experience in random-digit-dialled (RDD) phone surveys of this kind, including international health surveys and tobacco-specific research. Senior representatives from each firm participated in the survey and protocol design for the survey in order to ensure standardization across both firms and to consider technical implications.

The survey administration and calling protocol was standardized across both survey firms. All calling specifications, final questionnaires, and daily reports were reviewed and monitored by the ITCPES Research Team at the University of Waterloo to maintain consistency across survey firms and ITCPES countries (see Quality Assurance, below). In Canada and the U.S., interviews were conducted with Dash Computer Assisted Telephone Interviewing (CATI) software (Version 2.9). Interviews in Australia and the U.K. were conducted using Bellview CATI software (Version 6.11).

6.2 Interviewer Training

All interviewers were experienced calling staff who had been trained in the use of the CATI software at each survey firm. All interviewers also received additional training specific to the ITCPES Project. This training included extensive interviewer briefing on the questionnaire itself, with any questions or necessary clarifications being addressed. Interviewer training emphasized issues such as correct coding of callback appointments, proper recording of addresses in each country as well as the importance of maximizing the likelihood that the Wave 1 respondents would continue to participate in the ITCPES Project in the future. In addition, all interviewers conducted supervised "practice" calls prior to the commencing the survey. Interviewer training was conducted by senior research staff and supervised by Principal Investigators at each of the two firms (Geoffrey Fong attended the Environics interviewer training and Ron Borland attended the Roy Morgan interviewer training).

5.3 Supervision and Call Monitoring

Supervisors at each of the call centres monitored interviewers at all times. Supervisors were able to listen in on the interview and simultaneously patch into the interviewer's terminal, watching for any errors in coding of the responses. Any errors that were detected were then revised upon the completion of the interview. Supervisors also ensured that all probes, clarifications, etc., were executed in the proper manner, with any errors brought immediately to the interviewer's attention. Approximately 10-15% of interviews were monitored in this fashion, in accordance with Canadian Association of Marketing Research Organization (CAMRO) guidelines. In addition, during Wave 1 recruitment, all contact information provided by the respondent was thoroughly double-

checked by a supervisor, for every recruit. In any cases of incomplete addresses, telephone numbers, etc., the respondent was immediately called back by the supervisor so that the correct information could be obtained. Address-checking software was also used to confirm the accuracy of this information, with Internet checks (electronic white pages) conducted on unobtainable /non-contact numbers.

The progress and performance of the survey firms was monitored by the University of Waterloo Data Management and Analysis Team and the Chief Principal Investigator through regular contact with senior representatives at each firm. To this end, the survey firms provided daily status reports as well as weekly summaries. Daily reports included updates on the number of respondents recruited by sex, age ethnicity, geography, patterns of non-response, and survey length. The survey firms also reported data on the compensation mailing process, including the proportion of respondents called for the survey stage that have received their compensation by that time (one week later). As part of the weekly summaries, field operations managers also compiled difficulties and informed the research team on a daily basis, as necessary.

Patterns of nonresponse are analyzed at the conclusion of each wave, with changes implemented to maximize quality control (Analysis section).¹⁶

7.0 Policy Monitoring

Tobacco control policies at the national level were assessed in each of the four countries prior to administering the Wave 1 survey. Regular contact has been established with key tobacco control informants in each country (both governmental—at both federal and state/provincial levels, and non-governmental), in order to track a variety of relevant features of the tobacco control landscape, such as per capita public spending on tobacco control and state/provincial and federal tobacco control campaigns. These input variables act as covariates in analyses that are designed to estimate policy effects, using methodology as described by Stephens et al. (2001).¹⁷

A policy monitoring team has been established in each country to assess key policies that occur at the sub-national state or provincial level. The ITCPES monitoring teams conduct a policy review at each subsequent wave to assess any changes in relevant tobacco control policies in any of the four countries. The monitoring tool and policy reviews are available upon request.

Finally, respondents are also used as key informants for monitoring the environment—both policy and industry—that may exert an influence on them. The survey includes questions that ask respondents to report on price changes (e.g., discounts, coupons, and other pricing strategies), tobacco advertising and promotions (some items are mentioned in the section on Advertising/Promotion), and both reports of the presence or absence of clean air policies. The simultaneous collection of information about the policy environment and about tobacco industry initiatives with respondent reports on such activities provides a rich set of data for assessing the sensitivity of respondents to the tobacco control environment—both for and against. This has provided possibilities for validity studies on monitoring.

8.0 Wave 1 Data—Summary of Key Statistics

8.1 Recruitment Call Outcomes

Wave 1 Recruitment Survey calls began on October 28, 2002, with all Main Survey interviews completed by December 23, 2002. All call attempts were assigned an American Association for Public Opinion Research (AAPOR) disposition code.¹⁸ A list of final disposition codes and their definitions are provided in Appendix C. Table 1 presents statistics on survey length and sample size at Recruitment for each of the four countries.

8.2 Recruitment Survey Response Rates

Outcome rates were calculated for each country according to AAPOR¹⁸ and Council of American Survey Research Organizations (CASRO)¹⁹ standards. A flowchart of principal recruitment outcomes is provided in Appendix D. Note that differences in disposition rates between countries may be function of: 1) the respondent, 2) differences in the classification of outcomes across interviewers and research firms, as well as 3) cultural norms and differences in the phone systems between countries.

Table 1 also presents the AAPOR Response Rate #4 for each country. This response rate has 2 distinguishing features: 1) partial interviews are included as respondents (partial respondents were defined as respondents who skipped at least one question, but who completed all screener and smoking behaviour questions and a minimum of 80% of the entire survey); and 2) the proportion of cases of unknown eligibility that are actually eligible is estimated. The ITCPES sample design involves multi-stage screening (CASRO Sample Type IV), yielding eligible units, ineligible units, and units for which eligibility is not ascertained. Given that smoking prevalence in each of the four countries is 20-30%, the majority of initial respondents are ineligible for the survey. As a result, estimating the number of cases of unknown eligibility is critical to calculating an accurate response rate. For cases of unknown eligibility (e.g., household contacts that were terminated before screening was complete), we estimated the proportion that was eligible using the country-specific eligibility rates (see Appendix E and Appendix F). Respondents with insufficient language or cognitive skills were considered ineligible, as were numbers that could not be identified as households after 5 call attempts.

Table 1. Recruitment Survey Statistics

	Canada	U.S.	U.K.	Australia
Total Respondents (10,290)	2,507	2,493	2,728	2,562
Screener Completion Rate	68.3%	33.7%	53.5%	67.4%
Household Eligibility Rate	8.1%	9.6%	14.1%	14.3%
Cooperation Rate	82.3%	83.2%	78.7%	78.8%
Response Rate (AAPOR#4)	49.5%	25.6%	37.8%	45.8%
Mean Survey Length (min)	11.8	13.2	10.3	9.1

Despite high cooperation rates in all four countries, the country response rates are lower than those typically reported in the literature. It should be noted, however, that survey rates reported in the literature rarely adhere to AAPOR reporting standards. The ITCPES rates reported above are based on these conservative standards and should be interpreted within their proper context. To this end, we identified the largest telephone surveys recently conducted on smoking or health behaviour in each of the four countries. In order to ensure that the same equation was used to calculate the response rates for these surveys as the one reported for ITCPES data, in several cases we calculated these rates using the raw disposition codes, rather than relying on published figures.

In Australia, the National Drug Strategy Household Survey yielded a 46% response rate reported for the 2001 survey, while the National Tobacco Campaign Evaluation Survey, most recently conducted in 2000, reported a 45% response rate. These response rates are nearly identical to the ITCPES rates for Australia.

In Canada, we identified two large national RDD surveys of smoking behaviour. The Survey on Smoking Behaviour, last conducted in 1995, yielded response rates of approximately 70%, while the Canadian Tobacco Use Monitoring Survey—the benchmark for national smoking data—yielded a response rate of 70% for its 2002 cycle. These responses rates are higher than the ITCPES rate for Canada; however, both of these surveys are conducted on behalf of the Government of Canada and benefit from the credibility this association provides.

In the U.S., the 1999 Behavioral Risk Factor Surveillance System study reported a national response rate of approximately 55%. The ITCPES rate for the U.S. sample is considerably lower, mainly due to the relatively high number of terminations prior to completion of the screener. This lower response rate in the U.S. is likely a reflection of the documented trend of declining response rates for RDD surveys in North America.²⁰ For example, median response rates for longitudinal CDC phone surveys have declined from over 71% in 1993 to below 49% in 2000.²¹ Anecdotal evidence suggests that

response rates from more recent surveys, yet to be published, have declined even further.

In contrast to the other 3 countries, RDD telephone surveys in the U.K. are relatively rare, with the majority of social and health research conducted using face-to-face or in-person methodology. We were able to identify only a single RDD survey related to smoking: the "Tobacco in London: Attitudes Towards Smoking" survey. This survey was conducted in 2001 with a final sample over 9,000 and yielded a response rate of approximately 10%. In contrast, an RDD survey examining parental involvement on education by the Department for Education and Skills conducted in 2001 reported a cooperation rate of approximately 56%. Within this context, the ITCPES U.K. response rate seems to fare well against the available, albeit limited, standards.

8.3 Representativeness

Non-contact and non-response should not affect data quality to the extent that they occur randomly. In other words, low response rates will only lead to a biased sample to the extent that non-respondents differ from respondents. As a result, large differences in response rates have been found to have only minor effects on data accuracy.^{21,22,23} Indeed, differences in response rates as large as 45% have been found to yield a predicted difference in smoking prevalence estimates of only 1.5%.²¹

Examining the weights and various summaries of the weights can be useful in assessing the representativeness of the ITCPES sample. The weights are intended to reduce biases from uneven representation, so that a unit with a higher-than-average weight can be thought of as having come from an under-represented region or demographic group. A full description of the weights is provided in Section 8.5.

Appendix G presents brief descriptions of the national benchmark surveys to which the ITCPES sample characteristics are compared and from which we took estimated population values to compute the ITCPES weights. Appendix H presents the demographic profiles of the ITCPES sample and the national benchmark surveys. As Appendix H indicates, there is generally good correspondence between the demographic characteristics of the ITCPES sample and those of the national benchmarks. And the weighting of the ITCPES data serves to close/eliminate the differences. Section 7.5 provides a more detailed account of these differences as they relate to the survey weights.

Weighting will not typically eliminate all biases. For example, weights will not necessarily correct for biases except in characteristics that are highly associated with the variables used to weight the sample (in this case, gender, age, and region). For this reason, we also undertook a comparison of key measures of smoking status from the ITCPES with the national benchmark surveys of adult smokers. These data are presented in Appendix I. As these data indicate, ITCPES data for these key indicators of smoking are generally similar to the benchmark surveys, with slightly higher measures of daily consumption and addiction in the ITCPES sample.

Considering that non-response has been associated with lower socio-economic status,²⁴ and given that there is an inverse relationship between tobacco use and SES,²⁵ the ITCPES data might be expected to yield a sample of lighter, less-addicted smokers than surveys with higher response rates, such as the national benchmarks in the Canada and the U.S., for example. However, the data presented in Appendix I suggest that the ITCPES was successful in surveying traditionally hard-to-reach respondents. Further, the differences between ITCPES and national benchmarks are modest and often no greater than the differences between national benchmarks themselves. Indeed, the variability among these benchmark surveys within each country is worth noting. For example, the two Australian benchmarks yield a difference in daily consumption of 2 cigarettes per day. Although we have made every effort to identify comparable measures and survey dates, it is also worth noting that the exact wording of certain questions and different survey dates might also account for some of these differences between benchmarks estimates and those of the ITCPES. Overall, it would appear that the ITCPES sample is providing reasonable and valid estimates, in line with the best available measures in each country.

8.4 Attrition: Main Survey Follow-Up Rates

Overall attrition from recruitment to Main Surveys varied from a 10.2% to 14.4% (see Table 2). Appendix J presents the flowchart of Main Survey follow-up outcomes for each of the four countries. As expected, attrition rates were higher for males in every broad age group (except for the 50+ group in the U.K.); attrition rates tended to be higher for respondents in large urban areas; attrition rates were somewhat higher in the 18-34 age group for both sexes; and attrition was higher for non-white people in Canada and the U.S. The dependence of attrition on educational attainment was minor and not consistent across the four countries. Attrition was higher for those who rated their health as "poor" in Canada and Australia, but not in the U.S. or the U.K. On the basis of these results, we decided not to incorporate education or perceived health in the adjustments for the Main Survey weights. Nevertheless it is important to consider the determinants of attrition when analyzing the survey results. A detailed analysis of attrition from the Recruitment Survey to the Main Survey has been conducted and is available on request. Based upon this analysis, predictors of attrition that could affect some analyses are marital status (single respondents are more often lost to follow up) and quit attempt history (with those who have never attempted to quit being more likely to be lost).

Table 2. Main Survey Statistics				
	Canada	U.S.	U.K.	Australia
Total Respondents (9,058)	2,214	2,138	2,401	2,305
Refusal Rate	4.6%	4.7%	6.5%	3.7%
Non-Contact Rate	7.4%	9.8%	5.6%	6.6%
Follow-Up Rate	88.0%	85.6%	88.0%	89.8%
Mean Survey Length (min)	43.4	44.6	38.6	38.7

8.5 Survey Weights

The sampling design was selected to provide a random, unbiased sample of adult smokers within each geographic stratum. However, even with the most carefully designed and administered sampling, the outcome is subject to practical limitations: not all selected households will yield a response within the fieldwork constraints and not all persons selected will agree to be interviewed or successfully complete an interview. As with all surveys, the ITCPES sample is subject to disproportionate selection and undercoverage of population subgroups. In order to adjust for disproportionate selection of adult smokers in subgroups, weights have been calculated for each respondent. Where estimates in ITCPES results are derived from the sample, they are based on the weighted samples, unless stated otherwise. The following describes the procedures for calculating these weights.

8.5.1 Recruitment Weights

1. Each household was given a multiple phone factor $wt1 = 1$ if it had one personal phone line, and $wt1 = 1/2$ if it had more than one personal phone line (since theoretically the latter households had at least twice as much chance of being contacted).
2. Each respondent's $wt1$ was then multiplied by an adjustment factor = 1 if that person was the only adult smoker in the house, and 2 if that person was one of 2 or more adult smokers in the house.
3. The result was then multiplied by a factor to produce $wt4$ for each respondent, so that the sum of the $wt4$ values for respondents in a stratum was proportional to the general population for the stratum. This compensates for differential achieved sampling fractions from stratum to stratum. General population stratum numbers corresponding to strata actually used in the sampling design were available for Canada, the U.K. and Australia, but not in the U.S. In the U.S., $wt4$ was constructed to produce sums proportional to the general populations of the larger states and regional groups of smaller states + DC. There are a few respondents for which the

variable "state" was missing or ambiguous; such respondents received an average value of wt4.

4. Finally, the weights wt4 were adjusted so that estimates of total numbers of smokers in age-sex groups (and white/non-white groups in the U.S.) agreed with current prevalence numbers, mainly current daily smokers, in these groups. The groups used differed from country to country: In the U.K., population estimates were drawn from census figures, while prevalence for sex*stratum and prevalence by sex*age group was estimated from the General Household Survey (2001). In Australia, we used census estimates for population estimates and data from the National Health Survey, 2001 for estimating prevalence within state*sex*age groups. In the U.S., population estimates were drawn from census data, while prevalence by sex*age group*white/non-white were taken from proportions from the 1998-1999 Current Population Survey applied to a prevalence number estimate from the National Health Interview Survey (2002). For Canada, weights were constructed for region*sex*age groups from 2001 Canadian Community Health Survey prevalence data that were already weighted with current census estimates.

8.5.2 Main Survey Weights

A separate set of weights was created for the subset of those recruits who also completed the Main Survey at least partially (N = 9,046 respondents). Starting from the recruitment weights, Steps 3 and 4 (described above) were repeated with the subset of Main Survey respondents. Respondents who did not complete the Main Survey were assigned a weight of 0. As noted above, based upon our analysis of attrition between the Recruitment Survey and Main Survey, it was decided not to incorporate other variables, such as education and perceived health status in the adjustment for the Main Survey weights.

8.5.3 Descriptive Uses of the Weights

The weight for any respondent can be interpreted as the number of people in the population that we deem that respondent to represent. Thus the recruitment weight for a recruited respondent would vary from respondent to respondent, but would be of the order of $(\text{stratum population size})/(\text{stratum recruitment sample size})$. The sum of the recruitment weights over all recruited respondents will be the same as the population size (which we estimate from other sources). The Main Survey weight for a Main Survey respondent will be a little higher than the recruitment weight for the same respondent. This is because the recruitment weights for those who drop out between the Recruitment Survey and the Main Survey are re-distributed to those who stay in the sample.

Either set of weights might be used in computing estimates of proportions and means for purposes of "description" of attributes of the smoker population in each country. For example, recruitment weights could be used in estimating the proportion of smokers aged 45 and over who smoke at least 20 cigarettes per day, or the mean number of cigarettes smoked per day by women with at least secondary school graduation. (For

the latter, take the sum of weights*consumption for women in the country who have at least secondary school graduation, and divide by the sum of the same weights. SAS and SPSS will do this with appropriate instructions.) The weights should not be used to estimate numbers, such as the number of daily or occasional smokers who intend to quit in a given period, because the weights have been “benchmarked” to approximate numbers of daily smokers from other sources, which typically refer to time periods other than the time period for Wave 1 of the ITC survey (end of 2002). For example, the sum of the recruitment weights (or the main weights) for the Canadian part of the sample is equal to the number of daily smokers aged 18 and over in the provinces of Canada as estimated from the Canadian Community Health Survey (CCHS) of 2001. Because our data were collected over a year after the benchmark CCHS survey of 2001, we cannot use our data to estimate the number of smokers or any other population value.

It should be noted that proportions estimated using these weights (e.g., estimated proportion of smokers in category A = sum of weights for smokers in category A/sum of weights for all smokers in sample) are not standardized across countries with respect to demographic variables. (Standardized proportions are easily calculated as appropriate weighted averages of e.g., age-sex group proportions.)

8.5.4 Standard Errors for Proportions or Means

Where a survey sample cannot be considered a true “simple random sample” consideration must be given to the “design effect.” Departure from “simple random sampling” may sometimes be due to specific requirements of the survey or the nature of the attributes or population being measured, as well as to the practical limitations of field sampling operations. The standard errors must be adjusted for the design effect.

Rough—and likely conservative—standard errors for the proportions or means may be obtained from the corresponding unweighted (simple random sampling) analysis, by multiplying by the square root of F where $F = [n * (\text{sum of squares of weights}) / (\text{sum of weights})^2]$. Here n refers to the size of the sample subgroup of interest, and the sums are taken over that same sample subgroup. The factor F is 1 + the square of the coefficient of variation of the weights in the sample subgroup. (The coefficient of variation of a positive variable is its standard deviation divided by its mean.)

For all four countries the full sample coefficient of variation of the recruitment weights is approximately .45, and the coefficient of variation of the Main Survey weights is about .48. The factor F for the latter is 1.2304, and thus, the variability of the weights may be regarded very crudely as inflating standard errors by a factor equal to the square root of 1.2304, or 1.109. However, the point of using the weights for descriptive aims is to reduce sampling bias. The reduction in bias should compensate at least in part for the gain in variability.

For ITC PES results, bootstrap weights for the data can be used to adjust standard errors. With bootstrap weights, the analysis is run many times (or “replicated” many times), but each time, all output is ignored except the estimates of the coefficients of

interest. The variability of a slope coefficient, for example, is measured through its observed variation from bootstrap sample to bootstrap sample.²⁸

8.5.5 Analytical Uses of the Weights

The weights may also be used in modelling, for example in logistic regressions. The usual rationale is that the results will then measure relevant attributes of the actual population at hand. Some software packages that use weights in analysis produce unrealistic p-values, because the software “erroneously” takes the sum of the weights to be the sample size. If using such software it may be advisable as a “quick fix” to rescale the weights so that they sum to the sample size.

The method of rescaling the weights (and even the necessity to do it) depends on the software being used and the analysis desired. Some software (e.g., SAS) allows a redefinition of the weight variable so that it sums to the appropriate subsample size, before the main analysis is run. This can be done manually in SPSS, as follows:

1. Calculate the actual (i.e. unweighted) size of the subsample (e.g., Canadian women aged 18-34 at Main Survey). Call this N1.
2. Calculate the “subpopulation size estimate” by summing the Main Survey weights for that subsample. Call this W1.
3. The rescaled weights = original weights * N1 / W1

Alternatively, for some analyses the output can be corrected. For example, if the software “erroneously” takes the sum of the weights to be the sample size, we can correct standard errors for means and proportions as indicated earlier, or less conservatively by multiplying by the square root of (sum of weights in denominator of weighted mean or proportion divided by denominator of unweighted mean or proportion); we can correct a chi-square statistic by multiplying by (unweighted sample size for the frequency table divided by apparent (weighted) sample size for the frequency table).

If the software allows weighted linear regression, as SAS does, the output is usually adjusted automatically, and no rescaling is needed, for an analysis of data from a single country. For logistic regression, weighted, SAS allows a “norm” option to rescale the weights automatically.

Rescaling the ordinary weights provides only crude corrections for test statistics in contexts such as logistic regression. Estimation and testing from ITC PES can be refined using bootstrap weights, described above.

Please note that the prescriptions above assume that data from just one country are being used in the analysis. In an analysis from a sample pooled across countries, additional care must be taken, since the population sizes (and hence the average weights) differ widely from country to country. Using the weights as given will cause the

largest country to dominate the analysis, and will make estimation very inefficient. Scaling the weights so that they sum to the appropriate subsample sizes within countries will eliminate this problem.

8.5.6 When Should Weights Be Used?

For descriptive purposes the use of the weights is necessary, but when the aims are analytic the answer is not so clear. Where possible, modelling analyses should be run both with the weights and without. If the estimates of coefficients or the results of tests agree reasonably well, the weighted analysis can be presented (with standard errors and p-values corrected where necessary). "Agreeing reasonably well" might mean agreeing to within a standard error or two, or, more generally, when the weighted and unweighted analyses yield the same analytic conclusions. If the estimates disagree substantially, it is likely that the model is inadequate in the sense of leaving out important explanatory variables associated with the weights. In that case, neither the weighted nor the unweighted analysis is well-supported.

Because the weights tend to add variability, it is possible to have the situation where coefficient estimates agree, but appear non-significant in a weighted analysis and significant in an unweighted analysis. When this occurs, both analyses should be reported. In all cases, diagnostic checking of models is important, and may include examination of the influence of high or low weights on the analysis.

Appendix A. Sampling Specifications

Description	Survey Firm		Comments
	EnviroNics	Roy Morgan	
Source of samples	Canada: SSI U.S.: SSI	U.K.: SSI Australia: EWP/RDD Sampling plan (see next section)	
Sampling frame	Canada and U.S.: directories used to produce cleaned-up database of working blocks	U.K. and Australia: directories used to produce cleaned-up database of working blocks	
Stratification & allocation (of blocks) in production of number stock	Canada: Census division; allocation proportional to census division's share of total households U.S.: Counties; allocation proportional to census-estimated number of telephone households	Australia: Not stratified U.K.: Not stratified	Stock = Source of numbers from which each survey firm draws its samples. In the case of the SSI samples, these have already gone through a process whereby the samples are prepared as indicated. For Australia, the stock is created from EWP/RDD sampling procedures

Description	Survey Firm		Comments
	Enviroics	Roy Morgan	
Number stock generation from working blocks	Canada and U.S.: Systematic, with interval = listed units divided by desired sample size; listed units chosen, then last two digits randomized	U.K.: Listed numbers in working blocks are lined up; sampling is systematic, with interval = listed units divided by desired sample size; listed units chosen, last two digits randomized; rechosen if a business number Australia: see below	
Organization of numbers called from stock	Canada: stratified by province x community size U.S.: stratified by four categories of community size (A - largest metropolitan areas; B - those not in A but in metropolitan areas with more than 85,000 households; C -- those not in A or B that have more than 20,000 households; D -- the remainder) within region.	U.K.: Stratified by region: North East, Yorkshire/Humber, East Midlands, Eastern, London, South East, South West, West Midlands, North West, Wales, Scotland, Northern Ireland Australia: Stratified by state x (metropolitan vs. non-metropolitan)	Canada and U.S.: Respondent sample allocated proportionally to stratum sizes based on census U.K.: Respondent sample allocated proportionally to stratum sizes based on census Australia: Respondent sample allocated proportionally to potentially effective numbers in numbers stock. In all 4 countries: to obtain numbers to be called from numbers stock: numbers stock is stratified and the order of numbers is randomized within strata

Description	Survey Firm		Comments
	EnviroNics	Roy Morgan	
Cell phones	Not to be called	Not to be called	Cell phones are not present in the SSI samples (Canada, U.S., U.K.) They are not present in Australia samples if they are not "listed" in EWP.
Selection of respondent within household	Adult (18 years old or older) smoker with next birthday: current smokers who are either daily or occasional smokers and who have smoked at least 100 cigarettes in their life	Adult (18 years old or older) smoker with next birthday: current smokers who are either daily or occasional smokers and who have smoked at least 100 cigarettes in their life	Smoker with next birthday; if does not satisfy refined definition when asked screening questions, go to smoker with next birthday in same household. If target person refuses, eliminate household (i.e., don't ask for another person)
Retention in waves after Wave 1	Respondents are retained until they have reported being non-smokers in two consecutive waves	Respondents are retained until they have reported being non-smokers in two consecutive waves	
Respondents reporting having quit at Wave 2 (or at any post-baseline wave after entry into the panel)	Administer quit version of Main Survey and then recontact at next wave	Administer quit version of Main Survey and then recontact at next wave	Respondents with two consecutive waves of status as a quitter are removed from panel Respondents who report being a quitter at one wave but then relapse at the next are retained in the panel. Respondents reporting quitting at subsequent waves or by calls to survey firm's toll-free number are given the quit version of the survey if still eligible.

Appendix B. Recruitment Contact Protocol

Description of Issue/Situation	Action Taken
Answering machines	Messages are not left on telephone answering devices. If calls were forwarded to a household number, the interviewer proceeds with script as usual. Changed numbers at recruitment are discarded.
Respondent is seriously ill or has passed away	Both firms have considerable experience in dealing with this situation. They will use discretion and tact, per their usual procedures, which are comparable across firms.
Respondent has a close family member who has been diagnosed with smoking-related disease	Both firms have considerable experience in dealing with this situation. They will use discretion and tact, per their usual procedures, which are comparable across firms. It should be noted that the interviewer scripts allow for the possibility that the respondent still wants to participate.
Respondent shows psychological distress	Both firms have considerable experience in dealing with this situation. They will use discretion and tact, per their usual procedures, which are comparable across firms. Interviewers will discern whether the respondent can indeed participate in the survey at that time or at another time.
Respondent asks about treatment options	We will not provide information about treatment options: (1) our interviewers are not trained health professionals and do not have expertise of any kind in treatment for nicotine addiction; (2) providing treatment options would affect the behaviour of our panel, thereby potentially confounding our ability to evaluate national-level tobacco control policies; (3) this is not a clinical study—to offer/recommend treatment options would change the nature of the study.
Number of call attempts: recruitment call	<ul style="list-style-type: none"> • If phone rings, but no answer and no machine: total of 5 call attempts. • If phone rings, but no answer, but answering machine: total of 7 call attempts. • If phone is constantly busy: 7 call-backs. • If a non-adult (<18 years old) answers and no adult home: total of 7 call attempts

Description of Issue/Situation	Action Taken
Main Survey Callback: Missed Appointment Time	<ul style="list-style-type: none"> • If missed appointment time: call back later in the same day twice (first within an hour, and then again later—if time is not too late); if answering machine, leave message; call back 2 more times on each of the next 3 days • If contact with other member of household, leave message, ask for best time to call, and then call at that time and then again once more
Main Survey Callback: Number of Callbacks	<ul style="list-style-type: none"> • Use contact time of respondent's last survey administration as an initial call time • 2 times/day for 3 consecutive days for first week and then repeat for the next week • If answering machine, leave message on first and third days of each week • If other person in household, determine status, location of respondent, leave message as appropriate; record contact—may need to decrease number of subsequent calls depending on info from other person
Thank-you letter	Respondent are sent a thank-you letter one week after survey is completed
Recontact letter sent to complete respondents	A recontact letter is sent to respondent one week prior to next scheduled wave (next wave is 6-8 months after respondent's last survey date).
Refusal conversion	If a respondent initially refuses, they are told that "this is an important international research project and we will be compensating you for your time. Could we ask you a few more questions?" No subsequent refusal conversion calls are attempted.
Other languages: French interviewing in Canada	Canadian respondents are given the option of completing the survey in English or French.

Appendix C. Wave 1 Disposition Codes By Country

Disposition Code	AAPOR Code	Description	Canada	U.S.	U.K.	Aus.
CS 00	4.30	Not in service	13,747	25,806	3,746	23,973
CS 01	4.20	FAX/modem	3,757	9,175	324	5,445
CS 02	4.40	TCI fault	952	1,936	1	—
CS 03	4.50	Non-residential (business, institution)	4,712	15,347	263	8,982
CS 04	4.42	Cell phone/mobile	200	171	31	143
CS 08	1.2	Eligible respondent smoker completes screener but hangs up before end of the Recruitment Survey.	19	16	19	3
CS 09	1.1	Eligible respondent smoker completes recruitment script with no skips	2,454	2,389	2,606	2,449
CS 10	2.21	Appointment type 0: appointment made with initial respondent for next birthday adult smoker; no adult available	156	800	78	2
CS 11	2.21	Appointment type 1: soft callback when no adult available	130	378	151	62
CS 12	2.21	Appointment type 2: appointment with next birthday respondent to complete screener	68	60	—	—
CS 13	2.21	Appointment type 3: appt made with initial respondent for next birthday adult smoker; initial respondent has completed intro	41	30	41	2

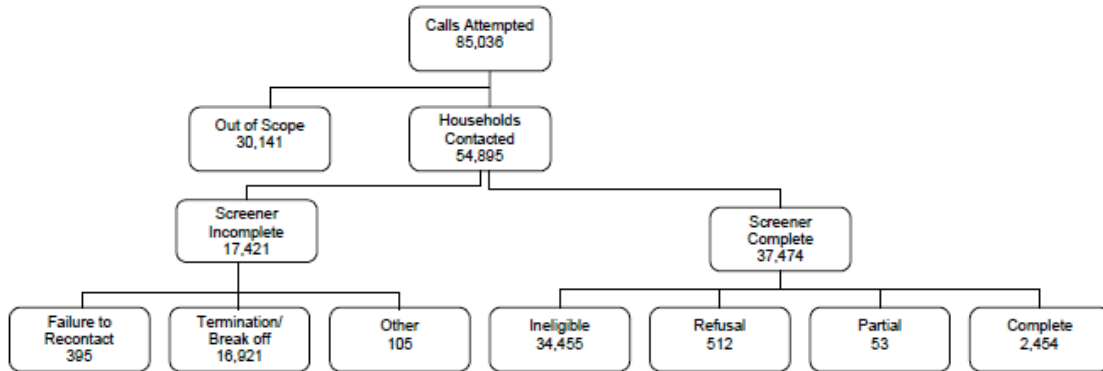
Disposition Code	AAPOR Code	Description	Canada	U.S.	U.K.	Aus.
CS 18	3.21	Initial respondent refuses; initial respondent is asked to give household size and number of smokers but refuses again at some point before completing this	3,289	3,648	9,220	3,506
CS 19	4.7	No household member 18 or older	365	670	469	276
CS 20	4.7	No adult household member smokes cigarettes; household size given	16,483	24,903	18,938	17,355
CS 21	4.7	Initial respondent volunteers no adult household member smokes cigarettes; household size refused	—	—	1,001	818
CS 22	3.24	Initial respondent refuses but answers Q1d, Q1e; >0 smokers	130	124	184	245
CS 24	4.7	No adult household member smokes, number of adults household members unknown (child was the initial respondent)	17,550	1,629	237	399
CS 27	3.25	Next birthday smoker refuses to participate in screener	71	73	57	72
CS 28	3.25	Initial respondent completes intro but refuses to get next birthday smoker	78	89	574	731
CS 30	3.25	Next birthday smoker refuses to give age	41	20	239	118
CS 32	4.7	Next birthday smoker proves to be too young; no others left to try	3	8	9	7
CS 33	4.7	Next birthday smoker has not smoked 100 cigarettes; no others left to try	38	75	51	39
CS 34	4.7	Next birthday smoker does not smoke at least once a month; no others left to try	15	29	11	17

Disposition Code	AAPOR Code	Description	Canada	U.S.	U.K.	Aus.
CS 35	2.111	Eligible respondent smoker refuses	257	245	591	556
CS 40	3.13	Rings only, 5 consecutive attempts	2,939	4,444	5,630	8,585
CS 41	3.12	Busy/engaged at least once, no ans. machine, no contact, 7 attempts	680	1,611	784	2,535
CS 42	3.13	Ans. machine at least once, not clear if resid or non-residential, no contact, 7 attempts	3,017	6,641	152	391
CS 43	3.29	Ans. machine at least once, residential, no contact, 7 attempts	—	—	—	—
CS 44	3.19	Number reached but unknown if residential	137	615	1,824	670
CS 80	3.21	Initial respondent hangs up before screener	11,636	50,318	4,821	3,585
CS 81	3.25	Next birthday smoker hangs up during screener	155	183	7	8
CS 82	2.12	Eligible respondent smoker hangs up during Q11- Q22	236	134	54	42
CS 83	1.2	Eligible respondent smoker skips (refuses/can't answer) one or more questions in Q11 - Q22	22	90	59	69
CS 84	1.2	Eligible respondent smoker completes up to Q22, skips (refuses/can't answer) one or more later questions, reaches end of recruitment script	31	21	63	48
CS 90	3.23	Termination, initial respondent has language problem	828	2,226	365	1,187
CS 91	3.22	Termination, initial respondent is physically/mentally incompetent	189	282	368	255
CS 92	3.29	Termination, other problem with initial respondent	504	1,178	4,753	743
CS 93	2.33	Termination in screener, next birthday smoker has language problem	21	47	15	51

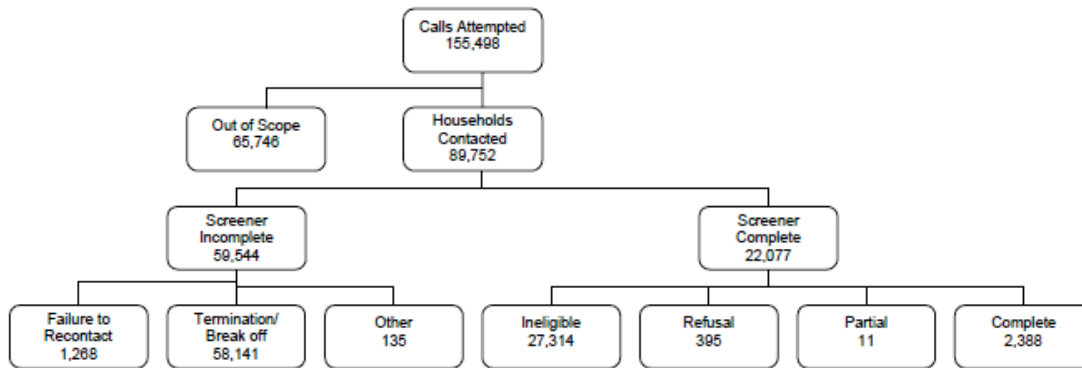
Disposition Code	AAPOR Code	Description	Canada	U.S.	U.K.	Aus.
CS 94	2.32	Termination in screener, next birthday smoker physically/mentally incompetent	12	27	13	6
CS 95	2.35	Termination in screener, other problem	72	61	58	89
		TOTALS	85,035	155,499	57,807	83,464

Appendix D. Recruitment Survey Outcomes

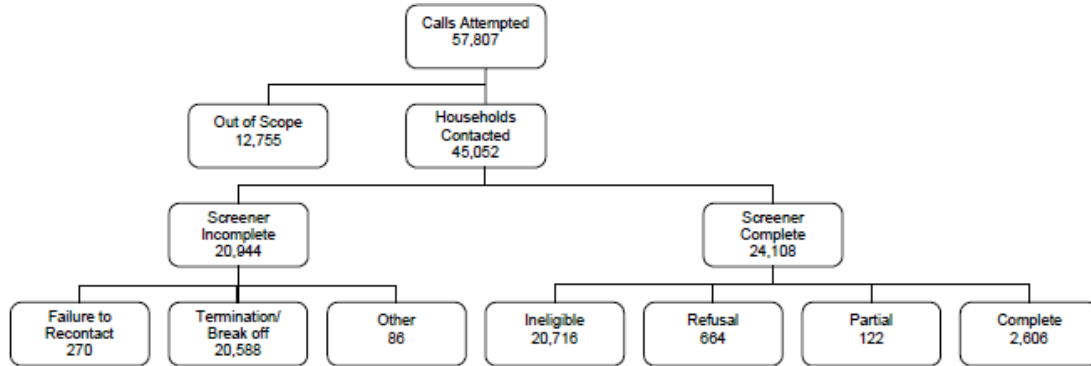
Canada



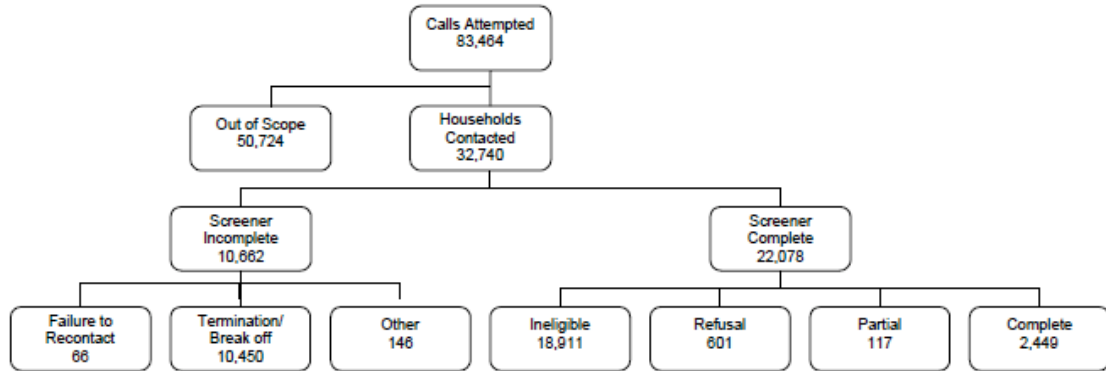
United States



United Kingdom



Australia



Appendix E. Intermediate Outcome Frequencies By Country

Intermediate Outcome Frequencies	Canada	U.S.	U.K.	Aus.
Completed Interviews (I) (CS09)	2,454	2,388	2,606	2,449
Partial Interviews (P) (CS84)	53	111	122	117
Refusal and break-off (R) (CS08+CS35+CS82)	512	395	664	601
Non-Contact (NC) (CS10+CS11+CS12+CS13)	395	1,268	270	66
Other (O) (CS93+CS94+CS95)	105	135	86	146
Total Ineligible (CS00+CS01+CS02+CS03+CS04+CS19+CS20+CS21+ CS24+CS32+CS33+CS34)	57,822	79,749	25,081	57,454
Unknown Eligibility—Household (UH) (CS40+CS41+CS42+CS44)	6,773	13,311	8,390	12,181
Unknown Eligibility—Other (UO) Total (CS18+CS80+CS90+CS01+CS92+CS43+CS44)	16,922	58,141	20,588	10,450
UO.1—Adult smoker, screener incomplete (CS22+CS27+CS28+CS30+CS81)	476	489	1,061	1,174
UO.2—Not known if smoker in household (CS18+CS43+CS80+CS90+CS91+CS92)	16,446	57,652	19,527	9,276

Appendix F. Other Computations Involving Disposition Codes

Computing Estimated Eligibility of Cases of “Unknown Eligibility”

Description	Canada	U.S.	U.K.	Aus.
Total “Screener Eligibles” (CS82+83+08+84+09)	2,785	2,739	2,860	2,680
Total cases found to be ineligible after screener (CS30+32+33+34)	98	132	310	181
Proportion of Total “Screener Eligibles” found to be eligible	0.97	0.95	0.89	0.93
Estimated number of UO.1 Eligibles (UO.1*proportion above)	458	465	946	1,095
Estimated number of eligible respondents from cases of unknown eligibility	1,783	5,990	3,693	2,425

Estimating Eligibility of Non-Contact Cases

Description	Canada	U.S.	U.K.	Aus.
CS11 * Eligibility rate	10	36	21	9
CS10,12,13 * .96	256	847	106	4
Revised Total of Non-Contacts	266	883	127	13

Appendix G. Benchmark Surveys

Canada

Canadian Tobacco Use Monitoring Survey (CTUMS), 2002

CTUMS provides data on tobacco use and related issues from over 10,000 respondents per year. The primary objective of the survey is to track changes in smoking status, especially for populations most at risk, such as the 15-24 year olds. The survey allows Health Canada to estimate smoking prevalence by province-sex-age groups on a semi-annual basis. The sample design is a special two-phase stratified random sample of telephone numbers. The two-phase design is used in order to increase the representation in the sample of individuals belonging to the 15-19 and 20-24 age groups. In the first phase, households are selected using Random Digit Dialling. In the second phase, one or two individuals (or none) are selected based upon household composition. Data are collected using computer-assisted telephone interviewing (CATI).

Canadian Community Health Survey (CCHS), 2000–01

The CCHS is conducted by Statistics Canada to provide timely cross-sectional estimates of health determinants, health status, and health system utilization at a sub-provincial level (health region or combination of health regions). Each two-year collection cycle is comprised of two distinct surveys: a health region-level survey in the first year with a total sample of 130,000 and a provincial-level survey in the second year with a total sample of 30,000. Both computer-assisted personal and telephone interviews are used. The target population of the CCHS includes household residents in all provinces and territories; with the principal exclusion of populations on Indian Reserves, Canadian Forces Bases, and some remote areas. One randomly selected respondent is interviewed per household, although planned over sampling of youths was conducted in a second member of certain households being interviewed. For the first collection cycle, only those 12 years of age and over were eligible for selection.

Survey on Smoking Behaviour (SSB), 1994–95

The major objectives of the SSB were to assess the national prevalence of smoking and to measure attitudes towards tobacco use. The first cycle was administered between April 20 and June 1, 1994 as a random digit dialed (RDD) survey. The target population for the Survey on Smoking in Canada was all persons 15 years of age. Individuals aged 15-24 or 65+ had 50 times the chance of being selected over people aged 25-64. Second, households with only 25-64 year-olds present were sub-sampled.

United States

National Health Interview Survey (NHIS), 2001

The NHIS is a multi-purpose health survey conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), and is the principal source of information on the health of the civilian, noninstitutionalized, household population of the United States. HIS data are collected through a personal household interview by Census interviewers. From each family in the NHIS, one sample adult and one sample child (if any children underage 18 are present) are randomly selected, and information on each is collected. The U.S. Census Bureau is the data collection agent for the NHIS. Further information is available at: <http://www.cdc.gov/nchs/nhis.htm>

Current Population Survey (CPS), 2002²⁷

The Current Population Survey (CPS) is a monthly survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CPS is the primary source of information on the labor force characteristics of the U.S. population. The sample is selected to represent the civilian noninstitutional population. Respondents are interviewed to obtain information about the employment status of each member of the household 15 years of age and older. The sample provides estimates for the nation as a whole and serves as part of model-based estimates for individual states and other geographic areas.

Behavioural Risk Factor Surveillance Systems (BRFSS), 1999^{28,29}

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC), and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Surveillance Branch, is an ongoing data collection program designed to measure behavioural risk factors in the adult population 18 years of age or older living in households. The objective of the BRFSS is to collect uniform, state-specific data on preventive health practices and risk behaviours that are linked to chronic diseases, injuries, and preventable infectious diseases in the adult population. Data are collected from a random sample of adults (one per household) through a computer-assisted telephone survey.

United Kingdom

Health Survey for England (HSE), 2001

The HSE is a face-to-face survey designed to provide data at both national and regional level about the population living in private households in England. The sample for the 2001 survey included a cross-section of the population living in private households for which over 13,680 addresses were drawn from the Postcode Address File (PAF). All persons in the private household including those under 2 were eligible for inclusion in the survey. At addresses where there were more than two children under 16, two children were selected at random. Information was obtained directly from persons aged 13 and over. Information about children aged 0-12 was obtained from a parent, with the child present. For all informants, there was a computer-assisted interview by an interviewer with each eligible person (Stage 1), followed by a nurse visit (Stage 2) who undertook a number of measurements and in some cases obtained a blood sample or a saliva sample.

General Household Survey (GHS), 2001³⁰

The General Household Survey (GHS) is a multi-purpose face-to-face survey carried out by the Social Survey Division of the Office for National Statistics (ONS) which collects information on a range of topics from people living in private households in Great Britain. The survey consists of two elements: the Continuous Survey and trailers. The main aim of the survey is to collect data on a range of core topics, including health. A sample of approximately 13,000 addresses is selected each year from the Postcode Address File. All adults aged 16 and over are interviewed in each responding household. Demographic and health information is also collected about children in the household.

Australia

National Drug Strategy Household Survey (NDSHS), 2001

The NDSHS is managed by the Australian Institute of Health and Welfare on behalf of the Commonwealth Department of Health and Ageing, and conducted by Roy Morgan Research. The 2001 Survey, which was the seventh in a series, provides data about awareness, attitudes and behaviour relating to drug use, including alcohol and tobacco as well as illicit drugs. The 2001 Survey, as well as utilizing the personal interview and self-completion methodologies adopted in past surveys, also incorporated a sample who were interviewed using Computer Assisted Telephone Interviewing (CATI). All respondents were aged 14 and over. In each household the selected respondent was the person with the next birthday. The questionnaire included both questions about general attitudes to drugs and more sensitive questions about personal drug usage and required approximately 25 minutes to complete.

National Tobacco Survey Evaluation Campaign (NTSEC), 2000

The evaluation surveys were conducted by the Commonwealth Department of Health and Aged Care and conducted by the Roy Morgan Research Centre. The second follow-up survey was conducted following the same methods as the first follow-up and benchmark surveys. An enumeration survey was conducted to identify the smoking status of all adults in the household and to enable selection of subjects. All participants were asked about their cigarette smoking to confirm categorization of participants into smokers, recent quitters and others. The telephone questionnaire included questions about participants' awareness of advertising about health, recent learning about smoking and health, and agreement and disagreement with a range of opinion statements relating to smoking and health.

National Health Survey, 2001

The National Health Survey (NHS) was conducted by the Bureau of Statistics (ABS) from February to November 2001. Approximately 26,900 people from all states and territories and across all age groups were included.

Appendix H. Demographic Profile of Daily Smokers 18 years and Older: ITCPES (Unweighted) and National Benchmarks

Measure	Canada *			U.S.		U.K.		Australia	
	ITCPES Total	ITCPES ≥ 20 yrs	CCHS ≥ 20 yrs	ITCPES	NHIS	ITCPES	GHS	ITCPES	NHS
Age									
18-24	15.0	12.0	11.0	16.5	14.7	9.1	12.7	17.3	15.6
25-39	31.3	32.4	34.6	30.3	31.3	31.8	36.3	36.3	38.8
40-54	35.2	36.4	36.3	34.4	34.7	32.8	27.1	32.5	29.4
55+	18.6	19.2	18.1	18.9	19.4	26.3	24.0	13.8	16.1
Sex									
Female	53.4	53.7	54.4	54.0	52.2	55.1	50.5	51.5	55.6
Male	46.6	46.3	45.6	46.0	47.8	44.9	49.5	48.5	44.4
Race/Ethnicity†									
White	86.8	87.0	91.9	75.7	79.7	94.3	94.3	85.0	86.6
Other/Mixed	13.2	13.0	8.1	24.3	20.3	5.7	5.5	15.0	13.4
Education									
12 years or less	47.9	46.7	51.9	44.8	38.9	65.3	66.2	66.0	–
More than 12 years	52.1	53.3	48.1	55.2	61.1	34.7	33.8	34.0	–

* CCHS data only available for respondents ≥ 20 years old.

† In Australia, for both ITCPEs and NHS samples, Race/Ethnicity was assessed by language spoken at home (English only vs. Any other).

Appendix I. Key Indicators of Smoking: ITCPES and National Benchmarks

Canada

Measure	ITCPES			CTUMS (2002)			ITCPES (≥ 20 years)			CCHS (2001)*		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Cigarettes per day	17.5	14.8	16.0	18.1	14.9	16.6	17.6	14.9	16.2	18.5	15.5	17.1
% quit attempt in last 12 months	46.8	47.7	47.3	43.8%	46.0%	44.9	45.7	46.8	46.3	38.2	38.2	38.2
% Seriously considering or planning to quit in next 6 months†	46.2	43.4	44.7	62.1%	56.5%	59.4	—	—	—	—	—	—
% having first cigarette of day within 5 min of waking	18.3	21.6	20.1	26.6%	24.4%	25.6	—	—	—	—	—	—

* CCHS data includes only respondents 20 years and older

† Differences in question wording: ITCPES = "planning to quit"; CTUMS = "considering quitting"

United States

Measure	ITCPES (2002)			NHIS (2001)		
	Male	Female	Total	Male	Female	Total
Cigarettes per day	19.5	16.5	17.9	19.5	16.2	17.9
% quit attempt in last 12 months	44.5	45.5	45.0	40.1	41.1	40.6

United Kingdom

Measure	ITCPES (U.K. Total)			GHS (2001)			ITCPES (England)			HSE (2001; England)		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Cigarettes per day	18.0	15.8	16.8	15.3	13.5	14.4	18.6	17.0	17.8	15.6	13.4	14.4
% having first cigarette of day within 15 min of waking	41.2	36.8	38.7	32.8	33.0	32.9	32.7	27.3	30.1	34.0	30.2	31.9

Australia

Measure	ITCPES (2002)			NTCES (2002)			NDDS (2001)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Cigarettes per day	19.4	16.6	17.9	17.4	16.2	16.7	19.5	17.8	18.7
% ever tried to quit	82.9	83.3	83.1	80.3	80.0	80.1	—	—	—
% tried to quit in past year	44.2	45.8	45.0	—	—	—	39.5	38.4	39.0
% seriously considering or planning to quit in next month*	13.4	11.0	12.2	15.8	17.0	16.5	10.6	8.9	10.8

* Differences in question wording: ITCPEs and NDDS = "planning to quit"; NTCES = "considering quitting"

Appendix J. Main Survey Follow-up Rates

Definitions for not contacted and contacted:

NOT CONTACTED:

Not in service/line problem
Rings only
Busy
Answering machine/fax/modem

CONTACTED:

Respondent has died
Respondent calls to withdraw
Household refusal to get respondent
Respondent unavailable this wave
Respondent refuses before Qxx is finished
All questions answered
All questions asked, respondent refused one or more questions
Interruption, never completed
Respondent completes all but income

OF THOSE CONTACTED

NOT CONTACTED

- o Respondent has died
- o Respondent calls to withdraw
- o Respondent unavailable this wave
- o Rescheduled, appointment not kept
- o Interviewer termination

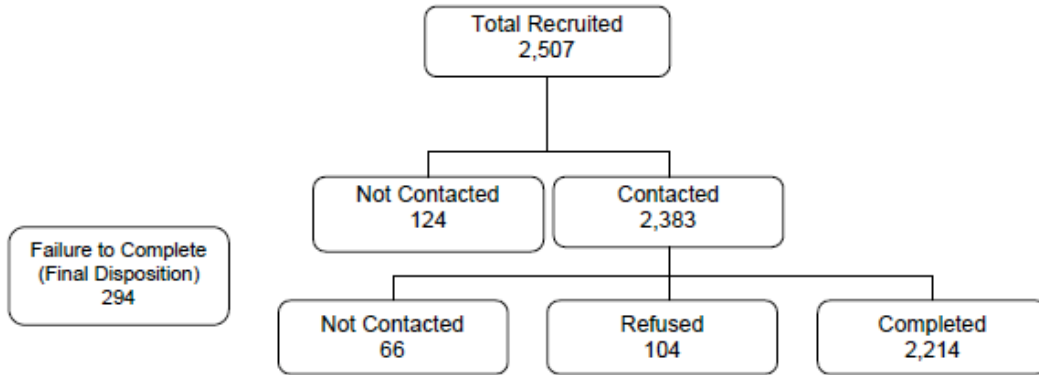
REFUSAL

- o Respondent refuses before Qxx is finished
- o Household refusal to get respondent

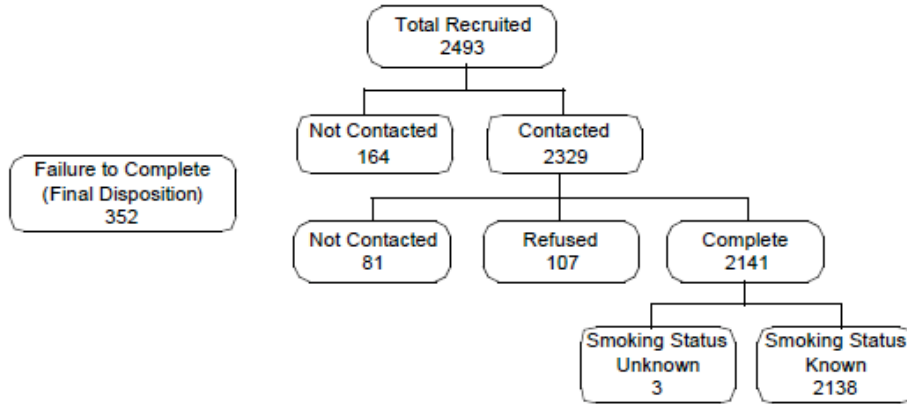
COMPLETE

- o All questions answered
- o All questions asked, respondent refused one or more questions
- o Interruption, never completed
- o Respondent completes all but income

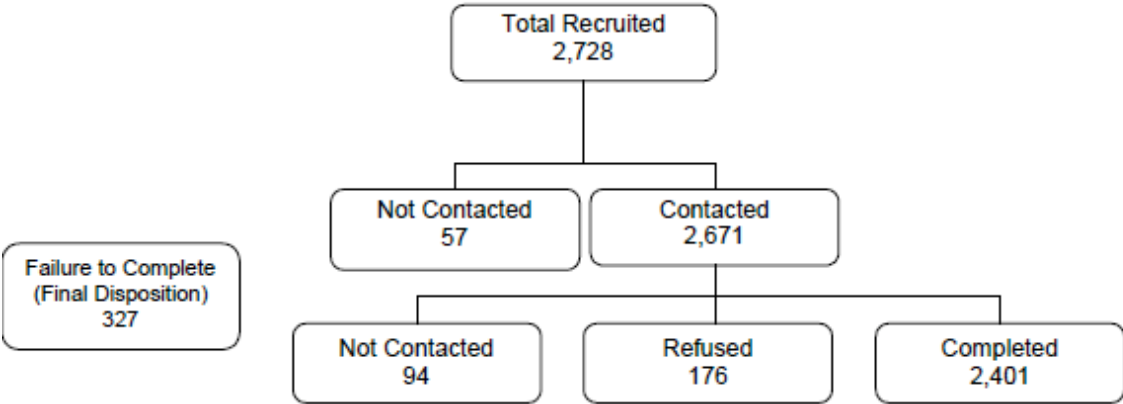
Canada



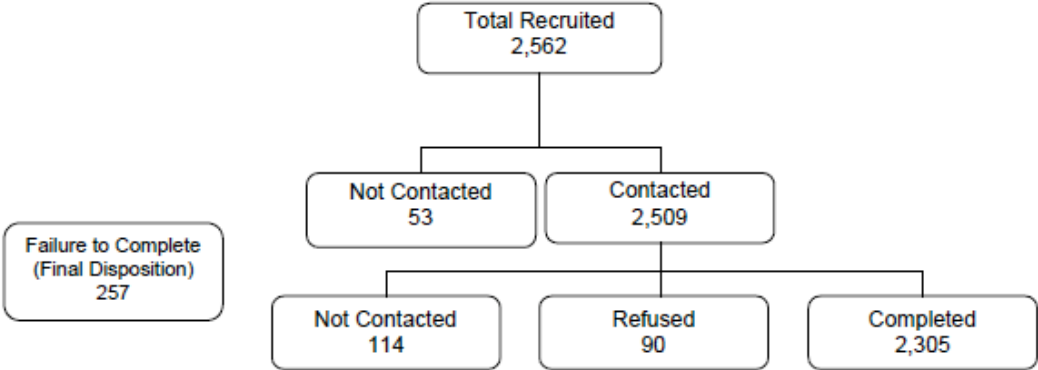
United States



United Kingdom



Australia



References

- ¹ Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- ² Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- ³ Becker, M.H. (Ed.) (1974). *The health belief model and personal health behavior*. Thorofare, NJ: Charles B. Slack.
- ⁴ Rogers, R., & Prentice-Dunn, S. (1997). Protection Motivation Theory. In D. Gochman (Ed.), *Handbook of health behavior research: Vol. 1. Determinants of health behavior: Personal and social* (pp. 113-132). New York: Plenum.
- ⁵ Binson, D., Canchola, J.A., & Catania, J.A. (2000). Random selection in a national telephone survey: a comparison of the Kish, next-birthday, and last-birthday methods. *Journal of Official Statistics*, 16, 53-60.
- ⁶ Hedeker, D., Gibbons, R. D. & Watemaux, C. (1999) Sample size estimation for longitudinal designs with attrition: Comparing time-related contrasts between two groups. *Journal of Educational and Behavioural Statistics*, 24, 70-93.
- ⁷ Fong, G.T., Cameron, A.J.R., Brown, K.S., Campbell, H.S., Zanna, M.P., Murnaghan, D., MacDonald, M.M., Madill, C., Driezen, P., & Clayton, R.R. (2002, November). *Effects of the Canadian Graphic Warning Labels Among High School Students: A Quasi-Experimental Longitudinal Survey*. Paper presented at the 2002 National Conference on Tobacco or Health, San Francisco.
- ⁸ Borland, R. (1997). Tobacco health warnings and smoking-related cognitions and behaviours. *Addiction*, 92, 1427-1435.
- ⁹ Environics Research Group (2001, July). *The effects of health warning messages on cigarette packages, Wave 3*. Report prepared for Health Canada. [Results of a representative sample survey of Canadian adult smokers.]
- ¹⁰ U.S. Department of Health and Human Services (2000). *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
- ¹¹ Singer, E., van Hoewyk, J., & Maher, M. P. (2000). Experiments with incentives in telephone surveys. *Public Opinion Quarterly*, 64, 171-188.
- ¹² Lynn, P., Taylor, B., & Brook, L. (1997). Incentives, information and number of contacts: Testing the effects of these factors on response to a panel survey. *Survey Methods Centre Newsletter* 17. National Centre for Social Research, London, UK.
- ¹³ Martin, E., Abreu, D., & Winters, F. (2001). Money and motive: effects of incentives on panel attrition in the survey of income and program participation. *Journal of Official Statistics*, 17, 267-284.
- ¹⁴ Duncan, G.J., & Kalton, G. (1987). Issues of design and analysis of surveys across time. *International Statistical Review*, 55, 97-117.

- 15 Lepkowski, J.M. (1988). The treatment of wave nonresponse in panel surveys. In Kasprzyk, D., Duncan, G., & Singh, M.P. (eds.). *Panel survey design and analysis*. New York: Wiley.
- 16 Weeks, M.F., Kulka, R.A., & Pierson, S.A. (1987). Optimal call scheduling for a telephone survey. *Public Opinion Quarterly*, 51, 540-549.
- 17 Stephens, T., Pederson, L., Koval, J., & Macnab, J. (2001). Comprehensive tobacco control policies and the smoking behaviour of Canadian adults. *Tobacco Control*, 10, 317-322.
- 18 American Association for Public Opinion Research (2000). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. Lenexa, Kansas: AAPOR. a
- 19 Council of American Survey Research Organizations (1982). *On the definition of response rates: A Special Report of the CASRO Task Force on Completion Rates*. Port Jefferson, NY: CASRO. b
- 20 Flynn, C.A., Biener, L., & Roman, A.M. (2002, November). *Consequences of declining response rates for estimating population smoking prevalence*. Paper presented at the National Conference on Tobacco or Health. San Francisco, CA. c
- 21 Wortley, P., & Mariolis, P. (2002, March). *Impact of response rates on estimates of smoking prevalence: comparison of state-specific estimates from the BRFSS and the CPS Tobacco Use Supplement*. Paper presented at the meeting of the American Association for Public Opinion Research (AAPOR). d
- 22 Keeter, S., Miller, C., Kohut, A., Groves, R.M., & Presser, S. (2000). Consequences of reducing nonresponse in a national telephone survey. *Public Opinion Quarterly*, 64, 125-148. g
- 23 Curtin, R., Presser, S., & Singer, E. (2000). The effects of response rate changes on the index of consumer sentiment. *Public Opinion Quarterly*, 64, 413-428. h
- 24 Koch, A., & Prost, R. (Eds) (1998). *Nonresponse in survey research. Proceedings of the Eight International Workshop on Household Survey Nonresponse*. Mannheim, Germany: ZUMA.
- 25 U.S. Department of Health and Human Services (2000). *Reducing tobacco use: A report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
- 26 Lohr, S.L. (1999). *Sampling: Design and Analysis*. Pacific Grover, CA: Duxbury Press.
- 27 U.S. Dept. of Commerce, Bureau of the Census (2001). *CURRENT POPULATION SURVEY, FEBRUARY 2001: CONTINGENT WORK SUPPLEMENT* [Computer file]. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census [producer], 2001. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor], 2001.
- 28 Centers for Disease Control and Prevention (1999). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

- ²⁹ Centers for Disease Control and Prevention (1999). *Behavioral Risk Factor Surveillance System Survey Questionnaire*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
- ³⁰ Office for National Statistics. Social Survey Division, General Household Survey, 2001-2002 [computer file]. 2nd Edition. Colchester, Essex: UK Data Archive [distributor], July 2003. SN: 4646.

APPENDIX B: ITC 4 COUNTRY WAVE 1 SURVEY



4-Country Wave 1 Survey

Survey Code: 4C1-P

Languages: English

Mode: Telephone Interview

Generated on August 27, 2009

4-Country W1 Replenishment (Main)

Q#	VarName	
001a	FR309v	Derived variable -- smoking status 1 Daily smoker 2 Weekly smoker 3 Monthly smoker 4 Quit in the last month 5 Quit 1-6 months ago 6 Quit more than 6 months ago 7 Not applicable 8 Refused 9 Don't know If smoking status=1, continue with FR216. If smoking status=2, go to FR226. If smoking status=3, go to FR236. If smoking status=4-6, go to SB031.
001b	Date	
INTRODUCTION		
001c	Centre	1 Toronto 2 Montreal 3 Calgary 4 Melbourne 5 Auckland 7 Not applicable 8 Refused 9 Don't know
001d	length	
001e	Intvwr	
001f	srvyd	
001g	Disp	00 Non-contact, not in service, line problem 09 Contact, all questions answered -- complete1 15 Contact, rescheduled appt not kept 27 Respondent calls to withdraw 28 Contact, household refusal to get respondent 29 Contact, respondent unavailable this wave 30 Contact, respondent has died 31 Emerg # sought, no contact 32 Emerg # sought, contact, unknown

		33 Emerg # sought, contact, refused 34 Emerg # sought, contact, obtained 40 Non-contact, rings only 41 Non-contact, busy 42 Non-contact, ans machine, fax, or modem 80 Contact, respondant refuses before qxx is finished -- refusal 81 Contact, all ques asked, refuses >=1ques -- complete2 83 Interruption, never completed -- incomplete 85 Respondant completes all but income -- complete1 86 Contact, age, sex, smoking status unknown 95 Interviewer termination 96 Non-contact, unsuccessful attempt to trace 77 NA 88 Refused 99 Don't Know
001h	uniqid	
001i	country	1 CA 2 US 3 UK 4 AU 7 Not applicable 8 Refused 9 Don't know
001j	BI201	Ask all. Hello. My name is [interviewer name] and I'm calling from Roy Morgan Research. I wish to speak to [participant name]. 1 Yes 2 No
001k	BI208	<i>Once participant is on the line:</i> I'm calling from Roy Morgan Research regarding the survey on smoking. 1 Continue; respondent on phone 2 Respondent refuses interview 3 Unable to continue If response = 1, go to BI229. If response = 2, go to BI425. If response = 3, go to BI971.
001l	BI425	Ask if BI208=2. This is a survey that is being conducted among smokers throughout the world. It's very important for the accuracy of the survey for smokers who agreed to do the survey to actually complete it. That is why we have sent you the [payment]. Will you help us now by completing the survey today? We can arrange another time for you to complete the survey, if this time is not convenient. 1 Yes 2 No (refusal)

		<p>3 Appointment. <i>If another time, make appointment.</i> If response=1, go to BI229. If response=2, go to BI901. If response=3, make appointment.</p>
001m	BI971	<p>If BI208=3, <i>Enter reason for being unable to continue.</i> 1 Household refusal to get respondent 2 Respondent is unavailable this wave (e.g. sick or away) 3 Respondent has died 4 Respondent no longer at this phone number and new respondent number given</p>
001n	BI229	<p>Ask if letter was sent and [today's date]>=[Recruit Date] + 3 days. Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment amount] as thanks for your participation in the survey. Did you receive the letter? 1 Yes 2 No</p>
001o	BI230	<p>Ask if letter was sent and [today's date]<[Recruit Date] + 3 days. Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment] as thanks for your participation in the survey. You should be receiving the [payment] shortly.</p>
001p	BI212	<p>If BI229=2, ask. I'm very sorry. Our mailing service sent out the letter with [payment] recently. We fully intended for the cheque to get to you by today and we would like you to answer the survey today, but if you feel more comfortable waiting until you receive the [payment] before you answer the survey, we could schedule the survey in a few days time. Would you answer the survey now or would you like to wait a few days? 1 Answer the survey now 2 Wait a few days</p>
002	QA211	<p>Ask all. Can I just check: are you still smoking, or have you quit smoking altogether? 1 Quit 2 Still smoking 7 Not applicable 8 Refused 9 Don't know If response=1 (quit smoking) go to QA221. If response=2 (still smoking) go to SB011.</p>
003	QA221	<p>Ask if QA211=1. How many days ago did you quit? <i>Enter number of days. Response must be < [current date] - [recruitment date].</i> <i>After response, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you WERE smoking.</i></p>
***** SMOKING BEHAVIOUR *****		

004	Sbint	We would like to start with some questions about your smoking. Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you WERE smoking.
005a	SB011a	Ask all. <i>Do not read out time units.</i> If smoking status=1: How soon after waking do you usually have your first smoke? If smoking status=2-3: On days that you smoke, how soon after waking do you usually have your first smoke? (number of minutes)
005b	SB011b	(number of hours)
006a	SB013v	(Derived variable -- composite: total min to first cig, category) 0 More than 60 min 1 31-60 min 2 6 to 30 min 3 5 min or less 7 Not applicable 8 Refused 9 Don't know
006b	SB012v	(Derived variable -- composite: total min to first cig, continuous)
007	SB031	Ask all. <i>Read out response options.</i> Do you consider yourself addicted to cigarettes? Would you say . . . 1 Not at all 2 Yes -- somewhat addicted 3 Yes -- very addicted 7 Not applicable 8 Refused 9 Don't know
008	SB041	Ask all. <i>Read out response options.</i> If QA211=1: How hard has it been to go without smoking for a whole day? If QA211=2: How hard would you find it to go without smoking for a whole day? 1 Not at all hard 2 Somewhat hard 3 Very hard 4 Extremely hard 7 Not applicable 8 Refused 9 Don't know
009	SB061	Ask all. <i>Read out response options.</i>

		<p>If necessary, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking.</p> <p>When you smoke, how much of the cigarette do you usually smoke?</p> <ol style="list-style-type: none"> 1 Right to the butt 2 Nearly to the butt 3 Most of the cigarette 4 About half the cigarette or less 7 Not applicable 8 Refused 9 Don't know
010	SB071	<p>Ask all.</p> <p>Read out response options.</p> <p>If necessary, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking.</p> <p>Which of the following best describes how strongly you usually inhale when you smoke?</p> <ol style="list-style-type: none"> 1 You inhale as deeply into your chest as possible 2 You inhale only partly into your chest 3 You inhale as far back as your throat 4 You inhale well back into your mouth 5 You just puff, you don't really inhale 7 Not applicable 8 Refused 9 Don't know
011	SB081	<p>Ask all.</p> <p>Read out response options.</p> <p>If necessary, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking.</p> <p>Which of the following statements best describes how many puffs you usually take when you smoke a cigarette?</p> <ol style="list-style-type: none"> 1 You only take a few puffs on each cigarette 2 You take more than a few puffs, but not as many as you could 3 You take as many puffs as you can on each cigarette 7 Not applicable 8 Refused 9 Don't know
012a	QA231a	<p>Ask if QA101<>2 and QA211<>1.</p> <p>You mentioned in your previous interview that you have tried to quit smoking before. How long ago did your most recent serious quit attempt END? (days)</p>
012b	QA231b	(months)
012c	QA231c	(years ago)

013a	QA241a	<p>Ask if QA101<>2 and QA211<>1. Thinking about any quit attempt that ENDED within the last 6 months -- since [6M anchor] -- what is the longest time you stayed smoke-free? (days)</p> <p><i>If this period began longer than 6 months ago but finished in the last 6 months, record full length of period. This could be longer than 6 months.</i></p>
013b	QA241b	(weeks)
013c	QA241c	(months)
014a	SB201	<p>Ask all. <i>Read out response options if necessary.</i> The following questions ask you about how often you've had certain thoughts in the last month, that is, since [1M Anchor]. For each question, please answer using one of the following: Never, Rarely, Sometimes, Often, Very Often.</p> <p>In the last month -- since [1M Anchor] -- how often, if at all, did you . . . Think about the danger or other bad things about smoking?</p> <ul style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
014b	SB203	<p>Think about how much you enjoy smoking.</p> <ul style="list-style-type: none"> 8 Refused (Don't read) 9 Don't Know (Don't read)
014c	SB205	<p>Think about the harm your smoking might be doing to you?</p> <ul style="list-style-type: none"> 7 Not applicable 8 Refused 9 Don't know
014d	SB207	Think about the harm your smoking might be doing to other people?
014e	SB209	Think about the bad conduct of tobacco companies?
014f	SB211	<p>Smoking status=1-3: Think about the money you spend on smoking? Smoking status=4-6: Think about the money you used to spend on smoking?</p>

015a	SB221	<p>Ask all. In the last month -- since [1M anchor] -- have you [stubbed/ butted] out a cigarette before you finished it because you thought about the harm of smoking?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SB226. Otherwise, go to KN211.</p>
015b	SB226	<p>Ask if SB221=1. Was that once, a few times, or lots of times?</p> <p>1 Once 2 A few times 3 Lots of times</p>
015c	SB226v	<p>(Derived variable: Combination of SB221 (ever butt out) with SB226 (freq of butting out).)</p> <p>0 Never 1 Once 2 A few times 3 Lots of times</p>
KNOWLEDGE OF HEALTH EFFECTS and TOBACCO CONSTITUENTS		
016a	KN211	<p>Ask all. I am going to read you a list of health effects and diseases that may or may not be caused by smoking cigarettes. Based on what you know or believe, does smoking cause . . .</p> <p>Heart disease in smokers?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
016b	KN221	<p>Stroke in smokers?</p> <p>8 Refused (Don't read) 9 Don't Know (Don't read)</p>
016c	KN231	<p>Impotence in male smokers?</p> <p>7 Not applicable 8 Refused 9 Don't know</p>
016d	KN241	<p>Lung cancer in smokers?</p>
016e	KN251	<p>Lung cancer in non-smokers from secondhand smoke?</p>

WARNING LABELS		
017	WL201	<p>Ask all. <i>Read out response options.</i> In the last month -- that is, since [1M anchor] -- how often, if at all, have you noticed the warning labels on cigarette packages?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 8 Refused (Don't read) 9 Don't Know (Don't read)
018a	KN311	<p>Present KN311-KN356 in randomized order. Ask all. As far as you know, are each of the following chemicals included in cigarette smoke?</p> <p>Cyanide?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
018b	KN321	Mercury?
018c	KN331	Arsenic?
018d	KN341	Carbon monoxide?
019	WL211	<p>Ask all. <i>Read out response options.</i> In the last month, how often, if at all, have you read or looked closely at the warning labels on cigarette packages?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
020a	KN411	<p>Ask all. Are each of the following statements true or false? The way a smoker PUFFS on a cigarette can affect the amount of tar and nicotine a smoker takes in.</p> <ol style="list-style-type: none"> 1 True 2 False

		7 Not applicable 8 Refused 9 Don't know
020b	KN421	The way a smoker HOLDS a cigarette can affect the amount of tar and nicotine a smoker takes in.
020c	KN431	Filters reduce the harmfulness of cigarettes.
020d	KN441	The nicotine in cigarettes is the chemical that causes most of the cancer. 8 Refused (Don't read) 9 Don't Know (Don't read)
021	WL221	Ask all. <i>Read out response options.</i> In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one? Would you say . . . 1 Never 2 Once 3 A few times 4 Many times 7 Not applicable 8 Refused 9 Don't know
022a	WL311	Ask all. <i>Read out response options.</i> In the last month, have you made any effort to avoid looking at or thinking about the warning labels . . . By covering the warnings up? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
022b	WL321	By keeping the pack out of sight?
022c	WL331	By using a cigarette case or some other pack?
022d	WL341	By not buying packs with particular labels?
ANTI-SMOKING CAMPAIGNS <i>Interviewer note: Read out response options.</i>		
023	AD201	Ask all. Smokers: If you quit smoking within the next 6 months, this would be... Quitters: If you stay quit within the next 6 months, this would be...

		1 Mentioned 2 Not mentioned 8 Refused (Don't read) 9 Don't Know (Don't read)
024a	AD206	Ask all. <i>Read out each source of information.</i> Now I want to ask you about tobacco advertising. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places? On television? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
024b	AD211	On radio?
024c	AD216	At the cinema before or after the film?
024d	AD221	On posters or billboards?
024e	AD225	In newspapers or magazines?
024f	AD231	On shop windows or inside shops where you buy tobacco?
024g	AD236	Anywhere else? (specify) If response=1, go to AD236o. Otherwise, go to AD246.
024h	AD236o	Ask if AD236=1. Where else have you noticed cigarettes or tobacco products being advertised in the last 6 months? <i>Enter text response.</i>
025	AD246	Ask all. In the last 6 months, have you seen any advertising by tobacco companies that is not promoting particular products or brands, but the COMPANY itself? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
026a	AD301	Ask all. Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Sport or sporting event that is sponsored by or connected with BRANDS of cigarettes?

		1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
026b	AD311	Sport or sporting event that is sponsored by or connected with tobacco COMPANIES?
026c	AD321	Music, theatre, art, or fashion events, that are sponsored by or connected with BRANDS of cigarettes?
026d	AD331	Music, theatre, art, or fashion events, that are sponsored by or connected with tobacco COMPANIES?
027a	AD401	Ask all. <i>Read out each statement.</i> In the last 6 months - that is, since [6M Anchor] -- have you noticed any of the following types of tobacco promotion? In the last 6 months, have you noticed . . . Free samples of cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD406. Otherwise, go to AD411.
027b	AD406	Ask if AD401=1. In the last 6 months, have YOU received free samples of cigarettes?
028a	AD411	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Special price offers for cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD416. Otherwise, go to AD421.
028b	AD416	Ask if AD411=1. In the last 6 months, have you used special price offers?
029	AD421	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Free gifts or special discount offers on other products when buying cigarettes?

		1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD431. Otherwise, go to AD471.
030a	AD431	Ask if AD421=1. Were these free gifts or special discounts . . . From a [shop/ store] keeper when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
030b	AD441	From you or someone else saving coupons or tokens from inside cigarette packs?
030c	AD451	From you or someone else saving parts of cigarette packs (e.g. pack fronts)?
030d	AD461	Free gifts showing cigarette brand logos, given out at events such as concerts, festivals or sports events?
031a	AD436	Ask if AD431=1. In the last 6 months, have YOU personally received . . . Free gifts or discount offers from a [shop/ store]- keeper when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
031b	AD446	Ask if AD441=1. Free gifts/ discount offers from you or someone else saving coupons or tokens from inside cigarette packs?
031c	AD456	Ask if AD451=1. Free gifts/ discount offers from you or someone else saving parts of cigarette packs (e.g. pack fronts)? 9 Don't know
031d	AD466	Ask if AD461=1. Free gifts showing cigarette brand logos, given out at events such as concerts, festivals or sports events? 7 Not applicable 8 Refused 9 Don't know
032a	AD471	Ask all.

		<p>In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . E-mail messages promoting cigarettes or tobacco products?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD476. Otherwise, go to AD481.</p>
032b	AD476	<p>Ask if AD471=1. In the last 6 months, have you received promotional email messages promoting cigarettes or tobacco products?</p>
033a	AD481	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Mobile phone text messages promoting cigarettes or tobacco products?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD486. Otherwise, go to AD491.</p>
033b	AD486	<p>Ask if AD481=1. In the last 6 months, have you received mobile phone text messages promoting cigarettes or tobacco products?</p>
034a	AD491	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Mail promoting cigarettes or tobacco products?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD496. Otherwise, go to AD501.</p>
034b	AD496	<p>Ask if AD491=1. In the last 6 months, have you RECEIVED mail promoting cigarettes or tobacco products?</p>
035a	AD501	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Clothing or other items with a cigarette brand name or logo?</p> <p>1 Yes 2 No 7 Not applicable</p>

		8 Refused 9 Don't know If response=1, go to AD506. Otherwise, go to AD511.
035b	AD506	Ask if AD501=1. In the last 6 months, have YOU received clothing or other items with a cigarette brand name or logo?
036a	AD511	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Competitions linked to cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD516. Otherwise, go to AD521.
036b	AD516	Ask if AD511=1. In the last 6 months, have YOU participated in any competitions linked to cigarettes?
037a	AD521	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Internet sites promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD526. If response=2, go to AD531.
037b	AD526	Ask if AD521=1. In the last 6 months, have YOU visited any Internet sites promoting cigarettes or tobacco products?
038a	AD531	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Leaflets promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD536. Otherwise, go to AD541.

038b	AD536	Ask if AD531=1. In the last 6 months have YOU received any leaflets promoting cigarettes or tobacco products?
039	AD541	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Signs or posters or branded items in bars, pubs or clubs, promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
040a	AD601	Ask all. <i>Read out response options.</i> Now, I want to ask you about the media more generally. First, thinking about news stories relating to smoking or tobacco companies that might have been on TV, radio, or in the newspapers. In the last 6 months -- that is, since [6M Anchor] -- about how often, if at all, have you seen or heard a news story about smoking? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know If response=2-5, go to AD606. Otherwise, go to AD611.
040b	AD606	Ask if AD601=2-5. On balance, how did the news stories portray smoking? Were they . . . 1 All pro-smoking 2 Mostly pro-smoking 3 Equally pro- and anti-smoking 4 Mostly anti-smoking 5 All anti-smoking
041a	AD611	Ask all. <i>Read out response options.</i> Now thinking about the entertainment media, like [films/ movies], TV programs, and magazines . . . In the last 6 months -- since [6M Anchor] -- about how often, if at all, have you seen people smoking in the entertainment media? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often

		<p>7 Not applicable 8 Refused 9 Don't know</p> <p>If response=2-5, go to AD616. Otherwise, go to AD701.</p>
041b	AD616	<p>Ask if AD611=2-5. About how often, if at all, were you able to tell what brand was being smoked in the [movies/ films], TV programs, or magazines?</p>
042	AD701	<p>Ask all. <i>Read out response options.</i> Now I would like you to think about advertising or information that talks about the dangers of smoking, or encourages quitting. In the last 6 months -- since [6M anchor] -- how often, if at all, have you noticed such advertising or information?</p> <p>1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know</p>
043a	AD711	<p>Ask all. <i>Read out each source of information.</i> In the last 6 months, have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting, in any of the following places: On television?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
043b	AD716	On radio?
043c	AD721	At the [cinema/ movies].
043d	AD726	On posters or billboards?
043e	AD731	In newspapers or magazines?
043f	AD736	On shop windows or inside shops where you buy tobacco?
043g	AD741	On cigarette packs?

043h	AD746	In leaflets?
043i	AD751	On the Internet?
043j	AD756	Anywhere else? (specify)
		If response=1, go to AD756o. Otherwise, go to AD801.
043k	AD756o	Ask if AD756=1. In the past 6 months, where else have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting? <i>Enter text response.</i>
044	AD801	Ask all. In the last 6 months, have you noticed any advertising or information from tobacco companies which deals with the topic of youth smoking? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
PRICES, TAXATION, AND SOURCES OF TOBACCO		
045a	SO211	Ask all. Where did you last buy cigarettes for yourself? 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 88 Refused 99 Don't know

		<p>If response=10, go to SO215. If response=13, go to SO211o. Otherwise, go to BR701.</p>
045b	SO211o	<p>Specify where else purchased cigarettes Respondent answered "other" to "Where did you last buy cigarettes for yourself?"</p> <p><i>Enter text response.</i></p>
045c	SO215	<p>Would that be : respondent answered that purchased cigarettes from someone else</p> <ol style="list-style-type: none"> 1 From someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street 2 From a friend or relative 7 Not applicable 8 Refused 9 Don't know <p>If response=2, go to SO217.</p>
045d	SO217	<p>Ask if SO215=2.</p> <ol style="list-style-type: none"> 01 Convenience stores or gas stations, newsstands, etc [Aus, UK= petrol stations] 02 Supermarket, Grocery Store [US, Canada=Safeway, Loblaws; UK= Tesco] [AUS=?] 03 Discount store [US, CAN=Costco, WalMart, K-Mart; Price Club, Sam's Club] 04 In a bar or entertainment establishment 05 Indian reservation -- US , First Nations reserve -- Can [Aus, UK: none] 06 Duty-free shops 07 Outside the state, province [UK: Outside of the UK; Aus: Outside the country] 08 Military commissaries [Aus, UK: none] 09 Using a toll free number [UK: Using a free phone number] 10 From someone else -- not at a store, shop or other mainstream establishment 11 On the Internet 12 From vending machines 13 Other; specify 14 Tobacconist, tobacco shop [UK, Australia] 15 News stand [kiosk in Australia, UK] 16 News agent [mostly Australia, UK] 17 Milk bar [Australia] 88 Refused 99 Don't know
045e	SO217o	<p>Where else did your friend/ relative buy them?</p> <p><i>Enter text response.</i></p>
046a	BR701	<p>Ask all.</p> <p>Was it [current brand]?</p> <ol style="list-style-type: none"> 1 Yes 2 No <p><i>"Regular" means the brand they usually smoke.</i></p> <p>If response=1, go to PU201. Otherwise, go to [BR712/ BR722/ BR731/ BR741].</p>

046b	BR741o	<p>Ask if BR741=997. What brand did you buy?</p> <p><i>Enter text response.</i> <i>Verify with respondent at end of sequence: "So you smoke [brand name, strength, etc., as listed on screen] "</i></p>
046c	BR741	Ask if BR701 NE 1 and country=AU.
046d	BR731o	<p>Ask if BR731=997.</p> <p><i>Enter text response.</i> <i>Verify with respondent at end of sequence: "So you smoke [brand name, strength, etc., as listed on screen] "</i></p>
046e	BR731	Ask if BR701 NE 1 and country=UK.
047a	PU201	<p>Ask if FR326=1 or 3 (smokes factory-made). The last time you bought cigarettes for yourself, did you buy them by the carton, the pack, or loose out of the pack?</p> <ol style="list-style-type: none"> 1 Carton 2 Pack 3 Single, loose 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to PU211. If response=2, go to PU311. If response=3, go to PU411. Otherwise, go to PU611.</p>
047b	PU211	<p>Ask if PU201=1. How many cartons did you buy?</p> <p><i>Enter number of cartons.</i> If response=1, go to PU221a. If response>1, go to PU221b.</p>
047c	PU221v	(Derived variable: combination of PU221a and PU221b, which differ only slightly in wording and not at all in meaning)
047d	PU221a	<p>Ask if PU211=1. How many packs of cigarettes were in the carton?</p>
047e	PU221b	<p>Ask if PU211>1. How many packs of cigarettes were in each carton?</p>
047f	PU226	<p>How many cigarettes were in each pack?</p> <p>If PU211=1, go to PU231a. If PU211>1, go to PU229.</p>

047g	PU231a	<p>Ask if PU211=1. How much did you pay for that carton?</p> <p><i>Enter price.</i> Go to PU611.</p>
047h	PU229	<p>Ask if PU211>1. <i>Interviewer Notes: (1) whichever is easier for respondent -- price per carton or price for all cartons together. Respondents might not know the cost per carton, and we don't want them to do arithmetic. (2) Record exact price. Do not round number. If they give range, ask to specify. If they cannot narrow down the range, enter midpoint of the range.</i> I'd like to find out how much you paid. Is it easier for you to say how much you paid per carton or how much you paid for all [PU211] cartons?</p> <ol style="list-style-type: none"> 1 Price per carton 2 Total paid for all cartons 8 Refused 9 Don't Know <p>If response=1 or 2, go to PU241. Otherwise, go to PU611.</p>
047i	PU241	<p>How much did you pay?</p> <p>Go to PU611.</p>
047j	PU311	<p>Ask if PU201=2. How many packs did you buy?</p> <p><i>Enter number of packs.</i> If PU311=1, go to PU321a. If PU311>1, go to PU321b.</p>
047k	PU321a	<p>Ask if PU311=1. How many cigarettes were in the pack?</p> <p>Go to PU331a.</p>
047l	PU321b	<p>Ask If PU311>1. How many cigarettes were in each pack?</p> <p>If PU311=1, go to PU331a. If PU311>1, go to PU331b.</p>
047m	PU331a	<p>Ask if PU311=1. How much did you pay for that pack?</p> <p><i>Enter price for one pack.</i> Go to PU611.</p>
047n	PU329	<p>Ask If PU311>1. <i>Interviewer Notes: (1) whichever is easier for respondent (respondents might not know the cost per pack, and we don't want them to do arithmetic). (2) Give exact price. Do not round number. If they give range ask to specify. If they cannot narrow down</i></p>

		<p><i>the range, enter midpoint of the range.</i></p> <p>I'd like to find out how much you paid. Is it easier for you to say how much you paid per pack or how much you paid for all [PU311] packs?</p> <ol style="list-style-type: none"> 1 Price per pack 2 Total paid for all packs 8 Refused 9 Don't Know <p>If response=1 or 2, go to PU341. Otherwise, go to PU611.</p>
047o	PU341	<p>How much did you pay?</p> <p><i>Enter price for all packs.</i></p> <p>Go to PU611.</p>
047p	PU321v	
047q	PU411	<p>Ask if PU201=3.</p> <p>How many loose cigarettes did you purchase?</p> <p><i>Enter number of cigarettes.</i></p> <p>If response=1, go to PU431a. If response>1, go to PU431b.</p>
047r	PU431a	<p>Ask if PU411=1.</p> <p>How much did you pay for that one cigarette?</p> <p><i>Enter price for one cigarette.</i></p>
047s	PU429	<p>Ask if PU411>1.</p> <p><i>Interviewer Notes: (1) whichever is easier for respondent (respondents might not know the cost per cigarette, and we don't want them to do arithmetic); (2) Give exact price — do not round number. If they give range ask to specify. If they cannot narrow down the range, enter midpoint of the range.</i></p> <p>I'd like to find out how much you paid. Is it easier for you to say how much you paid per cigarette or how much you paid for all [PU411] cigarettes?</p> <ol style="list-style-type: none"> 1 Price per cigarette 2 Total paid for all cigarettes 8 Refused 9 Don't Know <p>If response=1 or 2, go to PU441. Otherwise, go to PU611.</p>
047t	PU441	<p>How much did you pay?</p> <p>Go to PU611.</p>
047u	PU511	<p>Ask if FR326=2.</p> <p>The last time you bought roll-your-own tobacco, how many pouches or containers did you buy?</p> <p><i>Enter number of pouches or containers.</i></p>

		If response=1, go to PU521a. If response>1, go to PU529.
047v	PU521a	Ask if PU511=1. How much did you pay for that one pouch or container? <i>Enter price for one pouch or container.</i> Go to PU611.
047w	PU529	Ask if PU511>1. <i>Interviewer Notes: (1) whichever is easier for respondent (respondents might not know the cost per pouch/ container), and we don't want them to do arithmetic; (2) Give exact price — do not round number. If they give range ask to specify. If they cannot narrow down the range, enter midpoint of the range.</i> I'd like to find out how much you paid. Is it easier for you to say how much you paid per pouch/ container or how much you paid for all [PU511] pouches/ containers? 1 Price per pouch 2 Total paid for all pouches 8 Refused 9 Don't Know If response=1 or 2, go to PU541. Otherwise, go to PU611.
047x	PU541	How much did you pay? Go to PU611.
048	PU611	Ask if smoking status=1-3. The last time you bought [cigarettes/ tobacco] FOR YOURSELF, did you use any coupons or discounts to get a special price? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
049	S0301	If FR326=2 or 3 (smokes RYO, with or without factory-made), add "or tobacco" as shown. You've just told me where you last bought [cigarettes/ tobacco]. Is this where you buy MOST of your [cigarettes/ tobacco]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to S0411. Otherwise, go to S0321.
050a	S0311	Ask if S0301=2. Where do you buy most of your cigarettes [or tobacco]? 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment

		<ul style="list-style-type: none"> 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 77 NA 88 Refused 99 Don't Know <p>If response=10, go to SO315. If response=13, go to SO311o. Otherwise, go to SO411.</p>
050b	SO311o	<p>Ask if SO311=13. Where else do you buy most of your [cigarettes/ tobacco]?</p> <p><i>Enter text response.</i></p>
051a	SO315	<p>Ask if SO311=10. Would that be from someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street? Respondent answered "from someone else" (not at a store, shop or other mainstream establishment) in response to "Where do you buy most of your cigarettes [or tobacco]?" (don't read checklist, select only one)</p> <ul style="list-style-type: none"> 1 From someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street 2 From a friend or relative 7 Not applicable 8 Refused 9 Don't know <p>{If response=2, go to SO317. Otherwise, go to SO411.</p>
051b	SO317	<p>Ask if SO315=2. Where did your friend or relative buy them?</p> <ul style="list-style-type: none"> 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country

		08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 88 Refused 99 Don't know
051c	SO317o	Ask if SO317=97. Where else did your friend/ relative buy them? <i>Enter text response.</i>
052a	SO411	Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . from the Internet? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO416. Otherwise, go to SO421.
052b	SO416	Ask if SO411=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] from the Internet? 1 Only once 2 A few times 3 Many times 4 Just about all of the time
053a	SO421	Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . By phone? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO426. Otherwise, go to SO431.

053b	SO426	<p>Ask if SO421=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] by phone? 1 Only once 2 A few times 3 Many times 4 Just about all of the time</p>
054a	SO431	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . By mail-order? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO436. Otherwise, go to SO441.</p>
054b	SO436	<p>Ask if SO431=1. <i>Read out.</i> How often in the last 6 months have you bought cigarettes by mail order? 1 Only once 2 A few times 3 Many times 4 Just about all of the time</p>
055a	SO441	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . From people selling them independently (e.g. door-to-door, in the street, or at local markets)? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO446. Otherwise, go to SO501.</p>
055b	SO446	<p>Ask if SO441=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes from people selling them independently (e.g. door to door, in the street, or at local markets)? 1 Only once 2 A few times 3 Many times 4 Just about all of the time</p>
056	SO501	<p>Ask all. In the last 6 months, have you made any other special effort to buy cigarettes [or tobacco] that are less expensive than you</p>

		<p>can get from local stores?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SO511. Otherwise, go to PU621.</p>
057a	SO511	<p>Ask if SO501=1.</p> <p>Where have you bought these less expensive cigarettes? Convenience stores or gas stations, newsstands, etc. [AUS/UK=petrol stations]</p> <p>1 Mentioned 2 Not mentioned</p>
057b	SO513	Supermarket/grocery store [US/Canada=Safeway/Loblaws; UK=Tesco] [AUS=?]
057c	SO515	Discount store [US/CAN=Costco, WalMart, K-Mart, Price Club, Sam's Club]
057d	SO517	In a bar or entertainment establishment
057e	SO519	Indian reservation (U.S.)/First Nations reserve (Can.) [AUS, UK: none]
057f	SO521	Duty-free shops
057g	SO523	Outside the state/province [UK: Outside of the UK; AUS: Outside the country]
057h	SO525	Military commissaries [AUS, UK: none]
057i	SO527	Using a toll free number [UK: Using a free phone number]
057j	SO529	From someone else--not at a store, shop or other mainstream establishment
057k	SO531	On the Internet?
057l	SO533	Vending machines.
057m	SO537	(Tobacconist/tobacco shop (UK, AUS)
057n	SO539	News stand [kiosk in AUS/UK]
057o	SO541	News agent [mostly AUS/UK]
057p	SO543	Milk bar?

057q	S0535	Other place
057r	S0535o	Ask if S0535=1. What other place? <i>Enter text response.</i>
058a	S0545	Ask if S0529=1. Would that be: from someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street or from a friend or relative? 1 Independent seller 2 Friend or relative 7 Not applicable 8 Refused 9 Don't know
058b	S0551	Ask if S0545=2. Where did your friend or relative buy them? 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other
058c	S0551o	Ask if S0551=13 (other). Where else did your friend/ relative buy them?
059a	S0611	Ask if S0511=1. <i>Read out sources.</i> How often in the past 6 months -- since [6M anchor] -- have you bought these less expensive cigarettes from . . . Convenience store? 1 Only once 2 A few times 3 Many times 4 Just about all of the time

		7 Not applicable 8 Refused 9 Don't know
059b	SO613	Ask if S0513=1. Grocery store?
059c	SO615	Ask if S0515=1. Discount store?
059d	SO617	Ask if S0517=1. Bar?
059e	SO619	Ask if S0519=1. Indian reserve?
059f	SO621	Ask if S0521=1. Duty-free store?
059g	SO623	Ask if S0523=1. Outside the province/ state/ county?
059h	SO625	Ask if S0525=1. Military Commissary?
059i	SO627	Ask if S0527=1. Toll-free number?
059j	SO629	Ask if S0529=1. Someone else?
059k	SO631	Ask if S0531=1. The Internet.
059l	SO633	Ask if S0533=1. A vending machine?
059m	SO637	Ask if S0537=1. Tobacconist?
059n	SO639	Ask if S0539=1.
059o	SO641	Ask if S0541=1. News agent?

059p	SO643	Ask if SO543=1. Milk bar?
059q	SO635	Ask if SO535=1. Another place. 1 Only once 2 A few times 3 Many times 4 Just about all of the time 7 Not applicable 8 Refused 9 Don't know
060a	PU621	Ask all. In the last 6 months -- since [6M Anchor] -- have you spent money on cigarettes that you knew would be better spent on household essentials like food? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
060b	PU631	If the price per carton (or price per pack) went up from () would you (smoke fewer cigarettes)
060c	PU633	If the price per carton (or price per pack) went up from () would you (switch to a cheaper cigarette brand)
060d	PU635	If the price per carton (or price per pack) went up from () would you (look for a cheaper source for your current cigarette brand)
060e	PU637	If the price per carton (or price per pack) went up from () would you (buy smaller amount of cigarettes at a time?)
060f	PU639	If the price per carton (or price per pack) went up from () would you (buy cigarettes in bulk)
060g	PU641	If the price per carton (or price per pack) went up from () would you (try to quit smoking)
LIGHT/MILD		
061a	LM201	Ask all. Some cigarettes are described as light, mild or low in tar. Do you currently smoke these types of cigarettes? 1 Yes 2 No 8 Refused 9 Unsure If response=2, go to LM211. Otherwise, go to LM311.

061b	LM211	<p>Ask if LM201=2. Have you ever smoked any of these types of cigarettes?</p> <p>7 Not applicable 8 Refused 9 Don't know</p>
062a	LM311	<p>Ask all. For the following questions, I will refer to all types of light, mild, and low tar cigarettes as "light cigarettes". Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements about light cigarettes. Light cigarettes make it easier to quit smoking.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
062b	LM321	<p>Light cigarettes are less harmful than regular cigarettes.</p> <p>1 Plus nocifs 2 Aussi nocifs 8 Refused (Don't read) 9 Don't Know (Don't read)</p>
062c	LM331	<p>Light cigarettes are smoother on your throat and chest than regular cigarettes.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
062d	LM341	<p>Smokers of light cigarettes take in less tar than smokers of regular cigarettes.</p>
063	LM411	<p>Ask all. <i>Read out response options.</i> How many light cigarettes would you have to smoke to harm you as much as 10 regular cigarettes would?</p> <p>1 Far fewer light cigarettes than 10 2 Somewhat fewer light cigarettes than 10 3 The same number of light cigarettes, that is 10 4 Somewhat more light cigarettes than 10 5 Far more light cigarettes than 10 7 Not applicable</p>

		8 Refused 9 Don't know If they believe that light cigarettes are just as harmful as regular cigarettes, they will answer code 3. If they believe that light cigarettes are less harmful than regular cigarettes, then they should answer code 4 or 5 (i.e., it would take more light cigarettes than 10 to harm you as much as 10 regular cigarettes would)
SMOKED TOBACCO PRODUCTS		
064	ST201	Ask all. Thinking about different types of tobacco products that are smoked -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- are any of these less harmful than the others or are they all equally harmful? 1 All kinds are equally harmful 2 Some kinds are more harmful than others 3 Don't know (don't read) 7 Not applicable 8 Refused 9 Don't know If response=2, go to ST211. Otherwise go to ST501.
065a	ST211	Ask if ST201=2. What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is LEAST harmful? 1 Factory-made cigarettes 2 Roll-your-own cigarettes 3 Pipes 4 Cigars 7 Not applicable 8 Refused 9 Don't know
065b	ST216	What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is MOST harmful?
066	ST501	Ask all. Accept 'don't know' without pressing for an answer. Tobacco companies are developing new types of cigarettes or cigarette-like products that are supposed to be less harmful than ordinary cigarettes? Have you heard of such products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST506. Otherwise, go to SL201.
067	ST506	Ask if ST501=1. If none of ST323-330=1:

		<p>Can you name any of these new products? If any of ST323-330=1: Apart from [products mentioned in ST323-330], can you name any new types of cigarettes or cigarette-like products that are supposed to be less harmful than ordinary cigarettes?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST511. Otherwise, go to ST551.</p>
068a	ST511	<p>Ask if ST506=1. <i>Do not read product names. Select all that apply.</i> What are the names? Accord.</p> <ol style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
068b	ST513	Eclipse.
068c	ST515	Omni.
068d	ST517	Ariva.
068e	ST519	Advance.
068f	ST521	Exalt.
068g	ST531	Other less harmful cigarette.
068h	ST531o	<p>Ask if ST531=1. What other less-harmful cigarette? <i>Enter text response.</i></p>
068i	ST551	<p>Have you EVER tried any of these products?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST561.</p>

		Otherwise, go to ST701.
068j	ST561	Ask if ST551=1. <i>Do not read product names. Select all that apply.</i> Which products have you EVER tried? Accord. 1 Mentioned 2 Not mentioned
068k	ST563	<i>Do not read product names.</i> Eclipse.
068l	ST565	Omni.
068m	ST567	Ariva.
068n	ST569	Advance.
068o	ST571	Exalt.
068p	ST581	Other less harmful cigarette.
068q	ST581o	Ask if ST581=1. Which other less harmful cigarette have you ever tried? <i>Enter text response.</i>
068r	ST611	Ask if ST551=1. <i>Do not read product names. Select all that apply.</i> Which products have you tried in the last 6 months -- that is, since [6M anchor]? Accord. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
068s	ST613	Eclipse.
068t	ST615	Omni.
068u	ST617	Ariva.
068v	ST619	Advance.
069a	ST621	Ask if ST551=1. <i>Do not read product names. Select all that apply.</i>

		Which products have you tried in the last 6 months -- that is, since [6M anchor]? Exalt. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
069b	ST631	Specify other _____.
069c	ST631o	Ask if ST631=1. Which other product?
069d	ST701	Ask if ST501=1. As far as you know, are any of these new products less harmful than ordinary cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
SMOKELESS TOBACCO PRODUCTS		
069e	SL201	Ask all. <i>Includes "nasal snuff," but does not include nicotine replacement therapy (i.e. patch, gum, etc).</i> Are you aware of any smokeless tobacco products, such as snuff or chewing tobacco, which are not burned or smoked but instead are usually put in the mouth? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SL221. Otherwise, go to SL301.
069f	SL211	Ask if SL201=1. Have you used any smokeless tobacco products in the last 12 months?
069g	SL221	Ask if SL211=1. <i>Read out product names. Check all that apply. 'Snus' is pronounced to rhyme with 'goose.'</i> Have you used . . . Chewing tobacco. 1 Mentioned 2 Not mentioned
069h	SL223	Moist snuff or "Snus" put in the mouth.
070a	SL225	Ask if SL211=1.

		<p><i>Read out product names. Check all that apply. 'Snus' is pronounced to rhyme with 'goose.'</i></p> <p>Have you used . . .</p> <p>Nasal snuff.</p> <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
070b	SL227	<p><i>Read out response options. Check all that apply.</i></p> <p>Other smokeless tobacco product.</p> <ul style="list-style-type: none"> 1 Yes 2 No
070c	SL227o	<p>Ask if SL227=1.</p> <p>Which other product have you used?</p> <p><i>Enter text response.</i></p>
070d	SL293	<p>Ask if SL211=1.</p> <p>In the last 6 months, did you use [this/any of these] product[s] as a way of cutting down on your cigarette smoking?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
070e	SL301	<p>Ask all.</p> <p>As far as you know, are ANY smokeless tobacco products less harmful than ordinary cigarettes?</p>
NICOTINE REPLACEMENT THERAPY		
071	NR101	<p>Ask all.</p> <p>Have you heard about medications to help people stop smoking, such as Nicotine Replacement Therapies like nicotine gum or the patch, or pills such as Zyban?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to NR106.</p> <p>Otherwise, go to NR783.</p>
072	NR106	<p>Ask if NR101=1.</p> <p>Have you ever used any stop-smoking medication?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused

		9 Don't know If response=1, go to NR111. Otherwise, go to NR783.
073a	NR111	Ask if NR106=1. /If M survey/ Since [LSD], have you used any stop-smoking medication? /If P survey or first wave/ Since 12M anchor, have you used any stop-smoking medication? 1 Yes, used in last year 2 No, not used in last year 3 Not mentioned 7 Not applicable 8 Refused 9 Don't know
073b	NR112v	(Derived variable: Number of NRT medications used since LSD.) If only one of (NR137, NR121–141)=1, go to NR401.
073c	NR121	Ask if NR111=1. <i>We can't use BRAND (e.g., Nicorette). We want the TYPE (e.g., gum, patch). Read out products if necessary. Select ALL that apply.</i> In the last 6 months, which medication or medications did you use? NRT: Nicotine gum. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know If number of responses to (NR121 - NR141) > 1, go to NR201.
073d	NR123	NRT: Nicotine patch.
073e	NR125	NRT: Nicotine lozenges.
073f	NR127	NRT: Nicotine (sublingual) tablets.
073g	NR129	NRT: Nicotine inhaler.
073h	NR131	NRT: Nicotine nasal spray.
073i	NR133	Zyban (or bupropion).
073j	NR135	Wellbutrin.
073k	NR141	Other medication (specify).
074a	NR141o	Ask if NR141=1.

		<p>We can't use BRAND (e.g., Nicorette). We want the TYPE (e.g., gum, patch). Read out products if necessary. Select ALL that apply.</p> <p>In the last 6 months, which medication or medications did you use? Specify other _____.</p> <p>Enter text response.</p>
074b	NR201	<p>Ask if more than one of (NR121-141o)=1 (Used more than one product). The last time you used a stop-smoking medication, did you use more than one product at the same time?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to NR221. If response=2, go to NR301.</p>
075a	NR202v	(Derived variable: # meds used at the same time (counter))
075b	NR221	<p>Ask if NR201=1. <i>Do not read.</i> Which medications did you use AT THE SAME TIME? NRT: Nicotine gum.</p>
075c	NR223	NRT: Nicotine patch.
076a	NR225	<p>Ask if NR201=1. <i>Do not read.</i> Which medications did you use AT THE SAME TIME? NRT: Nicotine lozenges.</p>
076b	NR227	NRT: Nicotine (sublingual) tablets.
076c	NR229	NRT: Nicotine inhaler.
076d	NR231	NRT: Nicotine nasal spray.
076e	NR233	Zyban (or bupropion).
076f	NR235	Wellbutrin.
076g	NR241	Other medication (specify).
076h	NR241o	<p>Ask if NR241=1. Which other medications did you use AT THE SAME TIME?</p>

		<i>Enter text response.</i>
076i	NR411	Ask if NR221=1. How did you get nicotine gum? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend 7 Not applicable 8 Refused 9 Don't know
076j	NR412	When you used nicotine gum, did you pay full price, get a discount, or get it free? 1 Paid full price 2 Got a discount 3 Got it free After (NR321 - NR341) & Q.66 (NR361 - NR381) are asked for each product mentioned in (NR221 - NR241), then go to (NR391)
076k	NR421	Ask if NR223=1. How did you get nicotine patches? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
076l	NR422	When you used nicotine patches, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount 3 Got it free
076m	NR431	Ask if NR225=1. How did you get nicotine lozenges? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
076n	NR432	When you used nicotine lozenges, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount 3 Got it free
076o	NR441	Ask if NR227=1. How did you get nicotine (sublingual) tablets? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
077a	NR442	Ask if NR227=1. When you used nicotine tablets, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount

		<ul style="list-style-type: none"> 3 Got it free 7 Not applicable 8 Refused 9 Don't know
077b	NR451	<p>Ask if NR441=1.</p> <p>How did you get a nicotine inhaler?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
077c	NR452	<p>When you used a nicotine inhaler, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
077d	NR461	<p>Ask if NR231=1.</p> <p>How did you get nicotine nasal spray?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
077e	NR462	<p>When you used nicotine nasal spray, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
077f	NR471	<p>Ask if NR233=1.</p> <p>How did you get Zyban?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
077g	NR472	<p>When you used Zyban, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
078a	NR481	<p>Ask if NR235=1.</p> <p>How did you get Wellbutrin?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend 7 Not applicable 8 Refused 9 Don't know
078b	NR482	<p>When you used Wellbutrin, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free

078c	NR491	<p>Ask if NR241=1. How did you get [referent medication]?</p> <ol style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend
078d	NR492	<p>When you used the other NRT, did you pay full price, get a discount, or get it free?</p> <ol style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
078e	NR251	<p>Ask if any of NR121-NR141=1. <i>Read out response options. Select only one.</i> What was the main reason you used these medications?</p> <ol style="list-style-type: none"> 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) <p>Go to NR783.</p>
079	NR251o	<p>Ask if NR251=4. What was the other main reason you used [referent medication]?</p> <p><i>Enter text response.</i></p>
080a	NR301	<p>Ask if NR201=2. <i>Do not read.</i> Which medication did you use?</p> <ol style="list-style-type: none"> 1 Nicotine gum 2 Nicotine patch 3 Nicotine lozenge 4 Nicotine tablets 5 Nicotine inhaler 6 Nicotine nasal spray 7 Zyban 8 Wellbutrin 9 Other 88 Refused 99 Can't Say <p>If response=9, go to NR301o. Otherwise, go to NR783.</p>
080b	NR301o	<p>Ask if NR301=9. Which other medication did you use?</p> <p><i>Enter text response.</i></p>
081	NR303	<p>Ask if NR201<>1 or only one of NR121-141=1. <i>Read out response options.</i> How did you get [referent medication]?</p>

		<ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend 7 Not applicable 8 Refused 9 Don't know
082a	NR304	<p>Ask if NR201<>1 or only one of NR121-141=1.</p> <p>When you used [medication mentioned in NR301], did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free 7 Not applicable 8 Refused 9 Don't know
082b	NR305	<p><i>Read out response options. Select only one.</i></p> <p>What was the main reason you used [medication mentioned in NR301]?</p> <ul style="list-style-type: none"> 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify)
083a	NR305o	<p>Ask if NR305=4.</p> <p>What was the other main reason you used [medication mentioned in NR301]?</p> <p><i>Enter text response.</i></p>
083b	NR783	<p>Ask all.</p> <p>I'm going to read out a list of statements about stop-smoking medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>If you decided you wanted to quit, stop-smoking medications would make it easier.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
083c	NR785	If you decided you wanted to quit, you would be able to quit without stop-smoking medications.
083d	NR787	Stop-smoking medications are too expensive.
083e	NR789	You don't know enough about how to use stop-smoking medications properly.
083f	NR791	Stop-smoking medications are too hard to get.

084a	NR793	<p>Ask all.</p> <p>I'm going to read out a list of statements about stop-smoking medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Stop-smoking medications might harm your health.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
084b	NR801	<p>In the last 6 months, have you visited a doctor or other health professional?</p> <ol style="list-style-type: none"> 1 Yes 2 No <p>If response=1 AND smoking status=1-3, go to NR811. If response=1 AND smoking status=4-6, go to NR821. If response=2, go to NR861.</p>
084c	NR811	<p>Ask if NR801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . . Advice to quit smoking?</p>
085a	NR811v	<p>(Derived variable -- composite: NR801 and NR811.)</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
085b	NR813	<p>Ask if NR801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . . Additional help or a referral to another service to help you quit?</p>
085c	NR813v	<p>(Derived variable -- composite: NR801 and NR813.)</p>
085d	NR815	<p>Ask if NR801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . . Would you say that the health warnings on cigarette packages are:</p>
085e	NR815v	<p>(Derived variable -- composite: NR801 and NR815.)</p>
085f	NR817	<p>Ask if NR801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . .</p>

		Pamphlets or brochures on how to quit?
086a	NR817v	(Derived variable -- composite: NR801 and NR817.) 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
086b	NR861	Ask all. Since [LSD], have you received advice or information about quitting smoking from . . . Telephone or quit line services? If response NE 1, go to NR865.
086c	NR865	The Internet. If response NE 1, go to NR869.
086d	NR869	Local stop-smoking services (such as clinics or specialists)? If response NE 1, go to NR880.
087	NR880	Ask all. In the last month -- that is, since [1M anchor] -- have you noticed any advertisements for stop-smoking medications? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
ENVIRONMENTAL TOBACCO SMOKE		
088	ET221	Ask all. <i>Read out response options. Select only one.</i> Which of the following best describes smoking in your home? 1 Smoking is allowed anywhere in your home 2 Smoking is NEVER allowed ANYWHERE in your home 3 Something in between 7 Not applicable 8 Refused 9 Don't know
089	ET321	Ask all. <i>Read out response options.</i> When you are in a car or other private vehicle with non-smokers, do you . . . 1 Smoke as you normally smoke 2 Never smoke 3 Something in between 7 Sans objet

		8 Refusi 9 Ne sait pas
090	ET421	Ask all. <i>Read out response options.</i> Which of the following best describes the rules about smoking in drinking establishments, bars, and pubs where you live? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 No rules or restrictions 7 Not applicable 8 Refused 9 Don't know
091	ET431	Ask all. In the last 6 months -- that is, since [6 M anchor] -- have you visited a drinking establishment, bar, or pub where you live? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ET436. If response NE 1, go to ET521.
092	ET436	Ask if ET431=1. The last time you did so, did you smoke indoors? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093	ET521	Ask all. <i>Read out response options.</i> Which of the following best describes the rules about smoking in restaurants or cafis where you live? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in all indoor areas 4 Every restaurant, cafi has its own rules 7 Not applicable 8 Refused 9 Don't know
094	ET531	Ask all. In the last 6 months -- since [6M Anchor] -- have you visited a restaurant or cafi where you live? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know

		If response=1, go to ET536. Otherwise, go to ET621.
095	ET536	Ask if ET531=1. The last time you were in a restaurant or cafe where you live, did you smoke indoors? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
096a	ET621	If FR416=2 (do not work outside home), go to ET701. <i>Read out response options.</i> Which of the following best describes the smoking policy where you work? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in any indoor areas 7 Not applicable 8 Refused 9 Don't know
096b	ET636	In the last 6 months, have you smoked in indoor areas at work? 1 Yes 2 No
096c	ET701	Ask all. For each of the following public places, please tell me if you think smoking should be allowed in all indoor areas, in some indoor areas, or not allowed indoors at all: Hospitals? 1 Smoking cigarettes/bidis should not be allowed in any indoor areas 2 Smoking cigarettes/bidis should be allowed only in some indoor areas 3 No rules or restrictions
096d	ET703	Workplaces? 1 All indoor areas 2 Some indoor areas 3 Not at all 9 Don't know
097a	ET705	Ask all. For each of the following public places, please tell me if you think smoking should be allowed in all indoor areas, in some indoor areas, or not allowed indoors at all: Drinking establishments (e.g. pubs/ bars) 1 All indoor areas 2 Some indoor areas 3 Not at all 9 Don't know
097b	ET707	Restaurants and cafes? 7 Not applicable

		8 Refused 9 Don't know
PSYCHOSOCIAL: BELIEFS ABOUT SMOKING, MODERATORS		
098a	PS211	<p>Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>You enjoy smoking too much to give it up.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
098b	PS213	Your cigarette smoke is dangerous to those around you.
098c	PS215	If you had to do it over again, you would not have started smoking.
098d	PS217	Smoking calms you down when you are stressed or upset.
098e	PS219	You spend too much money on cigarettes.
098f	PS221	Smoking helps you concentrate better.
098g	PS223	Smoking is an important part of your life.
098h	PS225	Smoking helps you control your weight.
098i	PS227	You have strong mixed emotions both for and against smoking, all at the same time.
098j	PS229	People who are important to you believe that you should not smoke.
098k	PS231	There are fewer and fewer places where you feel comfortable about smoking.
098l	PS233	Society disapproves of smoking.
098m	PS235	Smoking makes it easier for you to socialize.
099a	PS311	<p>Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>You have the kind of genetic makeup that allows you to smoke without it giving you health problems.</p>

		1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
099b	PS313	The medical evidence that smoking is harmful is exaggerated.
099c	PS315	You've got to die of something, so why not enjoy yourself and smoke.
099d	PS317	Smoking is no more risky than lots of other things that people do.
TOBACCO INDUSTRY		
100	IN211	Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Tobacco companies should be allowed to advertise and promote cigarettes as they please. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
101	IN213	Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Tobacco products should be more tightly regulated. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
102	IN215	Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Tobacco companies can be trusted to tell the truth about the dangers of their products.

		<ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
103	IN217	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco companies should take responsibility for the harm caused by smoking.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
104	IN219	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco companies have tried to convince the public that there is little or no health risk from second-hand smoke.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
105	IN311	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>The government should do more to tackle the harm done by smoking.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know

106	IN313	<p>Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. The government doesn't really care about people smoking because it makes so much money from tobacco taxes.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
BELIEFS ABOUT QUITTING		
107a	BQ111	<p>Ask if smoking status=1-3. <i>Respondent does not need to be intending to quit to respond. Emphasize "If" in wording.</i> <i>Read out response options.</i> Now some questions on any THOUGHTS you might have had about quitting smoking. If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed?</p> <ol style="list-style-type: none"> 1 Not at all sure 2 Slightly sure 3 Moderately sure 4 Very sure 5 Extremely sure 7 Not applicable 8 Refused 9 Don't know
107b	BQ121	<p>Ask all. <i>Read out response options.</i> How easy or hard would it be for you to completely quit smoking if you wanted to?</p> <ol style="list-style-type: none"> 1 Very easy 2 Somewhat easy 3 Neither easy nor hard 4 Somewhat hard 5 Very hard
108a	BQ141	<p>If QA211=1, go to BQ201. <i>[Interviewer Note: Read out response options.]</i> Are you planning to quit smoking . . .</p> <ol style="list-style-type: none"> 1 Within the next month 2 Within the next 6 months 3 Sometime in the future, beyond 6 months 4 Or are you not planning to quit? 7 Not applicable 8 Refused 9 Don't know

		If response=1, go to BQ146. Otherwise, go to BQ201.
108b	BQ146	Ask if BQ141=1. Have you set a firm date? 1 Yes 2 No
108c	BQ150v	(Derived variable: dichotomous version of BQ110) 1 No, not intending to quit 2 Yes, intending to quit
108d	BQ201	Ask all. Smoking status=1-3 AND BQ141=4: Even though you mentioned that you are not currently planning to quit, in the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much? Smoking status=1-3 AND BQ141=1-3: In the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much? Smoking status=4-5: To what extent, if at all, were the following reasons for your current quit attempt? Concern for your personal health? 1 Not at all 2 Somewhat 3 Very much
108e	BQ203	Concern about the effect of your cigarette smoke on non-smokers?
108f	BQ205	Illness or death of a friend or relative?
108g	BQ207	That society disapproves of smoking?
108h	BQ209	The price of cigarettes?
108i	BQ211	Smoking restrictions at work?
108j	BQ213	Smoking restrictions in public places like [restaurants or bars/ cafes or pubs]?
108k	BQ215	Not wanting family or friends to worry? 7 Not applicable 8 Refused 9 Don't know
108l	BQ217	Advice from a doctor, dentist, or other health professional to quit?
108m	BQ219	Friends or family members who have recently quit or are currently quitting?
108n	BQ221	Free, or lower cost, stop-smoking medication?

108o	BQ223	Availability of telephone helpline/ quitline/ information line?
108p	BQ225	Advertisements or information about the health risks of smoking? 9 Don't know
108q	BQ227	Warning labels on cigarette packages? 7 Not applicable 8 Refused 9 Don't know
108r	BQ229	Setting an example for children?
108s	BQ241	In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify) 1 Yes 2 No
108t	BQ241o	<i>Enter only one reason.</i> Peripheral vascular disease? <i>Enter text response.</i>
108u	BQ243o	Ask if BQ241=1. <i>INTERVIEWER NOTE: ENTER 2ND "THING" HERE AND 3RD ON NEXT SCREEN</i> <i>IF NO ANSWER OR "NOTHING" PRESS "ENTER" ONLY</i> In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify)
108v	BQ244	Ask if answered BQ243o. Has [other reason] led you to think about quitting somewhat or very much?
108w	BQ245o	In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify)
109	BQ242	Ask if BQ241=1. Has [other reason] led you to think about quitting somewhat or very much? 1 Not at all 2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know
110	BQ301	Ask all. <i>Read out response options.</i> How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months?

		1 Not at all 2 Slightly 3 Moderately 4 Very much 5 Extremely 7 Not applicable 8 Refused 9 Don't know
PERCEIVED RISK		
111	PR311	Ask all. <i>Read out response options.</i> Now I'd like to ask you about smoking and your health. To what extent, if at all, has smoking damaged your health? 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 Not applicable 8 Refused 9 Don't know
112	PR313	Ask all. Now I'd like to ask you about smoking and your health. How worried are you, if at all, that smoking WILL damage your health in the future? 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused 9 Don't know
113	PR321	Ask all. <i>Read out response options.</i> Now I'd like to ask you about smoking and your health. To what extent, if at all, has smoking lowered your quality of life? 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 8 Refused (Don't read) 9 Don't Know (Don't read)
114	PR327	Ask all. <i>Read out response options.</i> Now I'd like to ask you about smoking and your health.

		<p>How worried are you, if at all, that smoking will lower your quality of life in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused 9 Don't know
MODERATORS		
115	DI211	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. You spend a lot of time thinking about how what you do today will affect your life in the future.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
116	DI216	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. You like to explore strange places.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
117	DI221	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. You like to do thrilling things.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused

		9 Don't know
118	DI226	<p>Ask all.</p> <p>Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like new and exciting experiences, even if you have to break the rules.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
119	DI231	<p>Ask all.</p> <p>Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like to be with friends who are exciting and unpredictable.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
120	DI241	<p>Ask all.</p> <p>Of the five closest friends or acquaintances that you spend time with on a regular basis, how many of them are smokers?</p> <p><i>Enter number.</i></p>
121	DI301	<p>Ask all.</p> <p><i>Read out response options.</i></p> <p>What is your overall opinion of smoking? Is it . . . ?</p> <ol style="list-style-type: none"> 1 Very positive 2 Positive 3 Neither positive nor negative 4 Negative 5 Very negative 7 Not applicable 8 Refused 9 Don't know
122a	usSize	<ol style="list-style-type: none"> 1 Counties in top 21 metro areas 2 Counties in metro areas with more than 85,000 households 3 Counties with more than 20,000 households

		4 Other counties 7 Not applicable 8 Refused 9 Don't know
122b	caProv	01 NL 02 PE 03 NS 04 NB 05 QC 06 ON 07 MB 08 SK 09 AB 10 BC 77 NA 88 Refused 99 Don't Know
DEMOGRAPHICS		
122c	DE211wx	Which of the following categories best describes your ANNUAL household income, that is the total income before taxes, or gross income, of all persons in your household combined, for one year? 1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over 77 NA 88 Refused 99 Don't Know
122d	caSize	1 100,000 to 1 million 2 25,000 to 99,999 3 10,000-24,999 4 5,000 to 9,999 5 Under 5,000 6 Vancouver 7 Montreal 8 Toronto 9 GTA
122e	DE211y	Which of the following categories best describes your ANNUAL household income, that is the total income before taxes, or gross income, of all persons in your household combined, for one year? 01 Under £6,500

		02 £6,500-15,000 03 £15,001-30,000 04 £30,001-40,000 05 £40,001-50,000 06 £50,001-65,000 07 £65,001-95,000 08 £95,001 and over
122f	usRegion	1 Northeast 2 Midwest 3 South 4 West 7 Not applicable 8 Refused 9 Don't know
122g	usState	
122h	DE211z	Which of the following categories best describes your ANNUAL household income, that is the total income before taxes, or gross income, of all persons in your household combined, for one year? 1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over 77 NA 88 Refused 99 Don't Know
122i	auRegion	01 NSW Metro 02 NSW Country 03 VIC Metro 04 VIC country 05 QLD Metro 06 QLD Country 07 SA Metro 08 SA Country 09 WA Metro 10 WA Country 11 TAS Metro 12 TAS Country 13 ACT 14 NT
122j	DE212v	(Derived variable: Income categories for all countries)

		1 Low 2 Moderate 3 High 7 Not applicable 8 Refused 9 Don't know
123	ukRegion	01 North East 02 Yorkshire & the Humber 03 East Midland 04 Eastern 05 London 06 South East 07 South West 08 West Midland 09 North West 10 Wales 20 Scotland 30 Northern Ireland 77 NA 88 Refused 99 Don't Know
124a	DE721	
124b	DE723	
125a	DE733	
125b	DE731	
126a	DE915v	
126b	S0502v	(Derived variable: # sources of cheap cigs (counter))

APPENDIX C: ITC FOUR COUNTRY SURVEY WAVE 2



4-Country Wave 2 Replenishment Survey

Survey Code: 4C2-P

Languages: English

Mode: Telephone Interview

Generated on August 27, 2009

Q#	VarName	
000a	uniqid	
000b	length	
000c	country	1 CA 2 US 3 UK 4 AU 7 Not applicable 8 Refused 9 Don't know
INTRODUCTION		
000d	Intvwr	
000e	Disp	00 Non-contact, not in service, line problem 09 Contact, all questions answered -- complete1 15 Contact, rescheduled appt not kept 27 Respondent calls to withdraw 28 Contact, household refusal to get respondent 29 Contact, respondent unavailable this wave 30 Contact, respondent has died 31 Emerg # sought, no contact 32 Emerg # sought, contact, unknown 33 Emerg # sought, contact, refused 34 Emerg # sought, contact, obtained 40 Non-contact, rings only 41 Non-contact, busy 42 Non-contact, ans machine, fax, or modem 80 Contact, respondent refuses before qxx is finished -- refusal 81 Contact, all ques asked, refuses >=1ques -- complete2 83 Interruption, never completed -- incomplete 85 Respondant completes all but income -- complete1 86 Contact, age, sex, smoking status unknown 95 Interviewer termination 96 Non-contact, unsuccessful attempt to trace 77 NA 88 Refused 99 Don't Know
000f	Date	

000g	Centre	<ul style="list-style-type: none"> 1 Toronto 2 Montreal 3 Calgary 4 Melbourne 5 Auckland 7 Not applicable 8 Refused 9 Don't know
000h	srvyd	
000i	BI201	<p>Ask all. Hello. My name is [interviewer name] and I'm calling from Roy Morgan Research. I wish to speak to [participant name].</p>
000j	BI208	<p><i>Once participant is on the line:</i> Hello [participant name], I'm calling from Roy Morgan Research regarding the phone survey on smoking.</p> <ul style="list-style-type: none"> 1 Continue; respondent on phone 2 Respondent refuses interview 3 Unable to continue <p>If response = 1, go to BI229. If response = 2, go to BI425. If response = 3, go to BI971.</p>
000k	BI425	<p>Ask if BI208=2. This is a survey that is being conducted among smokers throughout the world. It's very important for the accuracy of the survey for smokers who agreed to do the survey to actually complete it. That is why we have sent you the [payment].</p> <p>Will you help us now by completing the survey today? We can arrange another time for you to complete the survey, if this time is not convenient.</p> <ul style="list-style-type: none"> 1 Yes 2 No (refusal) 3 Appointment. <p><i>If another time, make appointment.</i> If response=1, go to BI235. If response=2, go to BI901. If response=3, make appointment.</p>
000l	BI971	<p>If BI208=3. <i>Enter reason for being unable to continue.</i></p> <ul style="list-style-type: none"> 1 Household refusal to get respondent 2 Respondent is unavailable this wave (e.g. sick or away) 3 Respondent has died 4 Respondent no longer at this phone number and new respondent number given
000m	BI229	<p>Ask if letter was sent and [today's date]>=[Recruit Date] + 3 days. Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment amount] as thanks for your participation in the survey. Did you receive the letter?</p> <ul style="list-style-type: none"> 1 Yes

		2 No
000n	BI230	Ask if letter was sent and [today's date]<[Recruit Date] + 3 days. Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment] as thanks for your participation in the survey. You should be receiving the [payment] shortly.
000o	BI212	If BI229=2, ask. I'm very sorry. Our mailing service sent out the letter with [payment] recently. We fully intended for the cheque to get to you by today and we would like you to answer the survey today, but if you feel more comfortable waiting until you receive the [payment] before you answer the survey, we could schedule the survey in a few days time. Would you answer the survey now or would you like to wait a few days? 1 Answer the survey now 2 Wait a few days If response=1, go to BI255. If response=2, make appointment.
000p	BI255	Ask all. OK, the survey will take about 35 minutes. Some of the questions ask you about the last 6 months -- that means any time from [6M Anchor] until now. Other questions ask you about the last month -- that means from [1M Anchor] until now. Let's begin. If there is any question you do not wish to answer, just let me know and we will skip it and go on to the next.
001	QA211	Ask all. Can I just check: are you still smoking, or have you quit smoking altogether? 1 Quit 2 Still smoking 7 Not applicable 8 Refused 9 Don't know If response=1, go to QA221. If response=2, go to FR309v.
002	QA221	Ask if QA211=1. How many days ago did you quit? <i>Enter number of days. Response must be < [current date] - [recruitment date].</i> <i>After response, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you WERE smoking.</i>
003	FR309v	Derived variable: smoking status in current wave: 1 - Daily smoker 2 - Weekly smoker 3 - Monthly 4 - Quit in the last month 5 - Quit 1-6 months ago 1 Daily smoker 2 Weekly smoker 3 Monthly smoker

		4 Quit in the last month 5 Quit 1-6 months ago 6 Quit more than 6 months ago 7 Not applicable 8 Refused 9 Don't know If smoking status=1, go to SB020. If smoking status=2-3, go to SB025. If smoking status=4-6, go to SB031.
***** SMOKING BEHAVIOUR *****		
004	Sbint	We would like to start with some questions about your smoking. Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you WERE smoking.
005a	SB020	Ask if FR309v=1. <i>Do not read out time units.</i> How soon after waking do you usually have your first smoke? 1 Minutes 2 Hours 7 Not applicable 8 Refused 9 Don't know
005b	SB021a	(number of minutes) <i>Enter number of min.</i>
005c	SB021b	(number of hours) <i>Enter number of hours.</i>
006a	SB025	Ask if smoking status=2-4. <i>Do not read out time units.</i> On days that you smoke, how soon after waking do you usually have your first smoke? 1 Minutes 2 Hours 7 Not applicable 8 Refused 9 Don't know <i>Enter choice of time units, or a non-response code.</i>
006b	SB026a	(number of minutes)
006c	SB026b	(number of hours)
007a	SB012v	(Derived variable -- composite: total min to first cig, continuous)

007b	SB013v	(Derived variable -- composite: total min to first cig, category) 0 More than 60 min 1 31-60 min 2 6 to 30 min 3 5 min or less 7 Not applicable 8 Refused 9 Don't know
008	SB031	Ask all. <i>Read out response options.</i> Do you consider yourself addicted to cigarettes? Would you say . . . 1 Not at all 2 Yes -- somewhat addicted 3 Yes -- very addicted 7 Not applicable 8 Refused 9 Don't know
009	SB041	Ask all. Smoking status=1-3: How hard would you find it to go without smoking for a whole day? Smoking status=4: How hard has it been to go without smoking for a whole day? 1 Not at all hard 2 Somewhat hard 3 Very hard 4 Extremely hard 7 Not applicable 8 Refused 9 Don't know
010	SB051	Ask if smoking status=4. How often do you get strong urges to smoke? 1 Never 2 Less than daily 3 Daily 4 Several times a day 5 Hourly or more often 7 Not applicable 8 Refused 9 Don't know
011	SB061	Ask all. <i>Read out response options.</i> If necessary, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking. When you smoke, how much of the cigarette do you usually smoke? 1 Right to the butt 2 Nearly to the butt

		<ul style="list-style-type: none"> 3 Most of the cigarette 4 About half the cigarette or less 7 Not applicable 8 Refused 9 Don't know
012	SB072	<p>Ask all. <i>Read out response options.</i> If necessary, say: <i>Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking.</i></p> <p>Which of the following best describes how strongly you usually inhale when you smoke?</p> <ul style="list-style-type: none"> 1 You don't inhale into your chest at all 2 You inhale only a little into your chest 3 You inhale deeply into your chest 4 You inhale into your chest as deeply as possible 7 Not applicable 8 Refused 9 Don't know
013	SB081	<p>Ask all. <i>Read out response options.</i> If necessary, say: <i>Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for when you were smoking.</i></p> <p>Which of the following statements best describes how many puffs you usually take when you smoke a cigarette?</p> <ul style="list-style-type: none"> 1 You only take a few puffs on each cigarette 2 You take more than a few puffs, but not as many as you could 3 You take as many puffs as you can on each cigarette 7 Not applicable 8 Refused 9 Don't know
014a	QA231a	<p>Ask if QA106>0. You mentioned in your previous interview that you have tried to quit smoking before. How long ago did your most recent serious quit attempt END? (days)</p> <p><i>Enter number.</i></p>
014b	QA231b	(months)
014c	QA231c	(years ago)
015a	QA241a	<p>Thinking about any quit attempt that ENDED within the last 6 months -- since [6M anchor] -- what is the longest time you stayed smoke-free? (weeks)</p> <p><i>Enter number.</i></p>

015b	QA241b	Ask if QA106>0. <i>Do not read out response options.</i>
015c	QA241c	(months) <i>If this period began longer than 6 months ago but finished in the last 6 months, record full length of period. This could be longer than 6 months.</i>
015d	QA241d	(days)
016a	SB201	Ask all. <i>Read out response options if necessary.</i> The following questions ask you about how often you've had certain thoughts in the last month, that is, since [1M Anchor]. For each question, please answer using one of the following: Never, Rarely, Sometimes, Often, Very Often. In the last month -- since [1M Anchor] -- how often, if at all, did you . . . Think about the danger or other bad things about smoking? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
016b	SB203	Think about how much you enjoy smoking.
016c	SB205	Think about the harm your smoking might be doing to you?
016d	SB207	Think about the harm your smoking might be doing to other people?
016e	SB209	Think about the bad conduct of tobacco companies?
016f	SB211	Think about the money you spend on smoking?
017a	SB221	Ask all. In the last month -- since [1M anchor] -- have you [stubbed/ butted] out a cigarette before you finished it because you thought about the harm of smoking? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SB226.

		Otherwise, go to KN211.
017b	SB226	Ask if SB221=1. Was that once, a few times, or lots of times? 1 Once 2 A few times 3 Lots of times
017c	SB226v	Derived variable: Overall frequency of butting out before finishing (including those who said 'no' in part a). 0 Never 1 Once 2 A few times 3 Lots of times
KNOWLEDGE OF HEALTH EFFECTS and TOBACCO CONSTITUENTS		
018a	KN211	Ask all. I am going to read you a list of health effects and diseases that may or may not be caused by smoking cigarettes. Based on what you know or believe, does smoking cause . . . Heart disease in smokers? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
010b	KN221	Stroke in smokers?
018c	KN231	Impotence in male smokers?
018d	KN241	Lung cancer in smokers?
018e	KN251	Lung cancer in non-smokers from secondhand smoke?
019a	KN311	Present KN311-KN356 in randomized order. Ask all. As far as you know, are each of the following chemicals included in cigarette smoke? Cyanide? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
019b	KN321	Mercury?
019c	KN331	Arsenic?
019d	KN341	Carbon monoxide?

WARNING LABELS		
019e	KN411	<p>Ask all. Are each of the following statements true or false? The way a smoker PUFFS on a cigarette can affect the amount of tar and nicotine a smoker takes in.</p> <ol style="list-style-type: none"> 1 True 2 False 7 Not applicable 8 Refused 9 Don't know
019f	KN421	The way a smoker HOLDS a cigarette can affect the amount of tar and nicotine a smoker takes in.
019g	KN431	Filters reduce the harmfulness of cigarettes.
019h	KN441	The nicotine in cigarettes is the chemical that causes most of the cancer.
020	WL201	<p>Ask all. <i>Read out response options.</i> In the last month -- that is, since [1M anchor] -- how often, if at all, have you noticed the warning labels on cigarette packages?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
021	WL211	<p>Ask all. <i>Read out response options.</i> In the last month, how often, if at all, have you read or looked closely at the warning labels on cigarette packages?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
022	WL221	<p>Ask all. <i>Read out response options.</i> In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one? Would you say . . .</p>

		<ul style="list-style-type: none"> 1 Never 2 Once 3 A few times 4 Many times 7 Not applicable 8 Refused 9 Don't know
023a	WL311	<p>Ask all. <i>Read out.</i> In the last month, have you made any effort to avoid looking at or thinking about the warning labels . . . By covering the warnings up?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
023b	WL321	By keeping the pack out of sight?
023c	WL331	By using a cigarette case or some other pack?
023d	WL341	By not buying packs with particular labels?
024a	WL411	<p>Ask all. <i>Read out response options.</i> To what extent, if at all, do the warning labels make you think about the health risks of smoking?</p> <ul style="list-style-type: none"> 1 Not at all 2 A little 3 Somewhat 4 A lot 7 Not applicable 8 Refused 9 Don't know
024b	WL421	<p>Ask if smoking status=1-3. <i>Read out.</i> To what extent, if at all, do the warning labels on cigarette packs make you more likely to quit smoking?</p>
024c	WL431	<p>Ask if smoking status=4-6. To what extent, if at all, do the warning labels on cigarette packs make you more likely to stay quit?</p>
025a	WL451	<p>Ask if country=UK. Have you noticed any changes to the warning labels on cigarette packs since [6M anchor]?</p> <ul style="list-style-type: none"> 1 Yes 2 No

		7 Not applicable 8 Refused 9 Don't know If response=1, go to WL461. If response=2, go to WL471.
025b	WL461	Ask if WL451=1. Does the pack you are currently smoking have the new warnings?
026	WL471	Ask all. In the last month, how often have you read or looked closely at the information about the contents on the side of the pack? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
ANTI-SMOKING CAMPAIGNS		
027	AD201	Ask all. <i>Doesn't have to be advertising -- anything promoting smoking.</i> <i>Read out response options.</i> Thinking about everything that happens around you, in the last 6 months -- since [6 month anchor] -- how often have you noticed things that promote smoking? Would that be . . . 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
028a	AD206	Ask all. <i>Read out each statement.</i> Now I want to ask you about tobacco advertising. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places? On television? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
028b	AD211	<i>Read out each source of information.</i>

		On radio?
028c	AD216	At the cinema before or after the film?
028d	AD221	On posters or billboards?
028e	AD225	In newspapers or magazines?
028f	AD231	On shop windows or inside shops where you buy tobacco?
028g	AD236	In the last six months have you noticed cigarettes or tobacco products being advertised... Anywhere else? (specify) If response=1, go to AD236o. Otherwise, go to AD246.
028h	AD236o	Ask if AD236=1. Now I want to ask you about tobacco advertising. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places? Where else have you seen cigarettes or tobacco products being advertised in the last 6 months?
029	AD246	Ask all. In the last 6 months, have you seen any advertising by tobacco companies that is not promoting particular products or brands, but the COMPANY itself? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
030a	AD301	Ask all. Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Sport or sporting event that is sponsored by or connected with BRANDS of cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD306. Otherwise, go to AD311.
030b	AD306	Ask if AD301=1. Did you attend the sponsored event or did you hear about it in some other way? 1 Attended 2 Heard another way
030c	AD311	Ask all.

		<p>Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Sport or sporting event that is sponsored by or connected with tobacco COMPANIES?</p> <p>1 Yes 2 No</p> <p>If response=1, go to AD316. Otherwise, go to AD321.</p>
030d	AD316	<p>Ask if AD311=1.</p> <p>Did you attend the sponsored event or did you hear about it in some other way?</p> <p>1 Attended 2 Heard another way</p>
031a	AD321	<p>Ask all.</p> <p>Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Music, theatre, art, or fashion events, that are sponsored by or connected with BRANDS of cigarettes?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD326. Otherwise, go to AD331.</p>
031b	AD326	<p>Ask if AD321=1.</p> <p>Did you attend the sponsored event or did you hear about it in some other way?</p> <p>1 Attended 2 Heard another way</p>
031c	AD331	<p>Ask all.</p> <p>Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Music, theatre, art, or fashion events, that are sponsored by or connected with tobacco COMPANIES?</p> <p>1 Yes 2 No</p> <p>If response=1, go to AD336. Otherwise, go to AD401.</p>
031d	AD336	<p>Ask if AD331=1.</p> <p>Did you attend the sponsored event or did you hear about it in some other way?</p> <p>1 Attended 2 Heard another way</p>
032a	AD401	<p>Ask all.</p> <p>In the last 6 months - that is, since [6M Anchor] -- have you noticed any of the following types of tobacco promotion?</p> <p>In the last 6 months, have you noticed . . . Free samples of cigarettes?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused</p>

		9 Don't know If response=1, go to AD406. Otherwise, go to AD411.
032b	AD406	Ask if AD401=1. In the last 6 months, have YOU received free samples of cigarettes?
033a	AD411	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Special price offers for cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD416. Otherwise, go to AD421.
033b	AD416	Ask if AD411=1. In the last 6 months, have you used special price offers?
034	AD421	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Free gifts or special discount offers on other products when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD431. Otherwise, go to AD471.
035a	AD431	Ask if AD421=1. Were these free gifts or special discounts . . . From a [shop/ store] keeper when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
035b	AD441	From you or someone else saving coupons or tokens from inside cigarette packs?
035c	AD451	From you or someone else saving parts of cigarette packs (e.g. pack fronts)?
035d	AD461	Free gifts showing cigarette brand logos, given out at events such as concerts, festivals or sports events?

036a	AD436	<p>Ask if AD431=1. In the last 6 months, have YOU personally received . . . Free gifts or discount offers from a [shop/ store]- keeper when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
036b	AD446	<p>Ask if AD441=1. Free gifts/ discount offers from you or someone else saving coupons or tokens from inside cigarette packs?</p>
036c	AD456	<p>Ask if AD451=1. Free gifts/ discount offers from you or someone else saving parts of cigarette packs (e.g. pack fronts)?</p>
036d	AD466	<p>Ask if AD461=1. Free gifts showing cigarette brand logos, given out at events such as concerts, festivals or sports events?</p>
037a	AD471	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . E-mail messages promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD476. Otherwise, go to AD481.</p>
037b	AD476	<p>Ask if AD471=1. In the last 6 months, have you received promotional email messages promoting cigarettes or tobacco products?</p>
038a	AD481	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Mobile phone text messages promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD486. Otherwise, go to AD491.</p>
038b	AD486	<p>Ask if AD481=1. In the last 6 months, have you received mobile phone text messages promoting cigarettes or tobacco products?</p>

039a	AD491	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Mail promoting cigarettes or tobacco products?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD496. Otherwise, go to AD501.</p>
039b	AD496	<p>Ask if AD491=1. In the last 6 months, have you RECEIVED mail promoting cigarettes or tobacco products?</p>
040a	AD501	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Clothing or other items with a cigarette brand name or logo?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD506. Otherwise, go to AD511.</p>
040b	AD506	<p>Ask if AD501=1. In the last 6 months, have YOU received clothing or other items with a cigarette brand name or logo?</p>
041a	AD511	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Competitions linked to cigarettes?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD516. Otherwise, go to AD521.</p>
041b	AD516	<p>Ask if AD511=1. In the last 6 months, have YOU participated in any competitions linked to cigarettes?</p>
042a	AD521	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Internet sites promoting cigarettes or tobacco products?</p> <p>1 Yes 2 No</p>

		<p>7 Not applicable 8 Refused 9 Don't know</p>
042b	AD526	<p>Ask if AD521=1. In the last 6 months, have YOU visited any Internet sites promoting cigarettes or tobacco products?</p>
043a	AD531	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Leaflets promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to AD536. Otherwise, go to AD541.</p>
043b	AD536	<p>Ask if AD531=1. In the last 6 months have YOU received any leaflets promoting cigarettes or tobacco products?</p>
044	AD541	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Signs or posters or branded items in bars, pubs or clubs, promoting cigarettes or tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
045a	AD601	<p>Ask all. <i>Read out response options.</i> Now, I want to ask you about the media more generally. First, thinking about news stories relating to smoking or tobacco companies that might have been on TV, radio, or in the newspapers. In the last 6 months -- that is, since [6M Anchor] -- about how often, if at all, have you seen or heard a news story about smoking? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know If response=2-5, go to AD606. Otherwise, go to AD611.</p>

045b	AD606	<p>Ask if AD601=2-5. On balance, how did the news stories portray smoking? Were they . . .</p> <ol style="list-style-type: none"> 1 All pro-smoking 2 Mostly pro-smoking 3 Equally pro- and anti-smoking 4 Mostly anti-smoking 5 All anti-smoking
046a	AD611	<p>Ask all. Now thinking about the entertainment media, like [films/ movies], TV programs, and magazines . . . In the last 6 months -- since [6M Anchor] -- about how often, if at all, have you seen people smoking in the entertainment media?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know <p>If response=2-5, go to AD616. Otherwise, go to AD701.</p>
046b	AD616	<p>Ask if AD611=2-5. <i>Read out response options.</i> About how often, if at all, were you able to tell what brand was being smoked in the [movies/ films], TV programs, or magazines?</p>
047	AD701	<p>Ask all. <i>Read out response options.</i> Now I would like you to think about advertising or information that talks about the dangers of smoking, or encourages quitting. In the last 6 months -- since [6M anchor] -- how often, if at all, have you noticed such advertising or information?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
048a	AD711	<p>Ask all. <i>Read out each statement.</i> In the last 6 months, have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting, in any of the following places: On television?</p> <ol style="list-style-type: none"> 1 Yes

		2 No 7 Not applicable 8 Refused 9 Don't know
048b	AD716	<i>Read out each source of information.</i> On radio?
048c	AD721	At the [cinema/ movies].
048d	AD726	On posters or billboards?
048e	AD731	In newspapers or magazines?
048f	AD736	On shop windows or inside shops where you buy tobacco?
048g	AD741	On cigarette packs?
048h	AD746	In leaflets?
048i	AD751	On the Internet?
048j	AD756	Anywhere else? (specify) If response=1, go to AD756o. Otherwise, go to AD801.
048k	AD756o	Ask if AD756=1. In the past 6 months, where else have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting? <i>Enter text response.</i>
049a	AD801	Ask all. In the last 6 months, have you noticed any advertising or information from tobacco companies which deals with the topic of youth smoking? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
PRICES, TAXATION, AND SOURCES OF TOBACCO		
049b	S0211	Ask all. <i>Do not read out response options.</i> Where did you last buy cigarettes for yourself? 01 Convenience stores or petrol stations

		<ul style="list-style-type: none"> 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 77 NA 88 Refused 99 Don't Know
049c	SO2110	<p>Ask if SO211=97. Where else did you last buy cigarettes for yourself?</p> <p><i>Enter text response.</i></p>
049d	SO215	<p>Ask if SO211=10. Would that be: from someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street or from a friend or relative Respondent answered that bought cigarettes from "someone else"</p> <ul style="list-style-type: none"> 1 From someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street 2 From a friend or relative 7 Not applicable 8 Refused 9 Don't know
049e	SO217	<p>Ask if SO215=2. Where did your friend or relative buy them?</p> <ul style="list-style-type: none"> 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet

		12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 88 Refused 99 Don't know
049f	SO217o	Ask if SO217=97. Where else did your friend/ relative buy them?
050	BR701	Was it [current brand]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SCREEN76. If response=2, go to brand questions, BR711-741.
051a	BR711	What brand did you buy?
051b	BR711o	Which other brand did you buy?
051c	BR721	What brand did you buy?
051d	BR721o	If response NE 297, skip BR721o. Which other brand did you buy?
051e	BR723	What is the strength of the cigarettes that you last bought.
051f	BR723o	What other strength?
051g	BR725	What is the size of the cigarettes that you last bought?
051h	BR725o	What other size?
051i	BR727	What is the flavour of the cigarettes that you last bought?
051j	BR727o	Which other flavour?
051k	BR731	What brand did you buy? If response NE 997, skip BR731o.

051l	BR731o	Which other brand did you buy?
051m	BR741	What brand did you buy?
051n	BR741o	Which other brand did you buy?
052	PU201	<p>Ask if FR326=1 or 3 (smokes factory-made). The last time you bought cigarettes for yourself, did you buy them by the carton, the pack, or loose out of the pack?</p> <p>1 Carton 2 Pack 3 Single, loose 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to PU211. If response=2, go to PU311. If response=3, go to PU411. Otherwise, go to PU611.</p>
053a	PU211	<p>Ask if PU201=1. How many cartons did you buy?</p> <p>If response=1, go to PU221a. If response>1, go to PU221b.</p>
053b	PU221a	<p>Ask if PU211=1. How many packs of cigarettes were in the carton?</p> <p><i>Enter number.</i></p>
053c	PU221b	<p>Ask if PU211>1. How many packs of cigarettes were in each carton?</p>
053d	PU221v	
053e	PU226	<p>Ask if PU201=1. How many cigarettes were in each pack?</p> <p><i>Enter number.</i></p>
053f	PU231a	<p>Ask if PU211=1. How much did you pay for that carton?</p> <p><i>Enter price for one carton.</i> Go to PU2_chk.</p>
053g	PU229	<p>Ask if PU211>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per carton or how much you paid for all [PU211] cartons?</p>

		1 Price per carton 2 Total paid for all cartons 88 Refused 99 Don't know If response=1, go to PU231b. If response=2, go to PU241. Otherwise, go to PU2_chk.
053h	PU231b	Ask if PU229=1. How much did you pay? Go to PU2_chk.
053i	PU241	Ask if PU229=2. How much did you pay for all cartons?
053j	PU2_chk	Ask if PU201=1. Just to confirm: You LAST bought cigarettes FOR YOURSELF by the CARTON. You bought [PU211] carton(s) containing [PU222] packs of cigarettes [per carton]. Each pack of cigarettes contained [PU227] cigarettes. You paid [PU231 per carton/ PU231 for the carton/ PU241 for all the cartons together]. Is this correct? 1 Yes 2 No If response=2, clear responses and go back to PU201. Otherwise, continue with next question.
054a	PU311	Ask if PU201=2. How many packs did you buy? If PU311=1, go to PU321a. If PU311>1, go to PU321b.
054b	PU321a	Ask if PU311=1. How many cigarettes were in the pack? <i>Enter number.</i>
054c	PU321b	Ask If PU311>1. How many cigarettes were in each pack?
054d	PU321v	
054e	PU331a	Ask if PU311=1. How much did you pay for that pack? <i>Enter price.</i>

		Go to PU3_chk.
054f	PU329	Ask if PU311>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per pack or how much you paid for all [PU311] packs? 1 Price per pack 2 Total paid for all packs 8 Refused 9 Don't Know If response=1, go to PU331b. If response=2, go to PU341. Otherwise, go to PU3_chk.
054g	PU331b	Ask if PU329=1. How much did you pay? <i>Enter price.</i> Go to PU3_chk.
054h	PU341	Ask if PU329=2. I'd like to find out how much you paid. Is it easier for you to say how much you paid per pack or how much you paid for all [PU311] packs?
054i	PU3_chk	Ask if PU201=2. Just to confirm: You LAST bought cigarettes FOR YOURSELF by the PACK. You bought [PU311] pack(s) containing [PU322] cigarettes [per pack]. You paid [PU331 per pack/ PU331 for the pack/ PU341 for all the packs together]. Is this correct? 1 Yes 2 No If response=2, clear responses and go back to PU201. Otherwise, continue with next question.
055a	PU411	Ask if PU201=3. How many loose cigarettes did you purchase? <i>Enter number.</i>
055b	PU431a	Ask if PU411=1. How much did you pay for that one cigarette? <i>Enter price.</i> Go to PU4_chk.
055c	PU429	Ask if PU411>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per cigarette or how much you paid for all [PU411] cigarettes?

		<p>1 Price per cigarette 2 Total paid for all cigarettes 8 Refused 9 Don't Know</p> <p>If response=1, go to PU431b. If response=2, go to PU441. Otherwise, go to PU4_chk.</p>
055d	PU431b	<p>I'd like to find out how much you paid. Is it easier for you to say how much you paid per cigarette or how much you paid for all [PU411] cigarettes? (Please per cigarette)</p> <p><i>Enter price.</i> Go to PU4_chk.</p>
055e	PU441	<p>Ask if PU429=2. How much did you pay?</p>
055f	PU4_chk	<p>Ask if PU201=3. Just to confirm: You LAST bought SINGLE cigarettes FOR YOURSELF. You bought [PU411] cigarette(s). You paid [PU431 per cigarette/ PU431 for the cigarette/ PU441 for all the cigarettes together].</p> <p>Is this correct? 1 Yes 2 No</p> <p>If response=2, clear responses and go back to PU201. Otherwise, continue with next question.</p>
056a	PU511	<p>Ask if FR326=2. <i>Interviewer Notes: (1) whichever is easier for respondent (respondents might not know the cost per cigarette, and we don't want them to do arithmetic); (2) Give exact price — do not round number. If they give range ask to specify. If they cannot narrow down the range, enter midpoint of the range.</i> The last time you bought roll-your-own tobacco, how many pouches or containers did you buy?</p> <p><i>Enter number.</i> If response=1, go to PU521a. If response>1, go to PU521b.</p>
056b	PU521a	<p>Ask if PU511=1. How much did you pay for that one pouch or container?</p> <p><i>Enter price.</i> Go to PU5_chk.</p>
056c	PU529	<p>Ask if PU511>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per pouch/ container or how much you paid for all [PU511] pouches/ containers?</p>

		<p>1 Price per pouch 2 Total paid for all pouches 8 Refused 9 Don't Know</p> <p>If response=1, go to PU521b. If response=2, go to PU541. Otherwise, go to PU5_chk.</p>
056d	PU521b	<p>Ask if PU529=1. How much did you pay?</p> <p><i>Enter price.</i> Go to PU5_chk.</p>
056e	PU541	<p>Ask if PU529=2. <i>Interviewer Notes: (1) whichever is easier for respondent (respondents might not know the cost per cigarette, and we don't want them to do arithmetic); (2) Give exact price — do not round number. If they give range ask to specify. If they cannot narrow down the range, enter midpoint of the range.</i></p>
056f	PU5_chk	<p>Ask if FR326=2. Just to confirm: The time you LAST bought roll-your-own tobacco, you bought [PU511] pouch(es) or container(s). You paid [PU531] per pouch or container/ PU531 for the pouch or container/ PU541 for all the pouches or containers together].</p> <p>Is this correct? 1 Yes 2 No</p> <p>If response=2, clear responses and go back to PU511. Otherwise, continue with next question.</p>
057	PU611	<p>Ask if smoking status=1-3. The last time you bought [cigarettes/ tobacco] FOR YOURSELF, did you use any coupons or discounts to get a special price?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
058	SO301	<p>Ask all. You've just told me where you last bought [cigarettes/ tobacco]. Is this where you buy MOST of your [cigarettes/ tobacco]?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SO411. Otherwise, go to SO311.</p>

059a	SO311	<p>Ask if SO301 NE 1. <i>Do not read out response options.</i> Where do you buy most of your cigarettes [or tobacco]?</p> <ol style="list-style-type: none"> 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment 05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 77 NA 88 Refused 99 Don't Know <p><i>INTERVIEWER NOTE: If respondent says "store", ask: "would that be a convenience store or gas station, a supermarket, or a discount store?"</i> <i>If unsure do not guess. Record under 13 - Other.</i> If response=10, go to SO315. If response=13, go to SO311o. Otherwise, go to SO411.</p>
059b	SO315	<p>Ask if SO311=10. Would that be : respondent answered that purchased cigarettes from someone else</p> <ol style="list-style-type: none"> 1 From someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street 2 From a friend or relative 7 Not applicable 8 Refused 9 Don't know <p>If response=2, go to SO317. Otherwise, go to SO411.</p>
059c	SO317	<p>Ask if SO315=2. Where did your friend or relative buy them?</p> <ol style="list-style-type: none"> 01 Convenience stores or petrol stations 02 Supermarket/Grocer store (eg Tesco) 03 Discount Store 04 In a Bar or Entertainment Establishment

		05 Indian Reservations 06 Duty-Free Shops 07 Outside of the UK/the Country 08 Military Commissaries 09 Using a Free Phone/Toll Free Number 10 From Someone Else (not a Store, Shop, etc) 11 On the Internet 12 From Vending Machines 13 Tobacconist/Tobacco Shop 14 News Stand/Kiosk 15 News Agent 16 Milkbar 97 Other 88 Refused 99 Don't know
059d	SO317o	Where else did your friend/ relative buy them? <i>Enter text response.</i>
059e	SO311o	Where else do you buy most of your [cigarettes/ tobacco]?
060a	SO411	Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . from the Internet? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO416. Otherwise, go to SO421.
060b	SO416	Ask if SO411=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] from the Internet? 1 Only once 2 A few times 3 Many times 4 Just about all of the time
060c	SO421	Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . By phone? 1 Yes 2 No If response=1, go to SO426. Otherwise, go to SO431.

060d	SO426	<p>Ask if SO421=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] by phone?</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 Just about all of the time
060e	SO431	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . By mail-order?</p> <ol style="list-style-type: none"> 1 Yes 2 No <p>If response=1, go to SO436. Otherwise, go to SO441.</p>
060f	SO436	<p>Ask if SO431=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes by mail order?</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 Just about all of the time
060g	SO441	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . From people selling them independently (e.g. door-to-door, in the street, or at local markets)?</p> <ol style="list-style-type: none"> 1 Yes 2 No <p>If response=1, go to SO446. Otherwise, go to SO501.</p>
060h	SO446	<p>Ask if SO441=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes from people selling them independently (e.g. door to door, in the street, or at local markets)?</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 Just about all of the time
061	SO501	<p>Ask all. In the last 6 months, have you made any other special effort to buy cigarettes [or tobacco] that are less expensive than you can get from local stores?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know

		If response=1, go to SO511. Otherwise, go to PU621.
062a	SO502v	
062b	SO517	Ask if SO501=1. Where have you bought these less expensive cigarettes? In a bar or entertainment establishment 1 Mentioned 2 Not mentioned
062c	SO511	Convenience stores or gas stations, newsstands, etc. [AUS/UK=petrol stations]
062d	SO513	Supermarket/grocery store [US/Canada=Safeway/Loblaws; UK=Tesco] [AUS=?]
062e	SO515	Discount store [US/CAN=Costco, WalMart, K-Mart, Price Club, Sam's Club]
062f	SO519	Indian reservation (U.S.)/First Nations reserve (Can.) [AUS, UK: none]
062g	SO521	Duty-free shops
062h	SO523	Outside the state/province [UK: Outside of the UK; AUS: Outside the country]
062i	SO525	Military commissaries [AUS, UK: none]
062j	SO527	Using a toll free number [UK: Using a free phone number]
062k	SO529	From someone else--not at a store, shop or other mainstream establishment
062l	SO545	Ask if SO529=1. Would that be: from someone selling cigarettes independently, perhaps at local markets, door to door, or just in the street or from a friend or relative? 1 Independent seller 2 Friend or relative 7 Not applicable 8 Refused 9 Don't know
062m	SO551	Ask if SO545=2. Where did your friend or relative buy them?
062n	SO551o	Ask if SO551=13 (other). Where else did your friend/ relative buy them? <i>Enter text response.</i>
062o	SO531	Ask if SO501=1. Where have you bought these less expensive cigarettes?

		<p>On the Internet?</p> <ol style="list-style-type: none"> 1 Mentioned 2 Not mentioned <p><i>INTERVIEWER NOTE: If respondent says "store", ask: "would that be a convenience store or gas station, a supermarket, or a discount store?"</i></p> <p><i>If unsure do not guess. Record under 13 – Other.</i></p>
062p	S0533	Vending machines.
062q	S0535	Other place
062r	S0535o	<p>Ask if S0535=1.</p> <p>What other place?</p> <p><i>Enter text response.</i></p>
062s	S0537	<p>Ask if S0501=1.</p> <p>Where have you bought these less expensive cigarettes?</p> <p>(Tobacconist/tobacco shop (UK, AUS))</p> <ol style="list-style-type: none"> 1 Mentioned 2 Not mentioned
062t	S0539	News stand [kiosk in AUS/UK]
062u	S0541	In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . News agent [mostly AUS/UK]
062v	S0543	Where have you bought these less expensive cigarettes? Milk bar?
063a	S0611	<p>Ask for each source selected in [S0511-S0551].</p> <p>How often in the past 6 months -- since [6M anchor] -- have you bought these less expensive cigarettes from . . . Convenience stores or gas stations, newsstands, etc. [AUS/UK=petrol stations]</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 Just about all of the time 7 Not applicable 8 Refused 9 Don't know
063b	S0613	Supermarket/grocery store [US/Canada=Safeway/Loblaws; UK=Tesco] [AUS=?]
063c	S0615	Discount store [US/CAN=Costco, WalMart, K-Mart, Price Club, Sam's Club]
063d	S0617	In a bar or entertainment establishment

063e	SO619	Indian reservation (U.S.)/First Nations reserve (Can.) [AUS, UK: none]
063f	SO621	Duty-free shops
063g	SO623	Outside the state/province [UK: Outside of the UK; AUS: Outside the country]
063h	SO625	Military commissaries [AUS, UK: none]
063i	SO627	Using a toll free number [UK: Using a free phone number]
063j	SO629	From someone else--not at a store, shop or other mainstream establishment
063k	SO631	On the Internet?
063l	SO633	Vending machines.
063m	SO635	Other place
063n	SO637	(Tobacconist/tobacco shop (UK, AUS)
063o	SO639	News stand [kiosk in AUS/UK]
063p	SO641	News agent [mostly AUS/UK]
063q	SO643	Milk bar?
LIGHT/MILD		
064	PU621	Ask all. In the last 6 months -- since [6M Anchor] -- have you spent money on cigarettes that you knew would be better spent on household essentials like food? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
065	LM211	Ask if current brand at Recruitment is not light/mild. Some cigarettes are described as light, mild, or low in tar. Have you ever smoked any of these types of cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
066a	PU631	If the price per [unit, from PU201] went up from [PU555v] to [PU555v X 1.5], would you . . .

		Smoke fewer cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
066b	PU633	If the price per carton (or price per pack) went up from () would you (switch to a cheaper cigarette brand)
066c	PU635	If the price per carton (or price per pack) went up from () would you (look for a cheaper source for your current cigarette brand)
066d	PU637	If the price per carton (or price per pack) went up from () would you (buy smaller amount of cigarettes at a time?)
066e	PU639	If the price per carton (or price per pack) went up from () would you (buy cigarettes in bulk)
066f	PU641	If the price per carton (or price per pack) went up from () would you (try to quit smoking)
067	LM301	Ask all. <i>Read out response options.</i> The next question is about the amount of tar smokers take into their lungs from smoking cigarettes. Compared to smokers of regular cigarette brands, do smokers who smoke [current brand] cigarettes take in . . . ? 1 A lot less tar into their lungs than smokers of regular cigarettes 2 A little less tar into their lungs 3 About the same amount of tar 4 A little more tar into their lungs 5 A lot more tar into their lungs 7 Not applicable 8 Refused 9 Don't know <i>If respondent needs definition of 'Regular', say "Regular cigarettes don't have any special descriptors on the pack or other ways of suggesting that they are somehow different from the standard brand."</i>
068a	LM311	Ask all. For the following questions, I will refer to all types of light, mild, and low tar cigarettes as "light cigarettes". Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements about light cigarettes. Light cigarettes make it easier to quit smoking. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know

068b	LM321	Light cigarettes are less harmful than regular cigarettes.
068c	LM331	Light cigarettes are smoother on your throat and chest than regular cigarettes.
068d	LM341	Smokers of light cigarettes take in less tar than smokers of regular cigarettes.
069	LM411	<p>Ask all. <i>Read out response options.</i> How many light cigarettes would you have to smoke to harm you as much as 10 regular cigarettes would?</p> <ol style="list-style-type: none"> 1 Far fewer light cigarettes than 10 2 Somewhat fewer light cigarettes than 10 3 The same number of light cigarettes, that is 10 4 Somewhat more light cigarettes than 10 5 Far more light cigarettes than 10 7 Not applicable 8 Refused 9 Don't know <p><i>If they believe that light cigarettes are just as harmful as regular cigarettes, they will answer code 3. If they believe that light cigarettes are less harmful than regular cigarettes, then they should answer code 4 or 5 (i.e., it would take more light cigarettes than 10 to harm you as much as 10 regular cigarettes would)</i></p>
SMOKED TOBACCO PRODUCTS		
070a	ST201	<p>Ask all. Thinking about different types of tobacco products that are smoked -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- are SOME of these less harmful than the others or are they all equally harmful?</p> <ol style="list-style-type: none"> 1 All kinds are equally harmful 2 Some kinds are less harmful than others 7 Not applicable 8 Refused 9 Don't know <p>If response=2, go to ST211. Otherwise, go to ST301.</p>
070b	ST211	<p>Ask if ST201=2. What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is LEAST harmful?</p> <ol style="list-style-type: none"> 1 Factory-made cigarettes 2 Roll-your-own cigarettes 3 Pipes 4 Cigars
070c	ST216	What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is MOST harmful?
071	ST301	<p>Ask all. In the past month, have you used any other tobacco product THAT IS SMOKED besides cigarettes?</p>

		1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST311. Otherwise, go to ST501.
072a	ST311	Ask if ST301=1. <i>Do not read out products. Code all that are mentioned.</i> What did you use? Cigars. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
072b	ST313	Cigarillos.
072c	ST315	Bidis.
072d	ST317	Pipe.
072e	ST319	Chewing tobacco.
072f	ST321	Snuff.
072g	ST323	Omni.
072h	ST325	Accord.
072i	ST327	Ariva.
072j	ST331	Other (specify).
072k	ST331o	Ask if ST331=1. What other product did you use? <i>Enter text response.</i>
073a	ST351	Ask if ST311=1. Do you currently smoke cigars? 1 Yes 2 No 7 Not applicable

		8 Refused 9 Don't know If response=1, go to ST352. Otherwise, go to ST353.
073b	ST352	Ask if ST351=1. <i>Read out response options.</i> How often do you currently smoke cigars? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073c	ST353	Ask if ST313=1. Do you currently smoke cigarillos? 1 Yes 2 No If response=1, go to ST354. Otherwise, go to ST355.
073d	ST354	Ask if ST353=1. <i>Read out response options.</i> How often do you currently smoke cigarillos? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073e	ST355	Ask if ST315=1. Do you currently smoke bidis? 1 Yes 2 No If response=1, go to ST356. Otherwise, go to ST357.
073f	ST356	Ask if ST355=1. <i>Read out response options.</i> How often do you currently smoke bidis? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073g	ST357	Ask if ST317=1. Do you currently smoke a pipe? 1 Yes 2 No

		If response=1, go to ST358. Otherwise, go to ST359.
073h	ST358	Ask if ST357=1. <i>Read out response options.</i> How often do you currently smoke a pipe? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073i	ST359	Ask if ST319=1. Do you currently use chewing tobacco? 1 Yes 2 No If response=1, go to ST360. Otherwise, go to ST361.
073j	ST360	Ask if ST359=1. <i>Read out response options.</i> How often do you currently use chewing tobacco? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073k	ST361	Ask if ST321=1. Do you currently smoke [ST311-ST331 product]? Snuff. 1 Yes 2 No If response=1, go to ST362. Otherwise, go to ST363.
073l	ST362	Ask if ST361=1. <i>Read out response options.</i> How often do you currently use snuff? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073m	ST363	Ask if ST323=1. Do you currently smoke [ST311-ST331 product]? Omni. 1 Yes 2 No

		If response=1, go to frequency question, ST364. Otherwise, go to ST365.
073n	ST364	Ask if ST363=1. <i>Read out response options.</i> How often do you currently use Omni? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073o	ST365	Ask if ST325=1. Do you currently smoke [ST311-ST331 product]? Accord. 1 Yes 2 No If response=1, go to frequency question, ST366. Otherwise, go to ST367.
073p	ST366	Ask if ST365=1. <i>Read out response options.</i> How often do you currently use Accord? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073q	ST367	Ask if ST327=1. Do you currently smoke [ST311-ST331 product]? Ariva. 1 Yes 2 No If response=1, go to ST368. Otherwise, go to ST387.
073r	ST368	Ask if ST367=1. <i>Read out response options.</i> How often do you currently use Ariva? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
073s	ST387	Ask if ST331=1. Do you currently use [other non-cig product from ST331o]? 1 Yes 2 No

		If response=1, go to ST388. Otherwise, go to ST491.
073t	ST388	Ask if ST387=1. <i>Read out response options.</i> How often do you currently use [other non-cig product from ST331o]? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
074	ST491	Ask if any of ST351-ST388=1. Did you use [this product/ any of these products] as an alternative to quitting? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
075	ST493	Ask if any of ST351-ST388=1. Did you use [this product/ any of these products] as a way of cutting down on your cigarette smoking? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
076	ST495	Ask if (any of ST351-ST388=1) AND EITHER [(smoking status=4-6) OR (smoking status=1-3 and QA231v<6M)]. Did you use [this product/ any of these products] to help you quit? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
077a	ST501	Ask if none of (ST323, 325, 327)=1. <i>Accept 'don't know' without pressing for an answer.</i> Tobacco companies are developing new types of cigarettes or cigarette-like products that are supposed to be less harmful than ordinary cigarettes? Have you heard of such products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST506. Otherwise, go to SL201.
077b	ST506	Ask if EITHER (ST501=1) OR (any of ST323, 325, 327)=1. If none of ST323, 325, 327=1:

		<p>Can you name any of these new products? If any of ST323, 325, 327=1: Apart from [ST323/ ST325/ ST327], can you name any new types of cigarettes or cigarette-like products that are supposed to be less harmful than ordinary cigarettes?</p> <p>If response=1, go to ST511. Otherwise, go to ST551.</p>
077c	ST511	<p>Ask if ST506=1. <i>Do not read product names. Select all that apply.</i> What are the names? Accord. 1 Mentioned 2 Not mentioned</p>
077d	ST513	Eclipse.
077e	ST515	Omni.
077f	ST517	Ariva.
077g	ST519	Advance.
077h	ST521	Exalt.
077i	ST523	Quest.
077j	ST531	Other less harmful cigarette.
077k	ST531o	<p>Ask if ST531=1. What other less-harmful cigarette? <i>Enter text response.</i></p>
077l	ST551	<p>Ask if ST506=1. Have you EVER tried any of these products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to ST561. Otherwise, go to ST701.</p>
077m	ST552v	Derived variable: # less harmful cigs ever tried (counter).
077n	ST561	Ask if ST551=1.

		<p><i>Do not read out response options.</i></p> <p>Which products have you EVER tried?</p> <p>Accord.</p> <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
077o	ST563	Eclipse.
077p	ST565	Omni.
077q	ST567	Ariva.
077r	ST569	Advance.
077s	ST571	Exalt.
077t	ST573	Quest.
077u	ST581	Other (specify).
077v	ST581o	<p>Ask if ST581=1.</p> <p>Specify other _____.</p>
077w	ST601	<p>Ask if ST551=1.</p> <p>Have you tried any of these products in the last 6 months?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST651.</p> <p>Otherwise, go to ST701.</p>
077x	ST651	<p>Ask if ST601=1.</p> <p>Are you still using any of these products?</p> <p>If response=1, go to ST661.</p> <p>Otherwise, go to ST691.</p>
077y	ST652v	Derived variable: # less-harmful cigarette products still using (counter).
077z	ST661	<p>Ask if ST651=1 AND ST561=1:</p> <p><i>Read out response options.</i></p>

		<p>Smoking status=1-3: Not including cigarettes, how often do you currently use [product]? Would that be . . .</p> <p>Smoking status=4-6: How often do you currently use [product]? Would that be . . .</p> <p>Accord.</p> <p>1 Daily</p> <p>2 Less than daily, but at least once a week</p> <p>3 Less than weekly, but at least once a month</p> <p>4 Less than monthly</p> <p>5 Or have you stopped altogether?</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
077za	ST663	Ask if ST651=1 and ST563=1. Eclipse.
077zb	ST665	Ask if ST651=1 and ST565=1. Omni.
077zc	ST667	Ask if ST651=1 and ST567=1. Ariva.
077zd	ST669	Ask if ST651=1 and ST569=1. Advance.
077ze	ST671	Ask if ST651=1 and ST571=1: Exalt.
077zf	ST673	Ask if ST651=1 and ST573=1. Quest.
077zg	ST681	Ask if ST651=1 and ST581=1. Other alternative product from ST531o and ST631.
078	ST691	<p>Ask if ST601=1.</p> <p>In the last 6 months, did you use [this/any of these] product[s] as an alternative to quitting?</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
079a	ST693	<p>Ask if ST601=1 and FR309v=1-3 and QA231>6M.</p> <p>In the last 6 months, did you use [this/any of these] product[s] as a way of cutting down on your cigarette smoking?</p> <p>1 Yes</p> <p>2 No</p>

		7 Not applicable 8 Refused 9 Don't know
079b	ST695	Ask if ST551=1 AND [(smoking status=4-5) OR (smoking status=1-3 and QA231v<6months)]. In the last 6 months, did you use [this/any of these] product[s] to help you quit?
080	ST701	Ask if (ST501=1) OR (any of ST323-330=1). As far as you know, are any of these new products less harmful than ordinary cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
SMOKELESS TOBACCO PRODUCTS		
081	SL201	Ask all. Are you aware of any smokeless tobacco products, such as snuff or chewing tobacco, which are not burned or smoked but instead are usually put in the mouth? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <i>Includes "nasal snuff," but does not include nicotine replacement therapy (i.e. patch, gum, etc).</i> If response=1, go to SL211. Otherwise, go to NR101.
082	SL211	Ask if SL201=1. In the past 6 months, have you used any smokeless tobacco products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SL221. Otherwise, go to SL301.
083a	SL221	Ask if SL211=1. <i>Read out response options.</i> Have you used . . . Chewing tobacco. 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know

		If none of (SL221-SL227o)=1, go to SL301.
083b	SL223	"Snus" is pronounced "snoose" (rhymes with moose/goose). Moist snuff or "Snus" put in the mouth.
083c	SL225	Nasal snuff.
083d	SL227	Any other smokeless tobacco products?
083e	SL227o	Ask if SL227=1. Which other product have you used? <i>Enter text response.</i>
084a	SL241	Ask if SL221=1. <i>Read out response options.</i> How often do you currently use chewing tobacco? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know
084b	SL243	Ask if SL223=1. How often do you currently use nasal snuff? Would that be . . .
084c	SL245	Ask if SL225=1. How often do you currently use snuff? Would that be . . .
084d	SL247	Ask if SL227=1. How often do you currently use [product]? Would that be . . . Other smokeless tobacco product.
085	SL291	Ask if any of SL221-SL227=1. In the last 6 months, did you use [this/any of these] product[s] as an alternative to quitting? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
086a	SL293	Ask if FR309v=1-3 and QA231v>6 mos. In the last 6 months, did you use [this/any of these] product[s] as a way of cutting down on your cigarette smoking? 1 Yes

		2 No 7 Not applicable 8 Refused 9 Don't know
086b	SL295	Ask if smoking status=4 (current quitter) OR if (smoking status=1-3 AND QA231< 6months (smoker with quit attempt in last 6M)). In the last 6 months, did you use [this/any of these] product[s] to help you quit?
087a	SL301	Ask if SL201=1. As far as you know, are ANY smokeless tobacco products less harmful than ordinary cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
NICOTINE REPLACEMENT THERAPY		
087b	NR101	Ask all. Have you heard about medications to help people stop smoking, such as Nicotine Replacement Therapies like nicotine gum or the patch, or pills such as Zyban? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to NR106. Otherwise, go to NR783.
087c	NR106	Ask if NR101=1. Have you ever used any stop-smoking medication? If response=1, go to NR111. Otherwise, go to NR783.
088	NR111	In the last 6 months—since [6M Anchor]—have you used any stop-smoking medication? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to NR121. Otherwise, go to NR783.
089a	NR121	Ask if NR111=1. <i>We can't use BRAND (e.g., Nicorette). We want the TYPE (e.g., gum, patch). Read out products if necessary. Select ALL that apply.</i> In the last 6 months, which medication or medications did you use?

		NRT: Nicotine gum. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
089b	NR123	NRT: Nicotine patch.
089c	NR125	NRT: Nicotine lozenges.
089d	NR127	NRT: Nicotine (sublingual) tablets.
089e	NR129	NRT: Nicotine inhaler.
089f	NR131	NRT: Nicotine nasal spray.
089g	NR133	Zyban (or bupropion).
089h	NR135	Wellbutrin.
089i	NR141	Other medication (specify).
089j	NR141o	Ask if NR141=1. Specify other _____. <i>Enter text response.</i>
090	NR211	Ask if two or more of NR121-NR141=1. Did you use these products at the same time or at different times? 1 Same time 2 Different times 7 Not applicable 8 Refused 9 Don't know If response=2, go to NR301. Otherwise, go to NR411.
091a	NR301	Which product did you use most recently?
091b	NR301o	Which other product did you use most recently? <i>Enter text response.</i>
091c	NR411	Ask if NR121=1. How did you get nicotine gum? 1 By prescription

		2 Over-the-counter/ off the shelf 3 From a friend 7 Not applicable 8 Refused 9 Don't know If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
091d	NR412	Ask if NR127=1. When you used nicotine gum, did you pay full price, get a discount, or get it free? 1 Paid full price 2 Got a discount 3 Got it free
091e	NR413	What was the main reason you used nicotine gum? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
091f	NR413o	Ask if NR413=4.
091g	NR414	Ask if NR413=1 or 2. Are you still using nicotine gum? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
091h	NR415a	NR414=1: In total, how long have you been using nicotine gum? NR414=2: In total, how long did you use nicotine gum? (days) <i>Enter number.</i>
091i	NR415b	(weeks)
091j	NR415c	(months)
091k	NR415d	(day of month)
091l	NR415e	(month) 01 January 02 February 03 March 04 April

		05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't know <i>(Enter month; day not required if not current or immediate past month)</i>
091m	NR417	Ask if NR413=1. Did you smoke regularly while using nicotine gum? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
091n	NR418	Ask if NR414=2. What was the main reason you discontinued using nicotine gum? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR418o. Otherwise, go to NR421.
091o	NR418o	Ask if NR418=8. <i>Enter text response.</i>
092a	NR419	Ask if NR413=3. <i>Read out response options.</i> How often do you use [product(s)] to cope with situations where you can't smoke, would that be: (gum) 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused

		9 Don't know
092b	NR421	Ask if NR123=1. How did you get nicotine patches? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
092c	NR422	When you used nicotine patches, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount 3 Got it free
092d	NR423	What was the main reason you used nicotine patches? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
092e	NR423o	Ask if NR423=4.
092f	NR424	Ask if NR423=1 or 2. Are you still using nicotine patches? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
092g	NR425a	NR424=1: In total, how long have you been using nicotine patch? NR424=2: In total, how long did you use nicotine patch? (days) <i>Enter number.</i>
092h	NR425b	(weeks)
092i	NR425c	(months)
092j	NR425d	(day of month)
092k	NR425e	(month) 01 January 02 February 03 March 04 April

		05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
092l	NR427	Ask if NR423=1. Did you smoke regularly while using nicotine patches? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
092m	NR428	Ask if NR424=2. What was the main reason you discontinued using nicotine patches? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR428o. Otherwise, go to NR431.
092n	NR428o	Ask if NR428=8. <i>Enter text response.</i>
092o	NR429	Ask if NR423=3. <i>Read out response options.</i> How often do you use [product(s)] to cope with situations where you can't smoke, would that be: (patch) 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused

		9 Don't know
092p	NR431	Ask if NR125=1. How did you get nicotine lozenges? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
092q	NR432	When you used nicotine lozenges, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount 3 Got it free
092r	NR433	What was the main reason you used nicotine lozenges? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
092s	NR433o	Ask if NR433=4. <i>Enter text response.</i>
092t	NR434	Ask if NR433=1 or 2. Are you still using nicotine lozenges? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093a	NR435a	Ask if NR433=1 or 2. NR434=1: In total, how long have you been using nicotine lozenges? NR434=2: In total, how long did you use nicotine lozenges? (days) <i>Enter number.</i>
093b	NR435b	(weeks)
093c	NR435c	(months)
093d	NR435d	(day of month)
093e	NR435e	(month) 01 January 02 February

		03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
093f	NR437	Ask if NR433=1. Did you smoke regularly while using nicotine lozenges? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093g	NR438	Ask if NR434=2. What was the main reason you discontinued using nicotine lozenges? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR438o. Otherwise, go to NR441.
093h	NR438o	Ask if NR438=8. <i>Enter text response.</i>
093i	NR439	Ask if NR433=3. <i>Read out response options.</i> How often do you use [product(s)] to cope with situations where you can't smoke, would that be: (lozenges) 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?

		7 Not applicable 8 Refused 9 Don't know
093j	NR441	Ask if NR127=1. How did you get nicotine (sublingual) tablets? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
093k	NR442	When you used nicotine tablets, did you pay full price, get a discount, or get them free? 1 Paid full price 2 Got a discount 3 Got it free
093l	NR443	What was the main reason you used nicotine tablets? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
093m	NR443o	Ask if NR443=4.
093n	NR444	<i>Enter text response.</i> Ask if NR443=1 or 2. Are you still using nicotine tablets? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093o	NR445a	NR444=1: In total, how long have you been using nicotine (sub-lingual) tablets? NR444=2: In total, how long did you use nicotine (sub-lingual) tablets? (days)
093p	NR445b	<i>Enter number.</i> (weeks)
093q	NR445c	(months)
093r	NR445d	(day of month)
093s	NR445e	(month) 01 January

		02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
093t	NR447	Ask if NR443=1. Did you smoke regularly while using nicotine tablets? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093u	NR448	Ask if NR444=2. What was the main reason you discontinued using nicotine tablets? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR448o. Otherwise, go to NR451.
093v	NR448o	Ask if NR448=8. <i>Enter text response.</i>
093w	NR449	Ask if NR443=3. <i>Read out response options.</i> How often do you use tablets to cope with situations where you can't smoke? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly

		5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know
093x	NR451	Ask if NR129=1. How did you get a nicotine inhaler? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
093y	NR452	When you used a nicotine inhaler, did you pay full price, get a discount, or get it free? 1 Paid full price 2 Got a discount 3 Got it free
093z	NR453	What was the main reason you used a nicotine inhaler? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
093za	NR453o	Ask if NR453=4. Enter text response.
093zb	NR454	Ask if NR453=1 or 2. 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093zc	NR455a	NR454=1: In total, how long have you been using nicotine inhaler? NR454=2: In total, how long did you use nicotine inhaler? (days)
093zd	NR455b	Enter number. (weeks)
093ze	NR455c	(months)
093zf	NR455d	(day of month)
093zg	NR455e	(month) 01 January

		02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
093zh	NR457	Ask if NR453=1. Did you smoke regularly while using a nicotine inhaler? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093zi	NR458	Ask if NR454=2. What was the main reason you discontinued using nicotine spray? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR458o. Otherwise, go to NR461.
093zj	NR458o	Ask if NR458=8. <i>Enter text response.</i>
093zk	NR459	Ask if NR453=3. <i>Read out response options.</i> How often do you use a nicotine inhaler to cope with situations where you can't smoke? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly

		5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know
093zl	NR461	Ask if NR131=1. How did you get nicotine nasal spray? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
093zm	NR462	When you used nicotine nasal spray, did you pay full price, get a discount, or get it free? 1 Paid full price 2 Got a discount 3 Got it free
093zn	NR463	What was the main reason you used nicotine nasal spray? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
093zo	NR463o	Ask if NR463=4. <i>Enter text response.</i>
093zp	NR464	Ask if NR463=1 or 2. Are you still using nicotine nasal spray? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
093zq	NR465a	NR464=1: In total, how long have you been using nicotine nasal spray? NR464=2: In total, how long did you use nicotine nasal spray? (days) <i>Enter number.</i>
093zr	NR465b	(weeks)
093zs	NR465c	(months)
093zt	NR465d	(day of month)
094a	NR465e	Ask if NR463=1 or 2.

		<p>NR464=1: In total, how long have you been using nicotine nasal spray? NR464=2: In total, how long did you use nicotine nasal spray? (month) 01 January 02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know</p> <p><i>(Enter month; day not required if not current or immediate past month)</i></p>
094b	NR467	<p>Ask if NR463=1. Did you smoke regularly while using nicotine spray? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
094c	NR468	<p>Ask if NR464=2. What was the main reason you discontinued using nicotine spray? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other</p> <p>If response=8, go to NR468o. Otherwise, go to NR471.</p>
094d	NR468o	<p>Ask if NR468=8. <i>Enter text response.</i></p>
094e	NR469	<p>Ask if NR463=1. How often do you use nicotine spray to cope with situations where you can't smoke? Would that be . . . 1 Daily</p>

		<ul style="list-style-type: none"> 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know
094f	NR471	<p>Ask if NR133=1.</p> <p>How did you get Zyban?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend <p>If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.</p>
094g	NR472	<p>When you used Zyban, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
094h	NR473	<p>What was the main reason you used Zyban?</p> <ul style="list-style-type: none"> 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) <p>If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441</p>
094i	NR473o	<p>Ask if NR473=4.</p> <p><i>Enter text response.</i></p>
094j	NR474	<p>Ask if NR473=1 or 2.</p> <p>Are you still using Zyban?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
094k	NR475a	<p>NR474=1: In total, how long have you been using Zyban?</p> <p>NR474=2: In total, how long did you use Zyban?</p> <p>(days)</p> <p><i>Enter number.</i></p>
094l	NR475b	(weeks)
094m	NR475c	(months)

094n	NR475d	(day of month)
094o	NR475e	(month) 01 January 02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
094p	NR477	Ask if NR473=1. Did you smoke regularly while using Zyban? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
094q	NR478	Ask if NR474=2. What was the main reason you discontinued using Zyban? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR478o. Otherwise, go to NR481.
095a	NR478o	Ask if NR478=8. What was the main reason you discontinued using Zyban? <i>Enter text response.</i>
095b	NR479	Ask if NR473=1. How often do you use Zyban to cope with situations where you can't smoke? Would that be . . .

		<ul style="list-style-type: none"> 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know
095c	NR481	<p>Ask if NR135=1.</p> <p>How did you get Wellbutrin?</p> <ul style="list-style-type: none"> 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend <p>If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.</p>
095d	NR482	<p>When you used Wellbutrin, did you pay full price, get a discount, or get it free?</p> <ul style="list-style-type: none"> 1 Paid full price 2 Got a discount 3 Got it free
095e	NR483	<p>What was the main reason you used Wellbutrin?</p> <ul style="list-style-type: none"> 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) <p>If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441</p>
095f	NR483o	<p>Ask if NR483=4.</p> <p><i>Enter text response.</i></p> <p>If response=1, go to NR414. If response=2, go to NR414. If response=3, go to NR419. If response=4, go to NR783.</p>
095g	NR484	<p>Ask if NR483=1 or 2.</p> <p>Are you still using Wellbutrin?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
095h	NR485a	<p>NR484=1: In total, how long have you been using Wellbutrin? NR484=2: In total, how long did you use Wellbutrin? (days)</p> <p><i>Enter number.</i></p>

095i	NR485b	(weeks)
095j	NR485c	(months)
095k	NR485d	(day of month)
095l	NR485e	(month) 01 January 02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
095m	NR487	Ask if NR483=1. Did you smoke regularly while using Wellbutrin? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
095n	NR488	Ask if NR484=2. What was the main reason you discontinued using Wellbutrin? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR488o. Otherwise, go to NR491.
095o	NR488o	Ask if NR488=8.

		<i>Enter text response.</i>
095p	NR491	Ask if NR141=1. How did you get [referent medication]? 1 By prescription 2 Over-the-counter/ off the shelf 3 From a friend 7 Not applicable 8 Refused 9 Don't know If referent=combination of products used at same time, ask Q.119 (NR411-NR491) for each product separately.
095q	NR492	When you used [medication mentioned in NR301], did you pay full price, get a discount, or get it free? 1 Paid full price 2 Got a discount 3 Got it free
095r	NR493	What was the main reason you used [medication mentioned in NR301]? 1 To stop smoking completely 2 To reduce the amount you smoke 3 To cope with times you could not or were not allowed to smoke 4 Other reason (specify) If Quit at M1 go to QA341 If NE Quit at M1 and quit now, go to QA441
095s	NR493o	Ask if NR493=4.
		<i>Enter text response.</i>
095t	NR494	Ask if NR493=1 or 2. Are you still using [other NRT]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
095u	NR495a	NR494=1: In total, how long have you been using [other NRT]? NR494=2: In total, how long did you use [other NRT]? (days)
		<i>Enter number.</i>
095v	NR495b	(weeks)
095w	NR495c	(months)
095x	NR495d	(day of month)
095y	NR495e	(month)

		01 January 02 February 03 March 04 April 05 May 06 June 07 July 08 August 09 September 10 October 11 November 12 December 77 NA 88 Refused 99 Don't Know <i>(Enter month; day not required if not current or immediate past month)</i>
095z	NR497	Ask if NR493=1. Did you smoke regularly while using [other NRT]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
095za	NR498	Ask if NR494=2. What was the main reason you discontinued using [other NRT]? 1 Quit/ it worked 2 Didn't work/ went back to smoking 3 Side effects/ made me sick 4 Ran out 5 Too expensive/ insurance coverage ran out 6 Stressful situation 7 Social situation 8 Other If response=8, go to NR498o. Otherwise, go to NR783.
095zb	NR498o	Ask if NR498=8. <i>Enter text response.</i>
095zc	NR489	Ask if NR483=3. How often do you use Wellbutrin to cope with situations where you can't smoke? Would that be . . . 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly

		<p>5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know</p>
095zd	NR499	<p>Ask if NR493=3. How often do you use [other NRT] to cope with situations where you can't smoke? Would that be . . .</p>
096a	NR783	<p>Ask all. I'm going to read out a list of statements about stop-smoking medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Smoking status=1-3: If you decided you wanted to quit, stop-smoking medications would make it easier. Smoking status=4: Stop smoking medications make it easier to quit. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
096b	NR785	<p>Ask if FR309v=1-3 OR (FR309v=4 and NR111=1). Smoking status=1-3: If you decided you wanted to quit, you would be able to quit without stop-smoking medications. Smoking status=4-6 & NR111=1: You would have been able to quit without stop smoking medications.</p>
096c	NR787	<p>Ask all. Stop-smoking medications are too expensive.</p>
096d	NR789	<p>You don't know enough about how to use stop-smoking medications properly.</p>
096e	NR791	<p>Stop-smoking medications are too hard to get.</p>
096f	NR793	<p>Stop-smoking medications might harm your health.</p>
096g	NR801	<p>In the last 6 months, have you visited a doctor or other health professional? 1 Yes 2 No If response=1 and smoking status=1-3, go to NR811. If response=1 and smoking status=4-6, go to NR821. Otherwise, go to NR861.</p>
096h	NR811	<p>Ask if NR801=1. During any visit to the doctor or other health professional in the last 6 months, did you receive . . . Advice to quit smoking?</p>

096i	NR812	Ask if NR811=1. Did this make you think about quitting smoking?
096j	NR813	Ask if NR801=1. During any visit to the doctor or other health professional in the last 6 months, did you receive . . . Additional help or a referral to another service to help you quit? If response=1, go to NR814. Otherwise, go to NR815.
096k	NR814	Ask if NR813=1. Did this make you think about quitting smoking?
096l	NR815	Ask if NR801=1. During any visit to the doctor or other health professional in the last 6 months, did you receive . . . A prescription for stop-smoking medication? If response=1, go to NR816. Otherwise, go to NR817.
096m	NR816	Ask if NR815=1. Did this make you think about quitting smoking?
096n	NR817	Ask if NR801=1. During any visit to the doctor or other health professional in the last 6 months, did you receive . . . Pamphlets or brochures on how to quit? If response=1, go to NR818. Otherwise, go to NR861.
096o	NR817v	Derived variable: quitting pamphlet received from doctor, overall (including those who did not visit the doctor)
096p	NR818	Ask if NR817=1. Did this make you think about quitting smoking?
096q	NR861	Ask all. In the last 6 months, have you received advice or information about quitting smoking from any of the following? Telephone or quit line services? If response=1, go to NR863. Otherwise, go to NR865.
096r	NR863	Ask if NR861=1 and made quit attempt in last 6M (either smoking status=4 OR (smoking status=1-3 AND QA231=1)). Did this help you in your quit attempt?
096s	NR865	Ask all. In the last 6 months, have you received advice or information about quitting smoking from any of the following?

		The Internet. If response=1, go to NR867. Otherwise, go to NR869.
097a	NR867	Ask if NR865=1 and made quit attempt in last 6M (either smoking status=4 OR (smoking status=1-3 AND QA231=1)). Did this help you in your quit attempt? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
097b	NR869	Ask all. In the last 6 months, have you received advice or information about quitting smoking from any of the following? Local stop-smoking services (such as clinics or specialists)? If response=1, go to NR871. Otherwise, go to NR880.
097c	NR871	Ask if NR869=1 and made quit attempt in last 6M (either smoking status=4 OR (smoking status=1-3 AND QA231=1)). Did this help you in your quit attempt?
098	NR880	Ask all. Smoking status=1-3: Now we would like to ask you some questions on any thoughts you might have had about quitting smoking. Smoking status=4: Now we would like to ask you some questions about quitting smoking. In the last month -- that is, since [1M anchor] -- have you noticed any advertisements for stop-smoking medications? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
BELIEFS ABOUT QUITTING		
099a	BQ111	Ask if smoking status=1-3. <i>Respondent does not need to be intending to quit to respond. Emphasize "IF" in wording. Read out response options.</i> Now some questions on any THOUGHTS you might have had about quitting smoking. If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed? 1 Not at all sure 2 Slightly sure 3 Moderately sure 4 Very sure 5 Extremely sure

		<p>7 Not applicable 8 Refused 9 Don't know</p> <p>Go to BQ121.</p>
099b	BQ116	<p>Ask if smoking status=4-6. You said earlier that you are currently attempting to quit. How sure are you that you will succeed in quitting smoking for good at this attempt?</p> <p>Go to BQ126.</p>
100a	BQ121	<p>Ask if smoking status=1-3. <i>Read out response options.</i> How easy or hard would it be for you to completely quit smoking if you wanted to? 1 Very easy 2 Somewhat easy 3 Neither easy nor hard 4 Somewhat hard 5 Very hard 7 Not applicable 8 Refused 9 Don't know</p> <p>Go to BQ141.</p>
100b	BQ126	<p>Ask if smoking status=4. How easy or hard is it for you to stop smoking permanently?</p> <p>Go to BQ201.</p>
101a	BQ141	<p>Ask if smoking status=1-3. <i>Read out response options.</i> Are you planning to quit smoking . . . 1 Within the next month 2 Within the next 6 months 3 Sometime in the future, beyond 6 months 4 Or are you not planning to quit? 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to BQ146. Otherwise, go to BQ201.</p>
101b	BQ146	<p>Ask if smoking status=1-3 and BQ141=1. Have you set a firm date? 1 Yes 2 No</p>
101c	BQ150v	<p>Intending to quit, overall (including parts a and b of Q.131 [BQ141 & BQ146].) 1 No, not intending to quit 2 Yes, intending to quit</p>

102a	BQ201	<p>Ask all. Smoking status=1-3 AND BQ141=4: Even though you mentioned that you are not currently planning to quit, in the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much? Smoking status=1-3 AND BQ141=1-3: In the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much? Smoking status=4-5: To what extent, if at all, were the following reasons for your current quit attempt? Concern for your personal health? 1 Not at all 2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know</p>
102b	BQ203	Concern about the effect of your cigarette smoke on non-smokers?
102c	BQ205	Illness or death of a friend or relative?
102d	BQ207	That society disapproves of smoking?
102e	BQ209	The price of cigarettes?
102f	BQ211	Smoking restrictions at work?
102g	BQ213	Smoking restrictions in public places like [restaurants or bars/ cafes or pubs]?
102h	BQ215	Not wanting family or friends to worry?
102i	BQ217	Advice from a doctor, dentist, or other health professional to quit?
102j	BQ219	Friends or family members who have recently quit or are currently quitting?
102k	BQ221	Free, or lower cost, stop-smoking medication?
102l	BQ223	Availability of telephone helpline/ quitline/ information line?
102m	BQ225	Advertisements or information about the health risks of smoking?
102n	BQ227	Warning labels on cigarette packages?
102o	BQ229	Setting an example for children?

102p	BQ241o	<p><i>Enter only one reason.</i></p> <p>In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify)</p> <p><i>Enter text response.</i></p>
102q	BQ242	<p>Ask if BQ241=1.</p> <p>Has [other reason] led you to think about quitting somewhat or very much?</p> <p>1 Not at all 2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know</p>
102r	BQ243o	<p>In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify)</p>
102s	BQ244	<p>Ask if answered BQ243o.</p> <p>Has [other reason] led you to think about quitting somewhat or very much?</p> <p>1 Not at all 2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know</p>
102t	BQ245o	<p>In the past 6 months have any OTHER things led you to think about quitting? __ (other reason) _____ (Specify)</p> <p><i>Enter text response.</i></p>
102u	BQ246	<p>Ask if answered BQ245o.</p> <p>Has [other reason] led you to think about quitting somewhat or very much?</p> <p>1 Not at all 2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know</p>
103a	BQ301	<p>Ask if smoking status=1-3.</p> <p><i>Read out response options.</i></p> <p>How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months?</p> <p>1 Not at all 2 Slightly 3 Moderately 4 Very much 5 Extremely 7 Not applicable 8 Refused</p>

		9 Don't know
103b	BQ306	Ask if smoking status=4. How much do you think you would benefit from health and other gains if you were to continue not to smoke in the next 6 months?
ENVIRONMENTAL TOBACCO SMOKE		
104	ET221	Ask all. Which of the following best describes smoking in your home? 1 Smoking is allowed anywhere in your home 2 Smoking is NEVER allowed ANYWHERE in your home 3 Something in between 7 Not applicable 8 Refused 9 Don't know
105	ET321	Ask all. <i>Read out response options.</i> When you are in a car or other private vehicle with non-smokers, do you . . . 1 Smoke as you normally smoke 2 Never smoke 3 Something in between 7 Not applicable 8 Refused 9 Don't know
106	ET421	Ask all. <i>Read out response options.</i> Which of the following best describes the rules about smoking in drinking establishments, bars, and pubs where you live? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 No rules or restrictions 7 Not applicable 8 Refused 9 Don't know
107	ET431	Ask all. In the last 6 months -- that is, since [6 M anchor] -- have you visited a drinking establishment, bar, or pub where you live? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ET436. If response NE 1, go to ET521.
108	ET436	Ask if ET431=1. The last time you did so, did you smoke indoors?

		1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
109	ET521	Ask all. Which of the following best describes the rules about smoking in restaurants or cafes where you live? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in all indoor areas 4 Every restaurant, cafe has its own rules 7 Not applicable 8 Refused 9 Don't know
110	ET531	Ask all. In the last 6 months -- since [6M Anchor] -- have you visited a restaurant or cafe where you live? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ET536. Otherwise, go to ET621.
111	ET536	Ask if ET531=1. The last time you were in a restaurant or cafe where you live, did you smoke indoors? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
112	ET621	Ask if ET601b=1. Which of the following best describes the smoking policy where you work? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in any indoor areas 7 Not applicable 8 Refused 9 Don't know
113	ET636	Ask if ET601b=1. In the last 6 months, have you smoked in indoor areas at work? 1 Yes 2 No 7 Not applicable 8 Refused

		9 Don't know
114a	ET701	Ask all. For each of the following public places, please tell me if you think smoking should be allowed in all indoor areas, in some indoor areas, or not allowed indoors at all: Hospitals? 1 All indoor areas 2 Some indoor areas 3 Not at all 7 Not applicable 8 Refused 9 Don't know
114b	ET703	Workplaces?
114c	ET705	Drinking establishments (e.g. pubs/ bars)
114d	ET707	Restaurants and cafis?
PSYCHOSOCIAL: BELIEFS ABOUT SMOKING, MODERATORS		
115a	PS211	Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Smoking status=1-3: You enjoy smoking too much to give it up. Smoking status=4-6: You enjoy smoking too much to give it up for good. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
115b	PS213	Your cigarette smoke is dangerous to those around you.
115c	PS215	If you had to do it over again, you would not have started smoking.
115d	PS217	Smoking calms you down when you are stressed or upset.
115e	PS219	Smoking status=1-3: You spend too much money on cigarettes. Smoking status=4-6: When you were smoking, you used to spend too much money on cigarettes.
115f	PS221	Smoking helps you concentrate better.
115g	PS223	Smoking is an important part of your life.

115h	PS225	Smoking helps you control your weight.
115i	PS227	You have strong mixed emotions both for and against smoking, all at the same time.
115j	PS229	People who are important to you believe that you should not smoke.
115k	PS231	Smoking status=1-3: There are fewer and fewer places where you feel comfortable about smoking. Smoking status=4-6: There are fewer and fewer places where you would feel comfortable about smoking.
115l	PS233	Society disapproves of smoking.
115m	PS235	Smoking makes it easier for you to socialize.
116a	PS311	Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. You have the kind of genetic makeup that allows you to smoke without it giving you health problems. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
116b	PS313	The medical evidence that smoking is harmful is exaggerated.
116c	PS315	You've got to die of something, so why not enjoy yourself and smoke.
116d	PS317	Smoking is no more risky than lots of other things that people do.
TOBACCO INDUSTRY		
117	IN211	Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Tobacco companies should be allowed to advertise and promote cigarettes as they please. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable

		8 Refused 9 Don't know
118	IN213	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco products should be more tightly regulated.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
119	IN215	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco companies can be trusted to tell the truth about the dangers of their products.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
120	IN217	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco companies should take responsibility for the harm caused by smoking.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
121	IN219	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Tobacco companies have tried to convince the public that there is little or no health risk from second-hand smoke.</p> <p>1 Strongly agree 2 Agree</p>

		<ul style="list-style-type: none"> 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
122	IN311	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>The government should do more to tackle the harm done by smoking.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
123	IN313	<p>Ask all.</p> <p>I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>The government doesn't really care about people smoking because it makes so much money from tobacco taxes.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
PERCEIVED RISK		
124a	PR213	<p>Ask if smoking status=1-3.</p> <p>Now I'd like to ask you some questions about your health.</p> <p>Let's say that you continue to smoke the amount you do now. How would you compare your own chance of getting lung cancer in the future to the chance of a nonsmoker? Would you say that you are...</p> <ul style="list-style-type: none"> 1 Much more likely to get lung cancer than a nonsmoker? 2 Somewhat more likely, 3 A little more likely, or 4 Just as likely 7 Not applicable 8 Refused 9 Don't know
124b	PR219	Ask if smoking status=4.

		Let's say that, instead of quitting, you continued to smoke the same amount as before you quit. In that case, how would you compare your own chance of getting lung cancer in the future to the chance of a nonsmoker? Would you say that you are...
125a	PR211	<p>Ask if smoking status=4. Let's say that you quit smoking completely. In that case, how would you compare your chance of getting lung cancer in the future to the chance of a nonsmoker? Do you think that you would be . . .</p> <ol style="list-style-type: none"> 1 Much more likely to get lung cancer than a nonsmoker? 2 Somewhat more likely, 3 A little more likely, or 4 Just as likely 7 Not applicable 8 Refused 9 Don't know
125b	PR216	<p>Ask if smoking status=1-3. Let's say that you quit smoking completely in the next 6 months. In that case, how would you compare your chance of getting lung cancer in the future to the chance of a nonsmoker? Do you think that you would be . . .</p>
126a	PR221	<p>Ask if smoking status=1-3. Let's say that you continue to smoke the amount you do now. How would you compare your own chance of getting heart disease in the future to the chance of a nonsmoker? Would you say that you are ...</p> <ol style="list-style-type: none"> 1 Much more likely to get heart disease than a nonsmoker 2 Somewhat more likely 3 A little more likely 4 Just as likely 7 Not applicable 8 Refused 9 Don't know
126b	PR223	<p>Ask if smoking status=4. Let's say that you continued to smoke the amount you did prior to quitting. How would you compare your own chance of getting heart disease in the future to the chance of a nonsmoker? Would you say that you are:</p>
127a	PR226	<p>Ask if smoking status=1-3. Let's say that you quit smoking completely in the next 6 months. In that case, how would you compare your chance of getting heart disease in the future to the chance of a nonsmoker? Do you think that you would be ...</p> <ol style="list-style-type: none"> 1 Much more likely to get heart disease than a nonsmoker 2 Somewhat more likely 3 A little more likely 4 Just as likely 7 Not applicable 8 Refused 9 Don't know
127b	PR229	<p>Ask if smoking status=4. Let's say that, instead of quitting, you continued to smoke the same amount as before you quit. In that case, how would you compare your own chance of getting heart disease in the future to the chance of a nonsmoker? Do you think that you would be</p>

		...
128	PR311	<p>Ask all. <i>Read out response options.</i> To what extent, if at all, has smoking damaged your health?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 Not applicable 8 Refused 9 Don't know
129	PR313	<p>Ask all. How worried are you, if at all, that smoking WILL damage your health in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused 9 Don't know
130	PR321	<p>Ask all. To what extent, if at all, has smoking lowered your quality of life?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 Not applicable 8 Refused 9 Don't know
131	PR327	<p>Ask all. How worried are you, if at all, that smoking will lower your quality of life in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused 9 Don't know
MODERATORS		
132	DI211	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p>

		<p>You spend a lot of time thinking about how what you do today will affect your life in the future.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
133	DI216	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like to explore strange places.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
134	DI221	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like to do thrilling things.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
135	DI226	<p>Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like new and exciting experiences, even if you have to break the rules.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused

		9 Don't know
136	DI231	<p>Ask all.</p> <p>Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.</p> <p>You like to be with friends who are exciting and unpredictable.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
137	DI241	<p>Ask all.</p> <p>Of the five closest friends or acquaintances that you spend time with on a regular basis, how many of them are smokers?</p> <p><i>Record number between 0 and 5.</i></p>
138	DI301	<p>Ask all.</p> <p><i>Read out response options.</i></p> <p>What is your overall opinion of smoking? Is it . . . ?</p> <ol style="list-style-type: none"> 1 Very positive 2 Positive 3 Neither positive nor negative 4 Negative 5 Very negative 7 Not applicable 8 Refused 9 Don't know
139a	DI311	<p>Ask all.</p> <p>I am now going to ask you a few questions about your experience of stress in the last 6 months -- that is, since [6M anchor]. Your choices are never, almost never, sometimes, often or very often.</p> <p>How often have you felt that you were unable to control the important things in your life?</p> <ol style="list-style-type: none"> 1 Never 2 Almost never 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
139b	DI316	How often have you felt confident about your ability to handle your personal problems?
139c	DI321	How often have you felt that things were going your way?

139d	DI326	How often have you felt difficulties were piling up so high that you could not overcome them?
139e	DI331	How often have you been distressed by world events?
140	DI336	<p>Ask all. To what extent, if at all, have recent world events changed your levels of stress? Would you say they have . . .</p> <ol style="list-style-type: none"> 1 Increased stress a lot 2 Increased stress a little 3 Not changed stress 4 Reduced stress a little 5 Reduced stress a lot 7 Not applicable 8 Refused 9 Don't know
141a	DI341	<p>Ask all. Is your level of stress higher, lower, or about the same as it was 6 months ago? Is that ...</p> <ol style="list-style-type: none"> 1 A lot higher 2 A little higher 3 About the same 4 A little lower 5 A lot lower 7 Not applicable 8 Refused 9 Don't know
DEMOGRAPHICS		
141b	DE811	<p>Ask all. Are there any children under the age of 18 currently living in your household?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to DE816. Otherwise, go to DE211.</p>
141c	DE816	<p>Ask if DE811=1. How many children under the age of 18 are currently living in your household?</p> <p>If response=1, go to DE821. If response>1, go to DE831.</p>
141d	DE821	<p>Ask if DE816=1. Is this child . . . ?</p> <ol style="list-style-type: none"> 1 Under the age of 1

		<p>2 Between 1 and 5 years old 3 Between 6 and 12 years old, or 4 Between 13 and 17 years old 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to DE826. Otherwise, go to DE211.</p>
141e	DE826	<p>Ask if DE821=1. How many months old is that child?</p> <p><i>Enter number of months.</i></p>
141f	DE831	<p>Ask if DE816>1. Ask each question below, until total is reached. How many are under the age of 1?</p> <p><i>Enter number.</i></p>
141g	DE836	<p>Ask if DE831>0. DE831=1: How many months old is that child? DE831>1: How many months old is the youngest child?</p> <p><i>Enter number of months.</i></p>
141h	DE841	<p>Ask if DE816>1. How many are between 1 and 5 years old?</p> <p><i>Enter number.</i></p>
141i	DE846	How many are between 6 and 12 years old?
141j	DE851	How many are between 13 and 17 years old?
141k	DE211wx	<p>Just to wrap up, we have a few questions for statistical purposes. Please be assured that all your responses will be kept entirely anonymous and confidential. Which of the following categories best describes your ANNUAL household income, that is the total income before taxes, or gross income, of all persons in your household combined, for one year?</p> <p>1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over 77 NA 88 Refused</p>

		99 Don't Know
141l	DE211y	Ask if country=UK. 01 Under £6,500 02 £6,500-15,000 03 £15,001-30,000 04 £30,001-40,000 05 £40,001-50,000 06 £50,001-65,000 07 £65,001-95,000 08 £95,001 and over
141m	DE211z	Ask if country=AU. 1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over
141n	DE212v	(Derived variable: Income categories for all countries) 1 Low 2 Moderate 3 High 7 Not applicable 8 Refused 9 Don't know
142a	DE733	Zip code (US)
142b	DE731	Postal code (Canada)
142c	DE723	Exchange (North America)
142d	DE721	Area code (North America)
142e	auRegion	Core variable auRegion (Aus Metro -- country by State) replaces bDE441z 01 NSW Metro 02 NSW Country 03 VIC Metro 04 VIC country 05 QLD Metro 06 QLD Country 07 SA Metro 08 SA Country

		09 WA Metro 10 WA Metro 11 TAS Metro 12 TAS Country 13 ACT 14 NT 77 NA 88 Refused 99 Don't Know
142f	ukRegion	Core variable ukRegion (UK Gov't office regions) replaces bDE431y 01 North East 02 Yorkshire & the Humber 03 East Midland 04 Eastern 05 London 06 South East 07 South West 08 West Midland 09 North West 10 Wales 20 Scotland 30 Northern Ireland
142g	usSize	Core variable usSize (Size of community—US) replaces bDE426x 1 Counties in top 21 metro areas 2 Counties in metro areas with more than 85,000 households 3 Counties with more than 20,000 households 4 Other counties 7 Not applicable 8 Refused 9 Don't know
142h	usState	Core variable state (State) replaces bDE421x
142i	caProv	Core variable caProv (Province (Canada)) replaces bDE411w 01 NL 02 PE 03 NS 04 NB 05 QC 06 ON 07 MB 08 SK 09 AB 10 BC 77 NA

		88 Refused 99 Don't Know
142j	caSize	Core variable caSize (Size of community) replaces bDE416w 1 100,000 to 1 million 2 25,000 to 99,999 3 10,000-24,999 4 5,000 to 9,999 5 Under 5,000 6 Vancouver 7 Montreal 8 Toronto 9 GTA
142k	usRegion	Core variable usRegion (US region) replaces bDE423x 1 Northeast 2 Midwest 3 South 4 West 7 Not applicable 8 Refused 9 Don't know

**APPENDIX D: ADDENDUM TO TECHNICAL REPORTS:
CONSTRUCTION AND USE OF WEIGHTS FOR THE INTERNATIONAL
TOBACCO CONTROL FOUR COUNTRY SURVEY**

Addendum to Technical Reports: Construction and Use of Weights for the International Tobacco Control

Four Country Survey

M. E. Thompson, University of Waterloo

May 9, 2006

Sampling design

At Wave 1 of the ITC Four Country Survey, within each country, the population was stratified into several geographic regions. Quotas were then assigned for the numbers of respondents in each of these strata, in order to ensure representation proportional to a measure of regional population size. The aim in each country was to obtain sufficiently many smokers for the recruitment survey that at least 2000 would complete the main survey.

A household was deemed to be eligible if it contained at least one eligible smoker. In households with multiple eligible smokers, the Next Birthday Method was used to select a single respondent. No substitution within the household was permitted, except where it was known that the selected respondent would be absent for the entire fieldwork procedure.

Cohort replenishment

In order to ensure that the number of completed surveys at each wave is at least 2,000 per country, respondents lost to attrition have been replaced. Replenishments have been carried out using the same sampling design and calling protocol as in Wave 1 recruitment. (The new sample is thus representative of the population at the new wave, rather than those lost to follow-up.)

Survey weights

The sampling design was chosen to provide a random and representative sample of adult smokers within each geographic stratum. However, as with all surveys, the ITC Four Country Survey sample is subject to some disproportionate selection and under-coverage of population subgroups. In order to adjust for disproportionate selection of adult smokers in subgroups, weights have been calculated for each respondent. The following describes the procedures for calculating these weights.

Initial recruitment weights at Wave 1

1. Each household was given a multiple phone factor $wt1 = 1$ if it had one personal phone line, $= 1/2$ if it had more than one personal phone line (since theoretically the latter households had at least twice as much chance of being contacted).
2. Each respondent's $wt1$ was then multiplied by an adjustment factor $= 1$ if that person was the only adult smoker in the house, and 2 if that person was one of 2 or more adult smokers in the house.
3. The result was then multiplied by a factor to produce an adjusted weight $wt4$ for each respondent, so that the sum of the $wt4$ values for respondents in a stratum was proportional to the general population for the stratum. This compensates for differential achieved sampling fractions from stratum to stratum. General population stratum numbers corresponding to strata actually used in the sampling design were available for Canada, the UK and Australia, but not in the US. In the US, $wt4$ was constructed to produce sums proportional to the general populations of the larger states and regional groups of smaller states +DC. See the section **Strata** for the stratification used in weighting .
4. Finally, the weights $wt4$ were adjusted by calibration to produce $wtr1$, from which estimates of total numbers of smokers in age-sex groups (and white/non-white groups in the US) agreed with current prevalence numbers, mainly of current daily smokers,

in these groups. ‘Non-white’ in the US was taken to include ‘Hispanic’. (The very small number of respondents for whom this variable was missing were taken to be non-white for the purpose of weighting only.) The age-sex groups used differed from country to country: In the UK, population estimates were drawn from census figures, while prevalence for sex*stratum and prevalence by sex*age group was estimated from the General Household Survey (2001). In Australia, we used census estimates for population estimates and data from the National Health Survey, 2001 for estimating prevalence within state*sex*age groups. In the US, population estimates were drawn from census data, while prevalence by sex*age group*white/non-white were taken from proportions from the 1998-1999 Current Population Survey applied to a prevalence number estimate from the National Health Interview Survey (2002). For Canada, we used weighted prevalence numbers for region*sex*age groups from the 2001 Canadian Community Health Survey. See the section **Targets** for the data used in calibration.

Note: For Canada, the US, Northern Ireland and Australia, the target groups were mutually exclusive, and thus calibration was a simple matter of multiplying wt4 by the target total divided by the wt4-estimated total for the relevant group. For the rest of the UK, for each gender, there were targets for geographic areas and for age-sex groups, but not their intersections. A regression estimator method was used to satisfy both sets of targets at once. For example, for UK men, there were at Wave 1 approximately 11 regions and 6 age groups. A column vector x for each participant was formed with 16 entries (leaving out the last region). With weights wt4, a weighted sum was computed of the xx^T (16x16) matrices; the inverse matrix J of this weighted sum was then obtained. (This can be obtained in SAS as output from the weighted regression of any y variable on the components of x .) If T is the column vector of target totals for the 11-1 regions and 6 age groups, then

$$w_i = (wt4)_i T^r Jx_i$$

will be calibrated to T . That is, the sum over the sample members i of $w_i x_i^r$ (a row vector) will be T^r .

The variable for the Wave 1 recruitment weight is aDE911v.

Main survey weights at Wave 1

From an analysis of attrition between the Recruitment and the Main Survey in Wave 1, it was decided not to incorporate variables other than geographic stratum, sex, age and ethnicity into the adjustment for the main survey weights. In particular, variables such as education and perceived health status did not appear to affect attrition in a consistent manner.

A separate set of weights wtm1 was created for the subset of those recruits who also completed the main survey at least partially (N=9,058 subjects). Starting from the recruitment weights wtr1, respondents who did not complete the main survey had wtr1 replaced by 0. Steps 3 and 4 (described above) were then repeated with the subset of main survey respondents, producing wt7 in Step 3 and wtm1 in Step 4.

The variable name for the Wave 1 main survey weight is aDE915v.

Notes on use of the Wave 1 weights

A Wave 1 weight for any respondent can be interpreted as the number of people in the Wave 1 population that we deem that respondent to represent. Thus the recruitment weight for a recruited respondent would be variable from respondent to respondent, but would be of the order of $(\text{stratum population size})/(\text{stratum recruitment sample size})$. The sum of the recruitment weights over all recruited respondents will be the same as the population size (which we estimate from other sources). The main survey weight for a main survey respondent will be a little higher than the recruitment weight for the same respondent. This is because the recruitment weights for those who drop out between recruitment and main are re-distributed, by attrition and calibration adjustments, to those who stay in.

Either set of weights might be used in computing estimates of proportions and means for purposes of "description" of attributes of the smoker population in each country. For example, recruitment weights could be used in estimating the proportion of smokers aged 45 and over who smoke at least 20 cigarettes per day, or the mean number of cigarettes smoked per day by women with at least secondary school graduation. (For the latter, take the sum of weights*consumption for women in the country who have at least secondary school graduation, and divide by the sum of the same weights.)

The weights should not be used to estimate numbers, such as the number of daily or occasional smokers who intend to quit in a given period, because the weights have been "benchmarked" to approximate numbers of daily smokers from other sources, which typically refer to time periods other than the time period for Wave 1 of the ITC survey (end of 2002). For example, the sum of the recruitment weights (or the main weights) for the Canadian part of the sample is equal to the number of daily smokers aged 18 and over in the provinces of Canada as estimated from the Canadian Community Health Survey

(CCHS) of 2001. Because our data were collected over a year after the benchmark CCHS survey of 2001, we cannot use our data to estimate the number of smokers or any other population value.

It should be noted that proportions estimated using these weights (e.g., estimated proportion of smokers in category A = sum of weights for smokers in category A/sum of weights for all smokers in sample) are not standardized across countries with respect to demographic variables. (Standardized proportions are easily calculated as appropriate weighted averages of e.g., age-sex group proportions.)

Weights for Wave 2

For Wave 2, the following sets of weights are available:

1. **Wave 1 – Wave 2 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed both the Wave 1 and 2 surveys, the population being represented is usually the Wave 1 population. Thus typically weights wtm12 should be used; these are the Wave 1 weights wtm1 adjusted for attrition within geographic strata and re-calibrated to the Wave 1 prevalence numbers.

The variable for these weights is bDE921v.

2. **Wave 2 new respondent weights.** For Wave 2 cross-sectional analyses involving new Wave 2 respondents only, recruitment weights wtr2 or main survey weights wtp2 should be used; these are calibrated to prevalence numbers at the time of Wave 2.

The variables for these weights are bDE911v (recruitment) and bDE915v (for main survey).

3. **Wave 2 main survey cross-sectional weights.** For cross-sectional analyses

involving all of Wave 2 respondents, weights wtm2 have been constructed; like the wtp2 weights above, these weights are calibrated to assumed prevalence numbers at the time of Wave 2. The weights are scaled so that within each country the sum of the wtm2 over continuing respondents is equal to the number of continuing respondents, and the sum of the wtm2 over new respondents is equal to the number of new respondents. (Thus the overall sum of these weights is the sample size, not an estimate of the population size.) The variable for these weights is bDE919v.

Weights for Wave 3

For Wave 3, the following sets of weights are available:

1. **Wave 1 – Wave 2 – Wave 3 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed the Waves 1, 2 and 3 surveys, the population being represented is usually the Wave 1 population. Thus typically weights wtm123 should be used; these are the Wave 1-Wave 2 longitudinal weights wtm12 adjusted for attrition within geographic strata and re-calibrated to the Wave 1 prevalence numbers. The variable for these weights is cDE921v.
2. **Wave 2 – Wave 3 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed both the Wave 2 and Wave 3 surveys, the population being represented is usually the Wave 2 population. Thus typically weights wtm23 should be used; these are the Wave 2 weights wtm2 adjusted for attrition within geographic strata and re-calibrated to the Wave 2 prevalence numbers. The variable for these weights is cDE923v.

3. **Wave 3 new respondent weights.** For Wave 3 cross-sectional analyses involving new Wave 3 respondents only, recruitment weights `wtr3` or main survey weights `wtp3` should be used; these are calibrated to prevalence numbers at the time of Wave 3.
The variables for these weights are `cDE911v` (recruitment) and `cDE915v` (for main survey).
4. **Wave 3 main survey cross-sectional weights.** For cross-sectional analyses involving all of Wave 3 respondents, weights `wtm3` have been constructed; like the `wtp3` weights above, these weights are calibrated to assumed prevalence numbers at the time of Wave 3. The weights are scaled so that within each country the sum of the `wtm3` over continuing respondents is equal to the number of continuing respondents, and the sum of the `wtm3` over new respondents is equal to the number of new respondents. (Thus the overall sum of these weights is the Wave 3 sample size, not an estimate of the population size.) The variable for these weights is `cDE919v`.

Note that at each wave the longitudinal sample is a little less representative of its original population because of attrition, and the weights become correspondingly a little more variable. However, the coefficients of variation of the cross-sectional weights at Waves 1, 2 and 3 remain reasonable at around 0.46, 0.53 and 0.63 respectively.

Treatment of movers

Respondents who move out of their countries between waves are dropped out of the sample. However, respondents who move from one geographic stratum to the other within a country are retained. No such movers were noted between Waves 1 and 2. However, there were several between Waves 2 and 3. For longitudinal weights, a mover was associated with the stratum in which he/she resided before the move.

However, for cross-sectional weights, a mover was associated with the new stratum. The preliminary weight before adjustment was then no longer the weight from the previous wave, but the average of weights in the new stratum in the previous wave, with the same calibration class as the respondent. Thus, for example, a respondent in age-sex group *g* moving from stratum *x* to stratum *y* between Waves 2 and 3 would need a new preliminary weight as input to the construction of the Wave 3 cross-sectional weight. The new preliminary weight was the average Wave 2 cross-sectional weight for respondents in stratum *y* and age-sex group *g*. (In the United States, *g* represented an age-sex-ethnicity group.)

Weights for Wave 4

For Wave 4, the following sets of weights are available:

1. **Wave 1 – Wave 2 – Wave 3 – Wave 4 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed the Waves 1, 2, 3 and 4 surveys, the population being represented is usually the Wave 1 population. Thus typically weights *wtm1234* should be used; these are the Wave 1-Wave 2-Wave 3 longitudinal weights *wtm123(cDE921v)* adjusted for attrition within geographic strata and re-calibrated to the Wave 1 prevalence numbers. The variable for these weights is *dDE921v*.
2. **Wave 2 – Wave 3 – Wave 4 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed the Waves 2, 3 and 4 surveys, the population being represented is usually the Wave 2 population. Thus typically weights *wtm234* should be used; these are the Wave 2-Wave 3 longitudinal weights *wtm23(cDE923v)* adjusted for attrition within geographic strata and re-calibrated to the Wave 2 prevalence numbers. The variable for these weights is *dDE923v*.

3. **Wave 3 – Wave 4 longitudinal weights.** For longitudinal or cohort analyses based on respondents who completed both the Wave 3 and Wave 4 surveys, the population being represented is usually the Wave 3 population. Thus typically weights wtm34 should be used; these are the Wave 3 weights wtm3 (cDE919v) adjusted for attrition within geographic strata and re-calibrated to the Wave 3 prevalence numbers.
The variable for these weights is dDE925v.

4. **Wave 4 new respondent weights.** For Wave 4 cross-sectional analyses involving new Wave 4 respondents only, recruitment weights wtr4 or main survey weights wtp4 should be used (See *Initial recruitment weights at Wave 1*, page 2); these are calibrated to prevalence numbers at the time of Wave 4 respectively.
The variables for these weights are dDE911v (recruitment) and dDE915v (for main survey).

5. **Wave 4 main survey cross-sectional weights.** For cross-sectional analyses involving all of Wave 4 respondents, weights wtx4 have been constructed. For continuing respondents, cDE919v is used as the initial weight, then calibrated to assumed prevalence numbers at the time of Wave 4, yielding cross-sectional weights for M3/P3-M4 continuers (dDE917v) ; For new respondents, dDE915v is used as the initial weight, being calibrated to assumed prevalence numbers at the time of Wave 4 already. These weights are scaled so that within each country the sum of the wtx4 over continuing respondents is equal to the number of continuing respondents, and the sum of the wtx4 over new respondents is equal to the number of new respondents. (Thus the overall sum of these weights is the Wave 4 sample size, not an estimate of the population size.) The variable for

these weights is dDE919v.

The country coefficients of variation of the Wave 4 cross-sectional weights range between 0.5 and 0.7; however, the CVs of the Wave 4 longitudinal weights are higher, and as high as 0.85 in the UK. This increased variability seems due to differential attrition by age group, since the age-specific coefficients of variation are around 0.4 to 0.5.

Treatment of movers

Movers between Wave 3 and Wave 4 were treated in the same manner as were movers between Wave 2 and Wave 3.

Standard errors for weighted means and proportions

Where a survey sample cannot be considered a true 'simple random sample' consideration must be given to the 'design effect'. Departure from 'simple random' sampling may sometimes be due to specific requirements of the survey or the nature of the attributes or population being measured, as well as to the practical limitations of field sampling operations. Standard errors need to be adjusted to take the design effect into account.

Because the design is a single stage design, rough standard errors for the proportions or means may be obtained from the corresponding unweighted (simple random sampling) analysis, by multiplying by the square root of F where $F = \frac{n \cdot (\text{sum of squares of weights})}{(\text{sum of weights})^2}$. Here n refers to the size of the sample subgroup of interest, and the sums are taken over that same sample subgroup. The factor F is 1 + the square of the coefficient of variation of the weights in the sample subgroup. (The coefficient of variation of a positive variable is its standard deviation divided by its mean.)

For all four countries the full sample coefficient of variation of the recruitment weights is approximately 0.45, and the coefficient of variation of the main survey weights is about 0.46. The factor F for the latter is 1.2116, and thus, the variability of the weights may be regarded very crudely as inflating standard errors by a factor equal to the square root of 1.2116, or 1.101. However, the point of using the weights for descriptive aims is to reduce sampling bias. The reduction in bias should compensate at least in part for the gain in variability.

For ITC Four Country Survey results, bootstrap weights for the data can be used to adjust standard errors. With bootstrap weights, the analysis is run many times (or "replicated" many times), but each time, all output is ignored except the estimates of the coefficients of interest. The variability of a slope coefficient, for example, is measured through its observed variation from bootstrap sample to bootstrap sample. (Lohr, 1999)

Analytical uses of the weights

The weights may also be used in modelling, for example in logistic regressions. The usual rationale is that the results will then measure relevant attributes of the actual population at hand. Some software packages which use weights in analysis produce unrealistic p-values, because the software "erroneously" takes the sum of the weights to be the sample size. If using such software it may be advisable as a 'quick fix' to rescale the weights so that they sum to the sample size.

Alternatively, for some analyses the output can be corrected: e.g. if the software "erroneously" takes the sum of the weights to be the sample size, we can correct standard errors for means and proportions as indicated earlier, or less conservatively by multiplying by the square root of (sum of weights in denominator of weighted mean or proportion divided by denominator of unweighted mean or proportion); we can correct a chi-square statistic by multiplying by (unweighted sample size for the frequency table

divided by apparent (weighted) sample size for the frequency table.

Newer versions of SAS [1] and SPSS have procedures for regression and logistic regression for complex designs. Both take into account effects of stratification and multistage sampling. However, neither takes into account weight calibration. For estimation and tests which do take calibration into account, the use of bootstrap weights, described below, is recommended.

Analyses across countries

The prescriptions above assume that data from just one country are being used in the analysis. In an analysis from a sample pooled across countries, additional care must be taken, since the population sizes (and hence the average weights) differ widely from country to country. Using the weights as given may cause the largest country to dominate the analysis, and will make estimation very inefficient. Scaling the weights to add to the appropriate subsample sizes within countries will remove this difficulty.

When should weights be used?

For descriptive purposes the use of the weights is necessary, but when the aims are analytic the answer is not so clear. Where possible, modeling analyses should be run with the weights and without. If the estimates of coefficients or the results of tests agree reasonably well, the weighted analysis are presented (with standard errors and p-values corrected where necessary). "Agreeing reasonably well" might mean agreeing to within a standard error or two, or more generally resulting in the same analytic conclusions. If the estimates disagree substantially, it is likely that the model is inadequate in the sense of leaving out important explanatory variables associated with the weights. In that case, neither the weighted nor the unweighted analysis is well supported.

Because the weights tend to add variability, it is possible to have the situation where coefficient estimates agree, but appear non-significant in a weighted analysis and significant in an unweighted analysis. When this occurs, both analyses should be reported. In all cases, diagnostic checking of models is important, and may include examination of the influence of high or low weights on the analysis.

REFERENCES

- [1] **SAS**, SAS Institute, Inc. Cary, NC: <http://www.sas.com/>
- [2] **Lohr SL**. *Sampling: Design and Analysis*. Pacific Grove, CA: Duxbury Press, 1999.

APPENDIX E: ITC CHINA WAVE 1 TECHNICAL REPORT



International Tobacco Control China Survey

Wave 1 (2006) ITC China Technical Report*

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*(This report was prepared for internal publication of ITC Project in June 2008)

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Preface

The International Tobacco Control (ITC) Survey is a longitudinal survey of smoking behaviour among adults in China.

The broad objective of this project is to evaluate and understand the psychosocial and behavioural effects of national-level tobacco control policies of the Framework Convention on Tobacco Control (FCTC), the first-ever international treaty on health, which was adopted by 192 countries of the World Health Organization (WHO) and which has already have been ratified by 154 countries. In addition to the quasi-experimental evaluation of change in policies, the cohort design of the ITC China Survey allows us to understand naturally occurring changes in smoking behaviour and their association over time with policies.

1. Introduction

Background

The International Tobacco Control (ITC) Policy Evaluation Project is a prospective cohort survey designed to evaluate national level tobacco control policies. The ITC Project is unique in that it is being administered in 14 different countries: the United States, Canada, Australia, the United Kingdom, Ireland, France, Germany, South Korea, Mexico, Uruguay, China and New Zealand as well as Thailand and Malaysia. The first wave of the ITC China survey was conducted in seven Chinese cities between April and August 2006.

Main Objectives

The objectives of the Wave 1 of the ITC China Survey are:

a) **To examine patterns of smoking behaviour in China.**

This study provides very detailed information about smokers' quitting behaviour, consumption patterns, and other important aspects of smoking behaviour.

b) **To examine the impact of specific tobacco control policies implemented in China during the next 5 years.**

The ITC survey has several sections that are intended to evaluate the impact of specific policies, such as health warning labels on cigarette packs, anti-smoking campaigns, and price/taxation increases. As a result, the survey is able to examine to what extent policies change smoking behaviour and attitudes towards smoking.

c) **To continue to compare smoking behaviour and the impact of policies between China and other ITC countries.**

The ITC survey is being administered in 14 other countries. Because most of the questions are the same, we will be able to compare patterns of smoking and policies in China and each of the 13 other countries.

Survey Design

The ITC Survey is a longitudinal cohort study. Therefore, the respondents who participated in this survey will be recontacted in the future to answer the follow-up survey. The longitudinal design will allow the research team to track any changes in smoking behaviour and to examine the predictors of smoking behaviour, including the impact of policies introduced during the survey period. The plan at the time of Wave 1 was to recontact the respondents for follow-up surveys in the following 4 years.

The Wave 1 survey was conducted in seven cities in China, namely Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan and Zhengzhou.

The Survey Teams

The survey was conducted by team members from the Central China CDC and the local CDCs in Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan and Zhengzhou. The research team is collaborating with an international team of researchers in Australia (The Cancer Council of Victoria), Canada (The University of Waterloo) and the United States (Roswell Park Cancer Institute and The State University of New York).

2. The Sampling Design

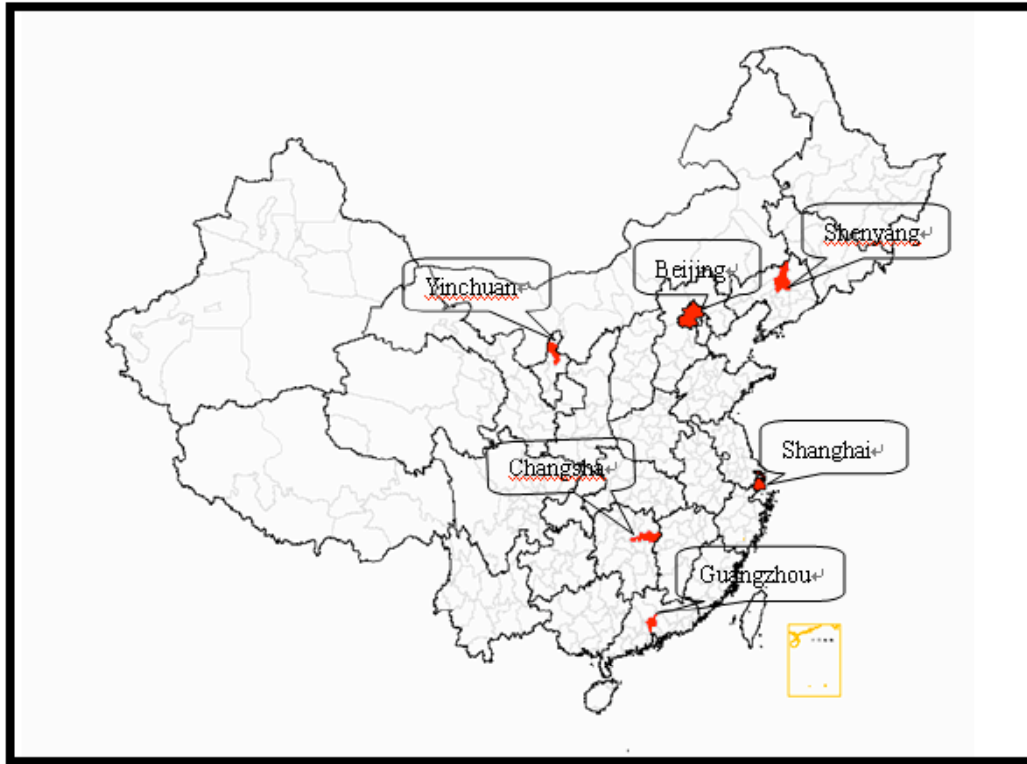
Target Population

Eligible adult respondents in each of the seven cities included smokers and non-smokers 18 years of age and older. Individuals in jail and those living in institutions were ineligible for the survey. The survey was originally conducted in the seven capital cities of one autonomous region, two municipalities and four provinces. However, the data quality from Zhengzhou city was found to be poor. It was, therefore, decided that the data from this city is not included in the analysis.

City	Autonomous Region/Municipality/Province
Beijing	Beijing Municipality
Changsha	Hunan Province
Guangzhou	Guangdong Province
Shanghai	Shanghai Municipality
Shenyang	Liaoning Province
Yinchuan	Ningxia Hui Autonomous Region
Zhengzhou*	Henan Province (not included in analysis)

*not included in data analysis

ITC SEA Wave 1 Survey Locations in China



Planned Sample Size

The planned sample size was designed to include in each city (excluding Zhengzhou):

- 800 adult smokers (aged 18 years+, smoke at least weekly)
- 200 adult non-smokers (aged 18 years+)

The tables below show the actual sample sizes of wave 1 survey data for China and for the individual cities.

Sample size for China

Sample Size	Smoker	Non-smoker
Total	4805 (100%)	1270 (100%)
Male	4560 (94.90%)	528 (41.57%)
Female	245 (5.10%)	742 (58.43%)
Gender Missing	10	0

Beijing

Sample Size	Smoker	Non-smoker
<i>Total</i>	804 (100%)	219 (100%)
Male	756 (94.38%)	100 (45.66%)
Female	45 (5.62%)	119 (54.34%)
Gender Missing	3	0

Changsha

Sample Size	Smoker	Non-smoker
<i>Total</i>	803 (100%)	205 (100%)
Male	733 (91.40%)	89 (43.41%)
Female	69 (8.60%)	116 (56.59%)
Gender Missing	1	0

Guangzhou

Sample Size	Smoker	Non-smoker
<i>Total</i>	804 (100%)	227 (100%)
Male	755 (94.38%)	94 (41.41%)
Female	45 (5.63%)	133 (58.59%)
Gender Missing	4	0

Shanghai

Sample Size	Smoker	Non-smoker
<i>Total</i>	801 (100%)	204 (100%)
Male	781 (97.50%)	91 (44.61%)
Female	20 (2.50%)	113 (55.39%)
Gender Missing	0	0

Shenyang

Sample Size	Smoker	Non-smoker
<i>Total</i>	801 (100%)	200 (100%)
Male	755 (94.38%)	68 (34.00%)
Female	45 (5.63%)	132 (66.00%)
Gender Missing	1	0

Yinchuan

Sample Size	Smoker	Non-smoker
<i>Total</i>	802 (100%)	215 (100%)
Male	780 (97.38%)	86 (40.00%)
Female	21 (2.62%)	129 (60.00%)
Gender Missing	1	0

Sampling Frame and Sample Selection

The Wave 1 survey used a multistage cluster sampling method to obtain a representative sample of adult smokers and adult nonsmokers who are registered residents in the six cities. In each of the six cities the China team selects 10 Jie Dao or Street Districts, with probability of selection proportional to population size of the Jie Dao. Within each of these Jie Dao, two residential blocks or Ju Wei Hui are selected, again with probability of selection proportional to size. Within each Ju Wei Hui, the addresses of the dwelling units (households) are listed first, and then a sample of 300 addresses are drawn by simple random sampling without replacement. Information on age, gender and smoking status for all adults living in these 300 households is collected. The enumerated 300 households are then randomly ordered, adult smokers and non-smokers are then approached following the randomized order until 40 adult smokers and 10 adult non-smokers are surveyed. Because of low smoking prevalence among women, one female smoker from every selected household is surveyed whenever possible to allow for the examination of gender effects.

Eligible Types of Dwellings

Private Homes

A private home is any dwelling that is considered to be the usual place of residence for at least one of the persons living there. The person may be:

- a family member
- a roomer / boarder
- an employee

Private Home AND Business

A private home and business is any dwelling that serves both as a business and the usual place of residence, such as in the case of a business operating out of the home.

Dwellings Not Eligible

Surveys were not conducted in dwellings that are businesses only or with individuals living in institutions, such as hospitals, nursing homes or jails.

Definition of a Household

A household is any persons or group of persons living in a dwelling. It may consist of:

1. one person living alone
2. a family sharing the same dwelling
3. a group of people who are not related but share the same dwelling

To be included on the *Household Enumeration Form* for a particular dwelling, a respondent must have regarded the dwelling as his/her usual place of residence.

3. Protocols and Quality Control

Collection Method

Data were collected through household surveys. Adult smokers and non-smokers responded to a “face-to-face” survey.

Main Component of the Survey

The ITC Survey protocol consisted of four main steps:

1. Household Enumeration (including demographic information)
2. Participant Selection and Consent
3. Main Questionnaire
4. Exit and Compensation

The kind of questions that will be asked have been described in the text of the application but the following is a summary of those questions:

- a) Demographic questions (e.g., age, gender, indicators of socio-economic status);
- b) Questions relevant to the policies of interest (policy-relevant, or “proximal” measures) of the kind outlined in the description of each of the main policy areas (e.g., warning labels, “light/mild”, advertising/promotion, price/taxation, smoke-free, cessation)
- c) Moderator variables (e.g., time perspective, collectivist vs. individual orientation);
- d) Other well-established questions assessing smoking behaviour; and
- e) Other important psychosocial predictors of smoking behaviour (e.g., normative beliefs, self-efficacy, intentions to quit) (distal variables).

In short, none of the survey questions will ask respondents to report on behaviors that are illegal. Moreover, none of the questions deal with matters that are overly personal and none of them should be surprising to respondents given that this is a “survey about smoking.” The ITC China Survey is included in the Appendix.

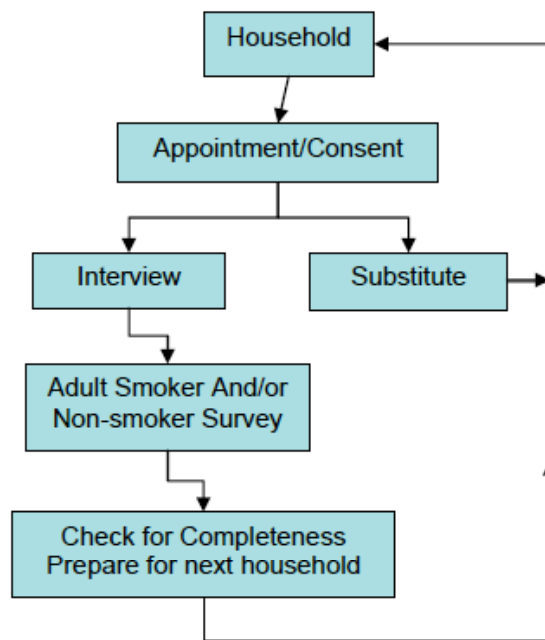
At the end of the survey, the respondent will be thanked for his/her participation and will be asked to provide the name, address, and phone number of one person who will always know where the respondent is, in the event that the respondent has moved in the next year.

The respondent will be reminded that we will be returning in about 1 year for the next wave.

Length of the Interview

The interview of the survey took a total of approximately 50 minutes to complete for adult smokers and 10 minutes for non-smoking adults.

The entire interview process is shown in the following chart.



During the survey field work period, the coordinator of each city was to hold weekly meetings of all interviewers, the data manager and the quality control staff member. Items on these meetings were to include i) summarizing the work for the past week; ii) identifying problems and find solutions; iii) arranging job tasks for the coming week, etc.

Selection of Household Members

The addresses of all the households for each Ju Wei Hui were provided to the research team in each city. The China CDC randomly selected 300 household from that list of addresses. The Ju Wei Hui members then collected basic information using the household enumeration form on every person over the age of 18 in every one of these 300 households. From this information, the China CDC randomly selected 50 respondents to participate in the survey.

Household Enumeration

At each dwelling, before respondents were selected, information was collected about the household, including a roster of all household members (with age, gender, and (for adults) smoking status). This information could be obtained from any adult member of the household. The ethnicity of the household informant was also coded. Time required to complete the *Household Enumeration Form* is: 2-5 minutes

Attempts to Enumerate

A maximum of 4 attempts were made to enumerate each household.

Respondent Gift/Enumeration

The interviewer will then indicate that, if the respondent agrees to participate and completes the survey, he/she will receive a thank-you gift. Smokers will receive a small but useful gift (i.e. soaps) which will be equivalent to about 10-20 Yuan. The respondent will be told that he/she would receive the same payment every time he/she participates.

Private Interviews

Adult participants were interviewed alone whenever possible. If another person insisted on being present, the agreement of the respondent was necessary in order to proceed with the interview. Adolescents completed the questionnaire in private.

Proxy Interviews

A proxy interview is an interview conducted with another knowledgeable member of the household on behalf of the selected respondent. Proxy interviews were not allowed in the ITC Survey.

Respondent Not Available

If a respondent was unavailable, an appointment time (hard appointment) was made to interview that respondent.

Fieldwork Team

Specially trained Ju Wei Hui staff will visit the sampled addresses and enumerate each of the 300 households. Upon reaching a household, the Ju Wei Hui staff member will identify him/herself and indicate that the National Centers for Disease Control is conducting a 30-40 minute health survey in the country. He/she will indicate also that this is a research survey and that it does not in any way involve selling or advertising any products. The respondent will be asked if he/she is willing to answer a few short questions to determine survey eligibility.

The Ju Wei Hui staff member will ask a series of screening questions determining for each adult household member, gender, smoking status, birth date, and residential status. The Ju Wei Hui staff member will thank the respondent and tell the participant that if someone in the household is selected for participation, they will be visited in the next few months by a survey interviewer from the Centers for Disease Control.

Survey administration will be conducted by survey interviewers from the local Centers for Disease Control in each of the cities, who will be trained by the National CDC and the Local CDC.

From a randomly ordered list of enumerated households, the National Chinese CDC staff will then use the next birthday method to select respondents within the households, in sufficient

number to reach quotas in each Ju Wei Hui of 40 adult smokers and 10 adult non-smokers. At most one smoker and one non-smoker will be selected in each household.

Interviewers will contact the selected respondents and explain that we are inviting the respondent to participate in the group of 1,000 respondents that have also been randomly selected, and that we would be contacting the respondent every year to complete a survey.

If the respondent agrees to participate, the interviewer will reiterate the confidential nature of their responses and will indicate to respondents that the questions asked will not be of an overly personal nature. The respondent will be given an information letter and asked to sign a consent form.

A total number of 20 Ju Wei Hui in each city were selected to participate in the survey. Each participating city formed a project team, which consisted of the following:

- 1 City Coordinator: Responsible for setting up the local fieldwork team, supervising fieldwork, overseeing the fieldwork plan and reporting to national CDC coordinators for any problems.
- 20 Survey Interviewers: Selected by the city coordinator according to local situations. They formed 10 groups, one male and one female for each group. All the interviewers were to have a college or university degree, be younger than 45 years old, and have indoor interview experience. It was recommended that, if possible, interviewers be chosen from university students majoring in preventive medicine.
- 1 Data Manager: Responsible for collecting the initial demographic information needed for sample selection, collecting finished questionnaires from interviewers along with the MP3 recordings, transferring data to central CDC, etc.
- 1 Quality Controller: Responsible for checking if the fieldwork procedures are strictly followed, the completeness of finished questionnaires and MP3 recordings, and writing quality control reports.

MP3 recording

All adult smoker survey interviews were recorded. Whenever possible, non-smoker interviews were recorded. If the interviewer need to do a smoker survey and a non-smoker survey in the same household, then only the smoker survey was recorded.

Identifying Eligible Members

There were three or four different categories of eligible respondents in a household

- 1) Adult Male Smokers
- 2) Adult Female Smoker
- 3) Adult Non-smokers

Information and Consent

Once a respondent was selected, the information letter was provided and the consent form was administered.

Language

The English surveys were translated into the Chinese language in order for the face-to-face interview to be conducted in the language.

Training Manual

An English manual on how to enumerate a household and conduct a survey interview were written to train survey interviewers before the survey fieldwork begins. The English language manual was translated into Chinese.

Monitoring and Quality Assurance

To ensure the accuracy and quality of the ITC survey, the fieldwork was monitored in several ways. The China CDC and the research team in the city applied quality control to the Ju Wei Hui data collection. They checked the forms submitted and to re-collected the information if the forms were incorrectly filled out.

During the survey interviewing stage, at the end of each day, interviewers were to carry out a self-check on the survey questionnaires they completed. The data manager collected all the completed surveys from all interviewer teams. Each day the data manager also copied all the MP3 recordings into a designated computer and used a unified file name system. Each recording file was named using the same coding on the cover page of the survey in the order of city (4 digits), Jie Dao (4 digits), Ju Wei Hui (4 digits), interviewer (2 digits), individual (2 digits) separated by a hyphen "-". The total number of digits is 20, e.g. "2101-0085-0001-2418-58-02.wav". No other characters and symbols are allowed for these recording files. Each Monday the data manager sent all recording files using a CD to the central team through courier service. The central team randomly selected 50% of the MP3 recordings and did the actual checking.

After the survey was completed, all surveys were collected, organized and bound together and send to the central team at China CDC.

4. Disposition Codes and Response Rates

Outcome Codes: Households

- 01 Not a current dwelling unit: DO NOT RETURN
- 02 No contact made, not sure whether a dwelling unit: MUST RETURN
- 03 No contact made, known to be a dwelling unit: MUST RETURN
- 04 Contact made, cannot answer at this time, but could in the future: MUST RETURN (and write appointment information in outcome)
- 05 Contact made, no one at all able to answer: DO NOT RETURN
- 06 Contact made, refusal: DO NOT RETURN
- 07 Contact made, Household Information Form completed: DO NOT RETURN
- 09 All other cases

If a household could not be contacted after four visits, one in weekday, one in weekday evening, one in weekend and one in weekend evening, the household was not contacted further.

Respondent ID

The respondent ID is a combination of the long ID written on page 1 of the survey in the order of city (4 digits), Jie Dao (4 digits), Ju Wei Hui (4 digits), interviewer (2 digits), individual (2 digits) separated by a hyphen "-". The total number of digits is 20, e.g. "2101-0085-0001-2418-58-02".

Response Rates

The response rates for smokers are listed here for each city. Out of six, three cities have the exact response rates while the remaining three are estimates.

City	Exact %	Estimated %
Shenyang	50.0	
Shanghai	61.3	
Yinchuan	39.4	
Changsha		50.0
Beijing		50.0
Guangzhou		66.0

For Wave 1, the response rates for non-smokers could not be obtained.

Cooperation Rates

City	Exact %	Estimated %
Shenyang	81.2	
Shanghai	84.2	
Yinchuan	90.3	
Changsha		95.0
Beijing		80.0
Guangzhou		80.0

For Wave 1, the cooperation rates for non-smokers could not be obtained.

Weight Construction

Sample Selection

a) First Stage: Jie Dao (JD)

For each city, ten (10) JDs were selected with probability proportional to the JD population size.

b) Second Stage: Ju Wei Hui (JWH)

For each selected JD, two (2) JWHs were selected with probability proportional to the JWH population size.

c) Third Stage: Household (HH)

For each selected JWH, 300 (or so) HHs were selected using simple random sampling and information on gender, age and smoking status of all adults in these HHs is collected; these 300 HHs were further stratified into Smoking HH (SMHH) and Non-smoking HH (NSHH); 6 NSHHs and up to 40 SMHHs were selected (treated as a stratified simple random sample) to meet the quota of 40 adult smokers and 10 adult non-smokers to be surveyed. Note: In some JWHs, the Non-smoking HHs are not necessarily from the 300 enumerated HHs; The number "6" (NSHH) has sometimes been replaced by a close number (say 7).

d) Fourth Stage: Individual

For each one of the 6 (or 7) NSHHs, one (1) adult non-smoker was selected using the next-birth date method. For each of the selected SMHHs, the following procedure was used to select adult smokers and non-smokers:

- If the SMHH had only one adult smoker, the smoker was selected
- If the SMHH had two or more adult smokers of same gender, one of them was selected using the next-birth date method
- If the SMHH had adult smokers of both genders, one male smoker and one female smoker were selected (with the next-birth date method if there were two or more adult smokers of same gender).
- If the SNHH had adult non-smokers, one of them was selected (with the next-birth date method if necessary). The total number of adult non-smokers targeted from SMHHs was four (4) or three (3).

Weight Calculation: Smokers

Survey weights for sampled individuals are best constructed from the bottom level (Household) first, and then move up one-level-at-a-time to reach the final weight. Bottom level (HH) weights depend on how the domains of interest are defined. We consider the simple scenario where,

$$\text{Population} = \text{Male Smokers} + \text{Female Smokers} + \text{Non-smokers}$$

which is the basic structure for the ITC China survey.

HH level weights

Each surveyed individual has a household level weight W_1 . This is the number of people in the same household and the same sampling category **represented** by the surveyed individual:

- For adult male smokers, W_1 is the number of adult male smokers in the household.
- For adult female smokers, W_1 is the number of adult female smokers in the household.

JWH level weights

Each surveyed individual has a JWH level weight W_2 . This is the number of people in the same JWH and the same sampling category **represented** by that person:

$$W_2 = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W_1$$

where N_1 is the total number of HHS in that JWH; N_2 is the number of HHS enumerated (by design we should have $N_2 = 300$ for most JWHs); M_1 is the number of smoking households (SMHH) **among the N_2 enumerated HHS**; and M_a is the number of SMHHs **surveyed** to reach the quota of 40 smokers (by design we should have $M_a \leq 40$ but it is not always the case since the quota 40 has to be adjusted sometimes).

JD level weights

Each surveyed individual has a JD level weight W_3 . This is the number of people in the same JD and the same sampling category represented by that person:

$$W_3 = \frac{P_b}{2P_c} \times W_2$$

where P_b is the **population size of the JD**, and P_c is the **population size of the JWH** from which the individual is surveyed. The factor 2 in the denominator represents the number of JWHs selected within the JD.

Final weights

Each surveyed individual has a final weight W_4 at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_4 = \frac{P_a}{10P_b} \times W_3$$

where P_a is the **population size of the city**, and P_b is the **population size of the JD** from which the individual is surveyed. The factor 10 in the denominator represents the number of JDs selected within the city.

Weight Calculation: Non-smokers

HH level weights

Each surveyed individual has a household level weight W_1 . This is the number of people in the same household and the same sampling category **represented** by the surveyed individual. For adult non-smokers, W_1 is the total number of adult non-smokers in the household.

JWH level weights

We now treat the selected households as a simple random sample from the whole list of households in the JWH.

$$W_2 = \frac{N_1}{M_b + M_c} \times W_1$$

where N_1 is the total number of HHs in that JWH and $M_b + M_c$ is the number of HHs surveyed (In most cases $M_b + M_c = 10$).

JD level weights

Each surveyed individual has a JD level weight W_3 . This is the number of people in the same JD and the same sampling category represented by that person:

$$W_3 = \frac{P_b}{2P_c} \times W_2$$

where P_b is the **population size of the JD**, and P_c is the **population size of the JWH** from which the individual is surveyed. The factor 2 in the denominator represents the number of JWHs selected within the JD.

Final weights

Each surveyed individual has a final weight W_4 at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_4 = \frac{P_a}{10P_b} \times W_3$$

where P_a is the **population size of the city**, and P_b is the **population size of the JD** from which the individual is surveyed. The factor 10 in the denominator represents the number of JDs selected within the city.

Variables Required for Weight Calculation

C_1 – City code

C_2 – Jie Dao code

C_3 – Ju Wei Hui code

C_4 – Household code

C_5 – Individual code

P_a – City population size

P_b – Jie Dao population size

P_c – Ju Wei Hui population size

N_1 – Total number of households in the Ju Wei Hui
 N_2 – Number of households enumerated ($N_2 = 300$ for most cases)
 M_1 – Number of smoking households among the N_2 enumerated households
 M_2 – Number of non-smoking households among the N_2 enumerated HHs ($M_2 = N_2 - M_1$)
 M_a – Number of smoking households surveyed to reach the quota of 40 (or so) smokers
 M_b – Number of smoking households surveyed to reach the quota of 4 (or 3) non-smokers
(In most cases $M_b = 4$ or 3)
 M_c – Number of non-smoking households surveyed to reach the quota of 6 (or 7) nonsmokers
(In most cases $M_c = 6$ or 7)
 I_1 – Household classifier: $I_1 = 1$ for smoking households; $I_1 = 0$ for non-smoking households
 I_2 – Smoking status indicator: $I_2 = 1$ for smokers; $I_2 = 0$ for non-smokers
 G – Gender: $G = 1$ for male and $G = 2$ for female (This is Question P1 on the questionnaire)
 L_1 – Number of male adults in the household (This is Question P8A in the questionnaire)
 L_2 – Number of male adult smokers in the household (This is Question P8B in the Questionnaire)
 L_3 – Number of female adults in the household (This is Question P9A in the questionnaire)
 L_4 – Number of female adult smokers in the household (This is Question P9B in the Questionnaire)

Appendices

Country Profile

China has an estimated population of 1.3 billion people¹ 70% of which are concentrated in rural areas, however it is anticipated that 55% will live in urban areas by 2025.² GDP per capita is US \$6,600.³ Tobacco-related deaths contribute to four of the five leading causes of mortality in China.⁴ Lung cancer rates in China are also on the rise.⁵ It is anticipated that if current smoking patterns continue, tobacco will account for more than 2 million deaths in China annually.⁶ China is the largest producer and consumer of tobacco in the world.⁷ Prevalence estimates in 2002 indicate that 57% of males and 2.6% of females are current smokers.⁸ China produces over 31% of the world's cigarettes.⁹ To date, there are over 180 factories and 2,000 brands of cigarettes in the Chinese market.¹⁰ Over 15 million workers are employed by the China National Tobacco Corporation either in tobacco farming, industry, or retail sales.¹¹ Tobacco specific taxes on cigarettes in China are 21% of the price of the total cost.¹² The tobacco industry accounts for a significant proportion of the Chinese economy, and tobacco taxes represent the largest source of tax revenue to the Chinese provincial and local governments.¹³

The China National Tobacco Corporation controls 90-97% of the cigarette market. Joint ventures, however, with foreign cigarette companies exist (Imperial Tobacco and Gallaher have licensing agreements with the CNTC). In December 2005, the CNTC finalized a joint venture with Philip Morris International to produce Marlboros domestically. The specter of the world's most popular brand being produced domestically in China is disturbing. Moreover, the CNTC is undergoing consolidation within China (from over 3,000 brands to the goal of a few hundred), in preparation for entry into the export market. So the specter of domestic Marlboros may ultimately be dwarfed by the specter of the world's largest cigarette producer entering the export market.

China is just beginning to engage in tobacco control. They ratified the FCTC in October 2005 and established a governmental office for FCTC implementation. China has had several "Quit and Win" campaigns beginning in 1996, and quit lines have also been established.¹⁴ Services offered through cessation clinics are available in several cities. Nicotine replacement therapy has recently become available in China although it is not subsidized. In the future, the government plans to allocate some funds to build more cessation clinics and cessation education.

Many of the research reports on smoking in China are from school-based surveys.^{15 16 17 18 19} Although other household surveys of adult smokers have been conducted, virtually all are cross-sectional and focus on basic questions about smoking behaviour.^{20 21 22 23 24 25 26 27 28 29 30} Other important surveys in China with international comparisons focus on smoking among youth.^{31 32}

There are no surveys or other research efforts currently in China for rigorous evaluation of tobacco control policies that approach the comprehensiveness of the ITC China survey.

The Tobacco Journal International reported that for the first six months of 2007, China's tobacco industry registered more than RMB200 billion (USD26.5 billion) in pre-tax profits, up by 26% from 2006.³³ China, the world's largest producer and consumer announced in August 2008 that it will ban all forms of tobacco promotion by January 2011.³⁴

The China National Tobacco Corporation (CNTC) announced its joint venture with Schweitzer-Mauduit International to set up a facility for tobacco-related papers in the province of Guangdong.

The following tables are taken from the 2008 WHO document on global tobacco epidemic.

Demographics

Population (1000s)	1,323,345
Adults (>15 years)	78.6%
Urban	40.0%
Growth rate	0.8%
Income Group	Middle
Income per capita (Intl \$)	\$6,600
Extreme Poverty Rate	16.6%
Literacy Rate	90.9%

Smoking Prevalence

Youth Prevalence (2004 GYTS in Shanghai: 13-15 years)	
Males	7.1%
Females	4.1%
Overall	5.5%

Adult Prevalence (2002 – national)	
Males	57.4%
Females	2.6%
Overall	31.4%

Tobacco Industry

Tobacco Industry (from Tobacco Atlas, 2006)	
Cigarette Production (Ms)	1,748,500
Cigarette Imports (Ms)	47,740
Cigarette Exports (Ms)	41,566

Country (Ratification Date)	Domains									
	Labeling		Product			Advertising and Promotion				
	% of Pack	Picture Labels	Health Warnings	Light/Mild Descriptors	Emissions/Contents/Performance Standards	Broadcast	Print-Domestic	Print-Int'l	Bill-board	Sponsorship ³
China (11 Oct 05)	5% FUTURE 30% by 1 Jan 2009	No	1 FUTURE 2 in Jan 2009	No legislation	None	Full	Full	Full	None	None
Advertising/Promotion/Sponsorship Bans —Codes: DBM=distribution by mail; PD=promotional discounts; NTP=non-tobacco products identified with tobacco brand names; TP=brand name of non-tobacco products used for tobacco products; TVF=appearance of tobacco products in TV and/or films; SE=sponsored events										

Country (Ratification Date)	Domains					
	Cessation		Price and Taxation		Smoke Free	
	Programs	NRT Availability/Use	Taxes - % of retail price	Other Issues	Ban in Public Places ¹	Ban in Hospitality
China (11 Oct 05)	Bupropion (at pharmacy with Rx), cessation support available in some primary care facilities, hospitals and communities	pharmacy	21% FUTURE: Possible increases	Price of 20-cigarette pack: 4.00 CNY (\$0.50 USD)	Full: EDU None: HCF, UNI, GOV, IO, OIW FUTURE: city-driven smoke-free laws (eg Beijing 2008)	None FUTURE: city-driven smoke-free laws (eg Beijing 2008)
Smoke-Free Venue Codes: HCF=Health-care facilities; EDU=educational facilities; UNI=universities; GOV=government facilities; IO=indoor offices; OIW=other indoor workplaces RES=restaurants; B&P=bars & pubs						

City Profiles

Beijing

Location: The capital of People's Republic of China. Beijing is China's second largest city after Shanghai. It is a metropolis located in the northern tip of the roughly triangular North China Plain. Beijing is the political, educational and cultural centre of China. Beijing has 18 administrative subdivisions, county-level units governed directly by the municipality (second-level divisions). Of these, 16 are districts and 2 are counties. The urban and suburban areas of the cities are divided into: 8 districts (city proper+inner suburbs); 6 districts (more distant suburbs and satellite towns constituting part of the metropolitan area) and; 2 districts+2 counties (located further out govern semirural and rural areas).

Population: About 18 million people reside in Beijing for 6 months or more per year. Out of this number, approximately 12 million people are permanent residents with permits while the remainder are residents with temporary permits. In addition, there is a large but unknown number of migrant workers who live illegally in Beijing without residence permit. The city core has around 8 million people. Over 95% of Beijing residents belong to the Han Chinese majority.

Tobacco Production: Beijing has a cigarette factory. Zhongnanhai is the major brand (it has 10 varieties). This brand is mostly sold locally. Tobacco production is high and is sold to other areas.

Cultural Associations with Tobacco: There are no special cultural associations with tobacco because most people in Beijing are from different regions in China.

Smoke-Free Laws in the City: Beijing has implemented a new smoke-free policy as of 1 May 2008. Smoking is now banned in healthcare and educational facilities, including universities, government facilities, entertainment facilities (e.g. cinemas, concert halls, museums, etc.), inside public transportation vehicles and facilities, and in stadiums and gymnasiums. Designated smoking areas are permitted in service areas of business places (e.g. food and drink business establishments, establishments offering internet services), in public places (e.g. parks, playgrounds), and in waiting rooms for means of public transportation. Lodging businesses are required to have smoke-free rooms and/or floors.³⁵

Other Tobacco Control Measures/Policy: There are no other tobacco control laws. Jie Daos may have their own tobacco control campaigns. There are lots of tobacco-free campaigns being run in Beijing. The government has pledged to ban all forms of tobacco advertising and promotions by 2011 in accordance with FCTC regulations.³⁶

Changsha

Location: Is the capital city of Hunan, a province of Southcentral China.. Has jurisdiction over 5 districts, 3 counties and 1 city.

Population: 6 138 719 (2000). Urban: 2 743 825.

Tobacco Production: A major tobacco producer. Furongwang and Baisha – two cigarette factories merged together. Cigarette production is the highest among the 7 cities (and probably the highest cigarette producer in China). Philip Morris has also entered Changsha and a Philip Morris factory in Changsha makes Marlboro cigarettes. Furongwang is the leading brand in China in terms of sales. Tobacco is the major industry in Hunan.

Local Economy: Is a major port and, commercial and industrial centre. In 2007, nominal GDP was US \$31.3 billion. Is one of China's top 20 "economically advantaged" cities.³⁷

Cultural Associations with Tobacco: Changsha has a very "good" cultural association with tobacco. The government encourages the development of tobacco industry. The government wants to increase the production of tobacco and cigarettes. Tobacco ads are everywhere on the streets.

Smoke-Free Laws in the City: No local smoke-free laws. The Department of Health and the Ministry of Industry and Business are the major tobacco control government agencies. Smoke-free bus.

Other Tobacco Control Measures: Quit and win competition.

Guangzhou

Location: Capital and sub-provincial city of Guangdong Province. Located in the south of China, Guangzhou is close to Hong Kong and Macau. Guangzhou has 10 districts and two county-level cities.³⁸

Population (2006): City: 7 607 200; Urban: 6 253 300; Metro: 9 754 600.

Tobacco Production: Three cigarette factories were merged in 2004 with an annual production of 50 billion cigarettes per year. Gross sale is approximately 6 billion Yuan (about \$1 billion US)

Local Economy: Guangzhou is the economic centre of the Pearl River Delta and the heart of one of mainland China's leading commercial and manufacturing regions. It is the third wealthiest city in China, behind Beijing and Shanghai. The GDP in 2007 was about US \$100 billion.

Cultural Associations with Tobacco: It is reported that less people smoke in public places here than in other cities. In addition, many young people in the city have started to smoke. The prevalence of smoking among females in this city is also increasing, especially among young females who tend to smoke Marlboro.

Smoke-Free Laws in the City: Smoke-free legislation has been drawn up, which would ban smoking in 13 public spaces, including cinemas, concert halls, stadiums, libraries, museums, department stores and waiting rooms at public transportation facilities. Smoking on public transit would also be prohibited. However, there is no time-line for this legislation to be implemented.³⁹

Other Tobacco Control Measures: In May 2006 there was a media campaign on television. In July 2006, they started creating a new policy on smoke-free public places. Guangzhou became a Tobacco Ads Free City in Marcy 2008.⁴⁰

Shenyang

Location: In the northeast of China, Shenyang is the capital of Liaoning province. Shenyang has 13 county-level districts and 1 city; they are divided into inner city districts (5) and, outer districts and areas (5 districts, 1 city and 3 counties).

Population: 7 204 000 (2004). Urban: 5 066 000.

Tobacco Production: Has one cigarette factory, has been merged with Hongta Corp, which is a famous cigarette corporation in China.

Local Economy: Important industrial centre in China more recently – software, automotive and electronics. Was the transportation and commercial centre of China's focusing on heavy industry especially aerospace, machine tools, heavy equipment and defence.⁴¹

Cultural Associations with Tobacco: Smoking prevalence is high: 60% among males.

Smoke-Free Laws in the City: Has local laws restricting smoking in public places. Has smoke-free signs in all public places.

Other Tobacco Control Measures: Quit and Win.

Shanghai

Location: Is a municipality within China. It is the largest city in China in terms of population and one of the largest urban areas in the world with over 20 million people in its extended metropolitan area. Located on China's central eastern coast, it is administered as a municipality with provincial-level status: 19 divisions: 18 districts and 1 county.

Population: 18 450 000 (2007).

Tobacco Production: Has local cigarette factory. Produce "Zhonghua" cigarettes which are very expensive (30-50 Yuan/pack). Most people smoke "Double Happiness" brand – (7 Yuan/pack). They also produce "Mudan" (3 Yuan/pack). This is a very large cigarette corporation. Zhonghua is the leading brand in China???

Local Economy: Centre of trade and finance in mainland China. In 2007, Shanghai's nominal GDP posted a 13.3% growth to 1.2 trillion Yuan.⁴²

Cultural Associations with Tobacco: Smoking prevalence is 60% among males, but a little lower recently (50-60%)

Smoke-Free Laws in the City: Currently, cinemas, libraries and concert halls are smoke-free. Shanghai plans to extend this ban to more public places (office areas and restaurants) by the 2010 World Expo.⁴³ Has local laws – implementation is good. Smoke free schools – 80%
Smoke free hospitals – 54%

Other Tobacco Control Measures: Tobacco control campaign: media campaign each year around May 31st.

Yinchuan

Location: In the northwest of China. Yinchuan is the capital city of Ningxia Hui Autonomous Region. Yinchuan is a small city (the smallest among the 7 cities) with 3 districts, 1 city and 2 counties.

Population: 1.5 million people, 1.1 million urban population.

Tobacco Production: No local cigarette factory – a factory in NINGXIA close to Yinchuan.

Local Economy: Poor area in China. GDP per capita (2003) was US \$1450. Main industries are production of Chinese wolfberry, wheat, apple and rice.⁴⁴

Cultural Associations with Tobacco: Smoking prevalence is high. It is popular to give cigarettes as a gift.

Smoke-Free Laws in the City: Has a local smoke-free law, but the implementation is only good in hospitals and schools.

Other Tobacco Control Measures: Quit and win.

Zhengzhou

Location: Zhengzhou is a prefecture-level city, and capital of Henan Province. Located in central China, Zhengzhou is an important city for transportation connections. There are 12 county-level divisions: 6 districts, 5 county-level cities, and 1 county.

Population: 7 243 000 (2006). Urban: 4 362 800.

Tobacco Production: Zhengzhou is a high producer of cigarettes. The tobacco industry is the major tax contributor. Two major cigarette companies in Zhengzhou were merged last year to form Henan Cigarette Corporation. Henan Cigarette Corporation produces 1/3 of the cigarettes for the whole province.

Local Economy: Zhengzhou is a major industrial city in China, its staple industry being textiles.⁴⁵ The GDP per capita is 23305 Yuan (2005).

Cultural Associations with Tobacco: There is a high prevalence of smoking (34% of the population was smokers in 1996; 26% of health care providers smoke according to a 2005 study). Using cigarettes as gifts is popular.

Smoke-Free Laws in the City: Has a smoke-free law which is currently being revised. At this time, smoking is prohibited in hospitals and schools.

Other Tobacco Control Measures: There are several health education campaigns and it is believed that many people know that smoking is harmful to health. There is a tobacco control campaign that is a surveillance of second-hand smoke in public places. There is also a Quit and Win campaign.

Form 6

Wave 1 FCTC Surveillance/ITC China Survey
Fieldwork supplies list (CN-ITC-2005-S-6)

City: _____

	Supplies	Quantity	Received Quantity	Good quality or not
Survey Material	Respondent Information Form	20		
	Consent Form	900		
	Adult Smoker Survey	900		
	Adult Non-Smoker Survey	300		
	Training Manual	30		
	Quality Control Manual	10		
	Telephone Double Check EpiData Database	1		
	MP3	12		
Survey Instrument	Name Card	30		
	Battery	800		
	Marker	200		
	Electric Torch	30		
	Shoe Cover	2000		
	Backpack	25		
	Gift	800		

Note: Writing materials will be provided by China CDC, and survey instruments will be purchased by city CDC. City coordinator is in charge of preparing all supplies and sending the form back to China CDC. If supplies are enough and in good condition, mark "√" in the form, otherwise fill out the insufficient quantity and the numbers having poor quality.

City coordinator : _____

Date : yy mm dd

Form 7

Wave 1 FCTC Surveillance/ITC China Survey
 Training Location and Equipment list (CN-ITC-2005-S-7)

Supplies		Quantity
Training Location	Size	
	Table and Chair	
	Good for Practicing	
Training Equipments	1.Notebook Computer	
	2.Multi-Media Projector	
	3.Audio Equipment	
Training Material	4.Qestionnaire	
	5.Fieldwork Registration Form (CN-ITC-2007-S-16)	
	6.Respondent Information Form (CN-ITC-2007-S-5)	
	7.Telephone Double-Check Form (EpiData Database)	
	8.MP3	
	9.Training Manual	
	10.Qaulity Control Manual	
	11.Interviewer Registration Form (CN-ITC-2007-S-8)	
	12.Interviewer Attendance Form (CN-ITC-2007-S-9)	
	Other	13.Document Envelope
14.Marker		

Form 10

**Wave 1 FCTC Surveillance/ITC China Survey
Fieldwork Staff Registration Form (CN-ITC-2005-S-10)**

City: _____

Project Team	Name	Code	Telephone	Cell Phone	E-mail
Project Manager					
Coordinator					
Data Manager					
Quality Controller					
Interviewer		01			
		02			
		03			
		04			
		05			
		06			
		07			
		08			
		09			
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18			
		19			
		20			

Note: This form provides information for monitoring fieldwork, which is filled out by city coordinators. The information in the form is allowed for some changes in terms of actual situation later on. This form should be sent to China CDC before the fieldwork. The codes are only for interviewers, each interviewer has one code, and there are total 20 codes for all interviewers.

City code CODE1			

Street code CODE2			

JuWeiHui Code			

Household CODE4			

Individual CODE5	

Interviewer CODE0	

**Wave 1 FCTC Surveillance/ITC China Survey
Fieldwork Registration Form (CN-ITC-2005-S-16)**

1. Individual Appointment Record

Appointment #		Date of Appointment				Time of Appointment				Outcome					
1	QCA1			yy		mm		dd	QCB1		hh		min	QCC1	
2	QCA2			yy		mm		dd	QCB2		hh		min	QCC2	
3	QCA3			yy		mm		dd	QCB3		hh		min	QCC3	
4	QCA4			yy		mm		dd	QCB4		hh		min	QCC4	

Outcome:
<input type="checkbox"/> entering household
<input type="checkbox"/> nobody home or answering the door
<input type="checkbox"/> refusal

2. Survey time

Date	time
QCA5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> yy <input type="text"/> <input type="text"/> mm <input type="text"/> <input type="text"/> dd	QCB5 <input type="text"/> <input type="text"/> hh <input type="text"/> <input type="text"/> min

3. Individual survey outcome

	Outcome code	Note	Outcome code
Adult male smoker	QCAMS		<input type="checkbox"/> complete the survey <input type="checkbox"/> partly complete the survey <input type="checkbox"/> survey can not be conducted <input type="checkbox"/> refusal
Adult female smoker	QCAFS		
Adult non-smoker	QCANS		

Note: Before conducting survey, interviewer should fill out "individual appointment record" "Survey time"; and after survey, interviewer should fill out "individual survey outcome" each form for each respondent.

FCTC Surveillance/ITC China Survey—Household Enumeration Form (CN-ITC-2005-S-15)

Jie Dao: < Code2> Ju Wei Hui: < Code3> Household <Code4>

Address: _____ Interviewer: _____

	Date	Time	Outcome
Contact Attempt 1	____/____/____ Year ____/____/____ Month ____/____ Day	____/____ Hour ____/____ Minute	
Contact Attempt 2	____/____/____ Year ____/____/____ Month ____/____ Day	____/____ Hour ____/____ Minute	
Contact Attempt 3	____/____/____ Year ____/____/____ Month ____/____ Day	____/____ Hour ____/____ Minute	
Contact Attempt 4	____/____/____ Year ____/____/____ Month ____/____ Day	____/____ Hour ____/____ Minute	

Any Child Living in the Household? YES NO

Interviewer Code Code5	Name	Gender	Birthday			Permanent Resident Status (Yes:√ No:×)	Smoke Over 100 Cigarette (Yes:√ No:×)	Current Weekly Smoker (Yes:√ No:×)
			Year	Month	Day			
01								
02								
03								
04								
05								
06								

Outcome Code:

- 01 Not a current dwelling unit: DO NOT RETURN
- 02 No contact made, not sure whether a dwelling unit: MUST RETURN
- 03 No contact made, known to be a dwelling unit: MUST RETURN
- 04 Contact made, cannot answer at this time, but could in the future:
MUST RETURN (and write appointment information in outcome)
- 05 Contact made, no one at all able to answer: DO NOT RETURN
- 06 Contact made, refusal: DO NOT RETURN
- 07 Contact made, Household Information Form completed: DO NOT RETURN

References

- ITC China Wave 1 Training Manual in English.
ITC China Wave 1 Training Manual in Chinese.
WHO. (2008). *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER Package*. Geneva: World Health Organization.
- ¹ World Health Organization. (2003). *The World Health Report*. Geneva: World Health Organization. <http://www.who.int/countries/chn/en>
 - ² World Health Organization. (1997). WHO Global Status Report – China – 1997. *Tobacco or Health: A global status report*. Geneva: World Health Organization. <http://www.cdc.gov/tobacco/who/>
 - ³ *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package*. Geneva, World Health Organization, 2008.
 - ⁴ Shafey O, Dolwick, S, Guindon EG, (Eds). (2003). Tobacco Control Country Profiles. Georgia: American Cancer Society. <http://www.wpro.who.int/NR/rdonlyres/751257EA-1037-4E62-98F7-EBEEE278ADAF/0/countryprofiles2000.pdf>
 - ⁵ Shafey O, Dolwick, S, Guindon EG, (Eds). (2003). Tobacco Control Country Profiles. Georgia: American Cancer Society. <http://www.wpro.who.int/NR/rdonlyres/751257EA-1037-4E62-98F7-EBEEE278ADAF/0/countryprofiles2000.pdf>
 - ⁶ Yurekli AA (2000). *Tobacco and China: a Complex Challenge*. Presentation for Ministerial Level Economics of Tobacco Control Seminar, Beijing, China. <http://www1.worldbank.org/tobacco/presentation.asp>
 - ⁷ World Health Organization (1997). WHO Global Status Report – China – 1997. *Tobacco or Health: A global status report*. Geneva: World Health Organization. <http://www.cdc.gov/tobacco/who/>
 - ⁸ *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package*. Geneva, World Health Organization, 2008.
 - ⁹ World Health Organization (1997). WHO Global Status Report – China – 1997. *Tobacco or Health: A global status report*. Geneva: World Health Organization. <http://www.cdc.gov/tobacco/who/>
 - ¹⁰ Hu Teh-Wei, Mao Z (2002). Economic analysis of tobacco and options for tobacco control: China Case Study. Washington: World Bank. <http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/Hu-ChinaCaseStudy-whole.pdf>
 - ¹¹ World Health Organization (1997). WHO Global Status Report – China – 1997. *Tobacco or Health: A global status report*. Geneva: World Health Organization. <http://www.cdc.gov/tobacco/who/>

-
- ¹² WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package. Geneva, World Health Organization, 2008.
- ¹³ Yurekli AA (2000). *Tobacco and China a Complex Challenge*. Presentation for Ministerial Level Economics of Tobacco Control Seminar, Beijing, China. November 2000. <http://www1.worldbank.org/tobacco/presentation.asp>
- ¹⁴ Sun S, Korhonen T, Uutela A, Korhonen HJ, Puska P, Jun Y, Chonghua Y, Zeyu G, Yonghao W, Wenqing X (2000). International Quit and Win 1996: comparative evaluation study in China and Finland. *Tob. Control*, 9, 303-309.
- ¹⁵ Chen X, Stacy A, Zheng H, Shan J, Spruijt-Metz D, Unger J, Gong J, Gallaher P, Liu C, Azen S, Sohaila Shakib S, Johnson CA. (2003). Sensations from initial exposure to nicotine predicting adolescent smoking in China: A potential measure of vulnerability to nicotine. *Nicotine and Tobacco Research*, Vol 5 (4): 455-63.
- ¹⁶ Abdullah AS, Fielding R, Hedley AJ. (2002). "Patterns of Cigarette Smoking, Alcohol Use and Other Substance Use Among Chinese University Students in Hong Kong." *American Journal of Addiction*, 11, 235-46.
- ¹⁷ Chen, J-W (1988). *Adolescents' knowledge, behavior patterns, and attitudes related to cigarette smoking in the Republic of China*. (PhD dissertation, Indiana University). *Dissertation Abstracts International*, Vol 49(11-B), 4739. 163pp.
- ¹⁸ Zhu BP, Liu M, Shelton D, Liu S, Giovino GA (1996). Cigarette smoking and its risk factors among elementary school students in Beijing. *Am J Public Health*, 86, 368-375.
- ¹⁹ Niu SR, Guan N, Tian B, et al (1995). The survey of smoking pattern on 30,000 students. *J Health Study*, 24, 15-18.
- ²⁰ [Hu TW](#), [Mao Z](#), [Liu Y](#), [de Beyer J](#), [Ong M](#) (2005). Smoking, standard of living, and poverty in China. *Tob Control*, 14(4), 247-50.
- ²¹ [Abdullah AS](#), [Yam HK](#) (2005). Intention to quit smoking, attempts to quit, and successful quitting among Hong Kong Chinese smokers: population prevalence and predictors. *Am J Health Promot.*, 19(5), 346-54.
- ²² [Gu D](#), [Wu X](#), [Reynolds K](#), [Duan X](#), [Xin X](#), [Reynolds RE](#), [Whelton PK](#), [He J](#); [InterASIA Collaborative Group](#) (2004). Cigarette smoking and exposure to environmental tobacco smoke in China: the international collaborative study of cardiovascular disease in Asia. *Am J Public Health*, 94(11), 1972-6.
- ²³ Yang GH, Fan L, Tan J, Guoming Q, Zhang Y, Samet JM, Taylor CE, Becker K, Xu J. (2000) Smoking in China: findings from the 1996 national prevalence survey. *JAMA*, 282, 1247-1253.
- ²⁴ [Yang G](#), [Ma J](#), [Chen A](#), [Zhang Y](#), [Samet JM](#), [Taylor CE](#), [Becker K](#) (2001). Smoking cessation in China: findings from the 1996 national prevalence survey. *Tobacco Control*, 10(2), 170-4.
- ²⁵ Weng X, Hong Z, Chen D (1987). Smoking prevalence in Chinese aged 15 and above. *Chin Med J.*, 100, 886-892.

-
- ²⁶ Statistics Information Center, Ministry of Health (2004). Survey on Chinese health service. Beijing, China: China Union Medical University Press.
- ²⁷ [Chen X, Li X, Stanton B, Fang X, Lin D, Cole M, Liu H, Yang H](#) (2004). Cigarette smoking among rural-to-urban migrants in Beijing, China. *Prev Med.*, 4, 666-73.
- ²⁸ [Wang L, Kong L, Wu F, Bai Y, Burton R](#) (2005). Preventing chronic diseases in China. *Lancet*, 366(9499),1821-4.
- ²⁹ Department of Disease Control of the Ministry of Health (1997). The 1995 Annual Report on Disease Surveillance. *Chinese Academy of Preventive Medicine*. Beijing, China: Hua Xia Publishing House.
- ³⁰ Unger JB, Yan L, [Chen X, Jiang X, Azen S, Qian G, Tan S, Jie G, Sun P, ChunHong L, Chou CP, Zheng H](#), Anderson Johnson C (2001). Adolescent smoking in Wuhan, China: baseline data from the Wuhan Smoking Prevention Trial. *Am J Prev Med.*, 3, 162-9.
- ³¹ Chen, Xinguang, Yan Li, Jennifer B. Unger, Jie Gong, C. Anderson Johnson and Qian Guo. (2001). Hazard of Smoking Initiation by Age Among Adolescents in Wuhan, China. *Preventive Medicine*, 32.5, 437-445.
- ³² Global Youth Tobacco Survey: report on the Results of the GYTS Survey in China – Shandong.
http://www.cdc.gov/tobacco/global/GYTS/factsheets/1999/chinashandong_factsheet.htm
- ³³ Tobacco Journal International. 2008. 2007 Revisited. *TJI Yearbook 2008: Review, addresses, brands*. 10.
- ³⁴ Tobacco Journal International. 2008. 2007 Revisited. *TJI Yearbook 2008: Review, addresses, brands*. 11
- ³⁵ Certain regulations on the scope of the ban on smoking in public places in Beijing Municipality. (2008). *Beijing Municipal Government Directive No. 204*.
- ³⁶ (2007, October 3). Beijing bans smoking in cabs in run-up to Olympics. *Xinhua News Agency*. Retrieved 3 June 2008 from <http://en.chinagate.com.cn/environment/2007-10/03/content_8998197.htm>
- ³⁷ "Changsha". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Changsha>>
- ³⁸ "Guangzhou". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Ghangzhou>>.
- ³⁹ Hong, C. (2007, May 30). City to ban smoking in public. *China Daily*. Retrieved 3 June 2008 from <http://www.chinadaily.com.cn/china/2007-05/30/content_882941.htm>.
- ⁴⁰ (2008, May 29). Tobacco control legislation to be expected in Guangzhou. *Guangzhou International*. Retrieved 3 June 2008 from <http://www.gz.gov.cn/vfs/subsite/JGIN7QPB-AZE4-2MTO-EA6G-R281E8V2SFJH/content/content_visitor.jsp?contentId=569264&catId=5944>
- ⁴¹ "Shenyang". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Shenyang>>
- ⁴² "Shanghai". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Shanghai>>

⁴³ (2008, April 1). Shanghai eyes smoke-free environment for world expo. *China Daily*. Retrieved 3 June 2008 from <http://www.china.org.cn/environment/health_green_living/2008-04/01/content_14036923.htm>.

⁴⁴ "Yinchuan". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Yinchuan>>

⁴⁵ "Zhengzhou". Retrieved 3 June 2008 from <<http://en.wikipedia.org/wiki/Zhengzhou>>.

APPENDIX F: ITC CHINA WAVE 1 SURVEY

The People's Republic of China "Statistical Law" 3:15: "Investigation data about individuals and households cannot be released without the permission from the subject".

	INTVWR	
	Interviewer code CODE0	
CITY	street	block
City code CODE1	Street code CODE2	Residential block code CODE3
household	individ	1
Household code CODE4	Individual code CODE5	
RESPNAME	DE710	
Subject's name CODE_NAME	Telephone number CODE_TEL	

The Framework Convention on Tobacco Control Surveillance Adult Smoker's Questionnaire

DATE OF INTERVIEW: □□□□YYYY□□MM□□DD **DATE**

START TIME: □□HOUR□□MINUTE **BI606**

**NATIONAL CENTER FOR CHRONIC AND
NONCOMMUNICABLE DISEASE CONTROL AND
PREVENTION**

**CHINESE CENTER FOR DISEASE CONTROL AND
PREVENTION**

Inclusion criteria of study subjects:

1. Local registered residents, 18 years and older;
2. Have smoked at least 100 cigarettes in their lifetime, and are smoking now;
3. Will live in this house in next 5 years, or promise to inform local CDC after moving.

A. Smoking part

AN2. Have you smoked 100 cigarettes or more in your lifetime?

- ① Yes
- ② No

BK31501

A1. Do you smoke every day less than every day, or not at all? (Including factory-made cigarettes, hand-rolled cigarettes)

- ① Every day
- ② Some days → Skip to A3.
- ③ Not at all → Skip to Exclusion script.

FR31211

For every day smokers, ask A2.

A2. On average, how many cigarettes do you smoke each day, including both factory-made and hand-rolled cigarettes?

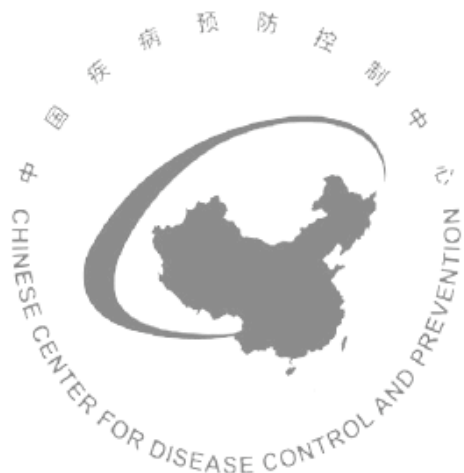
FR31216

For some days smokers, ask A3.

A3. On average, how many cigarettes do you smoke each week?

FR31226

Notes: If respondents give range (e.g. 15-20 cigarettes), choose midpoint and round up, if necessary (e.g. 17.5 becomes 18.0).



B. Survey part

B1. Do you smoke factory-made cigarettes, roll-your-own cigarettes, or both?

- ① Only factory-made cigarettes → Skip to B3.
- ② Only roll-your-own cigarettes → Skip to B3.
- ③ Both

FR31326

B2. Which do you smoke more, factory-made cigarettes or roll-your-own cigarettes?

- ① Factory-made cigarettes
- ② Roll-your-own cigarettes
- ③ About the same

FR31327

B3. In the last month, what brand of [factory-made/roll-your-own cigarettes] did you smoke more than any other? (Please choose only one brand)

Interviewer Note: Ask for brand family (e.g. Baisha), AND brand variety

(e.g. light, etc.) as instructed on card①

B3A. Brand Roll your own: Skip to B4

BR31301

B3AS1. Other (Domestic):

B3AS2. Other (Foreign):

BR31301o
BR31302o

B3B. Variety

BR31303

B3BS1. Other (Domestic):

B3BS2. Other (Foreign):

BR31303o
BR31304o

_____ B3C. Tobacco Company of the cigarettes you smoke?

BR31306o

B3D. Can you tell me the tar level (in mgs) of the brand?

(99) DK/Cannot say (Don't read out)

BR31405

B3E. Taste

- ① Virginia type
- ② Blended type
- ③ Menthol cigarettes
- ④ DK/Cannot say (Don't read out)

BR31307

B3G. W/o authenticity label

- ① With
- ② Without
- ④ DK/Cannot say (Don't read out)

BR31314

B3H. Number of cigarettes in one pack

- ① 20/pack
- ② <20/pack
- ③ >20/pack
- ④ DK/Cannot say (Don't read out)

BR31342

B3I. Filtered or non-filtered?

- ① Filtered
- ② Non-filtered
- ③ DK/Cannot say (Don't read out)

BR31315

B3J. Does your brand have small holes around the filter?

- ① Yes
- ② No
- ③ DK/Cannot say (Don't read out)

BR31501

B3K. Product Code Bar

BR31316

B3L. (For interviewers) Where do you get the above information of the brand?

- ① From the pack
- ② From the subject
- ③ Both

BR31317

B4. About how long have you been smoking (the brand in B3A)?

- ① <1 year
- ② 1-5 years
- ③ 6-10 years
- ④ More than 10 years

BR31502

B4N. About how long have you been smoking (from when you started smoking)?

- ① <1 year
- ② 1-5 years
- ③ 6-10 years
- ④ More than 10 years

BR31215



B5. In choosing [B3A Brand], was part of your decision to smoke this brand based on any of the following: (Read each statement and show card①)

<input type="checkbox"/> B5A.	How they taste ①Yes ②No ③Not sure (Don't read out)	BR31611
<input type="checkbox"/> B5B.	How good they make you feel ①Yes ②No ③Not sure (Don't read out)	BR31612
<input type="checkbox"/> B5C.	This brand is less harmful to my health than my regular brand ①Yes ②No ③Not sure (Don't read out)	BR31613
<input type="checkbox"/> B5D.	Price ①Yes ②No ③Not sure (Don't read out)	BR31614
<input type="checkbox"/> B5E.	I receive this brand as a gift ①Yes ②No ③Not sure (Don't read out)	BR31615
<input type="checkbox"/> B5F.	The package ①Yes ②No ③Not sure (Don't read out)	BR31616
<input type="checkbox"/> B5G.	It is a popular brand ①Yes ②No ③Not sure (Don't read out)	BR31617
<input type="checkbox"/> B5H.	High quality ①Yes ②No ③Not sure (Don't read out)	BR31618
<input type="checkbox"/> B5I.	B5IS. Other reasons: ①Yes ②No ③Not sure (Don't read out)	BR31619

B6. Do you smoke any other brands or brand varieties?

- ① Yes
② No (skip to B9)
③ DK/Cannot say (Don't read out)

BR31659

B7. How often do you smoke a SECOND brand - that is, the variety you are most likely to smoke when you are not smoking the variety you smoke most often.

- ② every day
③ every week
④ every month
⑤ less than every month
⑥ DK/Cannot say (Don't read out)

BR31660

B8A. Brand of the SECOND brand Roll your own: Skip to B4

BR31661

B8AS1. Other (Domestic):

BR31661o

B8AS2. Other (Foreign):

BR31662o

B8B. Variety of the SECOND brand BR31663

B8BS1. Other (Domestic): BR31663o

B8BS2. Other (Foreign): BR31664o

B8C. Tobacco company of the cigarettes you smoke? BR31666o

B9. We would like to find out why you smoke this second brand. Please tell us whether each of these reasons is one of your reasons why you smoke this second brand. (Read each statement and show card①)

<input type="checkbox"/> B9A.	How they taste ①Yes ②No ③Not sure (Don't read out)	BR31631
<input type="checkbox"/> B9B.	How good they make you feel ①Yes ②No ③Not sure (Don't read out)	BR31632
<input type="checkbox"/> B9C.	This brand is less harmful to my health than my regular brand ①Yes ②No ③Not sure (Don't read out)	BR31633
<input type="checkbox"/> B9D.	Price ①Yes ②No ③Not sure (Don't read out)	BR31634
<input type="checkbox"/> B9E.	I receive this brand as a gift ①Yes ②No ③Not sure (Don't read out)	BR31635
<input type="checkbox"/> B9F.	The package ①Yes ②No ③Not sure (Don't read out)	BR31636
<input type="checkbox"/> B9G.	It is a popular brand ①Yes ②No ③Not sure (Don't read out)	BR31637
<input type="checkbox"/> B9H.	High quality ①Yes ②No ③Not sure (Don't read out)	BR31638
<input type="checkbox"/> B9I.	B9IS. Other reasons: ①Yes ②No ③Not sure (Don't read out)	BR31649 BR31649o

B10. Have you ever tried cigarettes that are described as light, mild or low-tar?

- ① Yes
- ② No
- ③ DK/Cannot say (Don't read out)

LM31211

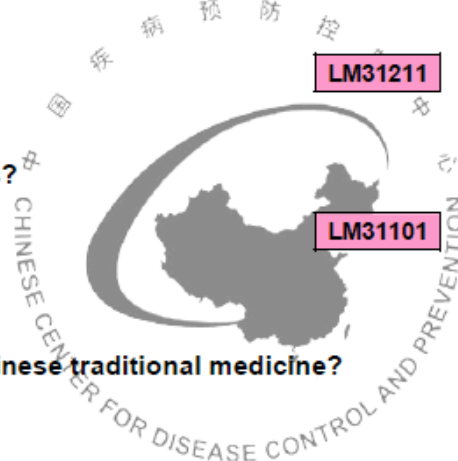
B11. Have you ever tried menthol cigarettes?

- ① Yes
- ② No
- ③ DK/Cannot say (Don't read out)

LM31101

B12. Have you ever tried cigarettes with Chinese traditional medicine?

- ① Yes
- ② No



- ⑨ DK/Cannot say (Don't read out)

B13A. How soon after waking do you usually have your first smoke?

- ① <5 min
 ② 6-30 min
 ③ 31-60 min
 ④ 61+ min
 ⑨ Not sure

SB31012

B13B. How soon after waking do you usually have your first smoke?

(Please read and show card)

- (1) Immediately (Before toilet)
 (2) During toilet
 (3) After toilet or before breakfast
 (4) With breakfast
 (5) After breakfast
 (6) In the morning
 (7) In the afternoon
 (8) In the evening
 (99) No specific time (none of the above) (Don't read out)

SB31013

B14. Do you consider yourself addicted to cigarettes? Would you say...?

(Read)

- ① Not at all
 ② A little
 ③ Somewhat
 ④ A lot
 ⑨ DK/Cannot say (Don't read out)

SB31031

B15. How hard would you find it to go without smoking for a whole day?

(Read)

- ① Not at all hard
 ② A little hard
 ③ Somewhat hard
 ④ Extremely hard
 ⑨ DK/Cannot say (Don't read out)

SB31041

B16A. Do your cigarettes ever go out between puffs?

- ① Yes
 ② No → Skip to B16.
 ⑨ DK/Cannot say (Don't read out) → Skip to B16.

SB31085

B16B. How often?

- ① Occasionally
 ② Very often
 ⑨ DK/Cannot say (Don't read out)

SB31086

B16C. During the past 12 months, have you noticed any changes to the cigarettes you usually smoke in how they taste?

- ① Yes
 ② No Skip to B17.
 ⑨ DK/Cannot say (Don't read out) Skip to B17.

SB31101

B16D. Do they taste better or worse?

- ① Better
- ② Worse
- ⑨ DK/Cannot say (Don't read out)

SB31103

B16E. During the past 12 months, have you noticed any changes to the cigarettes you usually smoke in how much they satisfy you?

- ① Yes
- ② No Skip to B16N.
- ⑨ DK/Cannot say (Don't read out) Skip to B16N.

SB31105

B16F. Are they more or less satisfying than before?

- ① More satisfying
- ② Less satisfying
- ⑨ DK/Cannot say (Don't read out)

SB31107

B16N. Do you think smoking is good or not good for your health?

- ① Good
- ② Neither good nor bad
- ③ Not good
- ⑨ DK/Cannot say (Don't read out)

SB31200

B17. In the last month, how often, if at all, did you: (Please read each statement and show card)

<input type="checkbox"/> B17A. Think about how much you enjoy smoking	①Never ②Occasionally ③Often ⑨Cannot say (Don't read out)	SB31203
<input type="checkbox"/> B17B. Think about the harm your smoking might be doing to you?	①Never ②Occasionally ③Often ⑨Cannot say (Don't read out)	SB31205
<input type="checkbox"/> B17C. Think about the harm your smoking might be doing to other people?	①Never ②Occasionally ③Often ⑨Cannot say (Don't read out)	SB31207
<input type="checkbox"/> B17D. Seriously consider quitting?	①Never ②Occasionally ③Often ⑨Cannot say (Don't read out)	SB31210
<input type="checkbox"/> B17E. Think about the cost of smoking	①Never ②Occasionally ③Often ⑨Cannot say (Don't read out)	SB31211

B18. In the last month, have you butted out a cigarette before you finished it because you thought about the harm of smoking?

- ① Yes
- ② No
- ⑨ DK/Cannot say (Don't read out)

SB31221



C. Quitting history

C1. Have you ever tried to quit smoking?

- ① Yes
- ② No **Skip to D1.**

QA31101

C2. How many times have you ever tried to quit smoking?

- ① Once
- ② 2-5 times
- ③ 6-10 times
- ④ More than 10 times
- ⑨ DK/Cannot say (**Don't read out**)

QA31106

C3. How long ago did your most recent serious quit attempt end? (**Don't read out**)

- (1) Less than 1 month
- (2) 1-3 months
- (3) 3 months to half a year
- (4) Half a year to 1 year
- (5) 1-3 years
- (6) More than 3 years
- (9) DK/Cannot say (**Don't read out**)

QA31231

C4. Thinking about your last serious quit attempt --- How long did you stay smoke-free? (**Don't read out**)

- (1) Less than 1 month
- (2) 1-3 months
- (3) 3 months to half a year
- (4) Half a year to 1 year
- (5) 1-3 years
- (6) More than 3 years
- (9) DK/Cannot say (**Don't read out**)

QA31235

D. Knowledge of health effects

D1. I am going to read you a list of health effects and diseases that may or may not be caused by smoking cigarettes. Based on what you know or believe, does smoking cause the following: (Read each statement)

<input type="checkbox"/> D1A. Stroke ①Yes ②No ③DK (Don't read out)	KN31221
<input type="checkbox"/> D1B. Impotence in male smokers ①Yes ②No ③DK (Don't read out)	KN31231
<input type="checkbox"/> D1C. Lung cancer in smokers ①Yes ②No ③DK (Don't read out)	KN31241
<input type="checkbox"/> D1D. Emphysema ①Yes ②No ③DK (Don't read out)	KN31243
<input type="checkbox"/> D1E. Stained teeth in smokers ①Yes ②No ③DK (Don't read out)	KN31102
<input type="checkbox"/> D1F. Premature aging ①Yes ②No ③DK (Don't read out)	KN31103
<input type="checkbox"/> D1G. Lung cancer in nonsmokers from secondhand smoke ①Yes ②No ③DK (Don't read out)	KN31251
<input type="checkbox"/> D1H. CHD ①Yes ②No ③DK (Don't read out)	KN31211

D2. Are each of the following statements true or false? (Read each of the statements)

<input type="checkbox"/> D2A. The way a smoker inhales can affect the amount of tar and nicotine a smoker takes in. ①Yes ②No ③DK (Don't read out)	KN31411
<input type="checkbox"/> D2B. Filters reduce the harmfulness of cigarettes. ①Yes ②No ③DK (Don't read out)	KN31431
<input type="checkbox"/> D2C. The nicotine in cigarettes is the chemical that causes most of the cancer. ①Yes ②No ③DK (Don't read out)	KN31441
<input type="checkbox"/> D2D. The quality of foreign cigarette is better than that of domestic cigarettes. ①Yes ②No ③DK (Don't read out)	KN31513
<input type="checkbox"/> D2E. Foreign cigarettes do less harm to your health compared to domestic cigarettes. ①Yes ②No ③DK (Don't read out)	KN31515

E. Health warning labels

E1. (Show **card**) In the last month, how often, if at all, have you noticed the health warning on cigarette packages?

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (Don't read out)

WL31201

E2. (Show **card**) In the last month, how often, if at all, have you read or looked closely at the health warning on cigarette packages?

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (Don't read out)

WL31211

E3. In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one? Would you say: (Read and show **card**)

- ① Never
- ② Once
- ③ A few times
- ④ Many times
- ⑤ DK/Cannot say (Don't read out)

WL31221

E4. In the last month, have you made any effort to avoid looking at or thinking about the warning labels: (Read)

- ① Yes
- ② No/Don't care health warning
- ③ DK/Cannot say (Don't read out)

WL31310

E5. To what extent, if at all, do the health warnings on cigarette packs make you more likely to think about the health risks (health danger) of smoking? (Read and show **card**)

- ① Not at all
- ② A little
- ③ A lot
- ④ DK/Cannot say (Don't read out)

WL31411

E6. To what extent, if at all, do the health warnings on cigarette packs make you more likely to quit smoking? (Read and show **card**)

- ① Not at all
- ② A little
- ③ A lot
- ④ DK/Cannot say (Don't read out)

WL31421

F. Advertising/promotion

F1. In the last 6 months, how often have you noticed things that are designed to encourage smoking or which make you think about smoking? (things like advertising and pictures of smoking) (Read and show AD31201 card)

Note: It doesn't have to be advertising, anything that promote smoking can be count)

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (Don't read out)

F2. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places? (Read out

each statement and show card)

<input type="checkbox"/> F2A.	On television ①Yes ②No ③Didn't watch TV/DK (Don't read out)	AD31206
<input type="checkbox"/> F2B.	On radio ①Yes ②No ③Didn't listen to radio/DK (Don't read out)	AD31211
<input type="checkbox"/> F2C.	On posters ①Yes ②No ③Didn't see any posters/DK (Don't read out)	AD31220
<input type="checkbox"/> F2D.	On billboards ①Yes ②No ③Didn't see any billboards/DK (Don't read out)	AD31221
<input type="checkbox"/> F2E.	In newspapers or magazines ①Yes ②No ③Didn't read newspapers and magazines/DK (Don't read out)	AD31226
<input type="checkbox"/> F2F.	In cinemas ①Yes ②No ③Didn't go to cinemas/DK (Don't read out)	AD31216
<input type="checkbox"/> F2G.	On shop/store windows or inside shops/stores where you buy tobacco ①Yes ②No ③Didn't go to shops or stores/DK (Don't read out)	AD31231
<input type="checkbox"/> F2H.	On or around street vendors ①Yes ②No ③Didn't go/DK (Don't read out)	AD31233
<input type="checkbox"/> F2I.	Over the Internet ①Yes ②No ③Didn't use the Internet/DK (Don't read out)	AD31208
<input type="checkbox"/> F2J.	At your working places ①Yes ②No ③Have no job/DK (Don't read out)	AD31209
<input type="checkbox"/> F2K.	On public transportation vehicles or stations ①Yes ②No ③Didn't use public transportation/DK (Don't read out)	AD31210
<input type="checkbox"/> F2L.	In restaurants, cafeterias or tea bars ①Yes ②No ③Didn't go/DK (Don't read out)	AD31212
<input type="checkbox"/> F2M.	In discos/karaoke lounges, or other entertainment venues ①Yes ②No ③Didn't go/DK (Don't read out)	AD31213

F3A. In the last six months, have you seen or heard about any sport or sporting event that is sponsored by or connected with either cigarette brands or tobacco companies?

- ① Yes
- ② No
- ③ DK/Cannot say (Don't read out)

AD31351

F3B. In the last six months, have you seen or heard about any music, theatre, art, or fashion events, that are sponsored by or connected with either cigarette brands or tobacco companies?

- ① Yes
- ② No
- ③ DK/Cannot say (Don't read out)

AD31355

F4. In the last 6 months, have you noticed (seen) any of the following types of tobacco promotion (Read out each statement)

<input type="checkbox"/> F4A.	Free samples of cigarettes ① Yes ② No ③ DK (Don't read out)	AD31401
<input type="checkbox"/> F4B.	Special price offers for cigarettes ① Yes ② No ③ DK (Don't read out)	AD31411
<input type="checkbox"/> F4C.	Free gifts or special discount offers on other products when buying cigarettes ① Yes ② No ③ DK (Don't read out)	AD31421
<input type="checkbox"/> F4D.	Clothing or other items with a cigarette brand name or logo ① Yes ② No ③ DK (Don't read out)	AD31501
<input type="checkbox"/> F4E.	Competitions linked to cigarettes ① Yes ② No ③ DK (Don't read out)	AD31511

F5. Thinking about news stories relating to smoking or tobacco companies that might have been on TV, radio, or in the newspapers. In the last 6 months, about how often, if at all, have you seen or heard a news story about smoking? (Read and show card)

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (Don't read out)

AD31601

F6. Now thinking about the entertainment media, like movies, TV programs, and magazines. In the last 6 months, about how often, if at all, have you seen people smoking in the entertainment media? (Read and show card)

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (Don't read out)

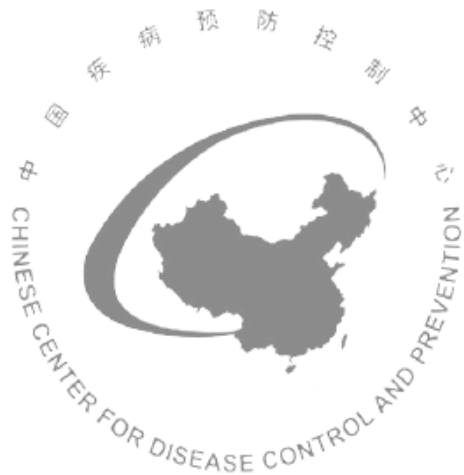
AD31611

G0. In the last 6 months, have you ever seen advertising or information that talks about the dangers of smoking, or encourages quitting?

FCTC surveillance

- ① Never
- ② Once in a while
- ③ Often
- ④ DK/Cannot say (**Don't read out**)

AD31701



G. Media campaign

G1. In the last 6 months, have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting in any of the following places? (Read out each statement and show card)

<input type="checkbox"/> G1A. On television ①Yes ②No ③Didn't watch TV/DK (Don't read out)	AD31711
<input type="checkbox"/> G1B. On radio ①Yes ②No ③Didn't listen to radio/DK (Don't read out)	AD31716
<input type="checkbox"/> G1C. On posters ①Yes ②No ③Didn't see any posters/DK (Don't read out)	AD31725
<input type="checkbox"/> G1D. On billboards ①Yes ②No ③Didn't see any billboards/DK (Don't read out)	AD31726
<input type="checkbox"/> G1E. In newspapers or magazines ①Yes ②No ③Didn't read newspapers and magazines/DK (Don't read out)	AD31731
<input type="checkbox"/> G1F. In cinemas ①Yes ②No ③Didn't go to cinemas/DK (Don't read out)	AD31721
<input type="checkbox"/> G1G. On shop/store windows or inside shops/stores where you buy tobacco ①Yes ②No ③Didn't go to shops or stores/DK (Don't read out)	AD31736
<input type="checkbox"/> G1H. On or around street vendors ①Yes ②No ③Didn't go/DK (Don't read out)	AD31712
<input type="checkbox"/> G1I. Over the Internet ①Yes ②No ③Didn't use the Internet/DK (Don't read out)	AD31713
<input type="checkbox"/> G1J. At your working places ①Yes ②No ③Have no job/DK (Don't read out)	AD31714
<input type="checkbox"/> G1K. On public transportation vehicles or stations ①Yes ②No ③Didn't use public transportation/DK (Don't read out)	AD31717
<input type="checkbox"/> G1L. In restaurants, cafeterias or tea bars ①Yes ②No ③Didn't go/DK (Don't read out)	AD31718
<input type="checkbox"/> G1M. In discos/karaoke lounges, or other entertainment venues ①Yes ②No ③Didn't go/DK (Don't read out)	AD31719
<input type="checkbox"/> G1N. On cigarette packs ①Yes ②No ③Didn't go/DK (Don't read out)	AD31720

Note: "No smoking" signs don't count. We want to focus on posters or billboards that talk about the dangers of smoking, or encourage quitting.

H. Overall media evaluation

- H1. Now thinking about all forms of advertising talking about the dangers of smoking or encouraging quitting: Has this advertising made smoking less socially desirable?
If yes, is that a little or a lot?

- ① No, not at all
- ② Yes, a little
- ③ Yes, a lot
- ④ DK/Cannot say (Don't read out)

AD31161

- H2. As a whole, has this advertising made you more or less likely to quit smoking or made no difference?

- ① More likely to quit smoking
- ② Less likely to quit smoking
- ③ Made no difference
- ④ DK/Cannot say (Don't read out)

AD31162



I. Price/taxation and sources of tobacco products

These next questions are about cigarette prices and where you get your cigarettes

I1. Where did you last buy cigarettes for yourself? (Don't read checklist, but can give examples) (Select only one response)

SO31211

- (01) From a street vender
- (02) Local stores, convenience stores or gas stations
- (03) Hypermarket or supermarket
- (04) From bar/entertainment outlets (bars, cafeterias, or tea bars)
- (05) From a restaurant
- (06) From a hotel/inn
- (07) Duty-free shop
- (08) Outside the country
- (09) Military stores
- (10) On the Internet
- (11) From vending machines
- (12) From a vender selling from a public transportation vehicle (a train or a ship)
- (13) From a smoke shop
- (14) I1S14S. Others:

SO31211o

I2A. What brand did you buy? (Cigarette brand you last bought)

BR31711

I2AS1. Other (Domestic):

I2AS2. Other (Foreign):

BR31711o
BR31712o

I2B. What variety did you buy?

BR31713

I2BS1. Other (Domestic):

I2BS2. Other (Foreign):

BR31713o
BR31714o

_____ I2C. Tobacco Company of the cigarettes

BR31716o

I3. The last time you bought cigarettes for yourself, did you buy them by the carton, the pack, or as single cigarettes?

- ① Carton
- ② Pack
- ③ Single cigarette
- ④ Hand-rolled cigarettes/tobacco → Skip to I4W.

PU31201

I3N1. How many packs of cigarettes did you purchase (If a smoker bought by the carton or as single cigarettes, please convert to packs. For example, a carton of cigarettes equals to 10.00 packs, a single cigarette equals to 0.05 packs) PU31311

I3N2. How much did you pay for all the cigarettes you bought last time? PU31341

I3N3. On average, how much did you pay for each pack of the cigarettes you bought last time? PU31331

Interviewer note :
 Respondents might not know the cost per pack, and we don't want them to do arithmetic. If can only provide price for multiple packs of cigarettes, please do the arithmetic to get the price for each pack and enter that.

I4W. In the last month, have you ever purchased foreign cigarettes?
 ① Yes PU31701
 ② No → Skip to I5N.

I4X. In the last month, what brand of foreign cigarettes did you purchase more than any other foreign brands? (Only one brand) PU31703o

I4Y. In the last month, how many packs of [I4X brand] have you purchased? PU31705

I4Z. On average, how much did you pay for each pack of [I4X brand] you bought in the last month? PU31707

I5N. In the last 6 months, have you purchased cigarettes that are less expensive than you can get from local stores for economic reasons?
 ① Never PU31601
 ② Once in a while
 ③ Often
 ④ DK/Cannot say (Don't read out)

I7. In the last 6 months, have you spent money on cigarettes that you knew would be better spent on household essentials like food? PU31621
 ① Yes
 ② No
 ③ DK/Cannot say (Don't read out)



J. Other tobacco products

J1. In the past month, have you used any other tobacco product including smoked or smokeless tobacco?

- ① Yes
② No → Skip to K1.

ST31200

J2. What did you use? (Don't read out, select all that apply) Do you use [products] daily or less than daily?

<input type="checkbox"/> J2A.	Cigars	①Daily	②Less than daily	③never (Don't read)	ST31352
<input type="checkbox"/> J2B.	Pipes or water pipes	①Daily	②Less than daily	③never (Don't read)	ST31358
<input type="checkbox"/> J2C.	Chewing tobaccos	①Daily	②Less than daily	③never (Don't read)	ST31360
<input type="checkbox"/> J2D.	Snuffs	①Daily	②Less than daily	③never (Don't read)	ST31362
<input type="checkbox"/> J2E.	J2ES. Other products (Specify):	①Daily	②Less than daily	③never (Don't read)	ST31388

J3. Now just thinking about smokeless forms of tobacco. As far as you know, are any smokeless tobacco products less harmful than ordinary cigarettes?

- ① Yes
② No
③ DK/Cannot say (Don't read out)

SL31301

K. Stop-smoking medications

K1. Have you heard about medications to help people stop smoking such as Nicotine Replacement Therapies like nicotine gum or the patch, stop-smoking pills such as Zyban?

- ① Yes
- ② No

NR31101

K1N1. Have you heard about Chinese traditional stop-smoking medications?

- ① Yes
- ② No

NR31102

K1N2. Have you heard about stop-smoking acupuncture?

- ① Yes
- ② No

NR31103

K2. Have you ever used any of these stop-smoking medications or treatments?

- ① Yes
- ② No **Skip to L1A.**
- ⑨ Cannot remember (Don't read out) Skip to L1A.

NR31106

K3. Which medications or treatments have you used?

<input type="checkbox"/> K3A.	Nicotine gum	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31111
<input type="checkbox"/> K3B.	Nicotine lozenges	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31113
<input type="checkbox"/> K3C.	Nicotine nasal spray	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31116
<input type="checkbox"/> K3D.	Chinese traditional medicine	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31108
<input type="checkbox"/> K3E.	Acupuncture	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31109
<input type="checkbox"/> K3F.	K3FS. Other (Specify):	① Used over one year ago ② Used in last year ⑨ Never used (Don't read out)	NR31119 NR31119o



L. Cessation services

L1A. In the last 6 months, have you visited a doctor or other health professional?

- ① Yes
② No → Skip to L2.

NR31801

L1B. During any visit to the doctor or other health professional in the last 6 months, did you receive: (Read)

<input type="checkbox"/> L1BA. Advice to quit smoking ① Yes ② No ⑨ Cannot say (Don't read)	NR31811
<input type="checkbox"/> L1BB. Additional help or a referral to another service to help you quit ① Yes ② No ⑨ Cannot say (Don't read)	NR31813
<input type="checkbox"/> L1BC. Pamphlets or brochures on how to quit ① Yes ② No ⑨ Cannot say (Don't read)	NR31817

L2. In the last 6 months, have you received advice or information about quitting smoking from any of the following?

L2A. Telephone or Quit Line services?

- ① Yes
② No
⑨ DK/Cannot say (Don't read out)

NR31861

L2B. Local stop-smoking services (such as hospitals or clinics)?

- ① Yes
② No
⑨ DK/Cannot say (Don't read out)

NR31869

LXA Have you ever heard about the "International Quit & Win Contest" in China?

- ① Yes
② No Skip to LY.

AD31100

LXB. Did you participate the "International Quit & Win Contest" in China?

- ① Yes
② No

AD31105

LXC. Did China "International Quit & Win Contest" make you think quitting?

- ① Very much
② A little
③ Not at all

AD31111

LY. Have you ever heard about "the Framework Convention on Tobacco Control"?

- ① Yes
② No

AD31159

M. Beliefs about quitting

- M1. If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed? (Read and show card 5) BQ31111
- ① Not at all sure
 - ② Somewhat sure
 - ③ Very sure
 - ④ Extremely sure
 - ⑨ DK/Cannot say (Don't read out)

Interviewer note: Respondent does not need to be intending to quit to respond. Emphasize "if" in wording.

M2. Now turn to card 6

- M2A. Are you planning to quit smoking? (Read and show card 6) BQ31141
- ① Within the next month
 - ② Within the next 6 months → Skip to M3.
 - ③ Sometime in the future, beyond 6 months → Skip to M3.
 - ④ Not planning to quit → Skip to M3.
 - ⑨ DK/Cannot say (Don't read out) → Skip to M3.

- M2B. Have you set a firm date? BQ31146
- ① Yes
 - ② No
 - ⑨ DK/Cannot say (Don't read out)



M3. In the past 6 months, have each of the following things led you to think about quitting, not at all, somewhat, or very much: Read and show

<input type="checkbox"/> M3A.	Concern for your personal health? ① Not at all ② A Little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31201
<input type="checkbox"/> M3B.	Concern about the effect of your cigarette smoke on non-smokers? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31203
<input type="checkbox"/> M3C.	That China society disapproves of smoking? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31207
<input type="checkbox"/> M3D.	The price of cigarettes? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31209
<input type="checkbox"/> M3E.	Smoking restrictions in public and work places? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31211
<input type="checkbox"/> M3F.	Advertisements or information about the health risks of smoking? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31225
<input type="checkbox"/> M3G.	Health warning labels on cigarette packages? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31227
<input type="checkbox"/> M3H.	Setting an example for children? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31229
<input type="checkbox"/> M3I.	Your family disapproves of smoking? ① Not at all ② A little ③ Very much ⑨ DK/Cannot say (Don't read out)	BQ31215

M4. How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months? (Read and show)

- ① Not at all
② A little
③ Very much
⑨ DK/Cannot say (Don't read out)

BQ31301

M5. To what extent, if at all, has smoking damaged your health? Read and show)

- ① Not at all
② A little
③ Very much
⑨ DK/Cannot say (Don't read out)

PR31311

M6. How worried are you, if at all, that smoking will damage your health in the future? (Read)

- ① Not at all
- ② A little
- ③ Very much
- ④ DK/Cannot say (Don't read out)

PR31313



M7. Of the five closest friends or acquaintances that you spend time with on a regular basis, how many of them are smokers?

- ① 1
- ② 2
- ③ 3
- ④ 4
- ⑤ 5
- ⑧ None
- ⑨ DK/Cannot say (Don't read out)

DI31241

M8. What is your overall opinion of smoking? (Read)

- ① Very good
- ② Good
- ③ Neither good nor bad
- ④ Bad
- ⑤ Very bad
- ⑨ DK/Cannot say (Don't read out)

DI31301

N. ETS / smoking restrictions

N1. Which of the following best describes smoking inside your home? (Read and show card)

- ① Smoking is not allowed in any indoor areas
- ② Smoking is allowed only in some indoor areas
- ③ No rules or restrictions
- ⑨ DK/Cannot say (Don't read out)

ET31221

N2. Which of the following best describes the rules about smoking in indoor entertainment places such as restaurants, coffee shops, and karaoke lounges that you go most often? (Read and show card)

- ① Smoking is not allowed in any indoor areas
- ② Smoking is allowed only in some indoor areas
- ③ No rules or restrictions
- ⑧ Never went to these places → Skip to N6A.
- ⑨ DK/Cannot say (Don't read out)

ET31521

N3. In the last 6 months, have you visited such places?

- ① Yes
- ② No → Skip to N6A.
- ⑨ DK/Cannot say (Don't read out)

ET31531

N4. Would that be at least weekly or less often?

- ① At least weekly
- ② Less often
- ⑨ DK/Cannot say (Don't read out)

ET31533

N5. The last time you did so, did you smoke indoors?

- ① Yes
- ② No
- ⑨ DK/Cannot say (Don't read out)

ET31536

N6A. Are you in a paid work?

- ① Yes
- ② No → Skip to N9.
- ⑨ DK/Cannot say (Don't read out)

ET31601

N6B. Do you usually work inside a building?

- ① Yes
- ② No → Skip to N9.
- ⑨ DK/Cannot say (Don't read out)

ET31603

N7. Which of the following best describes the smoking policy where you work? (Read and show card)

- ① Smoking is not allowed in any indoor areas
- ② Smoking is allowed only in some indoor areas
- ③ No rules or restrictions
- ⑨ DK/Cannot say (Don't read out)



ET31621

China-SMsurvey(19Jan)naire

N8. In the last 6 months, have you smoked in indoor areas at work?

ET31625

- ① Yes
 ② No
 ③ DK/Cannot say (Don't read out)

N9. For each of the following public places, please tell me if you think smoking should not be allowed in any indoor areas, should be allowed only in some indoor areas, or no rules or restrictions) (Read and show card)

<input type="checkbox"/> N9A. Hospitals ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31701
<input type="checkbox"/> N9B. Workplaces ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31703
<input type="checkbox"/> N9C. Conference rooms ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31711
<input type="checkbox"/> N9D. Restaurants or bars ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31707
<input type="checkbox"/> N9E. Public transportation vehicles ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31702
<input type="checkbox"/> N9F. Schools ①Smoking is not allowed in any indoor areas ②Smoking is allowed only in some indoor areas ③No rules or restrictions ④DK/Cannot say (Don't read out)	ET31712

O. Knowledge and attitude

Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. (Read and show card) Allow *@* Cannot say option for recording answers but do not read them out)

<input type="checkbox"/> O01.	Low tar cigarettes make it easier to quit smoking	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	LM31312
<input type="checkbox"/> O02.	Low tar cigarettes are smoother on your throat and chest than regular cigarettes	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	LM31332
<input type="checkbox"/> O03.	Low tar cigarettes are less harmful than regular cigarettes	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	LM31322
<input type="checkbox"/> O04.	Menthol cigarettes are smoother on your throat and chest than regular cigarettes	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	LM31105
<input type="checkbox"/> O05.	Menthol cigarettes are less harmful than regular cigarettes	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	LM31103
<input type="checkbox"/> O06.	Every cigarette you take damages your health	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31201
<input type="checkbox"/> O07.	Tobacco is addictive	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31205
<input type="checkbox"/> O08.	You enjoy smoking too much to give it up	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31211
<input type="checkbox"/> O09.	Your cigarette smoke is dangerous to nonsmokers	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31213
<input type="checkbox"/> O10.	If you had to do it over again, you would not have started smoking	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31215
<input type="checkbox"/> O11.	You spend too much money on cigarettes	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	PS31219

	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O12.	Smoking helps you control your weight						PS31225
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O13.	People who are important to you believe that you should not smoke						PS31229
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O15.	Smoking is a sign of sophistication						PS31241
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O16.	Female smoking is acceptable						PS31325
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O17.	Everybody has got to die of something, so why not enjoy yourself and smoke						PS31315
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O18.	Tobacco companies should be allowed to advertise and promote cigarettes as they please						IN31211
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O19.	The government should do more to control smoking						IN31310
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O20.	Tobacco companies do good things for the Chinese society						IN31225
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O01N.	Light cigarettes make it easier to quit smoking						LM31311
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O02N.	Light cigarettes are smoother on your throat and chest than regular cigarettes						LM31331
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	
<input type="checkbox"/> O03N.	Light cigarettes are less harmful than regular cigarettes						LM31321
	① Strongly disagree	② Disagree	③ Neither disagree or agree	④ Agree	⑤ Strongly agree	⑥ DK/Cannot say (Don't read out)	

disagree disagree or agree Strongly agree **(Don't read out)**

O14N. What is Chinese society's attitude toward smoking? **PS31234**

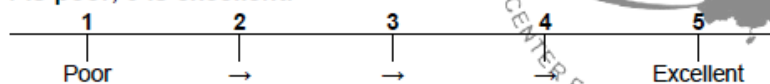
- ① Chinese society supports smoking
- ② Chinese society disapproves smoking
- ③ Chinese society neither supports nor disapproves smoking
- ④ DK/Cannot say **(Don't read out)**

Now we are going to ask you several questions about your attitudes toward life, which are not related to smoking.

Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. (Read and show **card 10**) Allow **@ Cannot say** option for recording answers but do not read them out)

<input type="checkbox"/> O22. You often think that what you do today will affect your life in the future	① Strongly disagree ② Disagree ③ Neither disagree or agree ④ Agree ⑤ Strongly agree ⑥ DK/Cannot say (Don't read out)	DI31211
<input type="checkbox"/> O23. Before you make a decision, you like to talk to close friends and get their ideas	① Strongly disagree ② Disagree ③ Neither disagree or agree ④ Agree ⑤ Strongly agree ⑥ DK/Cannot say (Don't read out)	DI31421
<input type="checkbox"/> O24. You would give up an activity you really enjoy if your family did not approve	① Strongly disagree ② Disagree ③ Neither disagree or agree ④ Agree ⑤ Strongly agree ⑥ DK/Cannot say (Don't read out)	DI31422
<input type="checkbox"/> O25. You enjoy being different from others	① Strongly disagree ② Disagree ③ Neither disagree or agree ④ Agree ⑤ Strongly agree ⑥ DK/Cannot say (Don't read out)	DI31423
<input type="checkbox"/> O26. It annoys you when other people do better than you at something	① Strongly disagree ② Disagree ③ Neither disagree or agree ④ Agree ⑤ Strongly agree ⑥ DK/Cannot say (Don't read out)	DI31424

O27. Now a question about your overall health. In general, how would you describe your health? Is it: (Read) 1 is poor, 5 is excellent. **PR31101**



P. Demographics

Just to wrap up, we have a few questions for statistical purpose. Please be assured that all your responses will be kept entirely confidential.

P1. Gender

- ① Male
② Female

Gender

P2. Your marital status

- ① Married or living together
② Divorced or separated
③ Windowed
④ Single
⑨ DK/Can't Say (Don't read)

DE31111

P3. Ethnic groups

- | | | |
|--------------|--------------------------|----------------|
| (01) Han | (02) Zhuang | (03) Man |
| (04) Hui | (05) Miao | (06) Uygur |
| (07) Yi | (08) Tujia | (09) Mongolian |
| (10) Tibetan | (11) P3S. Others: | DE31511o |

DE31511

P4. What is your usual occupation?

- | | |
|---|--|
| <p>Agriculture, forestry, animal husbandry, fishery and water conservation employees</p> <p>(01) Businessmen or service industry employees</p> <p>(02) Clerks</p> <p>(03) Soldiers</p> <p>(04) Students</p> <p>(05) Retired</p> | <p>Operators of production or transportation equipment and related personnel</p> <p>(06) Leaders of governments, Chinese Communist party organizations, companies or institutions</p> <p>(07) Specialized technicians</p> <p>(08) Other occupations</p> <p>(09) No job</p> |
|---|--|

DE31233

P5. In the last year, on average, how much was the total income per month of your household?

- ① <1000 Yuan ② 1000 Yuan~ ③ 3000 Yuan~
④ 5000 Yuan~ ⑤ 7000 Yuan~ ⑥ 9000 Yuan~
⑨ DK

DE31211

P6. What is your highest education? (Don't read out)

- ① No education ② Elementary school
③ Junior high school ④ High school/technical high school
⑤ College ⑥ University or higher

DE31311

P7. Date of birth: YYYYMMDD

birth

FCTC surveillance

P8A. Number of adult males in the household

BK314

P8B. Number of adult male smokers in the household

BK324

P9A. Number of adult females in the household

BK315

P9B. Number of adult female smokers in the household

BK325

P10. Is there anyone less than 18 years old live together with you?

DE31811

① Yes

② No

Wrap up: Thanks for the cooperation and remind subject the follow-up in one year

A thank-you gift.

AI31101

Q3JUST. Interviewers' overall judgment about the interview:

① Reliable

② Somewhat reliable

③ With some errors

④ With a lot of errors

AI543

END TIME: HH MM

AI606



APPENDIX G: ITC CHINA WAVE 2 TECHNICAL REPORT



International Tobacco Control China Survey

Wave 2 (2007-2008) ITC China Technical Report

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Preface

The International Tobacco Control (ITC) Survey is a longitudinal survey of smoking behaviour among adults in China.

This report documents the second wave of the International Tobacco Control Policy Evaluation Survey carried out in China from November 2007 to January 2008, approximately 12 months after the first wave was conducted (end of 2006 to early 2007).

In most parts, the format of this report is similar to the Wave 1 technical report. However, there are a number of changes in certain contents and methods in the second wave.

- a) Respondents from the first wave were recontacted to participate in Wave 2 of the ITC China Survey. It is expected that some respondents will not return for the second survey thus new respondents or replenishment respondents were recruited to fill the quota that has been predetermined.
- b) Information from each city survey, such as response rates.
- c) The report also presents the weight calculations that link Wave 2 back to Wave 1.

1. Introduction

Background

The International Tobacco Control (ITC) Policy Evaluation Project is a prospective cohort survey designed to evaluate national level tobacco control policies. The ITC Project is unique in that it is being administered in 18 different countries: the United States, Canada, Australia, the United Kingdom, Ireland, France, Germany, South Korea, Mexico, Uruguay, China, the Netherlands, New Zealand, Thailand, Malaysia, Bangladesh, Mauritius and India. The ITC Project is also currently developing the survey for Bhutan. The first wave of the ITC China survey was conducted in seven Chinese cities between April and August 2006. The second wave was conducted from November 2007 to January 2008.

Main Objectives

The objectives of the Wave 2, as in Wave 1, of the ITC China Survey are:

a) To examine patterns of smoking behaviour in China.

This study provides very detailed information about smokers' quitting behaviour, consumption patterns, and other important aspects of smoking behaviour.

b) To examine the impact of specific tobacco control policies implemented in China during the next 5 years.

The ITC survey has several sections that are intended to evaluate the impact of specific policies, such as health warning labels on cigarette packs, anti-smoking campaigns, and price/taxation increases. As a result, the survey is able to examine to what extent policies change smoking behaviour and attitudes towards smoking.

c) To continue to compare smoking behaviour and the impact of policies between China and other ITC countries.

The ITC survey is being administered in 13 other countries. Because most of the questions are the same, we will be able to compare patterns of smoking and policies in China and each of the 13 other countries.

Survey Design

The ITC Survey is a longitudinal cohort study. Therefore, the respondents who participated in this survey will be recontacted in the future to answer the follow-up survey. The longitudinal design will allow the research team to track any changes in smoking behaviour and to examine the predictors of smoking behaviour, including the impact of policies introduced during the survey period. The plan at the time of Wave 1 was to recontact the respondents for follow-up surveys in the following 4 years.

The Wave 2 survey was conducted in seven cities in China, namely Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan and Zhengzhou. However, only the results of 6 cities, excluding Zhengzhou, are included in this technical report.

The Survey Teams

The survey was conducted by team members from the Central China CDC and the local CDCs in Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan and Zhengzhou. The research team is collaborating with an international team of researchers in Australia (The Cancer Council of Victoria), Canada (The University of Waterloo) and the United States (Roswell Park Cancer Institute and The State University of New York).

2. The Sampling Design

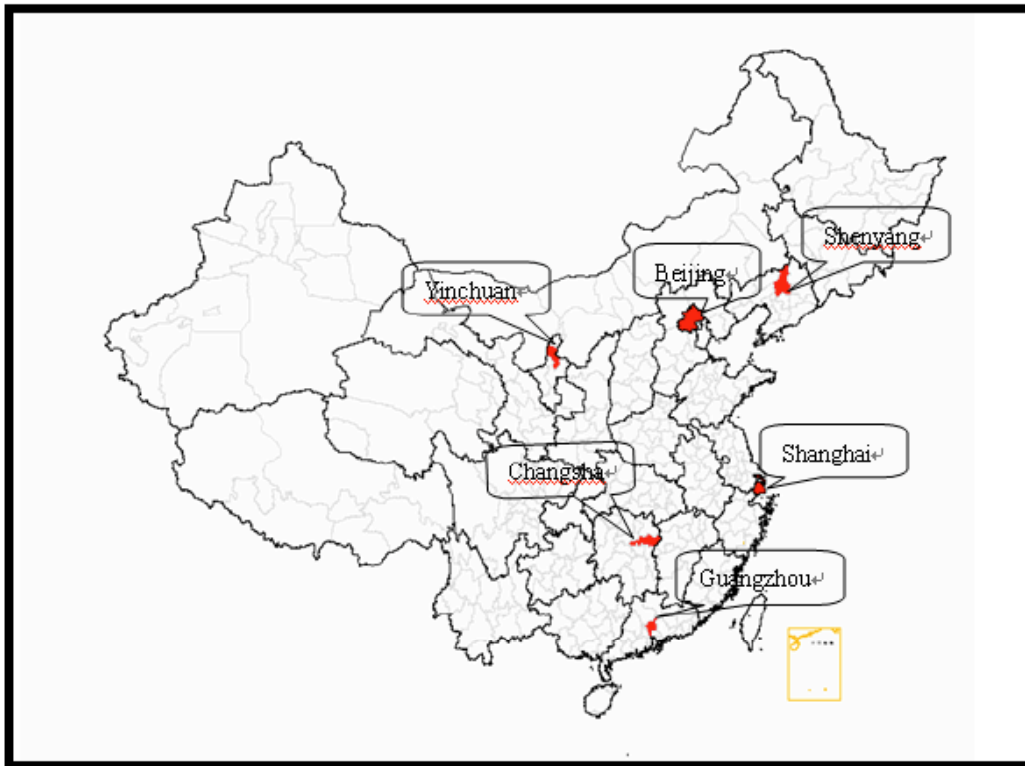
Target Population

Eligible respondents in each of the seven cities included adult smokers and non-smokers 18 years of age and older. Individuals in jail and those living in institutions were ineligible for the survey. The survey was originally conducted in the seven capital cities of one autonomous region, two municipalities and four provinces. However, the data quality from Zhengzhou city was found to be poor. It was, therefore decided that the data from this city is not included in the analysis.

City	Autonomous Region/Municipality/Province
Beijing	Beijing Municipality
Changsha	Hunan Province
Guangzhou	Guangdong Province
Shanghai	Shanghai Municipality
Shenyang	Liaoning Province
Yinchuan	Ningxia Hui Autonomous Region
Zhengzhou*	Henan Province

(*not included in data analysis)

ITC SEA Wave 1 Survey Locations in China



Sampling Frame and Sample Selection

The cohort from the Wave 1 survey was recontacted for Wave 2. The Wave 1 survey used a multistage cluster sampling method to obtain a representative sample of adult smokers and adult nonsmokers who are registered residents in the six cities. In each of the six cities the China team selects 10 Jie Dao or Street Districts, with probability of selection proportional to population size of the Jie Dao. Within each of these Jie Dao, two residential blocks or Ju Wei Hui are selected, again with probability of selection proportional to size. Within each Ju Wei Hui, the addresses of the dwelling units (households) are listed first, and then a sample of 300 addresses are drawn by simple random sampling without replacement. Information on age, gender and smoking status for all adults living in these 300 households is collected. The enumerated 300 households are then randomly ordered, adult smokers and non-smokers are then approached following the randomized order until 40 adult smokers and 10 adult non-smokers are surveyed. Because of low smoking prevalence among women, one female smoker from every selected household is surveyed whenever possible to allow for the examination of gender effects.

Replenishment

A new sample will be required from each city depending on the retention rate from the Wave 1 respondents.

The suggested design on how to select the replenishment sample in each city, assuming that the replenish sample size m has been pre-determined:

1. For each Ju Wei Hui, if there are enough un-sampled respondents from the original enumeration list of 300 households, replenish samples will be taken from that list;
2. If the 300 household list has been exhausted by the wave 1 sample or is not sufficient for replenishment and if the Ju Wei Hui has additional households which were not enumerated by the wave 1 survey, a new list of households will be constructed (on top of the original 300 list) and enumerated, and the replenish sample will be taken from the new list;
3. If the Ju Wei Hui has no room for selecting a replenish sample, the quota of replenish sample for this Ju Wei Hui will be fulfilled by the other sampled Ju Wei Hui within the same Jie Dao;
4. If both the sampled Ju Wei Hui's in the Jie Dao do not have sufficient room for the replenishment, the quota of replenish sample for this Jie Dao will be fulfilled by an adjacent Jie Dao which was included in the initial sample;
5. If a new Ju Wei Hui has to be selected from a new Jie Dao which is not in the initial sample, the new Jie Dao is first divided into half in terms of population (depending on the number of Ju Wei Hui's in the Jie Dao). A new Ju Wei Hui is selected from a chosen half of the Jie Dao, with probability proportional to the Ju Wei Hui population size;
6. For the selected new Ju Wei Hui, a list of 300 randomly selected households will be enumerated first, and smokers and non-smokers are selected from the enumerated households using the method from wave 1 sampling design.

The other half of the new Jie Dao might be used for replenishment samples in future waves.

The two major questions remaining are:

- a) What is the anticipated retention rate for wave 2 sampling? and consequently,
- b) What should be the size for the wave 2 replenishments samples for each of the seven cities?

Further Replenishment Sample Selection Stages (when required)

1. Stage 1 sampling: Collecting information about all Jie Dao in the city, including city district name and code, Jie Dao name and code, Jie Dao population and brief description. The data manager fills out the CN-ITC-2007-S-1 Form (see Appendix B) and sends all the files in Excel format to China CDC. The central team selects Jie Dao to be included in the sample and sends back the selection results to each project city.
2. Stage 2 sampling: Collecting information on all Ju Wei Hui in selected Jie Dao, including Ju Wei Hui name and code, total population and brief description. The data manager fills out the CN-ITC-2007-S-2 Form (see Appendix B) and sends all the files in Excel format to China CDC. The central team selects Ju Wei Hui to be included in the sample and sends back the results to each project city.
3. Stage 3 sampling: The Ju Wei Hui staff will collect information on all families in selected Ju Wei Hui, including family address and code. The data manager fills out the CN-ITC-2007-S-3 Form (see Appendix B) and sends all the files in Excel format to China CDC.

The central team selects families to be included in the study and sends back the results to each project city.

4. Stage 4 sampling: The Ju Wei Hui staff will collect detailed information on all families included in the selected list of families, including individual's name, code, birth date, regular resident or not, smoker or not. The data manager fills in the CN-ITC-2007-S-4 Form (see Appendix B) and sends all the files in Excel format to China CDC. The central team selects families and individuals to be included in the sample and sends back the results to each project city.

Sample Size

The sample for Wave 2 included the cohort from Wave 1 plus the new respondents recruited to account for loss to follow up. For the respondents of Wave 1 who were not able to be recontacted, new respondents were selected based on the same multistage cluster sampling method as in Wave 1. The breakdown of smoker and non-smoker respondents is tabled separately below.

Smokers

City	Wave 1	Wave 2			
		Recontact		Replenishment	Total
		Recontact	Quitter		
Beijing	785	672	38	74	746
Shenyang	781	567	18	200	767
Shanghai	784	680	23	87	767
Changsha	800	599	49	147	746
Guangzhou	791	525	37	263	788
Yinchuan	791	608	52	144	752
Total	4732	3651	217	915	4566

Non-smokers

City	Wave 1	Wave 2		
		Recontact	Replenishment	Total
Beijing	219	211	7	218
Shenyang	200	176	22	198
Shanghai	204	187	17	204
Changsha	205	160	25	185
Guangzhou	226	151	60	211
Yinchuan	215	181	24	205
Total	1269	1066	155	1221

The tables below summarize the sample size of the Wave 2 China Survey by gender and city. Please note that one respondent was not included in the tables because the gender was missing and the incorrect survey was administered.

Wave 2 Smokers:

Sex	City												Total	%
	Beijing		Shenyang		Shanghai		Changsha		Guangzhou		Yinchuan			
	N	%	N	%	N	%	N	%	N	%	N	%		
Male	706	94.64	722	94.13	749	97.65	687	92.09	735	93.27	736	97.87	4335	94.94
Female	40	5.36	45	5.87	18	2.35	59	7.91	53	6.73	16	2.13	231	5.06
All	746	100	767	100	767	100	746	100	788	100	752	100	4566	100

Wave 2 Nonsmokers:

Sex	City												Total	%
	Beijing		Shenyang		Shanghai		Changsha		Guangzhou		Yinchuan			
	N	%	N	%	N	%	N	%	N	%	N	%		
Male	97	44.50	67	33.84	87	42.65	71	38.38	81	38.39	74	36.10	477	39.07
Female	121	55.50	131	66.16	117	57.35	114	61.62	130	61.61	131	63.90	744	60.93
All	218	100	198	100	204	100	185	100	211	100	205	100	1221	100

Eligible Types of Dwellings

Private Homes

A private home is any dwelling that is considered to be the usual place of residence for at least one of the persons living there. The person may be:

- a family member
- a roomer / boarder
- an employee

Private Home AND Business

A private home and business is any dwelling that serves both as a business and the usual place of residence, such as in the case of a business operating out of the home.

Dwellings Not Eligible

Surveys were not conducted in dwellings that are businesses only or with individuals living in institutions, such as hospitals, nursing homes or jails.

Definition of a Household

A household is any persons or group of persons living in a dwelling. It may consist of:

1. one person living alone
2. a family sharing the same dwelling
3. a group of people who are not related but share the same dwelling

To be included on the *Household Enumeration Form* for a particular dwelling, a respondent must have regarded the dwelling as his/her usual place of residence.

Outcome Codes

The household outcome codes of the contact include:

- 01 Not a current dwelling unit: DO NOT RETURN
- 02 No contact made, not sure whether a dwelling unit: MUST RETURN
- 03 No contact made, known to be a dwelling unit: MUST RETURN
- 04 Contact made, cannot answer at this time, but could in the future:
MUST RETURN (and write appointment information in outcome)
- 05 Contact made, no one at all able to answer: DO NOT RETURN
- 06 Contact made, refusal: DO NOT RETURN
- 07 Contact made, Household Information Form completed: DO NOT RETURN

The individual outcome codes of the contact include:

- 11 No contact made: MUST RETURN
- 12 Contact made, the respondent is still living in the HH, no refusal, no appointment made:
MUST RETURN
- 13 Contact made, the respondent is still living in the HH, refusal: DO NOT RETURN
- 14 Contact made, the respondent is still living in the HH, appointment made: DO NOT
RETURN
- 15 The respondent has moved out: DO NOT RETURN

3. Protocols and Quality Control

Collection Method

Data were collected through household surveys. Adult smokers and non-smokers responded to a “face-to-face” survey.

Main Component of the Survey

The ITC Survey protocol consisted of four main steps:

1. Household Enumeration (including demographic information)
2. Participant Selection and Consent
3. Main Questionnaire
4. Exit and Remuneration.

The types of questions that will be asked have been described in the text of the application but the following is a summary of those questions:

- a) Demographic questions (e.g., age, gender, indicators of socio-economic status);
- b) Questions relevant to the policies of interest (policy-relevant, or “proximal” measures) of the kind outlined in the description of each of the main policy areas (e.g., warning labels, “light/mild”, advertising/promotion, price/taxation, smoke-free, cessation)
- c) Moderator variables (e.g., time perspective, collectivist vs. individual orientation);
- d) Other well-established questions assessing smoking behaviour; and
- e) Other important psychosocial predictors of smoking behaviour (e.g., normative beliefs, self-efficacy, intentions to quit) (distal variables).

In short, none of the survey questions will ask respondents to report on behaviors that are illegal. Moreover, none of the questions deal with matters that are overly personal and none of them should be surprising to respondents given that this is a “survey about smoking.” The ITC China Survey is included in the Appendix.

At the end of the survey, the respondent will be thanked for his/her participation and will be asked to provide the name, address, and phone number of one person who will always know where the respondent is, in the event that the respondent has moved in the next year.

The respondent will be reminded that we will be returning in about 1 year for the next wave.

Selection of Household Members

The addresses of all the households for each Ju Wei Hui were provided to the research team in each city. The China CDC randomly selected 300 household from that list of addresses. The Ju Wei Hui members then collected basic information using the household enumeration form on every person over the age of 18 in every one of these 300 households. From this information, the China CDC randomly selected 50 respondents to participate in the survey.

Household Enumeration

At each dwelling, before respondents were selected, information was collected about the household, including a roster of all household members (with age, gender, and (for adults) smoking status). This information could be obtained from any adult member of the household. The ethnicity of the household informant was also coded. Time required to complete the *Household Enumeration Form* is: 2-5 minutes.

Attempts to Enumerate

A maximum of four attempts were made to enumerate each household.

Respondent Gift/Enumeration

The interviewer will then indicate that, if the respondent agrees to participate and completes the survey, he/she will receive a thank-you gift. Smokers will receive a small but useful gift (i.e. soaps) which will be equivalent to about 10-20 Yuan. The respondent will be told that he/she would receive the same payment every time he/she participates.

Private Interviews

Adult participants were interviewed alone whenever possible. If another person insisted on being present, the agreement of the respondent was necessary in order to proceed with the interview. Adolescents completed the questionnaire in private.

Proxy Interviews

A proxy interview is an interview conducted with another knowledgeable member of the household on behalf of the selected respondent. Proxy interviews were not allowed in the ITC Survey.

Respondent Not Available

If a respondent was unavailable, an appointment time (hard appointment) was made to interview that respondent.

Fieldwork Team

Specially trained Ju Wei Hui staff will visit the sampled addresses and enumerate each of the 300 households. Upon reaching a household, the Ju Wei Hui staff member will identify

him/herself and indicate that the National Centers for Disease Control is conducting a 30-40 minute health survey in the country. He/she will indicate also that this is a research survey and that it does not in any way involve selling or advertising any products. The respondent will be asked if he/she is willing to answer a few short questions to determine survey eligibility.

The Ju Wei Hui staff member will ask a series of screening questions determining for each adult household member, gender, smoking status, birth date, and residential status. The Ju Wei Hui staff member will thank the respondent and tell the participant that if someone in the household is selected for participation, they will be visited in the next few months by a survey interviewer from the Centers for Disease Control.

Survey administration will be conducted by survey interviewers from the local Centers for Disease Control in each of the cities, who will be trained by the National CDC and the Local CDC.

From a randomly ordered list of enumerated households, the National Chinese CDC staff will then use the next birthday method to select respondents within the households, in sufficient number to reach quotas in each Ju Wei Hui of 40 adult smokers and 10 adult non-smokers. At most one smoker and one non-smoker will be selected in each household.

Interviewers will contact the selected respondents and explain that we are inviting the respondent to participate in the group of 1,000 respondents that have also been randomly selected, and that we would be contacting the respondent every year to complete a survey.

If the respondent agrees to participate, the interviewer will reiterate the confidential nature of their responses and will indicate to respondents that the questions asked will not be of an overly personal nature. The respondent will be given an information letter and asked to sign a consent form.

A total number of 20 Ju Wei Hui in each city were selected to participate in the survey. Each participating city formed a project team, which consisted of the following:

- 1 City Coordinator: Responsible for setting up the local fieldwork team, supervising fieldwork, overseeing the fieldwork plan and reporting to national CDC coordinators for any problems.
- 20 Survey Interviewers: Selected by the city coordinator according to local situations. They formed 10 groups, one male and one female for each group. All the interviewers were to have a college or university degree, be younger than 45 years old, and have indoor interview experience. It was recommended that, if possible, interviewers be chosen from university students majoring in preventive medicine.
- 1 Data Manager: Responsible for collecting the initial demographic information needed for sample selection, collecting finished questionnaires from interviewers along with the MP3 recordings, transferring data to central CDC, etc.

- 1 Quality Controller: Responsible for checking if the fieldwork procedures are strictly followed, the completeness of finished questionnaires and MP3 recordings, and writing quality control reports.

MP3 recording

All adult smoker survey interviews were recorded. Whenever possible, non-smoker interviews were recorded. If the interviewer needs to do a smoker survey and a non-smoker survey in the same household, then only the smoker survey was recorded.

Identifying Eligible Members

There were three different categories of eligible respondents in a household

- 1) Adult Male Smokers
- 2) Adult Female Smoker
- 3) Adult Non-smokers

Information and Consent

Once a respondent was selected, the information letter was provided and the consent form was administered.

Language

The English surveys were translated into the Chinese language in order for the face-to-face interview to be conducted in the language.

Training Manual

An English manual on how to enumerate a household and conduct a survey interview were written to train survey interviewers before the survey fieldwork begins. The English language manual was translated into Chinese.

Monitoring and Quality Assurance

To ensure the accuracy and quality of the ITC survey, the fieldwork was monitored in several ways. The China CDC and the research team in the city applied quality control to the Ju Wei Hui data collection. They checked the forms submitted and re-collected the information if the forms were incorrectly filled out.

During the survey interviewing stage, at the end of each day, interviewers were to carry out a self-check on the survey questionnaires they completed. The data manager collected all the completed surveys from all interviewer teams. Each day the data manager also copied all the MP3 recordings into a designated computer and used a unified file name system. Each recording file was named using the same coding on the cover page of the survey in the order of city (4 digits), Jie Dao (4 digits), Ju Wei Hui (4 digits), interviewer (2 digits), individual (2 digits) each separated by a hyphen "-". The total number of digits is 20, e.g. "2101-0085-0001-2418-58-02.wav". No other characters and symbols are allowed for these recording files. Each Monday the data manager sent all recording files using a CD to the central team through courier

service. The central team randomly selected 50% of the MP3 recordings and did the actual checking.

After the survey was completed, all surveys were collected, organized and bound together and sent to the central team at China CDC.

4. Disposition Codes and Response Rates

Outcome Codes: Households

- 01 Not a current dwelling unit: DO NOT RETURN
- 02 No contact made, not sure whether a dwelling unit: MUST RETURN
- 03 No contact made, known to be a dwelling unit: MUST RETURN
- 04 Contact made, cannot answer at this time, but could in the future: MUST RETURN (and write appointment information in outcome)
- 05 Contact made, no one at all able to answer: DO NOT RETURN
- 06 Contact made, refusal: DO NOT RETURN
- 07 Contact made, Household Information Form completed: DO NOT RETURN
- 09 All other cases

If a household could not be contacted after four visits, one in weekday, one in weekday evening, one in weekend and one in weekend evening, the household was not contacted further.

Respondent ID

The respondent ID is a combination of the long ID written on page 1 of the survey in the order of city (4 digits), Jie Dao (4 digits), Ju Wei Hui (4 digits), interviewer (2 digits), individual (2 digits) each separated by a hyphen "-". The total number of digits is 20, e.g. "2101-0085-0001-2418-58-02".

Retention Rates

a) Smokers

Retention Rate = (Recontact+Quitter)/Smoker of W1*100%

City	Wave 1	Wave 2				
		Recontact	Replenishment	Total	Quitter	Retention Rate (%)
Beijing	785	690	74	764	38	92.74
Shenyang	781	580	201	781	18	76.57
Shanghai	784	693	87	780	23	91.33
Changsha	800	599	147	746	49	81.00

Guangzhou	791	532	264	796	37	71.93
Yinchuan	791	616	144	760	52	84.45
Total	4732	3710	917	4627	217	82.99

b) Non-Smokers

Retention Rate = Recontact/Non-Smoker of W1*100%

City	Wave 1	Wave 2			
		Recontact	Replenishment	Total	Retention Rate (%)
Beijing	219	211	7	218	96.35
Shenyang	200	176	22	198	88.00
Shanghai	204	187	17	204	91.67
Changsha	205	160	25	185	78.05
Guangzhou	226	151	60	211	66.81
Yinchuan	215	181	24	205	84.19
Total	1269	1066	155	1221	84.00

Reasons for failure to follow-up in some cities

a) Beijing

Reason	N	Percentage (%)
Refusal	26	41.9
Nobody in household	16	25.8
Disease	13	21.0
Cannot be reached during survey period	7	11.3
Total	62	100

b) Changsha

Reason	N	Percentage (%)
Refusal	76	42.0
Nobody in household/Cannot be reached during the survey period/death	105	58.0
Total	181	100

c) Yinchuan

Reason	N	Percentage (%)
Refusal	36	24.0
Moved out	105	70.0
Death	7	4.7
Cannot be reached during survey period	2	1.3
Total	150	100

d) Shanghai

Reason	Smoker		Non-Smoker		Total	
	N	%	N	%	N	%
Refusal	22	25.9	1	5.9	23	22.5
Moved out	45	52.9	11	64.7	56	54.9
Death	4	4.7	3	17.6	7	6.9
Disease	3	3.5	1	5.9	4	3.9
Cannot be reached during survey period	6	7.1	0	0	6	5.9
No response after 4 attempts	5	5.9	1	5.9	6	5.9
Total	85	100	17	17	102	100

China Wave 2 Survey: Weight Calculation for Smokers

July 14, 2008

1 Wave 1 weights

(1) HH level weights

Each surveyed individual has a household level weight $W_1^{[1]}$. This is the number of people in the same household and the same sampling category **represented** by the surveyed individual:

- For adult male smokers, $W_1^{[1]}$ is the number of adult male smokers in the household
- For adult female smokers, $W_1^{[1]}$ is the number of adult female smokers in the household

(2) JWH level weights

Each surveyed individual has a JWH level weight $W_2^{[1]}$. This is the number of people in the same JWH and the same sampling category **represented** by that person:

$$W_2^{[1]} = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W_1^{[1]}$$

where N_1 is the total number of HHs in that JWH; N_2 is the number of HHs enumerated (by design we should have $N_2 = 300$ for most JWHs); M_1 is the number of smoking households (SMHH) **among the N_2 enumerated HHs**; and M_a is the number of SMHHs surveyed to reach the quota of 40 smokers (by design we should have $M_a \leq 40$ but it is not always the case since the quota 40 has to be adjusted sometimes).

(3) JD level weights

Each surveyed individual has a JD level weight $W_3^{[1]}$. This is the number of people in the same JD and the same sampling category represented by that person:

$$W_3^{[1]} = \frac{P_b}{2P_c} \times W_2^{[1]}$$

where P_b is the **population size of the JD**, and P_c is the **population size of the JWH** from which the individual is surveyed. The factor 2 in the denominator represents the number of JWHs selected within the JD.

(4) City level weights

Each surveyed individual has a city level weight $W_4^{[1]}$ at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_4^{[1]} = \frac{P_a}{10P_b} \times W_3^{[1]}$$

where P_a is the **population size of the city**, and P_b is the **population size of the JD** from which the individual is surveyed. The factor 10 in the denominator represents the number of JDs selected within the city.

(5) Final wave 1 weights

The final wave 1 weights are denoted as $W^{[1]}$, which are the same as $W_4^{[1]}$.

2 Wave 2 longitudinal weights

2.1 Data files

For each city, we need the wave 1 weight file which contains city code, JD code, JWH code, HH code, individual code, Gender (G), the four level wave 1 weights $W_1^{[1]}$, $W_2^{[1]}$, $W_3^{[1]}$ and $W_4^{[1]}$ for all individuals who responded at wave 1.

2.2 Weight calculation

To calculate wave 2 longitudinal weights $LW^{[2]}$, which are obtained from the wave 1 weights $W^{[1]}$ adjusted for attrition, we need first to create an indicator variable R such that $R_i = 1$ if the i th individual responded at wave 2 and $R_i = 0$ if the i th individual failed to respond at wave 2.

(1) HH level longitudinal weights

For every successful re-contact at wave 2, the related HH receives a wave 2 HH weight computed as $WH = W_4^{[1]}/W_1^{[1]}$. This is interpreted as the number of HH in the city represented by the sampled HH. This weight is re-scaled so that the total wave 2 HH weight matches the total wave 1 HH weight. Let s_1 denote the set of all respondents at wave 1. The re-scaled weights, denoted by LWH , are computed as follows:

$$LWH_i = WH_i \times \frac{\sum_{j \in s_1} WH_j}{\sum_{j \in s_1} WH_j R_j}.$$

If an HH has two respondents i and j , one male and one female, then we will have two (possibly) different HH weights LWH_i and LWH_j for that same HH. The HH level longitudinal weights satisfy

$$\sum_{i \in s_2} LWH_i = \sum_{j \in s_1} WH_j,$$

where s_2 is the set of all wave 2 re-contacts. We could let $LWH_i = 0$ if $i \in s_1$ but $i \notin s_2$.

(2) Individual level longitudinal weights

Each individual at wave 2 receives an (unadjusted) weights as $WI = LWH \times W_1^{[1]}$. This weight is re-scaled to obtain the individual longitudinal weight LWI . The total longitudinal weights for all wave 2 respondents match the total individual weights of all wave 1 respondents.

The re-scaling is done separately for male smokers and female smokers.

Let's re-code the gender variable as $G_i = 1$ if the i th respondent is male and $G_i = 0$ if the i th respondent is female. For male smoker i who responded to both waves 1 and 2, the re-scaled weight is computed as

$$LWI_i = WI_i \times \frac{\sum_{j \in s_1} WI_j G_j}{\sum_{j \in s_1} WI_j R_j G_j}.$$

Note that $\sum_{j \in s_1} WI_j R_j G_j = \sum_{j \in s_2} WI_j G_j$. For female smoker k who responded to both waves 1 and 2, the re-scaled weight is computed as

$$LWI_k = WI_k \times \frac{\sum_{j \in s_1} WI_j (1 - G_j)}{\sum_{j \in s_1} WI_j R_j (1 - G_j)}.$$

Note that $\sum_{j \in s_1} WI_j R_j (1 - G_j) = \sum_{j \in s_2} WI_j (1 - G_j)$.

(3) Weights for non-respondents

We let $LWI_i = 0$ if $i \in s_1$ but $i \notin s_2$.

(4) Final longitudinal weights

The individual level longitudinal weights LWI_i are the final longitudinal weights.

3 Wave 2 cross-sectional weights

3.1 Data files

Wave 2 adult smoker survey data consists of two parts: all successful re-contacts from wave 1 respondents and the wave 2 replenishment sample. Wave 2 cross-sectional weights are calculated for the combined data set.

It is preferable that a combined data set is created for each city. This data set may contain, for instance, 700 successful re-contact smokers and 100 newly surveyed smokers at wave 2. An indicator variable should be created to indicate whether a respondent is a re-contact or newly recruited.

3.2 Weights calculation

Wave 2 cross-sectional weights are calculated in the same way as wave 1 weights, which are also cross-sectional. The sampling design for wave 2 is an “induced one” which reflects how the combined sample is taken. Certain approximations are used in the calculation, due to the difficulty in finding the exact inclusion probability from the “induced design”.

The most important aspect in calculating wave 2 cross-sectional weights is that all design variables used in the calculation should be **those used for the induced wave 2 design**.

(1) HH level weights

Each surveyed individual, new or old, has a household level weight $W_1^{[2]}$. This is the number of people in the same household and the same sampling category represented by the surveyed individual:

- For adult male smokers, $W_1^{[2]}$ is the number of adult male smokers in the household
- For adult female smokers, $W_1^{[2]}$ is the number of adult female smokers in the household

(2) JWH level weights

Each surveyed individual, new or old, has a JWH level weight $W_2^{[2]}$. This is the number of people in the same JWH and the same sampling category represented by that person:

$$W_2^{[2]} = \frac{N_1}{N_2} \times \frac{M_1}{M_a} \times W_1^{[2]}$$

where

1. N_1 is the total number of HHs in that JWH;
2. N_2 is the number of HHs enumerated at both waves 1 and 2. For most JWHs, N_2 is 300 from wave 1 plus the newly enumerated ones from wave 2 (if any);
3. M_1 is the number of smoking households (SMHH) among the N_2 enumerated HHs;
4. M_a is the number of SMHHs surveyed at both waves 1 and 2 (re-contacts and replenishment)

(3) JD level weights

Each surveyed individual, new or old, has a JD level weight $W_3^{[2]}$. This is the number of people in the same JD and the same sampling category represented by that person:

$$W_3^{[2]} = \frac{P_b}{2P_c} \times W_2^{[2]}$$

where P_b is the population size of the JD, and P_c is the population size of the JWH from which the individual is surveyed.

Important Note: If one JWH is lost at wave 2 for a particular JD, and the replacement JWH is not in the same JD, then the factor 2 in front of P_c should be replaced by 1, to reflect the fact that only one JWH is selected in that JD. Similarly, if a JD added another JWH at wave 2, plus two original JWHs selected from wave 1, then the factor 2 should be replaced by 3.

(4) City level weights

Each surveyed individual has a city level weight $W_4^{[2]}$ at the city level. This is the number of people in the city and the sampling category represented by that person:

$$W_4^{[2]} = \frac{P_a}{10P_b} \times W_3^{[2]}$$

where P_a is the population size of the city, and P_b is the population size of the JD from which the individual is surveyed. The factor 10 in the denominator represents the number of JDs selected within the city.

Important Note: If a city added a new JD (Shenyang, for instance) at wave 2, and all the other 10 JDs from wave 1 are also surveyed, then the factor 10 in front of P_b should be replaced by 11; if a city added a new JD but one of the original 10 JDs has been totally lost (i.e. no re-contact from that JD), then the factor is still 10.

(5) Final wave 2 cross-sectional weights

The final wave 2 cross-sectional weights are denoted as $W^{[2]}$, which are the same as $W_4^{[2]}$.

4 Variables used for wave 1 weight calculation

C_1 – City code

C_2 – Jie Dao code

C_3 – Ju Wei Hui code

C_4 – Household code

C_5 – Individual code

P_a – City population size

P_b – Jie Dao population size

P_c – Ju Wei Hui population size

N_1 – Total number of households in the Ju Wei Hui

N_2 – Number of households enumerated ($N_2 = 300$ for most cases)

M_1 – Number of smoking households among the N_2 enumerated households

M_2 – Number of non-smoking households among the N_2 enumerated HHs ($M_2 = N_2 - M_1$)

M_a – Number of smoking households surveyed to reach the quota of 40 (or so) smokers

M_b – Number of smoking households surveyed to reach the quota of 4 (or 3) non-smokers
(In most cases $M_b = 4$ or 3)

M_c – Number of non-smoking households surveyed to reach the quota of 6 (or 7) non-smokers
(In most cases $M_c = 6$ or 7)

I_1 – Household classifier: $I_1 = 1$ for smoking households; $I_1 = 0$ for non-smoking households

I_2 – Smoking status indicator: $I_2 = 1$ for smokers; $I_2 = 0$ for non-smokers

G – Gender: $G = 1$ for male and $G = 2$ for female (This is Question P1 on the questionnaire)

L_1 – Number of male adults in the household (This is Question P8A in the questionnaire)

L_2 – Number of male adult smokers in the household (This is Question P8B in the Questionnaire)

L_3 – Number of female adults in the household (This is Question P9A in the questionnaire)

L_4 – Number of female adult smokers in the household (This is Question P9B in the Questionnaire)

Appendix A: Issues Reported by the Local CDC Fieldwork Teams

The issues reported include:

- Insufficient funding and support from China CDC
- Respondents complained the survey was too long, and some refused to complete it
- The gap between Wave 1 and Wave 2 was too short
- Weather difficulty—Wave 2 was carried out in the winter and for cities in the north, there was too much snow and too cold
- The end of the year fieldwork was not suitable to the teams at all members of local CDCs and China CDC are busy with their year-end reports
- Inconsistent or missing data from Wave 1
- Imbalanced retention rates across different districts in a city and also across different cities
- Relocation of some JWHs in certain cities for redevelopment by the government and respondents moving to another city searching for jobs causing high attrition rate.
- Some Wave 1 enumeration data were incomplete hence making it difficult in Wave 2.
-

Training Issues reported by Shanghai team include:

- Large number of trainees
- A number of JWH staff did not attend the training
- Interviewers had different backgrounds

Suggestion

- An official document issued by the China CDC that says “all levels of government should provide help to the ITC-FCTC China Survey” would be extremely helpful to obtain cooperation at every level.
- China CDC to provide some additional funding to this project.

Form 6

Wave 2 FCTC Surveillance/ITC China Survey
Fieldwork supplies list (CN-ITC-2005-S-6)

City: _____

Supplies		Quantity	Received Quantity	Good quality or not
Survey Material	Respondent Information Form	20		
	Consent Form	900		
	Adult Smoker Survey	900		
	Adult Non-Smoker Survey	300		
	Training Manual	30		
	Quality Control Manual	10		
	Telephone Double Check EpiData Database	1		
	MP3	12		
Survey Instrument	Name Card	30		
	Battery	800		
	Marker	200		
	Electric Torch	30		
	Shoe Cover	2000		
	Backpack	25		
	Gift	800		

Note: Writing materials will be provided by China CDC, and survey instruments will be purchased by city CDC. City coordinator is in charge of preparing all supplies and sending the form back to China CDC. If supplies are enough and in good condition, mark "√" in the form, otherwise fill out the insufficient quantity and the numbers having poor quality.

City coordinator : _____

Date : yy mm dd

Form 7

Wave 2 FCTC Surveillance/ITC China Survey
Training Location and Equipment list (CN-ITC-2005-S-7)

Supplies		Quantity
Training Location	Size	
	Table and Chair	
	Good for Practicing	
Training Equipments	1.Notebook Computer	
	2.Multi-Media Projector	
	3.Audio Equipment	
Training Material	4.Qestionnaire	
	5.Fieldwork Registration Form (CN-ITC-2007-S-16)	
	6.Respondent Information Form (CN-ITC-2007-S-5)	
	7.Telephone Double-Check Form (EpiData Database)	
	8.MP3	
	9.Training Manual	
	10.Qaulity Control Manual	
	11.Interviewer Registration Form (CN-ITC-2007-S-8)	
	12.Interviewer Attendance Form (CN-ITC-2007-S-9)	
Other	13.Document Envelope	
	14.Marker	

Form 10

**Wave 2 FCTC Surveillance/ITC China Survey
Fieldwork Staff Registration Form (CN-ITC-2005-S-10)**

City: _____

Project Team	Name	Code	Telephone	Cell Phone	E-mail
Project Manager					
Coordinator					
Data Manager					
Quality Controller					
Interviewer		01			
		02			
		03			
		04			
		05			
		06			
		07			
		08			
		09			
		10			
		11			
		12			
		13			
		14			
		15			
		16			
		17			
		18			
		19			
		20			

Note: This form provides information for monitoring fieldwork, which is filled out by city coordinators. The information in the form is allowed for some changes in terms of actual situation later on. This form should be sent to China CDC before the fieldwork. The codes are only for interviewers, each interviewer has one code, and there are total 20 codes for all interviewers.

City code CODE1	Street code CODE2	JuWeiHui Code	Household CODE4	Individual CODE5	Interviewer CODE0
--------------------	----------------------	------------------	--------------------	---------------------	----------------------

**Wave 2 FCTC Surveillance/ITC China Survey
Fieldwork Registration Form (CN-ITC-2005-S-16)**

1. Individual Appointment Record

Appointment #		Date of Appointment			Time of Appointment			Outcome							
1	QCA1			yy		mm		dd	QCB1		hh		min	QCC1	
2	QCA2			yy		mm		dd	QCB2		hh		min	QCC2	
3	QCA3			yy		mm		dd	QCB3		hh		min	QCC3	
4	QCA4			yy		mm		dd	QCB4		hh		min	QCC4	

Outcome:
<input type="checkbox"/> entering household
<input type="checkbox"/> nobody home or answering the door
<input type="checkbox"/> refusal

2. Survey time

Date
QCA5 yy mm dd

time
QCB5 hh min

3. Individual survey outcome

	Outcome code	Note
Adult male smoker	QCAMS	
Adult female smoker	QCAFS	
Adult non-smoker	QCANS	

Outcome code
<input type="checkbox"/> complete the survey
<input type="checkbox"/> partly complete the survey
<input type="checkbox"/> survey can not be conducted
<input type="checkbox"/> refusal

Note: Before conducting survey, interviewer should fill out "individual appointment record" "Survey time"; and after survey, interviewer should fill out "individual survey outcome" each form for each respondent.

FCTC Surveillance/ITC China Survey—Household Enumeration Form (CN-ITC-2005-S-15)

Jie Dao: < Code2> Ju Wei Hui: < Code3> Household <Code4>

Address: _____ Interviewer: _____

	Date	Time	Outcome
Contact Attempt 1	____/____/____ Year ____ Month ____ Day	____ Hour ____ Minute	
Contact Attempt 2	____/____/____ Year ____ Month ____ Day	____ Hour ____ Minute	
Contact Attempt 3	____/____/____ Year ____ Month ____ Day	____ Hour ____ Minute	
Contact Attempt 4	____/____/____ Year ____ Month ____ Day	____ Hour ____ Minute	

Any Child Living in the Household? YES NO

Interviewer Code Code5	Name	Gender	Birthday			Permanent Resident Status (Yes:√ No:×)	Smoke Over 100 Cigarette (Yes:√ No:×)	Current Weekly Smoker (Yes:√ No:×)
			Year	Month	Day			
01								
02								
03								
04								
05								
06								

Outcome Code:

01 Not a current dwelling unit: DO NOT RETURN

02 No contact made, not sure whether a dwelling unit: MUST RETURN

03 No contact made, known to be a dwelling unit: MUST RETURN

04 Contact made, cannot answer at this time, but could in the future:

MUST RETURN (and write appointment information in outcome)

05 Contact made, no one at all able to answer: DO NOT RETURN

06 Contact made, refusal: DO NOT RETURN

07 Contact made, Household Information Form completed: DO NOT RETURN

Appendix C: Pictures

Beijing



Shanghai



Shenyang



Yinchuan





Guangzhou



Changsha



References

ITC China Wave 1 Training Manual in English.

ITC China Wave 1 Training Manual in Chinese.

APPENDIX H: ITC CHINA WAVE 2 SURVEY

Survey 4

	INTVWR															
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	Interviewer code CODE0															
	CITY	STREET														
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	City code CODE1	Street code CODE2														
		BLOCK														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; height: 20px;"></td> <td style="width: 25%; height: 20px;"></td> <td style="width: 25%; height: 20px;"></td> <td style="width: 25%; height: 20px;"></td> </tr> </table>														
		Residential block code CODE3														
HOUSEHOLD	INDIVID	2														
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	Household code CODE4	Individual code CODE5														
RESPNAME		DE710														
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	Subject's name CODE_NAME	Telephone number CODE_TEL														

The Framework Convention on Tobacco Control Surveillance Adult Replenishment Smoker's Questionnaire

DATE **DATE OF INTERVIEW:** □□□□YYYY□□MM□□DD

B1606 **START TIME:** □□HOUR□□MINUTE

**NATIONAL CENTER FOR CHRONIC AND NONCOMMUNICABLE
DISEASE CONTROL AND PREVENTION**

CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION

FR31211 A1Z. Do you now smoke everyday or somedays?

- ① Everyday
- ② Some days – skip to A3

FR31216 For respondents who said they smoke **every day**, ask A2.

A2. On average, how many cigarettes do you smoke each day, including both factory-made and hand-rolled cigarettes?

For respondents who said they smoke **some days**, ask A3.

FR31226

A3. On average, how many cigarettes do you smoke each week, including both factory-made and hand-rolled cigarettes?

B. Smoking behaviors

FR31119 B0V. About how long have you been smoking (from when you started smoking)?

- ① <1 year
- ② 1-5 years
- ③ 6-10 years
- ④ 11-15 years
- ⑤ 16-20 years
- ⑥ 21-25 years
- ⑦ More than 25 years
- Refused (Don't read out)
- DK(Don't read out)

FR31118 B0Z1. How old were you when you first tried a cigarette?

- (98) Refused (Don't read out)
- (99) DK(Don't read out)

FR31120 B0Z2. How old were you when you first started smoking daily?

- (97) I have never smoked daily (Don't read out)
- (98) Refused (Don't read out)
- (99) DK(Don't read out)

FR31326 B1. Do you smoke factory-made cigarettes, roll-your-own cigarettes, or both?

- ① Only factory-made cigarettes → Skip to B3.
- ② Only roll-your-own cigarettes → Skip to B4.
- ③ Both
- ④ Refused (Don't read out) → Skip to B3.

FR31329 B2. Which do you smoke more, factory-made cigarettes or roll-your-own cigarettes?

- ① Factory-made cigarettes
- ② Roll-your-own cigarettes
- ③ About the same
- ⑧ Refused (Don't read out)
- DK(Don't read out)

B3. In the last month, what brand of cigarettes did you smoke more than any other? (Please choose only one brand)

Interviewer Note: Ask for brand family (e.g. Baisha), AND brand variety (e.g. light, etc.) as instructed on card①

BR31301 **B3A. Brand** Roll your own: Skip to B4

BR31301o **B3AS1. Other (Domestic):**

BR31302o **B3AS2. Other (Foreign):**

BR31303 **B3B. Variety**

BR31303o **B3BS1. Other (Domestic):**

BR31304o **B3BS2. Other (Foreign):**

BR31306o _____ **B3C. Tobacco Company of the cigarettes you smoke?**

BR31405 **B3D. Can you tell me the tar level (in mgs) of the brand?**

(98) Refused (Don't read out)

(99) DK (Don't read out)

BR31307 **B3E. Taste**

- ① Virginia type
- ② Blended type
- ③ Menthol cigarettes
- Refused (Don't read out)
- ⑨ DK (Don't read out)

BR31314 **B3G. W/o authenticity label**

- ① With
- ② Without
- Refused (Don't read out)
- ⑨ DK (Don't read out)

BR31342 **B3H. Number of cigarettes in one pack**

- ① 20/pack
- ② <20/pack
- ③ >20/pack
- Refused (Don't read out)
- ⑨ DK (Don't read out)

BR31315 **B3I. Filtered or non-filtered?**

- ① Filtered
- ② Non-filtered

- Refused (Don't read out)
- ⑨ DK (Don't read out)

BR31501 B3J. Does your brand have small holes around the filter?

- ① Yes
- ② No
- Refused (Don't read out)
- ⑨ DK (Don't read out)

BR31316 B3K. Product Bar Code

BR31317 B3L. (For interviewers) Where do you get the above information of the brand?

- ① From the pack
- ② From the subject
- ③ Both

BR31502 B4. About how long have you been smoking (the brand in B3A)?

- ① <1 year
- ② 1-3 years
- ③ 4-5 years
- ④ 6-10 years
- More than 10 years
- Refused (Don't read out)
- ⑨ DK (Don't read out)

B5. In choosing [B3A Brand], was part of your decision to smoke this brand based on any of the following:

- BR31611** B5A. How they taste
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31612** B5B. How good they make you feel
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31613** B5C. This brand is less harmful to my health than other brands
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31614** B5D. Price
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31618** B5E. High quality
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31615** B5F. I received it as a gift <See note above >
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31616** B5G. The package <See note above >
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
- BR31617** B5H. It is a popular brand <See note above >
① Yes ② No ③ Refused (Don't read out) ④ Not sure (Don't read out)
-

BR31659 B6. Do you currently smoke any other brands or brand varieties?

- ① Yes
② No (skip to i1)
③ Refused (Don't read out) skip to i1
④ DK (Don't read out) skip to i1

BR31661 B8A. Brand of the SECOND brand Roll your own: Skip to B8CV

BR31661o B8AS1. Other (Domestic):

BR31662o B8AS2. Other (Foreign):

BR31663 B8B. Variety of the SECOND brand

BR31663o B8BS1. Other (Domestic):

BR31664o B8BS2. Other (Foreign):

BR31660 B8CV. How often do you smoke a SECOND brand - that is, the variety you are most likely to smoke when you are not smoking the variety you smoke most often.

- ① every day
② every week
③ every month
④ less than every month
⑤ Refused (Don't read out)
⑥ DK (Don't read out)

B9. We would like to find out why you smoke this second brand. Please tell us whether each of these reasons is one of your reasons why you smoke this second brand.

BR31631 **B9A.** How they taste
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31632 **B9B.** How good they make you feel
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31633 **B9C.** This brand is less harmful to my health than other brands
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31634 **B9D.** Price
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31638 **B9E.** High quality
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

<Note: If second brand is roll your own skip to I1>

BR31635 **B9F.** I received it as a gift **<See note above >**
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31636 **B9G.** The package **<See note above >**
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

BR31637 **B9H.** It is a popular brand **<See note above >**
①Yes ②No ⑧Refused (Don't read out) ⑨Not sure (Don't read out)

I. Price/taxation and sources of tobacco products

- SO31212** I1. Where did you last buy cigarettes for yourself? (Don't read checklist, but can give examples) (Select only one response)
- (01) From a street vender
 - (02) Local stores, convenience stores or gas stations
 - (03) Hypermarket or supermarket
 - (04) From bar/entertainment outlets (bars, cafeterias, or tea bars)
 - (05) From a restaurant
 - (06) From a hotel/inn
 - (07) Duty-free shop
 - (08) Outside the country
 - (09) Military stores
 - (10) On the Internet
 - (11) From vending machines
 - (12) From a vender selling from a public transportation vehicle (a train or a ship)
 - (13) From a smoke shop
 - (14) **I1S14S.** Others: **SO31212o**
 - (15) Gifts from others (→Skip to J2)
 - (16) For the last year I didn't buy cigarettes for myself (→Skip to J2)
 - (98) Refused (Don't read out)

BR31711 I2A. What brand did you buy? (Cigarette brand you last bought)

BR31711o I2AS1. Other (Domestic):

BR31712o I2AS2. Other (Foreign):

BR31713 I2B. What variety did you buy?

BR31713o I2BS1. Other (Domestic):

BR31714o I2BS2. Other (Foreign):

BR31716o _____ I2C. Tobacco Company of the cigarettes

PU31201 I3. The last time you bought cigarettes for yourself, did you buy them by the carton, or by the pack?

- ① Carton→Skip to I3N2
- ② Pack→ Skip to I3N3
- ④ Hand-rolled cigarettes/tobacco → Skip to I4W
- ⑧ Refused (Don't read out) → Skip to I4W
- ⑨ DK (Don't read out) → Skip to I4W

Interviewer note: We are trying to find out how much the participant pays by the unit that they buy in. Some may answer that they pay xx/pack some may buy multiple packs at once. Just record what they say and we will do the calculations.

I3N2

How much did you pay?

PU31241 Yuan paid for _____ cartons

PU31211

Go to I3N2A

(9998) Refused

(9999) DK

I3N3

How much did you pay?

PU31341 Yuan paid for _____ packs

PU31311

Go to I3N3A

(9998) Refused

(9999) DK

PU31596a I3N2A What's your best guess for what a carton of your current brand will cost a year from now? ___ Yuan - Skip to I4A1
(9998) Refused (9999) DK

PU31596b I3N3A What's your best guess for what a pack of your current brand will cost a year from now? ___ Yuan
(9998) Refused (9999) DK

SO31501 I4A1 The last time you bought [cigarettes/ tobacco] FOR YOURSELF, did you make any special efforts to get cigarettes at a cheaper price?
① Yes
② No → Skip to I4W
⑧ Refused (Don't read out) → Skip to I4W
⑨ DK (Don't read out) → Skip to I4W

I4A2 If yes, which method(s) did you use?

PU31616 I4A2A Bargaining
① Yes ② No Refused (Don't read out) ⑨ DK (Don't read out)

PU31617 I4A2B Buying cigarettes in carton
① Yes ② No Refused (Don't read out) ⑨ DK (Don't read out)

PU31618 I4A2C Buying cigarettes from a specific venue
① Yes ② No Refused (Don't read out) ⑨ DK (Don't read out)

PU31619 I4A2D Any other method(s) please specify PU31619c
① Yes ② No Refused (Don't read out) ⑨ DK (Don't read out)

I4A3 How much less did you pay by using this (these) method(s)?

PU31620a () Yuan per pack OR

PU31620b () Yuan per carton

(9998) Refused (9999) DK

PU31701 I4W. In the last month, have you ever purchased foreign cigarettes?
① Yes
② No → Skip to I5N.
 Refused (Don't read out) → Skip to I5N.

PU31703o _____ I4X. In the last month, what brand of foreign cigarettes did you purchase more than any other foreign brands? (Only one brand)

PU31705 . I4Y. In the last month, how many packs of [I4X brand] have you purchased?

PU31707 . I4Z. On average, how much did you pay for each pack of [I4X brand] you bought in the last month?

PU31601 I5N. In the last 6 months, have you purchased cigarettes that are less expensive than you can get from local stores for economic reasons?
① Never

- ② Once in a while
- ③ Often
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

PU31621

17. In the last 6 months, have you spent money on cigarettes that you knew would be better spent on household essentials like food?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

J. Other tobacco products

J2. In the past month, have you used any of the following:

- ST31311** J2A. Cigars
①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)
- ST31317** J2B. Pipes
①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)
- ST31319** J2C. Chewing tobaccos
①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)
- ST31321** J2D. Snuff
①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)
- ST31331** J2E. J2ES. Other tobacco products (Specify): **ST31331o**
①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

BV. Opinion

LM31211 BV10. Have you ever tried cigarettes that are described as light, mild or low-tar?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

LM31701 BV11. Have you ever tried menthol cigarettes?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

LM31501 BV12. Have you ever tried cigarettes with Chinese traditional medicine?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

SB31012 BV13A. How soon after waking do you usually have your first smoke?

- ① <=5 min
- ② 6-30 min
- ③ 31-60 min
- ④ 61+ min
- ⑧ Refused (Don't read out)
- ⑨ Not sure

SB31031 BV14. Do you consider yourself addicted to cigarettes? Would you say...?

- ① Not at all
- ② A little
- ③ Somewhat
- ④ A lot
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

SB31041 BV15. How hard would you find it to go without smoking for a whole day?

- ① Not at all hard
- ② A little hard
- ③ Somewhat hard
- ④ Extremely hard
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

SB31101 BV16C. During the past 12 months, have you noticed any changes to the cigarettes you usually smoke in how they taste?

- ① Yes
- ② No **Skip to BV17.**
- ⑧ Refused **(Don't read out) Skip to BV17**
- ⑨ DK **(Don't read out) Skip to BV17.**

SB31103 **BV16D. Do they taste better or worse?**

- ① Better
- ② Worse
- ⑧ Refused **(Don't read out)**
- ⑨ DK **(Don't read out)**

DI31301a **BV16N. In your opinion, smoking is...**

- ① Good
- ② Neither good nor bad
- ③ Not good
- ⑧ Refused **(Don't read out)**
- ⑨ DK **(Don't read out)**

BV17. In the last month, how often, if at all, did you:

SB31203 **BV17A.** Think about how much you enjoy smoking
 ①Never ②Occasionally ③Often ⑧Refused **(Don't read out)** ⑨DK **(Don't read out)**

SB31205 **BV17B.** Think about the harm your smoking might be doing to you?
 ①Never ②Occasionally ③Often ⑧Refused **(Don't read out)** ⑨DK **(Don't read out)**

SB31207 **BV17C.** Think about the harm your smoking might be doing to other people?
 ①Never ②Occasionally ③Often ⑧Refused **(Don't read out)** ⑨DK **(Don't read out)**

SB31210 **BV17D.** Seriously consider quitting?
 ①Never ②Occasionally ③Often ⑧Refused **(Don't read out)** ⑨DK **(Don't read out)**

SB31211 **BV17E.** Think about the cost of smoking
 ①Never ②Occasionally ③Often ⑧Refused **(Don't read out)** ⑨DK **(Don't read out)**

SB31221 **BV18. In the last month, have you butted out a cigarette before you finished it because you thought about the harm of smoking?**

- ① Yes
- ② No
- ⑧ Refused **(Don't read out)**
- ⑨ DK **(Don't read out)**

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D. Knowledge of health effects

D1. I am going to read you a list of health effects and diseases that may or may not be caused by smoking cigarettes. Based on what you know or believe, does smoking cause the following:

Interviewer note: the response options for questions D1A to D1H are:

Yes No Refused (Don't read out) DK (Don't read out)

-
- | | | |
|---------|-------------------------------|---|
| KN31221 | <input type="checkbox"/> D1A. | Stroke |
| KN31241 | <input type="checkbox"/> D1B. | Lung cancer in smokers |
| KN31243 | <input type="checkbox"/> D1C. | Emphysema |
| KN31102 | <input type="checkbox"/> D1D. | Stained teeth in smokers |
| KN31103 | <input type="checkbox"/> D1E. | Premature aging |
| KN31211 | <input type="checkbox"/> D1F. | CHD |
| KN31251 | <input type="checkbox"/> D1G. | Lung cancer in nonsmokers from secondhand smoke |
| KN31231 | <input type="checkbox"/> D1H. | Impotence in male smokers |
-

E. Health warning labels

WL31201 **E1. In the last month, how often, if at all, have you noticed the health warning on cigarette packages?**

- ① Never → Skip to E3
- ② Once in a while
- ③ Often
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31211 **E2. In the last month, how often, if at all, have you read or looked closely at the health warning on cigarette packages?**

- ① Never
- ② Once in a while
- ③ Often
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31221 **E3. In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one? Would you say:**

- ① Never
- ② Once
- ③ A few times
- ④ Many times
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31310 **E4. In the last month, have you made any effort to avoid looking at or thinking about the warning labels: (Read)**

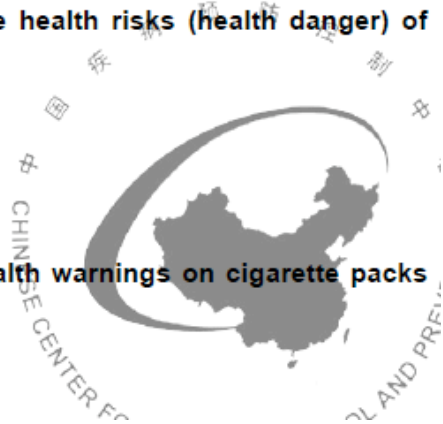
- ① Yes
- ② No/Don't care health warning
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31411 **E5. To what extent, if at all, do the health warnings on cigarette packs make you more likely to think about the health risks (health danger) of smoking?**

- ① Not at all
- ② A little
- ③ A lot
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31421 **E6. To what extent, if at all, do the health warnings on cigarette packs make you more likely to quit smoking?**

- ① Not at all
- ② A little
- ③ A lot



- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

WL31507

E7. Do you think that cigarette packages should have more health information than they do now, less, or about the same amount as they do now?

- ① Less health information
- ② About the same
- ③ More health information
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

F. Advertising/promotion

AD31201 **F1.** In the last 6 months, how often have you noticed things that are designed to encourage smoking or which make you think about smoking? (things like advertising and pictures of smoking)

Note: It doesn't have to be advertising, anything that promote smoking can be count)

- ① Never
- ② Once in a while
- ③ Often
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

F2. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places?

- AD31206** **F2A.** On television
 Yes No Refused (Don't read out) Didn't watch TV/DK (Don't read out)
- AD31211** **F2B.** On radio
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't listen to radio/DK (Don't read out)
- AD31219** **F2C.** On posters
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't see any posters/DK (Don't read out)
- AD31221** **F2D.** On billboards
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't see any billboards/DK (Don't read out)
- AD31226** **F2E.** In newspapers or magazines
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't read newspapers and magazines/DK (Don't read out)
- AD31216** **F2F.** In cinemas
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't go to cinemas/DK (Don't read out)
- AD31231** **F2G.** On shop/store windows or inside shops/stores where you buy tobacco
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't go to shops or stores/DK (Don't read out)
- AD31233** **F2H.** On or around street vendors
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't go/DK (Don't read out)
- AD31208** **F2I.** Over the Internet
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't use the Internet/DK (Don't read out)
- AD31209** **F2J.** In the workplace
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Have no job/DK (Don't read out)
- AD31210** **F2K.** On public transportation vehicles or stations
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't use public transportation/DK (Don't read out)
- AD31212** **F2L.** In restaurants, cafeterias or tea bars
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't go/DK (Don't read out)
- AD31213** **F2M.** In discos/karaoke lounges, or other entertainment venues
 ① Yes ② No ⑧ Refused (Don't read out) ⑨ Didn't go/DK (Don't read out)

AD31627 F2N. Do you support complete bans on tobacco advertisements inside shops and stores?

- Not at all
- A little bit/Somewhat
- A lot
- Neither support nor oppose
- Refused (Don't read out)
- DK (Don't read out)

AD31352 F3A. In the last six months, have you seen or heard about any sport or sporting event that is sponsored by or connected with either cigarette brands or tobacco companies?

- Yes
- No
- Refused (Don't read out)
- DK (Don't read out)

AD31356 F3B. In the last six months, have you seen or heard about any music, theatre, art, or fashion events, that are sponsored by or connected with either cigarette brands or tobacco companies?

- Yes
- No
- Refused (Don't read out)
- DK (Don't read out)

AD31358 F3C. In the last six months, have you seen or heard about any charity activities such as the Hope project and other forms of devoting money to education, that are sponsored by or connected with either cigarette brands or tobacco companies?

- Yes
- No
- Refused (Don't read out)
- DK (Don't read out)

F4. In the last 6 months, have you noticed (seen) any of the following types of tobacco promotion

AD31401 F4A. Free samples of cigarettes
①Yes ②No ③Refused (Don't read out) ④DK (Don't read out)

AD31411 F4B. Special price offers for cigarettes
①Yes ②No ③Refused (Don't read out) ④DK (Don't read out)

AD31421 F4C. Free gifts or special discount offers on other products when buying cigarettes
①Yes ②No ③Refused (Don't read out) ④DK (Don't read out)

AD31501 F4D. Clothing or other items with a cigarette brand name or logo
①Yes ②No ③Refused (Don't read out) ④DK (Don't read out)

AD31511 F4E. Competitions linked to cigarettes
①Yes ②No ③Refused (Don't read out) ④DK (Don't read out)

AD31601 F5. Thinking about news stories relating to smoking or tobacco companies that might have been on TV, radio, or in the newspapers. In the

last 6 months, about how often, if at all, have you seen or heard a news story about smoking?

- Never
- Once in a while
- Often
- Refused (Don't read out)
- DK (Don't read out)

AD31611

□F6. Now thinking about the entertainment media, like movies, TV programs, and magazines. In the last 6 months, about how often, if at all, have you seen people smoking in the entertainment media?

- Never
- Once in a while
- Often
- Refused (Don't read out)
- DK (Don't read out)

AD31613

□F7. How often, if at all, have you seen VIPs smoking in the newspaper or on tv?

- Never
- Once in a while
- Often
- Refused (Don't read out)
- DK (Don't read out)

G. Media campaign

- AD31701** **G0. In the last 6 months, have you ever seen advertising or information that talks about the dangers of smoking, or encourages quitting?**
- Never
 - Once in a while
 - Often
 - Refused (Don't read out)**
 - DK (Don't read out)

G1. In the last 6 months, have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting in any of the following places?

-
- AD31711** **G1A. On television**
 Yes No Refused (Don't read out) Didn't watch TV/DK (Don't read out)
- AD31716** **G1B. On radio**
 Yes No Refused (Don't read out) Didn't listen to radio/DK (Don't read out)
- AD31725** **G1C. On posters**
 Yes No Refused (Don't read out) Didn't see any posters/DK (Don't read out)
- AD31726** **G1D. On billboards**
 Yes No Refused (Don't read out) Didn't see any billboards/DK (Don't read out)
- AD31731** **G1E. In newspapers or magazines**
 Yes No Refused (Don't read out) Didn't read newspapers/magazines/DK (Don't read out)
- AD31721** **G1F. In cinemas**
 Yes No Refused (Don't read out) Didn't go to cinemas/DK (Don't read out)
- AD31736** **G1G. On shop/store windows or inside shops/stores where you buy tobacco**
 Yes No Refused (Don't read out) Didn't go to shops or stores/DK (Don't read out)
- AD31712** **G1H. On or around street vendors**
 Yes No Refused (Don't read out) Didn't go/DK (Don't read out)
- AD31713** **G1I. Over the Internet**
 Yes No Refused (Don't read out) Didn't use the Internet/DK (Don't read out)
- AD31714** **G1J. In the workplace**
 Yes No Refused (Don't read out) Have no job/DK (Don't read out)
- AD31717** **G1K. On public transportation vehicles or stations**
 Yes No Refused (Don't read out) Didn't use public transportation/DK (Don't read out)
- AD31718** **G1L. In restaurants, cafeterias or tea bars**
 Yes No Refused (Don't read out) Didn't go/DK (Don't read out)
- AD31719** **G1M. In discos/karaoke lounges, or other entertainment venues**
 Yes No Refused (Don't read out) Didn't go/DK (Don't read out)
- AD31741** **G1N. On cigarette packs**
 Yes No Refused (Don't read out) Didn't see cigarette packs/DK (Don't read out)

Note: "No smoking" signs don't count. We want to focus on posters or billboards that talk about the dangers of smoking, or encourage quitting.

H. Overall media evaluation

AD31161 H1. Now thinking about all forms of advertising talking about the dangers of smoking or encouraging quitting: Has this advertising made smoking less socially desirable?

<Interviewer note: read out the response options>

- No, not at all
- Yes, a little
- Yes, a lot
- Refused (**Don't read out**)
- DK (**Don't read out**)

AD31162 H2. As a whole, has this advertising made you more or less likely to quit smoking or made no difference?

- More likely to quit smoking
- Less likely to quit smoking
- Made no difference
- Refused (**Don't read out**)
- DK (**Don't read out**)

C. Quitting history

QA31106 C2. How many times have you ever tried to quit smoking?

- ① None – Skip to K1
- ② Once
- ③ 2-5 times
- ④ 6-10 times
- ⑤ More than 10 times
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

QA31108 C2B. How many times have you tried to quit smoking in the past year?

- ① Not at all
- ② 1 time
- ③ More than 1 time
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

QA31231 C3. How long ago did your most recent serious quit attempt end? (Don't read out)

- ① Less than 1 month
- ② 1-3 months
- ③ 4-6 months
- ④ 7 months to 1 year
- ⑤ 13 months to 3 years
- ⑥ More than 3 years
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

QA31235 C4. Thinking about your last serious quit attempt --- How long did you stay smoke-free? (Don't read out)

- ① Less than 1 month
- ② 1-3 months
- ③ 4-6 months
- ④ 7 months to 1 year
- 13 months to 3 years
- More than 3 years
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

K. Stop-smoking medications

NR31101 **K1.** Have you heard about medications to help people stop smoking such as Nicotine Replacement Therapies like nicotine gum or the patch, stop-smoking pills such as Zyban?

- ① Yes
 ② No
 ⑧ Refused (Don't read out)

NR31102 **K1N1.** Have you heard about Chinese traditional stop-smoking medications?

- ① Yes
 ② No
 ⑧ Refused (Don't read out)

NR31103 **K1N2.** Have you heard about stop-smoking acupuncture?

- ① Yes
 ② No
 ⑧ Refused (Don't read out)

K3. Which of the following stop smoking medications or treatments have you ever used?

NR31112 **K3AZ.** Nicotine patch
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31111 **K3A.** Nicotine gum
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31113 **K3B.** Nicotine lozenges
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31116 **K3C.** Nicotine nasal spray
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31117 **K3CZ** Zyban or Bupropion
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31108 **K3D.** Chinese traditional medicine
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31109 **K3E.** Acupuncture
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31119 **K3F.** K3FS. Other (Specify): **NR31119o**
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)

NR31120 **K3G.** None (don't read out)
 ①Yes ②No ⑧Refused (Don't read out) ⑨DK (Don't read out)



L. Cessation services

NR31801 **L1A.** In the last 6 months, have you visited a doctor or other health professional?

- ① Yes
- ② No → Skip to L2.
- ⑧ Refused (Don't read out) → Skip to L2

L1B. During any visit to the doctor or other health professional in the last 6 months, did you receive: (Read)

NR31811 **L1BA.** Advice on how to quit or how to stay quit

Yes No—skip to L1BB ⑧ Refused (Don't read out) —skip to L1BB DK (Don't read) —skip to L1BB

NR31812 **L1BA2** If yes: Was it helpful to you?

Yes No ⑧ Refused (Don't read out) DK (Don't read)

NR31813 **L1BB.** Additional help or a referral to another service to help you stay quit

Yes No—skip to L1BC ⑧ Refused (Don't read out) —skip to L1BC DK (Don't read) —skip to L1BC

NR31814 **L1BB2.** If yes: Was it helpful to you?

Yes No ⑧ Refused (Don't read out) DK (Don't read)

NR31817 **L1BC.** Pamphlets or brochures on how to stay quit

Yes No—skip to L2 ⑧ Refused (Don't read out) —skip to L2 DK (Don't read) —skip to L2

NR31818 **L1BC2.** If yes: Was it helpful to you?

Yes No ⑧ Refused (Don't read out) DK (Don't read)

L2. In the last 6 months, have you received advice or information about quitting smoking from any of the following?

NR31861 **L2A. Telephone or Quit Line services?**

- ① Yes
- ② No—skip to L2B
- ⑧ Refused (Don't read out) —skip to L2B
- ⑨ DK (Don't read out) —skip to L2B

NR31863 **L2A2. If yes:**
Was it helpful to you?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

NR31869 **L2B. Local stop-smoking services (such as hospitals or clinics)?**

- ① Yes
- ② No—skip to LVM1
- ⑧ Refused (Don't read out) —skip to LVM1

⑨ DK (Don't read out) —skip to LVM1

NR31871

L2B2. If yes:

Was it helpful to you?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

BQ31111

LVM1. If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed?

- ① Not at all sure
- ② Somewhat sure
- ③ Very sure
- ④ Extremely sure
- ⑧ Refused (Don't read out)
- ⑨ DK (Don't read out)

Interviewer note: Respondent does not need to be intending to quit to respond.
Emphasize "if" in wording.

AD31156

LXA Have you ever heard about the "International Quit & Win Contest" in China?

- ① Yes
- ② No Skip to LXD.
- ⑧ Refused (Don't read out) Skip to LXD

AD31157

LXB. Did you participate the "International Quit & Win Contest" in China?

- ① Yes
- ② No
- ⑧ Refused (Don't read out)

AD31158

LXC. Did China "International Quit & Win Contest" make you think quitting?

- Very much
- A little
- Not at all
- Refused (Don't read out)

ET31791

LXD. Have you ever heard of the "Smoke-Free Beijing Olympics"?

- Yes
- No → skip to LY
- Refused (Don't read out) → skip to LY

ET31792

LXE. Do you support the 'Beijing Olympics' going smoke free?

- Yes
- No
- Refused (Don't read out)

AD31159

LY. Have you ever heard about "the Framework Convention on Tobacco Control"?

- Yes



- No
- Refused (**Don't read out**)

M. Beliefs about quitting

- BQ31141** **M2A. Are you planning to quit smoking?**
- ① Within the next month
 - ② Within the next 6 months → Skip to M3.
 - ③ Sometime in the future, beyond 6 months → Skip to M3.
 - ④ Not planning to quit → Skip to M3.
 - ⑧ Refused (Don't read out) → Skip to M3.
 - ⑨ DK (Don't read out) → Skip to M3.

- BQ31146** **M2B. Have you set a firm date?**
- ① Yes
 - ② No
 - ⑧ Refused (Don't read out)
 - DK (Don't read out)

M3. In the past 6 months, have each of the following things led you to think about quitting, not at all, somewhat, or very much)

Interviewer note: the response options for questions M3A to M3I are:

Not at all A Little Very much Refused (Don't read out) DK (Don't read out)

-
- BQ31201** **M3A.** Concern for your personal health?
- BQ31203** **M3B.** Concern about the effect of your cigarette smoke on non-smokers?
- BQ31207** **M3C.** That China society disapproves of smoking?
- BQ31209** **M3D.** The price of cigarettes?
- BQ31211** **M3E.** Smoking restrictions in public and work places?
- BQ31225** **M3F.** Advertisements or information about the health risks of smoking?
- BQ31227** **M3G.** Health warning labels on cigarette packages?
- BQ31229** **M3H.** Setting an example for children?
- BQ31215** **M3I.** Your family disapproves of smoking?

- BQ31301** **M4. How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months?**
- Not at all
 - A little
 - Very much
 - Refused (Don't read out)
 - DK (Don't read out)

- PR31311** **M5. To what extent, if at all, has smoking damaged your health?**
- Not at all
 - A little
 - Very much
 - Refused (Don't read out)
 - DK (Don't read out)

- PR31313** **M6. How worried are you, if at all, that smoking will damage your health in the future?**
- Not at all
 - A little
 - Very much
 - Refused (Don't read out)
 - DK (Don't read out)

DI31240 **M6BZ. In the last 12 months, have any of your close friends or acquaintances quit smoking completely?**

- ① Yes 1 friend
- ② Yes more than 1 friend
- ③ No none
- ⑧ Refused (**Don't read out**)
- ⑨ DK (**Don't read out**)

DI31241 **M7. Of the five closest friends or acquaintances that you spend time with on a regular basis, how many of them are smokers?**

<interviewer note: Don't read out the response options just circle their response>

- ① 1
- ② 2
- ③ 3
- ④ 4
- ⑤ 5
- ⑥ None
- ⑧ Refused (**Don't read out**)
- DK (**Don't read out**)

DI31301 **M8. What is your overall opinion of smoking? (Read)**

- ① Very good
- ② Good
- ③ Neither good nor bad
- ④ Bad
- ⑤ Very bad
- ⑧ Refused (**Don't read out**)
- ⑨ DK (**Don't read out**)

N. ETS / smoking restrictions

- ET31221** **N1. Which of the following best describes smoking inside your home?**
- Smoking is not allowed in any indoor areas – skip to N2A
 - Smoking is allowed only in some indoor areas
 - No rules or restrictions
 - Refused (**Don't read out**)
 - DK (**Don't read out**)
- ET31220** **N1A. Are you intending to make your home totally smoke-free within the next year?**
- Yes
 - No
 - Refused (**Don't read out**)
 - DK (**Don't read out**)
- ET31534** **N2A. When you visited a restaurant in the last 6 months, were people smoking inside?**
- I have not visited a restaurant in the last 6 months
 - Yes
 - No
 - Refused (**Don't read out**)
 - DK (**Don't read out**)
- ET31434** **N2B. When you visited a bar in the last 6 months, were people smoking inside?**
- I have not visited a bar in the last 6 months
 - Yes
 - No
 - Refused (**Don't read out**)
 - DK (**Don't read out**)
- ET31546** **N2C. When you were in a taxi in the last 6 months, were people smoking inside?**
- I have not been in a taxi in the last 6 months
 - Yes
 - No
 - Refused (**Don't read out**)
 - DK (**Don't read out**)
- ET31556** **N2D. When you were in a cinema in the last 6 months, were people smoking inside?**
- I have not visited a cinema in the last 6 months
 - Yes
 - No
 - Refused (**Don't read out**)
 - DK (**Don't read out**)

- ET31544** **N2E. When you were on a bus in the last 6 months, were people smoking inside?**
- I have not been on a bus in the last 6 months
 - Yes
 - No
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31621** **N7. Which of the following best describes the smoking policy where you work?**
- Smoking is not allowed in any indoor areas
 - Smoking is allowed only in some indoor areas
 - No rules or restrictions
 - I do not work inside a building (skip to N9)
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31634** **N7B. In the last 6 months, have people smoked in indoor areas where you work?**
- Yes
 - No
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31625** **N8. In the last 6 months, have you smoked in indoor areas at work?**
- Yes
 - No
 - Refused (Don't read out)
 - DK (Don't read out)

N9. For each of the following public places, please tell me if you think smoking should not be allowed in any indoor areas, should be allowed only in some indoor areas, or no rules or restrictions)

- ET31701** **N9A. Hospitals**
- Smoking should not be allowed in any indoor areas
 - Smoking should be allowed only in some indoor areas
 - No rules or restrictions
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31703** **N9B. Workplaces**
- Smoking should not be allowed in any indoor areas
 - Smoking should be allowed only in some indoor areas
 - No rules or restrictions
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31726** **N9C. Cinemas**
- Smoking should not be allowed in any indoor areas
 - Smoking should be allowed only in some indoor areas
 - No rules or restrictions
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31708** **N9D. Restaurants**
- Smoking should not be allowed in any indoor areas
 - Smoking should be allowed only in some indoor areas
 - No rules or restrictions
 - Refused (Don't read out)
 - DK (Don't read out)

- ET31714** **N9E. Buses**
- Smoking should not be allowed in any indoor areas
 - Smoking should be allowed only in some indoor areas

No rules or restrictions Refused (Don't read out) DK (Don't read out)

ET31712

N9F. Schools

Smoking should not be allowed in any indoor areas Smoking should be allowed only in some indoor areas

No rules or restrictions Refused (Don't read out) DK (Don't read out)

ET31727

N9G. Government Buildings

Smoking should not be allowed in any indoor areas Smoking should be allowed only in some indoor areas

No rules or restrictions Refused (Don't read out) DK (Don't read out)

ET31705

N9H. Bars

Smoking should not be allowed in any indoor areas Smoking should be allowed only in some indoor areas

No rules or restrictions Refused (Don't read out) DK (Don't read out)

ET31744

N9I. Taxis

Smoking should not be allowed in any indoor areas Smoking should be allowed only in some indoor areas

No rules or restrictions Refused (Don't read out) DK (Don't read out)

ET31889

N11. Overall, would you say that a ban on smoking in restaurants and other enclosed public places would be a good thing or a bad thing?

- Very good
- Good
- Neither good nor bad
- Bad
- Very bad
- Refused (Don't read out)
- DK (Don't read out)

O. Knowledge and attitude

OVD2. Are each of the following statements true or false?

- KN31431** **OVD2B.** Filters reduce the harmfulness of cigarettes.
 Yes No Refused (Don't read out) DK (Don't read out)
- KN31441** **OVD2C.** The nicotine in cigarettes is the chemical that causes most of the cancer.
 Yes No Refused (Don't read out) DK (Don't read out)
- KN31513** **OVD2D.** The quality of foreign cigarette is better than that of domestic cigarettes.
 Yes No Refused (Don't read out) DK (Don't read out)
- KN31515** **OVD2E.** Foreign cigarettes do less harm to your health compared to domestic cigarettes.
 Yes No Refused (Don't read out) DK (Don't read out)

- LM31109** **O00.** Do you think that the brand you usually smoke, might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands?
- A little less harmful
 No different
 A little more harmful
 Refused (Don't read out)
 DK (Don't read out)

Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.

Interviewer note: the response options for questions O00Z to O03N are:

- Strongly disagree Disagree Neither disagree or agree Agree Strongly agree Refused (Don't read out) DK (Don't read out)

- LM31110** **O00Z.** The brand of cigarettes I usually smoke is smoother on my throat and chest than other cigarette brands.
- LM31312** **O01.** Low tar cigarettes make it easier to quit smoking
- LM31332** **O02.** Low tar cigarettes are smoother on your throat and chest than regular cigarettes
- LM31322** **O03.** Low tar cigarettes are less harmful than regular cigarettes
- LM31705** **O04.** Menthol cigarettes are smoother on your throat and chest than regular cigarettes
- LM31703** **O05.** Menthol cigarettes are less harmful than regular cigarettes
- PS31201** **O06.** Every cigarette you take damages your health
- PS31205** **O07.** Tobacco is addictive
- LM31315** **O07B.** Light cigarettes are less addictive than regular cigarettes
- PS31211** **O08.** You enjoy smoking too much to give it up
- PS31214** **O09.** Your cigarette smoke is dangerous to nonsmokers
- PS31215** **O10.** If you had to do it over again, you would not have started smoking

-
- PS31219 O11. You spend too much money on cigarettes
- PS31225 O12. Smoking helps you control your weight
- PS31229 O13. People who are important to you believe that you should not smoke
- PS31241 O15. Smoking is a sign of sophistication
- PS31325 O16. Female smoking is acceptable
- PS31315 O17. Everybody has got to die of something, so why not enjoy yourself and smoke
- IN31211 O18. Tobacco companies should be allowed to advertise and promote cigarettes as they please
- IN31316 O19. The government should do more to control smoking
- IN31225 O20. Tobacco companies do good things for the Chinese society
- LM31311 O01N. Light cigarettes make it easier to quit smoking
- LM31331 O02N. Light cigarettes are smoother on your throat and chest than regular cigarettes
- LM31321 O03N. Light cigarettes are less harmful than regular cigarettes
- LM31225 OH3. Tar numbers appear on cigarette packs. As you understand it, how closely, if at all, are the tar numbers related to the amount of tar that smokers take into their bodies?
- ① Closely related
 - ② Somewhat related
 - ③ Not related
 - ⑦ NA
 - ⑧ Refused
 - DK (Don't read out)

- PS31234** **O14N. What is Chinese society's attitude toward smoking?**
- ① Chinese society supports smoking
 - ② Chinese society disapproves smoking
 - ③ Chinese society neither supports nor disapproves smoking
 - ⑧ Refused (Don't read out)
 - DK (Don't read out)

- DI31251** **O15. I am concerned that because I smoke, children around me are more likely to smoke.**
- ① No, not at all
 - ② Yes, a little
 - ③ Yes, a lot
 - ④ There are no children around me regularly
 - ⑧ Refused (Don't read out)
 - ⑨ DK (Don't read out)

Now we are going to ask you several questions about your attitudes toward life, which are not related to smoking.

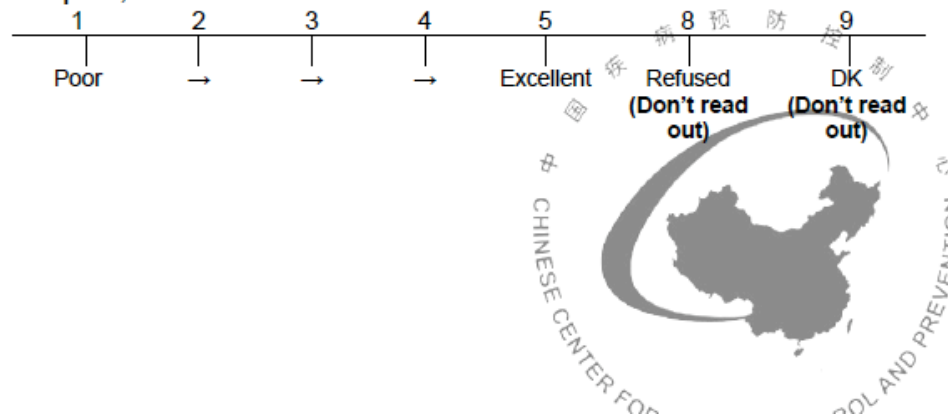
Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.

Interviewer note: the response options for questions O22 to O26 are:

- Strongly disagree Disagree Neither disagree or agree Agree Strongly agree Refused (Don't read out) DK (Don't read out)

-
- DI31211** **O22.** You often think that what you do today will affect your life in the future
- DI31421** **O23.** Before you make a decision, you like to talk to close friends and get their ideas
- DI31422** **O24.** You would give up an activity you really enjoy if your family did not approve
- DI31423** **O25.** You enjoy being different from others
- DI31424** **O26.** It annoys you when other people do better than you at something
-

- PR31101** **O27. Now a question about your overall health. In general, how would you describe your health? Is it: (Read)**
1 is poor, 5 is excellent.



OZ1. Feeling/mood

Below is a list of ways that you might have felt or behaved. Please tell me how often you have felt this way during the past week.

Interviewer note: the response options for questions OZ1A to OZ1D are:

① Rarely or none of the time (less than 1 day)	② Some or a little of the time (1-2 days)	③ Occasionally or a moderate amount of time (3-4 days)	④ Most or all of the time (5-7 days)	⑧ Refused (Don't read out)	⑨ DK (Don't read out)
--	---	--	--------------------------------------	----------------------------	-----------------------

DI31441	<input type="checkbox"/> OZ1A.	I did not feel like eating; my appetite was poor
DI31442	<input type="checkbox"/> OZ1B.	I felt hopeful about the future
DI31443	<input type="checkbox"/> OZ1C.	I felt sad
DI31444	<input type="checkbox"/> OZ1D.	I felt that people dislike me

OZ2. Alcohol Use

DI31701

OZ2A. Choose only one. Responses 1-6 refer to the respondent's average over the year.

During the last 12 months –about how often did you have any kind of drink that contained alcohol?

- ① Every day
- ② 5-6 days per week
- ③ 3-4 days per week
- 1-2 days per week
- Less than once a week but at least once a month
- Less than once a month
- Did not drink any alcohol in the past year →Skip to P1
- ⑧ Refused (Don't read out) →Skip to P1
- DK (Don't read out) →Skip to P1

OZ2B. Now I want you to think about a typical day when you did drink alcohol. I am interested in how much you typically drink.

On a typical day when you did drink alcohol, how many of each of the following alcoholic drinks did you usually have?

(Interviewer Note: Read or show liang of wine, can of beer, bottle of beer, liang of low alcohol liquor, liang of high alcohol liquor, and liang of yellow wine or rice wine, and get number of drinks for each. Write the number of drinks in the column provided below for each type of drink):

		Type of drinks	Number of drinks
DI31731	<input type="checkbox"/> <input type="checkbox"/> OZ2B1	Liang of wine	
DI31732	<input type="checkbox"/> <input type="checkbox"/> OZ2B2	Can of beer	
DI31733	<input type="checkbox"/> <input type="checkbox"/> OZ2B3	Bottle of beer	
DI31734	<input type="checkbox"/> <input type="checkbox"/> OZ2B4	Liang of low alcohol liquor	
DI31735	<input type="checkbox"/> <input type="checkbox"/> OZ2B5	Liang of high alcohol liquor	
DI31736	<input type="checkbox"/> <input type="checkbox"/> OZ2B6	Liang of yellow wine or rice wine	

DI31739

(Interviewer Note: After they have given you their number of drinks, confirm that you recorded this correctly by saying the following):

"Okay just to make sure I got this correct, on a typical day when you have alcohol you usually have ___liang of wine, ___cans of beer, ___bottles of beer, ___liang of low alcohol liquor, ___liang of high alcohol liquor, and ___liang of yellow wine/rice wine, is that correct?"

(Interviewer Note: If there are any discrepancies make the appropriate changes)

P. Demographics

Just to wrap up, we have a few questions for statistical purpose. Please be assured that all your responses will be kept entirely confidential.

gender

P1. Gender

- ① Male
- ② Female

DE31111

P2. Your marital status

- Married or living together
- Divorced or separated→skip to P3.
- Windowed→skip to P3.
- Single→skip to P3.
- ⑧ Refused (**Don't read out**) →skip to P3

DI31245

P2B. Does your spouse or partner smoke?

- ① Yes→skip to P3
- ② No
- ⑧ Refused (**Don't read out**) →skip to P3
- ⑨ DK (**Don't read**) →skip to P3

DI31247

P2C. Did your spouse or partner used to smoke but quit recently?

- ① Yes
- ② No→skip to P3
- ⑧ Refused (**Don't read out**) →skip to P3
- ⑨ DK (**Don't read**) →skip to P3

DI31249

P2D. When did your spouse or partner quit?

□□□□YYYY□□MM□□DD date quit: _____

Interviewer note: The respondents may give a specific date or a more vague timeline (6 months ago). Record whatever the respondent says.

DE31511

P3. Ethnic groups

- | | | |
|--------------|--------------------------|--|
| (01) Han | (02) Zhuang | (03) Man |
| (04) Hui | (05) Miao | (06) Uygur |
| (07) Yi | (08) Tujia | (09) Mongolian |
| (10) Tibetan | (11) P3S. Others: | (98) Refused (Don't read out) |

DE31511o

DE31233

P4. What is your usual occupation?

- | | |
|--|---|
| (01) Agriculture, forestry, animal husbandry, fishery and water conservation employees | (02) Operators of production or transportation equipment and related personnel |
| (03) Businessmen or service industry employees | (04) Leaders of governments, Chinese Communist party organizations, companies or institutions |
| (05) Clerks | (06) Specialized technicians |
| (07) Soldiers | (08) Other occupations |
| (09) Students | (10) No job |
| (11) Retired | (98) Refused (Don't read out) |

DE31211 P5. In the last year, on average, how much was the **total income per month** of your household?

- <1000 Yuan 1000-2999 Yuan ③ 3000-4999 Yuan
 5000-6999 Yuan 7000-8999 Yuan ⑥ 9000 Yuan or above
⑧ Refused (Don't read out) DK (Don't read out)

DE31311 P6. What is your highest education? (Don't read out)

- No education ② Elementary school
 Junior high school ④ High school/technical high school
 College ⑥ University or higher
⑧ Refused (Don't read out)

BIRTH // P7. Date of birth: YYYYMMDD

BI314 P8A. Number of adult males in the household

BI324 P8B. Number of adult male smokers in the household

<Interviewer note: If P8B is greater than P8A then clarify this with the respondent>

BI315 P9A. Number of adult females in the household

BI325 P9B. Number of adult female smokers in the household

<Interviewer note: If P9B is greater than P9A then clarify this with the respondent>

DE31811 P10. Is there anyone less than 18 years old live together with you?

- ① Yes
② No
⑧ Refused

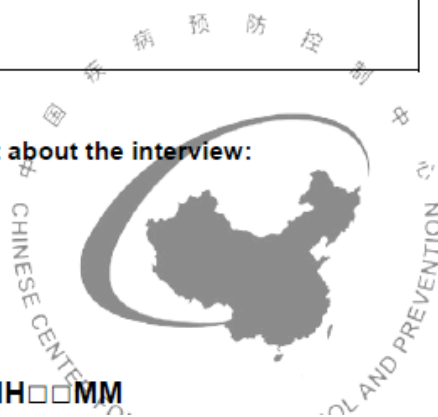
AI31101 **Wrap up: Thanks for the cooperation and remind subject the follow-up in one year**

A thank-you gift.

AI543 Q3JUST. Interviewers' overall judgment about the interview:

- ① Reliable
② Somewhat reliable
③ With some errors
④ With a lot of errors

AI31606 **END TIME:** HHMM



APPENDIX I: NASSS WAVE 3 AND WAVE 4 SURVEY

North American Student Smoking Survey

Correct Mark



Incorrect Marks

These questions are about the smoking experiences and attitudes of students like yourself. Read each question carefully and answer as honestly as you can. The information you give will be kept completely secret and confidential. This survey is anonymous, so please do not put your name on any of the pages.

For each question, mark your answer by making a dark pencil mark that fills the circle completely. Fill in only one (1) circle for each question unless the instructions tell you to do something different.

Health Behaviour Research Group University of Waterloo

PLEASE BEGIN HERE

In the boxes below, there are questions. Please read each question carefully and then:

- (1) write the correct letter for each question on the line
- (2) fill in the corresponding circle below (completely fill the circle with dark pencil)

What is the first letter of your middle name? (If you don't have a middle name, use "Z")	What is the first letter of the month you were born?	What is the day of the month of your birthday?	What is the second letter of your first name?	What is the first letter of your mother's first name? (If unknown, use "X")																																																																																																																															
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Please do not proceed without completing the questions above.

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1. What grade are you in?

- 8 9 10 11 12 OAC

2. How old are you?

- 13 or younger 17
 14 18
 15 19 or older
 16

3. Are you male or female?

- Male Female

4. Have you ever tried cigarette smoking (even just one puff)?

- Yes No

5. Have you ever smoked again since the first time you tried a cigarette?

- Yes No I have never smoked

6. Have you ever smoked a whole cigarette?

- Yes No I have never smoked

7. Do you think you will try a cigarette soon?

- Yes No

8. In the last 6 months, how often did you smoke?

- I have never smoked
 I have smoked, but not in the last 6 months
 I have tried one cigarette in the last 6 months
 I have had more than one cigarette in the last 6 months

9. Have you smoked 100 or more cigarettes in your life?

- Yes
 I have smoked, but not that much
 I have never smoked

10. Do you usually smoke every week?

- Yes
 No, I don't smoke that often
 No, I have only tried once
 No, I have quit
 I have never smoked

11. Since this day last week, how many cigarettes have you smoked?

- none
 1 - 5
 6 - 10
 11 - 20
 21 - 30
 31 - 50
 51 - 100
 more than 100

12. At this time, do you smoke cigarettes everyday, occasionally, or not at all?

- Every day
 Occasionally (less than every day)
 Not at all
 I have never smoked

13. Have you smoked a cigarette today?

- Yes No I do not smoke

14. On how many of the last 30 days did you smoke one or more cigarettes?

- none
 1 - 5 days
 6 - 10 days
 11 - 20 days
 21 - 29 days
 30 days (everyday)

15. Compared to 6 months ago, do you smoke more or less NOW than you did then?

- I don't currently smoke
 A lot more now
 A little more now
 About the same now
 A little less now
 A lot less now

16. At this time, have you quit smoking?

- Yes No I have never smoked

17. How long ago did you quit smoking?

- I am still smoking
 Less than 2 weeks ago
 Between 2 weeks and 6 months ago
 Between 6 months and one year ago
 More than one year ago
 I have never smoked

18. Do you plan to quit smoking cigarettes?

- I have never smoked
 I have already quit
 Yes, within one week
 Yes, within 30 days
 Yes, within six months
 Yes, within one year
 Yes, but I'm not sure when
 No, I do not plan to quit smoking

19. How likely do you think it is that smoking will lead to health problems for you?

- Very likely
 Somewhat likely
 Somewhat unlikely
 Very unlikely
 I have never smoked

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20. If you smoke, answer the following:

a. What **brand** do you usually smoke?

- Player's Export A Marlboro Newport Belvedere
 Du Maurier Benson & Hedges Camel Kool Other _____

b. What **strength** do you usually smoke?

- Regular Ultra Light or Extra Light Medium Menthol
 Light Mild Full Flavor Other _____

c. What **size** do you usually smoke?

- Regular Wide Short Other _____
 King Slim 100's

The next set of questions are about your opinions and perceptions of smoking-related issues.

21. Do you think you will smoke cigarettes in the future?

- I definitely will not smoke cigarettes
 I probably won't smoke cigarettes
 I might smoke cigarettes or I might not smoke cigarettes
 I probably will smoke cigarettes
 I definitely will smoke cigarettes

22. How much would your friends approve of you smoking?

- Not at all Somewhat
 Slightly Very much

23. How much would your parents approve of you smoking?

- Not at all Somewhat
 Slightly Very much

24. How many people your age do you think smoke cigarettes?

- 91 - 100% 51 - 60% 11 - 20%
 81 - 90% 41 - 50% 0 - 10%
 71 - 80% 31 - 40%
 61 - 70% 21 - 30%

25. Not counting yourself, how many people in your home smoke every day or almost every day?

- 0 2 4
 1 3 more than 4

26. Your closest friends are the friends you like to spend the most time with. How many of your 5 closest friends smoke cigarettes?

- None 1 2 3 4 5

27. If one of your best friends were to offer you a cigarette, would you smoke it?

- Definitely yes
 Probably yes
 Probably not
 Definitely not

28. If your friends wanted you to smoke a cigarette, how easy or hard would it be for you to say 'no' if you didn't want to smoke?

- It would be very easy to say 'no' to my friends
 It would be easy to say 'no' to my friends
 It would be somewhere in the middle
 It would be hard to say 'no' to my friends
 It would be very hard to say 'no' to my friends

29. In the next 6 months, I plan to smoke...

- More than the amount that I smoke now
 About the same amount that I smoke now
 Less than the amount that I smoke right now
 I plan to quit
 I don't smoke at all

30. In the next 6 months, I think that my friends who smoke plan to smoke... (choose only one)

- More than the amount that they smoke now
 About the same amount that they smoke now
 Less than the amount that they smoke now
 They plan to quit
 I don't have any friends that smoke

31. How easy or hard would it be for you to completely quit smoking if you wanted to?

- I don't smoke
 It would be very easy to quit
 It would be easy to quit
 It would be somewhere in the middle
 It would be hard to quit
 It would be very hard to quit

32. How many times in the last 6 months have you tried to quit smoking?

- I have never smoked
 I have not smoked in the last 6 months
 I have tried to quit smoking once in the last 6 months
 I have tried to quit smoking more than once in the last 6 months
 I have not tried to quit smoking in the last 6 months

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33. Think about the last 6 months. What's the longest time you intentionally stayed smoke-free?

- I don't smoke
- I have never intentionally tried to quit
- Less than one day
- 1 to 2 days
- 3 to 7 days
- 8 to 14 days
- 15 to 30 days
- More than 30 days

35. Do you believe that you will be smoking cigarettes 1 year from now?

- Definitely Yes
- Probably Yes
- Probably No
- Definitely No

37. Smoking is:

- a. Very Attractive
- Attractive
- In the middle
- Unattractive
- Very Unattractive
- b. Very Good
- Good
- In the middle
- Bad
- Very Bad
- c. Very Positive
- Positive
- In the middle
- Negative
- Very Negative

The following questions are about warning labels and about other aspects of smoking. Please answer the questions even if you do not smoke.

38. How often do you notice the warning label on the pack when you get a cigarette?

- I do not smoke
- Never
- Rarely
- Sometimes
- Often
- Always

39. In the last 6 months, has noticing the warning label made you decide not to have a cigarette?

- I do not smoke
- Never
- Rarely
- Sometimes
- Often

40. In the last 6 months, has noticing the warning label made you hesitate (made you think twice) to have a cigarette?

- I do not smoke
- Never
- Rarely
- Sometimes
- Often

41. Cigarette warning labels make me think that smoking is unhealthy.

- Disagree strongly
- Disagree somewhat
- Agree somewhat
- Agree strongly

42. In the past 6 months, have you noticed the warning labels on cigarette packages?

- No
- Yes--a little bit
- Yes--a lot

34. Do you believe that you will be smoking cigarettes 10 years from now?

- Definitely Yes
- Probably Yes
- Probably No
- Definitely No

36. Which of the following statements best describes you:

- I have never smoked
- I used to smoke but I have quit
- I smoke now and have no thoughts of quitting
- I smoke now and I think I need to consider quitting someday
- I smoke now and I'm starting to think about how to change my smoking patterns
- I smoke now and I'm taking action to quit such as cutting down or enrolling in a quit program

43. In the past 6 months, have you talked to your friends about the warning labels on cigarette packages?

- No
- Yes--a little bit
- Yes--a lot

44. In the past 6 months, have you talked to your parents or family about the warning labels on cigarette packages?

- No
- Yes--a little bit
- Yes--a lot

45. How much do the cigarette warning labels bother you?

- Not at all
- They bother me slightly
- They bother me somewhat
- They bother me a lot

46. The warning labels on cigarette packs are:

- Not at all scary
- Slightly scary
- Very scary
- Extremely scary

47. How unpleasant are cigarette warning labels to look at?

- Not at all unpleasant
- Slightly unpleasant
- Very unpleasant
- Extremely unpleasant

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	Not at all Effective	Slightly Effective	Very Effective	Extremely Effective
48. How effective do you think cigarette warning labels are in pointing out the health problems of smoking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. How effective do you think cigarette warning labels are in getting adults to quit or cut back on smoking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. How effective do you think cigarette warning labels are in getting high school students to quit or cut back on smoking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. How effective do you think cigarette warning labels are in preventing high school students from starting to smoke?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. How effective do your friends think cigarette warning labels are?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

53. How do cigarette warning labels affect your feelings about smoking?

I do not smoke
 I'm much less likely to smoke
 I'm slightly less likely to smoke
 No effect
 I'm slightly more likely to smoke
 I'm much more likely to smoke

54. Do you try to avoid looking at the warning label when you get a cigarette from the package?

I do not smoke
 No--I don't avoid looking at the warning label at all
 Yes--I try to avoid looking at the warning label a bit
 Yes--I try to avoid looking at the warning label a lot

55. In the past 6 months, have you asked to get another package of cigarettes because the warning label was too gross?

I do not smoke Yes--once
 No--never Yes--more than once

56. In the past 6 months, have you noticed young people taking cigarettes out of the package and putting them into something else?

No--never Yes--more than once
 Yes--once Yes--often

57. In the past 6 months have you taken cigarettes out of the package and put them into something else?

No--never Yes--more than once
 Yes--once Yes--often

58. In the past 6 months have you covered up the warning label on the package (e.g. with a sticker or with a cover)?

No--never Yes--more than once
 Yes--once Yes--often

59. Do you believe that smoking is unhealthy?

Not at all unhealthy Somewhat unhealthy
 Slightly unhealthy Extremely unhealthy

60. Do you think that smoking would increase your chances of...

Lung cancer:
 No--Not at all Yes--Somewhat
 Yes--Slightly Yes--Very much

Heart disease:
 No--Not at all Yes--Somewhat
 Yes--Slightly Yes--Very much

Dying younger:
 No--Not at all Yes--Somewhat
 Yes--Slightly Yes--Very much

61. Do you think that smoking would increase your chances of dying a painful death?

No--Not at all Yes--Somewhat
 Yes--Slightly Yes--Very much

62. Getting a smoking-related disease would be:

Not serious Very serious
 Slightly serious Extremely serious

63. Indicate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	In the middle	Agree	Strongly Agree
a. Smoking is only for those who are mature enough to be able to handle it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Smoking is OK, as long as you don't get in the habit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Smoking is addictive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Smoking is fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Smoking is cool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Smoking helps you calm your nerves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Smoking helps you lose weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Smoking hurts your athletic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. The dangers of smoking have been exaggerated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Some kinds of cigarettes are safer than others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Smoking cigarettes now won't really hurt me if I quit smoking in a couple of years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Cigarettes are too expensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Smoking makes you smell bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. At my school, smokers are more popular than non-smokers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Even if they don't intend to, parents who smoke encourage their children to smoke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Even if they don't intend to, parents who smoke can hurt their children's health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. The smoke from someone else's cigarette can be harmful to a non-smoker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. The smoke from someone else's cigarette can cause lung cancer in a non-smoker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64. How much do you think the government wants...

- a. to influence smokers to quit? Not at all Slightly Somewhat Very Much
- b. to prevent kids from smoking? Not at all Slightly Somewhat Very Much

65. Below are some reasons that people might give for smoking light or ultra-light cigarettes. For each one, please indicate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	In the middle	Agree	Strongly Agree
a. Light cigarettes are healthier than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Light cigarettes can be used as step toward quitting smoking completely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Light cigarettes can reduce the risks of smoking without having to quit completely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Light cigarettes taste better than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Light cigarettes are less harsh than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Light cigarettes are less addictive than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Light cigarettes feel smoother on your throat than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. You cough less when you smoke light cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Light cigarettes have less tar than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Light cigarettes have less nicotine than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Light cigarettes are less likely to cause cancer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. For those just starting to smoke, light cigarettes are easier to smoke than regular cigarettes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

66a. How many light cigarettes would someone have to smoke to get the same amount of tar as from one regular cigarette?

- Less than 1 4
 1 5
 2 more than 5
 3

b. How confident are you in your answer?

- Not at all confident Moderately confident
 Somewhat confident Very confident

67a. Smoking _____ light cigarettes is as unhealthy for you as smoking one regular cigarette.

- Less than 1 4
 1 5
 2 more than 5
 3

b. How confident are you in your answer?

- Not at all confident Moderately confident
 Somewhat confident Very confident

The following questions (68 - 71) are for smokers only. If you do not smoke, please skip to question 72.

68. Please respond to the following questions...

- | | Yes | No |
|--|-----------------------|-----------------------|
| a. Have you ever tried to quit smoking but couldn't? | <input type="radio"/> | <input type="radio"/> |
| b. Do you smoke <u>now</u> because it is really hard to quit? | <input type="radio"/> | <input type="radio"/> |
| c. Have you ever felt like you were addicted to tobacco? | <input type="radio"/> | <input type="radio"/> |
| d. Do you ever have strong cravings to smoke? | <input type="radio"/> | <input type="radio"/> |
| e. Have you ever felt like you really needed a cigarette? | <input type="radio"/> | <input type="radio"/> |
| f. Is it hard to keep from smoking in places where you are not supposed to, like school? | <input type="radio"/> | <input type="radio"/> |

69. When you tried to stop smoking (or when you haven't used tobacco for a while):

- | | Yes | No |
|---|-----------------------|-----------------------|
| a. Did you find it hard to concentrate because you couldn't smoke? | <input type="radio"/> | <input type="radio"/> |
| b. Did you feel more irritable because you couldn't smoke? | <input type="radio"/> | <input type="radio"/> |
| c. Did you feel a strong need or urge to smoke? | <input type="radio"/> | <input type="radio"/> |
| d. Did you feel nervous, restless, or anxious because you couldn't smoke? | <input type="radio"/> | <input type="radio"/> |

The next two questions are for smokers of light or ultra-light cigarettes.

70. If you learned that light or ultra-light cigarettes gave you the same amount of tar and nicotine as regular cigarettes, would that make you more likely to stop smoking?

- Not at all likely
 Somewhat likely
 Very likely

71. If you learned that light or ultra light cigarettes gave you the same amount of tar and nicotine as regular cigarettes, would that make you more likely to switch to a regular cigarette brand?

- Not at all likely
 Somewhat likely
 Very likely

These questions are for all students (non-smokers and smokers).

72. Indicate your level of agreement or disagreement with the following statements:

- | | Strongly Disagree | Disagree | In the middle | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a. I have a good idea of what my long-term goals in life are. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Living for today is more important than planning for the future. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. I spend a lot of time thinking about how what I do today will affect my life in the future. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d. The short-term results of my actions are more important to me than the long-term results. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e. I would like to explore strange places. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f. I like to do scary things. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g. I like new and exciting experiences, even if I have to break the rules. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h. I prefer friends who are exciting and unpredictable. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i. I am concerned about my weight. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

73. Have you ever bought or received for free any product that promoted a cigarette brand? (e.g., an item with the name of a cigarette on it such as a T-shirt or a sports bag)

- Yes—within the last 6 months
 Yes—but not within the last 6 months
 No—never

75. In the past 6 months, the cost of cigarettes has made me think I should not smoke.

- Not at all
 Somewhat
 A lot

74. Do you think you would be willing to use or wear a cigarette promotional item such as a T-shirt or a sports bag?

- Yes No

76. I notice it when cigarette companies sponsor sporting or music events.

- Not at all
 Sometimes
 Often
 I don't watch/go to sporting/music events

PLEASE DO NOT WRITE IN THIS SHADED AREA

77. Indicate how often you attend or watch on TV the following:

- a. Car races Never Rarely Sometimes Often
- b. Tennis Never Rarely Sometimes Often
- c. Rock concerts Never Rarely Sometimes Often

78. Indicate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	In the middle	Agree	Strongly Agree
a. It is OK for tobacco companies to sponsor events such as sporting events, music festivals, and concerts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. It is OK for smoking to be shown on TV or in the movies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. It is OK for restaurants to have designated smoking areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. It is OK for tobacco companies to be allowed to give out or sell promotional items such as T-shirts and sports bags.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. It is OK for tobacco companies to advertise on billboards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Events such as sports events, music festivals, or concerts sponsored by tobacco companies, do <u>not</u> influence teenagers to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Billboards that advertise cigarettes do <u>not</u> influence teenagers to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. The presence of smoking on TV or in the movies does <u>not</u> influence teenagers to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Movie stars who smoke do <u>not</u> influence teenagers to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Owning a promotional item from a tobacco company (e.g., a T-shirt or a sports bag) does <u>not</u> influence teenagers to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

79. Which of the following movies have you seen?

	No	Yes-Once	Yes-More than once
a. Swordfish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. The Fast and the Furious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. A.I.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. America's Sweethearts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Lara Craft: Tomb Raider	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Jurassic Park 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

80. Answer the following questions about your usual reactions when you watch a movie:

	Strongly Disagree	Disagree	In the middle	Agree	Strongly Agree
a. I easily identify with at least one character.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I find myself thinking what the characters may be thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I find myself feeling what the characters may be feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I sometimes feel as if I'm part of the movie.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

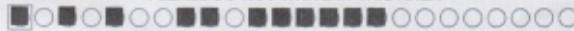
81. Which of the following categories best describes your ethnic/racial background?

- White Latino/Hispanic Native American/American Indian or Canadian Aboriginal
- Black Asian-American or Asian-Canadian Other (describe): _____

Thank you very much for completing this survey!

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APPENDIX J: ITC 4 COUNTRY SURVEY WAVE 6



4-Country Wave 6 Replenishment Survey

Survey Code: 4C6-P

Languages: English

Mode: Telephone Interview

Field Work Start Date: September 21, 2007

Field Work End Date: February 12, 2008

Generated on March 12, 2009

Q#	VarName	Introduction
001	BI201	Ask all. Hello, my name is [interviewer name] from Roy Morgan Research. Could I please speak to [participant name]?
002a	BI208	Ask all. <i>Once participant is on the line:</i> Hello [participant name], I'm calling from Roy Morgan Research regarding the phone survey on smoking. <ol style="list-style-type: none"> 1 Continue; respondent on phone 2 Respondent refuses interview 3 Unable to continue 7 Not applicable 8 Refused 9 Don't know If response = 1, go to BI229. If response = 2, go to BI425. If response = 3, go to BI971.
002b	BI425	Ask if BI208=2. This is an important survey because it is being conducted among smokers as well as non-smokers throughout the world. It's very important for the accuracy of the survey for people who agreed to do the survey to actually complete it. That is why we have sent you a [payment amount] cheque as a token of appreciation for your time. Will you help us now by completing the survey today? We can arrange another time for you to complete the survey, if this time is not convenient. <ol style="list-style-type: none"> 1 Yes 2 No <i>If another time, make appointment.</i> If response = 1, go to BI235. If response = 2, go to BI901.
002c	BI971	If BI208=3. <i>Enter reason for being unable to continue.</i> <ol style="list-style-type: none"> 1 Household refusal to get respondent 2 Respondent is unavailable this wave 3 Respondent has died 4 New respondent number given 5 No new respondent number given 6 Respondent calls to withdraw (supervisor use only) Go to BI912.
003a	BI229	Ask if letter was sent and [today's date]>=[Recruit Date] + 3 days.

		<p>Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment amount] as thanks for your participation in the survey. Did you receive the letter?</p> <p>1 Yes 2 No</p> <p>If response=1, go to BI235. If response=2, go to BI212.</p>
003b	BI230	<p>Ask if letter was sent and [today's date]<[Recruit Date] + 3 days.</p> <p>Thank you for agreeing to participate in our survey. We mentioned to you last time that we would be sending you [payment] as thanks for your participation in the survey. You should be receiving the [payment] shortly.</p> <p>Go to BI235.</p>
004	BI212	<p>If BI229=2, ask.</p> <p>I'm very sorry. Our mailing service sent out the letter with the [cheque/ voucher] within the last week. We fully intended for the [cheque/ voucher] to get to you by today and we would like you to answer the survey today, but if you would prefer waiting until you receive the [cheque/ voucher] before you answer the survey, we could schedule the survey in a few days time.</p> <p>Would you answer the survey now or would you like to wait until the letter arrives?</p> <p>1 Answer the survey now 2 Wait a few days</p> <p>If response=1, go to BI235. If response=2, make appointment.</p>
005	BI235	<p>All personal information, including your name, address, and survey answers will be kept strictly confidential and will not be shared with any person or group that is not associated with this survey. Identifying information (which is not attached to the responses themselves) will be kept in secure locations here at Roy Morgan and at the University of Waterloo, following security procedures that we employ for our surveys.</p> <p>Would you be willing to spend about 45 minutes to answer the survey?</p> <p>1 Yes 2 No 3 Start interview again</p> <p><i>If another time, make appointment.</i></p> <p>If response=1, go to BI240 (sex, noted for interviewer convenience only). If response=2, go to BI241. If response=3, go to BI201.</p>
006a	BI241	<p>Ask if BI235=2.</p> <p>When would be a more convenient time to complete the survey?</p> <p>1 Yes, speak with them now 2 No (refusal) 3 Not available right now; make appointment.</p> <p><i>If another time, make appointment.</i></p> <p>If response=1, go to BI201. If response=2, go to BI439. If response=3, make appointment.</p>
006b	BI439	<p>Ask if BI241=1.</p> <p>We understand how you feel. We really appreciate your participation in the first surveys. The difference between this and</p>

		<p>most other surveys is that this is an international research project and we are talking to the same people a number of times to better understand what affects their opinions and smoking behaviour. This is why your participation is so important to us.</p> <p>Can we just start with a few questions and see how it goes?</p> <p>1 Yes 2 No</p> <p><i>If hesitates, say "Or would another time be better?"</i></p> <p>If response=1, go to BI240. If response=2, go to BI912.</p>
007	BI900	<p>Sorry to have bothered you. Thank you for your time.</p> <p><i>Terminate call.</i></p>
008	BI901	<p>Thank you for your time and assistance.</p> <p><i>Terminate call.</i></p>
009	BI240	<p>Record sex -- Ask only if unsure.</p> <p>1 Female 2 Male</p>
010	BI100	<p>For the 6 month times, insert into script: For interviews taking place during first 10 days of month="Early" For interviews taking place during days 11-20 of month="Middle" For interviews taking place during days 21- end of month="Late"</p> <p>Create two string variables that will be referred to often in this program: 6M Anchor="[Early/Middle/Late] [CURRENT MONTH - 6]" 1M Anchor="[CURRENT MONTH - 1] [CURRENT DAY OF MONTH]"</p>
011	BI255	<p>OK, the survey will take about 45 minutes. Some of the questions ask you about the last 6 months -- that means any time from [6M Anchor] until now. Other questions ask you about the last month -- that means from [1M Anchor] until now. Let's begin. If there is any question you do not wish to answer, just let me know and we will skip it and go on to the next.</p>
012a	BI470	<p><i>If a respondent skips or refuses QA211 or QA221, say:</i> I'm sorry, but this is an essential question that will help us to skip any unnecessary questions later in the survey -- if at all possible, we'd ask you to try to answer the question.</p>
012b	QA211	<p>Ask all.</p> <p>Can I just check: are you still smoking, or have you quit smoking altogether?</p> <p>1 Quit 2 Still smoking 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to QA221. If response=2, go to FR309v.</p>
013	QA221	<p>Ask if QA211=1.</p> <p>How many days ago did you quit? <i>Enter number of days. Response must be < [current date] - [recruitment date].</i> <i>After response, say: Please note that, since some of the survey questions ask about your smoking, I'd like you to answer for</i></p>

		<i>when you WERE smoking.</i>
014	FR309v	<p>Derived variable: smoking status in current wave:</p> <p>1 – Daily smoker 2 – Weekly smoker 3 – Monthly 4 – Quit in the last month 5 – Quit 1-6 months ago</p> <p>If smoking status=1, go to SB020. Otherwise, go to SB025.</p>
Smoking Behaviour		
015	Sbint	We would like to start with some questions about your smoking.
016a	SB020	<p>Ask if FR309v=1. <i>Do not read out time units. Respondent can answer with one time unit, or use both hours and minutes to give a more accurate answer.</i> How soon after waking do you usually have your first smoke?</p> <p>1 Minutes 2 Hours 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Enter choice of time units, or a non-response code.</i></p>
016b	SB021a	<p>(number of minutes) <i>For >90 minutes, use hours field.</i></p>
016c	SB021b	<p>(number of hours) <i>Must be less than 24 hours.</i></p>
017a	SB025	<p>Ask if FR309v=2-5. <i>Do not read out time units. Respondent can answer with one time unit, or use both hours and minutes to give a more accurate answer.</i> If FR309v=2-3: On days that you smoke, how soon after waking do you usually have your first smoke? If FR309v=4-5: On days that you smoke, how soon after waking do you usually have your first smoke? Please answer for when you WERE smoking.</p> <p>1 Minutes 2 Hours 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Enter choice of time units, or a non-response code. If respondent says "don't know," accept answer and enter non-response code 9.</i></p>
017b	SB026a	<p>(number of minutes) <i>For >90 minutes, use hours field.</i></p>
017c	SB026b	<p>(number of hours) <i>Must be less than 24 hours.</i></p>

018a	SB012v	(Derived variable -- composite: total min to first cig, continuous)
018b	SB013v	(Derived variable -- composite: total min to first cig, category) 0 More than 60 min 1 31-60 min 2 6 to 30 min 3 5 min or less 7 Not applicable 8 Refused 9 Don't know
019	SB031	Ask all. <i>Read out response options.</i> Do you consider yourself addicted to cigarettes? Would you say . . . 1 Not at all 2 Yes -- somewhat addicted 3 Yes -- very addicted 7 Not applicable 8 Refused 9 Don't know
020	SB041	Ask if FR309v=4 or 5. <i>Read out response options.</i> How hard is it to go without smoking for a whole day? 1 Not at all hard 2 Somewhat hard 3 Very hard 4 Extremely hard 7 Not applicable 8 Refused 9 Don't know
021	SB051	Ask if FR309v=4 or 5. <i>Read out response options.</i> How often do you get strong urges to smoke? 1 Never 2 Less than daily 3 Daily 4 Several times a day 5 Hourly or more often 7 Not applicable 8 Refused 9 Don't know
022	SB084	Ask all. <i>Do not read out response options.</i> On average, how long do you let your cigarettes burn in between puffs? 1 15 seconds or less

		<p>2 16-30 seconds 3 31-60 seconds 4 More than 60 seconds 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Accept "don't know" without pressing for an answer.</i></p>
023a	SB085	<p>Ask all. Do your cigarettes ever go out between puffs? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SB086. Otherwise, go to SB110.</p>
023b	SB086	<p>Ask if SB085=1. How often? 1 Rarely 2 Sometimes 3 Often</p>
024	SB110	<p>Ask if BR310=1. In some parts of the world, cigarettes are required to be less likely to start fires. As far as you know, are the cigarettes you usually smoke designed to reduce the risk of fires? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Accept "don't know" without pressing for an answer.</i></p>
025a	QA231a	<p>Ask if smoking status=1-3 and QA101=1. <i>Do not read out time units.</i> You mentioned in your previous interview that you have tried to quit smoking before. How long ago did your most recent serious quit attempt END? (days)</p>
025b	QA231b	(months)
025c	QA231c	(years ago)
025d	QA231v	(Variable derived by DMC: Time since end of most recent quit attempt, in months)
026a	QA235a	<p>Ask if smoking status=1-3 and QA101=1. How long were you quit for, on your most recent quit attempt? (hours)</p>
026b	QA235b	(days)

026c	QA235c	(weeks)
026d	QA235d	(months)
026e	QA236v	(Derived variable: Days smokefree on most recent attempt.) <i>Note: For <24 hours, enter 0 days -- i.e. do not round up to 1 day.</i>
027	QA239	Ask if QA231v <= 6M. Thinking about any quit attempts that ended within the last 6 months - since [6M anchor] -- were any longer than [QA236v]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to QA241a. Otherwise, go to SB203.
028a	QA241a	Ask if QA239=1. Thinking about any quit attempts that ENDED within the last 6 months -- since [6M anchor] -- what is the longest time that you stayed smoke-free? (days)
028b	QA241b	(weeks)
028c	QA241c	(months)
029a	SB221	Ask if FR309v=1-4. In the last month -- since [1M anchor] -- have you [stubbed/ butted] out a cigarette before you finished it because you thought about the harm of smoking? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SB226. Otherwise, go to KN221.
029b	SB226	Ask if SB221=1. Was that once, a few times, or lots of times? 1 Once 2 A few times 3 Lots of times
029c	SB226v	(Derived variable: Combination of SB221 (ever butt out) with SB226 (freq of butting out).) 0 Never 1 Once 2 A few times 3 Lots of times
Knowledge Of Health Effects Tobacco Constituents		
030a	KN221	Ask all. I am going to read you a list of health effects and diseases that may or may not be caused by smoking cigarettes. Based on what

		<p>you know or believe, does smoking cause . . . Stroke in smokers?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
030b	KN231	Impotence in male smokers?
030c	KN246	Blindness?
030d	KN256	Mouth and throat cancer?
030e	KN253	Peripheral vascular disease?
030f	KN251	Lung cancer in non-smokers from secondhand smoke?
030g	KN255	Asthma in children from secondhand smoke?
031a	KN411	<p>Ask all. Are each of the following statements true or false? The way a smoker PUFFS on a cigarette can affect the amount of tar and nicotine a smoker takes in.</p> <ol style="list-style-type: none"> 1 True 2 False 7 Not applicable 8 Refused 9 Don't know
031b	KN441	The nicotine in cigarettes is the chemical that causes most of the cancer.
031c	KN445	Nicotine is the main substance in tobacco that makes people smoke.
Warning Labels		
032	WL201	<p>Ask all. <i>Read out response options.</i> In the last month -- that is, since [1M anchor] -- how often, if at all, have you noticed the warning labels on cigarette packages?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know <p>if response=1, go to WL221. Otherwise, go to WL211.</p>
033	WL211	<p>Ask if WL201=2-9. <i>Read out response options.</i> In the last month, how often, if at all, have you read or looked closely at the warning labels on cigarette packages?</p>

		<ul style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
034	WL221	<p>Ask all. <i>Read out response options.</i> In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one? Would you say . . .</p> <ul style="list-style-type: none"> 1 Never 2 Once 3 A few times 4 Many times 7 Not applicable 8 Refused 9 Don't know
035	WL313	<p>Ask all. In the last month, have you made any effort to avoid looking at or thinking about the warning labels -- such as covering them up, keeping them out of sight, using a cigarette case, avoiding certain warnings, or any other means?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
036	WL411	<p>Ask all. <i>Read out response options.</i> To what extent, if at all, do the warning labels make you think about the health risks of smoking?</p> <ul style="list-style-type: none"> 1 Not at all 2 A little 3 Somewhat 4 A lot 7 Not applicable 8 Refused 9 Don't know
037a	WL421	<p>Ask if smoking status=1-3. <i>Read out response options.</i> To what extent, if at all, do the warning labels on cigarette packs make you more likely to quit smoking?</p> <ul style="list-style-type: none"> 1 Not at all 2 A little 3 Somewhat 4 A lot

		<ul style="list-style-type: none"> 7 Not applicable 8 Refused 9 Don't know
037b	WL431	<p>Ask if FR309v=4-5. To what extent, if at all, do the warning labels on cigarette packs make you more likely to stay quit?</p>
038	WL471	<p>Ask if country=(CA, UK, or AU) and FR309v=1-3. In the last month, how often have you read or looked closely at the information about the contents on the side of the pack?</p> <ul style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
039	WL444	<p>Ask if country=(CA, UK, or AU) and FR309v=1-3. <i>Do not read out response options, except "yes" and "no" if necessary.</i> In the last year, has the information about chemicals on the side of the pack taught you anything new about your cigarettes that you did not already know?</p> <ul style="list-style-type: none"> 1 Yes 2 No 3 I never look at them (don't read out) 7 Not applicable 8 Refused 9 Don't know
040a	WL443	<p>Ask all. In some places, information is being attached to, or inserted into cigarette packs. In the last month – i.e. since [1M anchor] – have you noticed any information or advertising on the inside, or attached to the outside, of packs?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to WL446. Otherwise, go to WL507.</p>
040b	WL446	<p>Ask if WL443=1. As far as you know, was that information provided by the government, the tobacco industry, both, or some other source?</p> <ul style="list-style-type: none"> 1 Government 2 Tobacco industry 3 Both 4 Some other source <p><i>Accept "don't know" without pressing for an answer.</i></p>
041	WL507	<p>Ask all. Do you think that cigarette packages should have more health information than they do now, less information, or about the</p>

		<p>same amount as they do now?</p> <ol style="list-style-type: none"> 1 Less health information 2 About the same 3 More health information 7 Not applicable 8 Refused 9 Don't know
Advertising, Promotion, Anti-tobacco Media Campaigns		
042	AD201	<p>Ask all. <i>Doesn't have to be advertising -- anything promoting smoking.</i> <i>Read out response options.</i> Thinking about everything that happens around you, in the last 6 months -- since [6 month anchor] -- how often have you noticed things that promote smoking? Would that be . . .</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
043a	AD211	<p>Ask all. <i>Read out each source of information.</i> Now I want to ask you about tobacco advertising. In the last 6 months, have you noticed cigarettes or tobacco products being advertised in any of the following places? On radio?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
043b	AD221	On posters or billboards?
043c	AD225	In newspapers or magazines?
043d	AD231	On [shop/ store] windows or inside [shops/ stores] where tobacco is sold?
044a	AD623	<p>Ask all. I'd like to ask you some more specific questions about things you may have seen inside or at shops or stores where people can buy tobacco products. In the last month, have you seen cigarette packages being displayed, including on shelves or on the counter?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused

		9 Don't know
044b	AD625	In the last month, have you seen any signs or pictures or other things like clocks with cigarette brands or logos (inside shops or stores)?
045a	AD627	<p>Ask all. <i>Read out response options.</i> Do you support complete bans on tobacco advertisements inside shops and stores? Would you say...</p> <ul style="list-style-type: none"> 1 Not at all 2 Somewhat 3 A lot 7 Not applicable 8 Refused 9 Don't know
045b	AD629	Do you support complete bans on displays of cigarettes inside shops and stores? Would you say...
046a	AD301	<p>Ask all. Still thinking about the last 6 months -- that is, since [6M anchor] -- have you seen or heard about any . . . Sport or sporting event that is sponsored by or connected with BRANDS of cigarettes?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
046b	AD311	Sport or sporting event that is sponsored by or connected with tobacco COMPANIES?
046c	AD321	Music, theatre, art, or fashion events, that are sponsored by or connected with BRANDS of cigarettes?
047	AD401	<p>Ask all. In the last 6 months - that is, since [6M Anchor] -- have you noticed any of the following types of tobacco promotion?</p> <p>In the last 6 months, have you noticed . . . Free samples of cigarettes?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
048a	AD411	<p>Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Special price offers for cigarettes?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to AD416. Otherwise, go to AD421.</p>

048b	AD416	Ask if AD411=1. In the last 6 months, have YOU received special price offers for cigarettes?
049a	AD421	Ask all. In the last 6 months -- that is, since [6M anchor] -- have you noticed . . . Free gifts or special discount offers on other products when buying cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
049b	AD471	E-mail messages promoting cigarettes or tobacco products?
049c	AD491	Mail promoting cigarettes or tobacco products?
049d	AD501	Clothing or other items with a cigarette brand name or logo?
049e	AD511	Competitions linked to cigarettes?
049f	AD521	Internet sites promoting cigarettes or tobacco products?
049g	AD531	Leaflets promoting cigarettes or tobacco products?
049h	AD541	Signs or posters or branded items in bars, pubs or clubs, promoting cigarettes or tobacco products?
050a	AD601	Ask all. <i>Read out response options.</i> Now, I want to ask you about the media more generally. First, thinking about news stories relating to smoking or tobacco companies that might have been on TV, radio, or in the newspapers. In the last 6 months -- that is, since [6M Anchor] -- about how often, if at all, have you seen or heard a news story about smoking? 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know If response=2-5, go to AD606. Otherwise, go to AD701.
050b	AD606	Ask if AD601=2-5. On balance, how did the news stories portray smoking? Were they . . . 1 All pro-smoking 2 Mostly pro-smoking 3 Equally pro- and anti-smoking 4 Mostly anti-smoking 5 All anti-smoking
051	AD701	Ask all. <i>Read out response options.</i>

		<p>Now I would like you to think about advertising or information that talks about the dangers of smoking, or encourages quitting. In the last 6 months -- since [6M anchor] -- how often, if at all, have you noticed such advertising or information?</p> <ol style="list-style-type: none"> 1 Never 2 Rarely 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
052a	AD711	<p>Ask all. <i>Read out each source of information.</i> In the last 6 months, have you noticed advertising or information that talks about the dangers of smoking, or encourages quitting, in any of the following places: On television?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
052b	AD716	On radio?
052c	AD721	At the [cinema/ movies].
052d	AD726	On posters or billboards?
052e	AD731	In newspapers or magazines?
052f	AD736	On [shop/ store] windows or inside [shops/ stores] where tobacco is sold?
052g	AD741	On cigarette packs?
052h	AD746	In leaflets?
052i	AD751	On the Internet?
053	AD801	<p>Ask all. In the last 6 months, have you noticed any advertising or information from tobacco companies which deals with the topic of youth smoking?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
054	AD811	<p>Ask all. In the last 6 months, have you noticed any advertising or information from tobacco companies which deals more generally with the dangers of smoking?</p> <ol style="list-style-type: none"> 1 Yes 2 No

		<p>7 Not applicable 8 Refused 9 Don't know</p>
Prices, Taxation, And Sources Of Tobacco		
055a	SO221	<p>Ask all. <i>Do not read checklist. Select only one. If respondent not clear, probe to find out what category they fit. If can't determine, do not guess; record under 15=other.</i> <i>If respondent doesn't remember ANY DETAILS of last purchase, code "doesn't remember" (76) and skip to SO321. If respondent doesn't remember place of last purchase, code as DK (99) and continue with next question.</i> These next questions are about cigarette prices and where you get your cigarettes. Where did you LAST buy [cigarettes/ roll-your-own tobacco] for YOURSELF? 01 [US, CA] Convenience stores, gas stations, deli-shops etc; [AU, UK] Convenience stores, petrol stations, news stand, kiosk, news agent; [AU] Milk bar 02 [US, CA] Supermarket, Grocery Store, Drug Store, Warehouse Club, Wal-Mart, K-Mart, Sam's; [UK, AU] Supermarket, Grocer shop, discount grocery shops, etc (e.g. Tesco, Alldays, Kwik Save, Safeway, Coles, BiLo, Franklins, IGA) 03 [ALL] Bar, pub, restaurant, casino, game room, or other entertainment establishment 04 [ALL] Discount Tobacco Outlet Store (e.g. Smoke & Save, Tobacco King, Cheap Cigarettes, Smoke Smart etc), tobacconist, specialty tobacco shops 05 [US, CA] Liquor store; [AU] Liquor store or bottle shop, [UK] Off-license 06 [ALL] Vending machine 07 [US] Military commissary -- the PX 08 [US] Indian reservation, [CA] First Nations reserve, [UK, AU -- none] 09 [ALL] Duty free shop 10 [CA, UK, AU] Outside of the country, but not at a duty free shop; [US] Out of state or outside of the country, but not at a duty free shop 11 [UK] Using a free phone number [CA, US, AU] Using a toll free number 12 [ALL] On the Internet 13 [ALL] From someone else (not at a store, shop or other mainstream establishment) selling cigarettes independently and/ or illegally, perhaps at local markets, delivery service, door-to-door, or just in the street 14 [ALL] From a friend or relative 15 [ALL] From somewhere else 76 Doesn't remember any details of last purchase 77 NA 88 Refused 99 Don't Know If response=15, go to SO221o. If response=76, go to SO411. If response=77, 88, or 99, go to PU611. Otherwise, go to BR701.</p>
055b	SO221o	<p>Ask if SO221=15. Where else did you last buy cigarettes or tobacco for yourself? <i>Enter text response.</i></p>

056	BR701	<p>Ask if SO221 NE 76. Was it [current brand]?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to BR227. If response=2, go to [BR712/ BR722/ BR731/ BR741].</p>
057a	BR333	<p><i>Interviewer Training and Instructions for Brand question:</i> <i>Emphasize "specific" in the question. If respondent gives a brand name that could fit several different entries in the coded list, probe as necessary for other descriptors, to determine whether any of the listed varieties matches the respondent's answer. If the response is vague or nonspecific, prompt respondent by saying: "What is the name you use when you ask for your brand in the store?" Always confirm your choice with the respondent: e.g. "There is a brand on my list that says "Basic Ultra Light Menthol 100s" -- would that be the same as your brand?" or "Would that be the brand you smoke most?" If the respondent's answer exactly matches the name on the list, simply read back the brand name as confirmation: e.g. "So your brand is Benson & Hedges Methol Mild King Size".</i></p> <p><i>INTERVIEWER TRAINING -- Examples of probing:</i></p> <p><i>If respondent gives no strength indication at all, ask "Is your brand any particular strength, or isn't that part of the brand name?" If respondent says "just regular strength" or "the plain kind" or "full flavour", confirm that he/she smokes the default strength: "So there's no mention of strength in your brand's name?" Sometimes "full flavour" is actually part of the brand name and sometimes it is unmentioned because it is the default strength. This same kind of probing applies also to cigarette length – the shortest length for a given brand family will generally be the default length and may not be mentioned by the respondent, but the interviewer should explicitly confirm this with the respondent: "you didn't mention what length your cigarette is. Would that be [regular/ King size...] that you smoke?"</i></p> <p><i>IN UK and AU, strength descriptors have been banned, so manufacturers use other words to discriminate among varieties. The different varieties include colours (blue, white, gold, etc) or words like "Fine" or "Smooth" in their names. Probing for these words can't mention strength, but rather interviewers should say: "Are there any other words that help identify the name of your brand?" OR "How do you ask for your specific brand in the store?" If the response could fit several different varieties on the list, ask specifically: "Would that be Pall Mall gold or Pall Mall white, or something else?" In the brand lists for UK and AU, these non-strength descriptors have been treated like strength descriptors, in that they immediately follow the brand family's name in the variety's listing.</i></p> <p><i>If respondent says "ultra light" and the list for that brand family includes only the term "mild," and never "light", then say: Could that be "ultra mild"? If the description offered by the respondent isn't specific enough and therefore fits both menthol and non-menthol entries, probe by saying: "Is that menthol or not menthol?" Similarly, if the description could apply to entries for multiple lengths – e.g. King Size and 100s -- probe by saying: "Do you smoke King Size or 100s, or some other length?"</i></p> <p><i>In other words, use the names of the listed entries – within the mentioned brand family -- to probe for details, and thus to narrow down the options and identify the one code that fits the respondent's answer – if there is one. Confirm that variety with the respondent. If no entry matches, or if respondent does not confirm the entry you think is closest, then code "other" and enter</i></p>

		<i>respondent's answer as a text response.</i>
057b	BR712	<p>Ask if BR701 NE 1 and country=CA. BR310=1: What specific brand and variety did you buy? BR310<>1: What specific brand and variety did you last buy? 777 NA 888 Refused 999 Don't Know</p>
057c	BR712o	<p>Ask if BR712=997 (other). Which other brand did you buy? <i>Enter text response.</i></p>
057d	BR722	<p>Ask if BR701 NE 1 and country=US. BR310=1: What specific brand and variety did you buy? BR310<>1: What specific brand and variety did you last buy? 777 NA 888 Refused 999 Don't Know</p>
057e	BR722o	<p>Ask if BR722=997. Which other brand did you buy? <i>Enter text response.</i></p>
057f	BR731	<p>Ask if BR701 NE 1 and country=UK. BR310=1: What specific brand and variety did you buy? BR310<>1: What specific brand and variety did you last buy? 777 NA 888 Refused 999 Don't Know</p>
057g	BR731o	<p>Ask if BR731=997. Which other brand did you buy? <i>Enter text response.</i></p>
057h	BR741	<p>Ask if BR701 NE 1 and country=AU. BR310=1: What specific brand and variety did you buy? BR310<>1: What specific brand and variety did you last buy? 777 NA 888 Refused 999 Don't Know</p>
057i	BR741o	<p>Ask if BR741=997. Which other brand did you buy? <i>Enter text response.</i></p>
058a	BR742	<p>Ask if BR701 NE 1 and country=AU. How many cigarettes are in a pack of this brand? 1 Ten 2 Twenty 3 Twenty-five 4 Thirty</p>

		<ul style="list-style-type: none"> 5 Thirty-five 6 Forty 7 Fifty 8 Other (specify) 77 NA 88 Refused 99 Don't Know
058b	BR742o	<p>Ask if BR742=8: What other number of cigarettes per pack? <i>Enter number of cigarettes.</i></p>
059	BR227	<p>Ask if FR326 at recruitment=3 and SO221 NE 76. This last purchase -- was it factory-made cigarettes or roll-your-own tobacco?</p> <ul style="list-style-type: none"> 1 Factory-made/ packet cigarettes 2 Roll-your-own cigarettes 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to PU201. If response=2, go to PU511.</p>
060	PU201	<p>Ask if (FR326=1 OR (FR326=3 AND BR227=1)) AND SO221<>76. SO221=14: When you bought or got these cigarettes from your friend or relative, did you get them by the carton, the pack or as single cigarettes? SO221 NE 14: Did you buy these cigarettes by the carton, the pack, or as single cigarettes?</p> <ul style="list-style-type: none"> 1 Carton 2 Pack 3 Single, loose 7 Not applicable 8 Refused 9 Don't know <p><i>Accept "don't know" response from those who got cigarettes/ tobacco from a friend or relative.</i> If response=1, go to PU211. If response=2, go to PU311. If response=3, go to PU411. Otherwise, go to PU611.</p>
061	PU211	<p>Ask if PU201=1. How many cartons did you buy? <i>Enter number of cartons.</i></p>
062a	PU222	<p>Ask if PU201=1. PU211=1: How many packs of cigarettes were in the carton? PU211>1: How many packs of cigarettes were in each carton?</p> <ul style="list-style-type: none"> 1 Four 2 Five 3 Six 4 Seven

		<p>5 Eight 6 Ten 7 Twenty 8 Other (specify) 77 NA 88 Refused 99 Don't Know</p> <p>If response=8, go to PU222o. Otherwise, go to PU227.</p>
062b	PU222o	<p>Ask if PU222=8: What other number of packs in a carton? Enter number of packs.</p>
063a	PU227	<p>Ask if PU201=1. How many cigarettes were in each pack? 1 Ten 2 Twenty 3 Twenty-five 4 Thirty 5 Thirty-five 6 Forty 7 Fifty 8 Other (specify) 77 NA 88 Refused 99 Don't Know</p> <p>If response=8, go to PU227o. If response NE 8 and PU211=1, go to PU231. If response NE 8 and PU211>1, go to PU229.</p>
063b	PU227o	<p>Ask if PU227=8. What other number of cigarettes per pack? Enter number of cigarettes. If PU211=1, go to PU231. If PU211>1, go to PU229.</p>
064	PU229	<p>Ask if PU211>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per carton or how much you paid for all the cartons? 1 Price per carton 2 Total paid for all cartons 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Whichever is easier for respondent -- price per pack or price for all packs together. Respondents might not know the cost per pack, and we don't want them to do arithmetic.</i></p> <p>If response=1, go to PU231.</p>

		If response=2, go to PU241. Otherwise, go to SO411.
065a	PU241	Ask if PU229=2. How much did you pay for all cartons? <i>Enter [dollars/ pounds] and [cents/ pence] with decimal point.</i> <i>Enter exact price -- do not round number. If they give a range, ask them to specify. If they cannot narrow down the range, enter midpoint of the range.</i> Go to PU2_chk.
065b	PU231	Ask if PU211=1 or PU229=1. PU211=1: How much did you pay for THAT carton? PU211>1: How much did you pay for EACH carton?
066	PU2_chk	Ask if PU201=1. Just to confirm: You LAST bought cigarettes FOR YOURSELF by the CARTON. You bought [PU211] carton(s) containing [PU222] packs of cigarettes [per carton]. Each pack of cigarettes contained [PU227] cigarettes. You paid [PU231 per carton/ PU231 for the carton/ PU241 for all the cartons together]. Is this correct? 1 Yes 2 No If response=2, clear responses and go back to PU201. Otherwise, continue with next question.
067	PU311	Ask if PU201=2. SO221=14, ask: How many packs did you buy or get from your friend or relative? Otherwise ask: How many packs did you buy? <i>Enter number of packs.</i>
068a	PU322	Ask if PU201=2. PU311=1: How many cigarettes were in the pack? PU311>1: How many cigarettes were in each pack? 1 Ten 2 Twenty 3 Twenty-five 4 Thirty 5 Thirty-five 6 Forty 7 Fifty 8 Other (specify) 77 NA 88 Refused 99 Don't Know
068b	PU322o	Ask if PU322=8. What other number of cigarettes per pack? <i>Enter number of cigarettes.</i>

069	PU329	<p>Ask If PU311>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per pack or how much you paid for all the packs?</p> <p>1 Price per pack 2 Total paid for all packs 7 Not applicable 8 Refused 9 Don't know</p> <p><i>Whichever is easier for respondent -- price per pack or price for all packs together. Respondents might not know the cost per pack, and we don't want them to do arithmetic.</i></p> <p>If response=1, go to PU331. If response=2, go to PU341. Otherwise, go to PU3_chk.</p>
070a	PU341	<p>Ask if PU329=2. How much did you pay? <i>Enter [dollars/ pounds] and [cents/ pence] with decimal point.</i> <i>Enter exact price -- do not round number. If they give a range, ask them to specify. If they cannot narrow down the range, enter midpoint of the range.</i> Go to PU3_chk.</p>
070b	PU331	<p>Ask if PU311=1 or PU329=1. PU311=1: How much did you pay for THAT pack? PU311>1: How much did you pay for EACH pack?</p>
071	PU3_chk	<p>Ask if PU201=2. Just to confirm: You LAST bought cigarettes FOR YOURSELF by the PACK. You bought [PU311] pack(s) containing [PU322] cigarettes [per pack]. You paid [PU331 per pack/ PU331 for the pack/ PU341 for all the packs together].</p> <p>Is this correct? 1 Yes 2 No</p> <p>If response=2, clear responses and go back to PU201. Otherwise, continue with next question.</p>
072	PU411	<p>Ask if PU201=3. SO221 NE 14: How many loose cigarettes did you buy? SO221=14: How many loose cigarettes did you buy or get from your friend or relative? <i>Enter number of cigarettes.</i></p>
073	PU429	<p>Ask if PU411>1. I'd like to find out how much you paid. Is it easier for you to say how much you paid per cigarette or how much you paid for all cigarettes?</p> <p>1 Price per cigarette 2 Total paid for all cigarettes 7 Not applicable 8 Refused</p>

		<p>9 Don't know</p> <p><i>Whichever is easier for respondent -- price per cigarette or price for all cigarettes together. Respondents might not know the cost per cigarette, and we don't want them to do arithmetic.</i></p> <p>If response=1, go to PU431.</p> <p>If response=2, go to PU441.</p> <p>Otherwise, go to PU4_chk.</p>
074a	PU441	<p>Ask if PU429=2.</p> <p>How much did you pay?</p> <p><i>Enter [dollars/ pounds] and [cents/ pence] with decimal point.</i></p> <p><i>Enter exact price -- do not round number. If they give a range, ask them to specify. If they cannot narrow down the range, enter midpoint of the range.</i></p> <p>Go to PU4_chk.</p>
074b	PU431	<p>Ask if PU411=1 or PU429=1.</p> <p>PU411=1: How much did you pay for THAT cigarette?</p> <p>PU411>1: How much did you pay for EACH cigarette?</p>
074c	PU4_chk	<p>Ask if PU201=3.</p> <p>Just to confirm:</p> <p>You LAST bought SINGLE cigarettes FOR YOURSELF.</p> <p>You bought [PU411] cigarette(s).</p> <p>You paid [PU431 per cigarette/ PU431 for the cigarette/ PU441 for all the cigarettes together].</p> <p>Is this correct?</p> <p>1 Yes</p> <p>2 No</p> <p>If response=2, clear responses and go back to PU201.</p> <p>Otherwise, continue with next question.</p>
075	PU511	<p>Ask if (FR326=2 OR (FR326=3 AND BR227=2)) AND SO221<>76.</p> <p>SO221 NE 14: How many pouches or containers did you buy?</p> <p>SO221=14: How many pouches or containers did you buy or get from your friend or relative?</p> <p><i>Enter number of pouches or containers.</i></p> <p>If response=1, go to PU531.</p> <p>If response>1, go to PU529.</p>
076	PU529	<p>Ask if PU511>1.</p> <p>I'd like to find out how much you paid. Is it easier for you to say how much you paid per pouch or container or how much you paid for all the pouches or containers?</p> <p>1 Price per pouch</p> <p>2 Total paid for all pouches</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p><i>Whichever is easier for respondent -- price per carton or price for all cartons together. Respondents might not know the cost per carton, and we don't want them to do arithmetic.</i></p> <p>If response=1, go to PU531.</p> <p>If response=2, go to PU541.</p>

		Otherwise, go to PU545.
077a	PU541	Ask if PU529=2. How much did you pay? <i>Enter [dollars/ pounds] and [cents/ pence] with decimal point.</i> <i>Enter exact price -- do not round number. If they give a range, ask them to specify. If they cannot narrow down the range, enter midpoint of the range.</i> Go to PU545.
077b	PU531	Ask if PU511=1 or PU529=1. Ask if PU511=1: How much did you pay for THAT pouch or container? Ask if PU511>1: How much did you pay for EACH pouch or container?
077c	PU5_chk	Ask if FR326=2 OR (FR326=3 AND BR227=2). Just to confirm: The time you LAST bought roll-your-own tobacco, you bought [PU511] pouch(es) or container(s). You paid [PU531 per pouch or container/ PU531 for the pouch or container/ PU541 for all the pouches or containers together]. Is this correct? 1 Yes 2 No If response=2, clear responses and go back to PU201. Otherwise, continue with next question.
078a	PU545	Ask if FR326=2 OR (FR326=3 AND BR227=2). <i>Code whatever size units the respondent spontaneously uses -- verbal or grams etc.</i> What sized pouch or container did you buy? 1 Grams 2 Ounces 3 Other (Verbal designation) 7 Not applicable 8 Refused 9 Don't know If response=1, go to PU547. If response=2, go to PU548. If response=3, go to PU549. Otherwise, go to PU5_chk.
078b	PU547	Ask if PU545=1. <i>Enter number of grams. Round up any decimal places.</i>
078c	PU548	Ask if PU545=2. <i>Enter number of ounces. Round up to one decimal place.</i>
078d	PU549	Ask if PU545=3. <i>Code verbal designation, or enter as text response.</i> 1 Large 2 Standard 3 Small 4 Other; specify

		<p>7 Not applicable 8 Refused 9 Don't know</p> <p>If response=4, go to PU549o. Otherwise, go to PU5_chk.</p>
078e	PU549o	<p>Ask if PU549=4. <i>Enter other verbal designation of size as text response.</i></p>
079	PU550	<p>Ask if FR326=2 OR (FR326=3 AND BR227=2). About how many days does it take you to smoke the contents of this size of pouch or container? <i>Enter number of days.</i></p>
080	PU555v	<p>Derived by DMC at UW: Calculated variable: price per unit, regardless of packaging.</p> <p>(1) PU555v equals price for 1 unit , if given (in PU231, PU331, PU431, or PU531) . (2) If respondent gave total price for all units, divide total price by number of units.</p> <p>More specifically,</p> <p>If PU201=1 and PU211=1, then PU555v=PU231. If PU201=1 and PU211>1, then PU555v=PU241/PU211.</p> <p>If PU201=2 and PU311=1, then PU555v=PU331. If PU201=2 and PU311>1, then PU555v=PU341/PU311.</p> <p>If PU201=3 and PU411=1, then PU555v=PU431. If PU201=3 and PU411>1, then PU555v=PU441/PU411.</p> <p>If FR326=2 or 3, and BR227=2, and PU511=1, then PU555v=PU531. If FR326=2 or 3, and BR227=2, and PU511>1, then PU555v=PU541/PU511.</p>
081	PU611	<p>Ask if SO221 NE 76. The last time you bought [cigarettes/ tobacco] FOR YOURSELF, did you use any coupons or discounts to get a special price? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
082a	SO411	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . from the Internet? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>

		If response=1, go to SO416. Otherwise, go to SO421.
082b	SO416	Ask if SO411=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] from the Internet? 1 Only once 2 A few times 3 Many times 4 All of the time
083a	SO421	Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . By phone? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO426. Otherwise, go to SO437.
083b	SO426	Ask if SO421=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] by phone? 1 Only once 2 A few times 3 Many times 4 All of the time
084a	SO437	Ask if country=CA or US. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . from [an Indian reservation (US)/ a First Nations reserve (CA)]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to SO438. Otherwise, go to SO439.
084b	SO438	Ask if SO437=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] from [an Indian reservation (US)/ a First Nations reserve (CA)]? 1 Only once 2 A few times 3 Many times 4 All of the time

085a	SO439	<p>Ask if country=US or UK. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . From outside the [country (UK)/ state or country (US)]?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to SO440. Otherwise, go to SO441.</p>
085b	SO440	<p>Ask if SO439=1. <i>Read out response options.</i> How often in the last 6 months have you bought [cigarettes/ tobacco] from outside the [country (UK)/ state or country (US)]?</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 All of the time
086a	SO441	<p>Ask all. In the last 6 months -- that is, since [6M Anchor] -- have you bought [cigarettes/ tobacco] . . . From people selling them independently (e.g., door-to-door, in the street)?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to SO446. Otherwise, go to SO501.</p>
086b	SO446	<p>Ask if SO441=1. <i>Read out response options.</i> How often in the last 6 months have you bought cigarettes [or tobacco] from people selling them independently (e.g. door-to-door, in the street)?</p> <ol style="list-style-type: none"> 1 Only once 2 A few times 3 Many times 4 All of the time
087	SO501	<p>Ask all. In the last 6 months, have you made any other special effort to buy cigarettes [or tobacco] that are less expensive than you can get from local stores?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know

088a	AD631	<p>Ask if (BR310=1 and BR665<=3). <i>Read out each statement.</i> Still thinking about the last 6 months, and now thinking about when you are in a store that sells cigarettes. . . Have you ever chosen to buy a brand other than your usual brand because . . .? Your usual brand was not available.</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to AD632. Otherwise go to AD633.</p>
088b	AD632	<p>Ask if AD631=1 AND (BR665=1 or 2). Has this happened just once or twice, a few times, or quite regularly?</p> <ul style="list-style-type: none"> 1 Once or twice 2 A few times 3 Quite regularly
089a	AD633	<p>Ask if (BR310=1 and BR665<=3) or if BR310 <>1. <i>Read out each statement.</i> Still thinking about the last 6 months, and now thinking about when you are in a store that sells cigarettes. . . If BR310=1: Have you ever chosen to buy a brand other than your usual brand because . . .? If BR310<>1: Have you ever chosen a brand because . . .? If BR310=1: You noticed a special price for another brand, so you bought that brand. If BR310<>1: You noticed a special price for a brand, so you bought that brand.</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to AD634. Otherwise go to AD635.</p>
089b	AD634	<p>Ask if AD633=1 and (BR665=1 or 2, OR BR310<>1). Has this happened just once or twice, a few times, or quite regularly?</p> <ul style="list-style-type: none"> 1 Once or twice 2 A few times 3 Quite regularly
090a	AD635	<p>Ask if (BR310=1 and BR665<=3) or if BR310 <>1. <i>Read out each statement.</i> Still thinking about the last 6 months, and now thinking about when you are in a store that sells cigarettes. . . If BR310=1: Have you ever chosen to buy a brand other than your usual brand because . . .? If BR310<>1: Have you ever chosen a brand because . . .? If BR310=1: You noticed a promotion for another brand, such as an ad or a display, so you bought that brand. If BR310<>1: You noticed a promotion for a brand, such as an ad or a display, so you bought that brand.</p> <ul style="list-style-type: none"> 1 Yes

		<p>2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to AD636. Otherwise go to LM112.</p>
090b	AD636	<p>Ask if (AD635=1) and (BR665=1 or 2, OR BR310<>1). Has this happened just once or twice, a few times, or quite regularly?</p> <p>1 Once or twice 2 A few times 3 Quite regularly</p>
Light Mild		
091a	LM112	<p>Ask if smoking status=1-3. If BR310=1, ask: We are interested in the experiences you have with the cigarettes you smoke. Thinking about the cigarettes you usually smoke in relation to other cigarettes, are your cigarettes . . . If BR310<>1, ask: We are interested in the experiences you have with the cigarettes you smoke. Thinking about the cigarettes you are currently smoking in relation to other cigarettes, are your cigarettes . . . Lighter in taste or more intense in taste?</p> <p>1 Lighter 2 About the same 3 More intense 7 Not applicable 8 Refused 9 Don't know</p>
091b	LM113	<p>Harsher or smoother on your throat?</p> <p>1 Harsher 2 About the same 3 Smoother</p>
092a	LM361	<p>Ask if country=CA or US and smoking status=1-5. <i>Emphasize "YOU" in the question, so respondent bases his/her answer on their own experience.</i> To what extent do any of the following give YOU useful information on how cigarettes will taste: Terms like Light and Mild, written on the pack?</p> <p>1 Not at all 2 A little 3 Somewhat 4 A lot 7 Not applicable 8 Refused 9 Don't know</p>
092b	LM363	<p>Ask if smoking status=1-5. Terms like Smooth and Ultra written on the pack?</p>
092c	LM365	<p>The colours of the pack itself?</p>

092d	LM367	The rated tar and nicotine levels of the brand?
093	LM211	<p>Ask if BR611 at recruitment NE 1.</p> <p>Some cigarettes are described as light, mild or low in tar. Have you ever smoked these types of cigarettes?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
094	LM225	<p>Ask if BR611 at recruitment NE 1.</p> <p><i>Read out response options.</i></p> <p>If country=US: Tar numbers appear in advertisements and sometimes on cigarette packs. As you understand it, how closely, if at all, are the tar numbers related to the amount of tar that smokers take into their bodies? Would you say . . .</p> <p>If country=AU: Tar numbers used to appear on all cigarette packs, but have now been removed. As you understand it, how closely, if at all, are these tar numbers related to the amount of tar that smokers take into their bodies? Would you say . . .</p> <p>If country=CA or UK: Tar numbers appear on cigarette packs. As you understand it, how closely, if at all, are the tar numbers related to the amount of tar that smokers take into their bodies? Would you say . . .</p> <p>1 Closely related 2 Somewhat related 3 Not related 7 Not applicable 8 Refused 9 Don't know</p>
095a	LM321	<p>Ask all.</p> <p>Over the years tobacco companies have distinguished what they call "regular strength" or "full-flavoured" cigarettes from others variously described as "Light" or "Mild". For the following questions, I will refer to all types of light, mild, and low tar cigarettes as "Light Cigarettes."</p> <p>Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements about light cigarettes.</p> <p>Light cigarettes are less harmful than regular-strength cigarettes.</p> <p>1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know</p>
095b	LM331	Light cigarettes are smoother on your throat and chest than regular-strength cigarettes.
095c	LM341	Smokers of light cigarettes take in less tar than smokers of regular-strength cigarettes.
096a	LM351	<p>Ask all.</p> <p>Which, if any, of the following terms on cigarette packs mean that the cigarettes are supposed to be some form of light, mild, or low-tar cigarette?</p>

		<p>Does the term SMOOTH on cigarette packs mean that the cigarettes are supposed to be some form of light, mild, or low-tar cigarette?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p><i>Prompt if needed, by saying, If it is called [term], does that mean it is a light cigarette or not?</i></p>
096b	LM359	<p>Does the term ULTRA on cigarette packs mean that the cigarettes are supposed to be some form of light, mild, or low-tar cigarette?</p>
097	LM109	<p>Ask if smoking status=1-5. Smoking status=1-3: Based on your experience of smoking, do you think that [current brand], your current brand, might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands? Smoking status=4-5: Based on your experience of smoking, do you think that [former brand], the brand you used to smoke, might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands?</p> <ol style="list-style-type: none"> 1 A little less harmful 2 No different 3 A little more harmful 7 Not applicable 8 Refused 9 Don't know
098a	LM450	<p>Ask all. As far as you know, what is the position of government health authorities on the harmfulness of cigarettes that [are (CA, US)/ used to be (UK, AU)] described as Light, Mild or Low Tar, as compared to regular cigarettes? Do they say these cigarettes are MORE harmful, AS harmful, or LESS harmful than regular cigarettes?</p> <ol style="list-style-type: none"> 1 More harmful 2 As harmful 3 Less harmful 7 Not applicable 8 Refused 9 Don't know
098b	LM102	<p>Ask if LM109<>1. <i>Please emphasize the words "YOU" and "COULD". The respondent has just told us the official opinion of health authorities, but now we want to know whether he/ she has a somewhat different opinion.</i> Do YOU think that some types of cigarettes COULD be less harmful than other types, or are all cigarettes equally harmful?</p> <ol style="list-style-type: none"> 1 Some less harmful 2 All equally harmful
099	LM424	<p>Ask all. If the government forced tobacco companies to limit some of the harmful chemicals in cigarette smoke, would this affect how you feel about smoking? Would you feel much better, a little better, much worse, a little worse, or would it make no difference to how you feel?</p> <ol style="list-style-type: none"> 1 I would feel much WORSE about smoking. 2 I would feel a little worse about smoking. 3 It would make no difference to how I feel.

		<p>4 I would feel a little BETTER about smoking. 5 I would feel much better about smoking. 7 Not applicable 8 Refused 9 Don't know</p>
Other Smoked Tobacco Products		
100a	ST201	<p>Ask all. <i>Accept 'don't know' without pressing for an answer.</i> Thinking about ALL the DIFFERENT types of tobacco products that are smoked -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- are any of these more harmful or are they all equally harmful? 1 All kinds are equally harmful 2 Some kinds are more harmful than others 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=2, go to ST211. Otherwise, go to ST301.</p>
100b	ST211	<p>Ask if ST201=2. What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is LEAST harmful? 1 Factory-made cigarettes 2 Roll-your-own cigarettes 3 Pipes 4 Cigars</p>
100c	ST216	<p>Ask if ST201=2. Do not display product mentioned in ST211 as least harmful. <i>Read out response options.</i> What kind of tobacco product -- that is, factory-made cigarettes, roll-your-own, pipes, and cigars -- do you think is MOST harmful?</p>
101	ST301	<p>Ask all. In the past month, have you used any other tobacco product THAT IS SMOKED besides cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p><i>If respondent asks, this includes cigarillos, bidis and hookahs as well as pipes and cigars.</i></p> <p>If response=1, go to ST311. Otherwise, go to ST501.</p>
102a	ST311	<p>Ask if ST301=1. <i>Do not read out products. Code all that are mentioned.</i> What did you use? Cigars.</p>

		<p>1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know</p> <p>1. "Use" in the question includes just trying – i.e. include any products that the respondent has used one or more times. 2. If the respondent answers "chewing tobacco" or "snuff" say: "We will be asking you about smokeless products shortly. For the moment, do you use any other tobacco products that are SMOKED?"</p>
102b	ST313	Cigarillos.
102c	ST315	Bidis.
102d	ST317	Pipe.
102e	ST331	Other (specify).
102f	ST331o	<p>Ask if ST331=1. What other product did you use? Enter text response.</p>
102g	ST302v	Derived variable: # smoked tobacco products used in last month (counter).
103a	ST351	<p>Ask if ST311=1. Do you currently smoke cigars? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to ST352. Otherwise, go to ST353.</p>
103b	ST352	<p>Ask if ST351=1. Read out response options. How often do you currently smoke cigars? Would that be . . .</p> <p>1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?</p>
104a	ST353	<p>Ask if ST313=1. Do you currently smoke cigarillos? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to ST354. Otherwise, go to ST355.</p>

104b	ST354	<p>Ask if ST353=1. <i>Read out response options.</i> How often do you currently smoke cigarillos? Would that be . . .</p> <ol style="list-style-type: none"> 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
105a	ST355	<p>Ask if ST315=1. Do you currently smoke bidis?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST356. Otherwise, go to ST357.</p>
105b	ST356	<p>Ask if ST355=1. <i>Read out response options.</i> How often do you currently smoke bidis? Would that be . . .</p> <ol style="list-style-type: none"> 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
106a	ST357	<p>Ask if ST317=1. Do you currently smoke a pipe?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST358. Otherwise, go to ST387.</p>
106b	ST358	<p>Ask if ST357=1. <i>Read out response options.</i> How often do you currently smoke a pipe? Would that be . . .</p> <ol style="list-style-type: none"> 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
107a	ST387	<p>Ask if ST331=1. Do you currently use [other non-cig product from ST331o]?</p>

		<ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST388. Otherwise, go to ST491.</p>
107b	ST388	<p>Ask if ST387=1. How often do you currently use [other non-cig product from ST331o]? Would that be . . .</p> <ul style="list-style-type: none"> 1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether?
108a	ST491	<p>Ask if ST301=1. Did you use [this product/ any of these products] as an alternative to quitting?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
108b	ST493	<p>Ask if smoking status=1-3 and ST301=1. Did you use [this product/ any of these products] as a way of cutting down on your cigarette smoking?</p>
Alternative Cigarettes		
109	ST501	<p>Ask all. <i>Accept 'don't know' without pressing for an answer.</i> Tobacco companies are developing new types of cigarettes or cigarette-like products that are supposed to be less harmful than ordinary cigarettes. Have you heard of such products, outside of these surveys?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST506. Otherwise, go to SL201.</p>
110	ST506	<p>Ask if ST501=1. Can you name any of these new products?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ST511.</p>

		Otherwise, go to ST551.
111a	ST511	Ask if ST506=1. <i>Do not read product names. Code (only) the first 2 products mentioned.</i> What are the names? Accord. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
111b	ST513	Eclipse.
111c	ST515	Omni.
111d	ST519	Advance.
111e	ST523	Quest.
111f	ST531	Other less harmful cigarette.
111g	ST531o	Ask if ST531=1. What other less-harmful cigarette? <i>Enter text response.</i>
112	ST551	Ask if ST501=1. Have you EVER tried any of these NEW cigarette-like products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST561. Otherwise, go to ST701.
113a	ST561	Ask if ST551=1. <i>Do not read out products. Code all that are mentioned.</i> Which products have you EVER tried? Accord. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
113b	ST563	Eclipse.
113c	ST565	Omni.
113d	ST569	Advance.
113e	ST573	Quest.
113f	ST581	Other less harmful cigarette.

113g	ST581o	Ask if ST581=1. Which other less harmful cigarette have you ever tried? <i>Enter text response.</i>
113h	ST552v	Derived variable: # less harmful cigs ever tried (counter).
114	ST651	Ask if ST551=1. Are you still using any of these products? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST655. Otherwise, go to ST691.
115	ST655	Ask if ST651=1. <i>Read out response options.</i> How often do you currently use [this product/ any of these products]? Would that be . . . 1 Daily 2 Less than daily but at least once a week 3 Less then weekly but at least once a month 4 Less than monthly 5 Or have you stopped using such products altogether?
116a	ST691	Ask if ST551=1. In the last 12 months, did you use [this product/ any of these products] as an alternative to quitting? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
116b	ST693	In the last 12 months, did you use [this product/ any of these products] as a way of cutting down on your cigarette smoking?
116c	ST695	Ask if ST551=1 AND [(smoking status=4-5) OR (smoking status=1-3 and QA231v<6months)]. Did you use [this product/ any of these products] to help you quit?
117a	ST701	Ask if ST501=1. Compared with ordinary cigarettes, are ANY of these new products less harmful? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ST711. If response=2, go to ST716. Otherwise, go to SL201.
117b	ST711	Ask if ST701=1. Are they a little or a lot less harmful than ordinary cigarettes?

		<ul style="list-style-type: none"> 1 A little less 2 A lot less
117c	ST716	<p>Ask if ST701=2. Are they more harmful or the same as ordinary cigarettes?</p> <ul style="list-style-type: none"> 1 More harmful 2 The same
118	ST715	<p>Ask if smoking status=1-3. Would you be interested in trying a nicotine free cigarette if one were available?</p> <ul style="list-style-type: none"> 1 Yes 2 No 3 Not sure 7 Not applicable 8 Refused 9 Don't know
Smokeless Tobacco Products		
119	SL201	<p>Ask all. Are you aware of any smokeless tobacco products, such as snuff or chewing tobacco, which are not burned or smoked but instead are usually put in the mouth?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p><i>(1) Includes nasal snuff.</i> <i>(2) Does not include nicotine replacement therapy (NRT), such as patch or gum.</i> <i>(3) Accept "don't know" without pressing for an answer.</i></p> <p>If response=1, go to SL211. Otherwise, go to SM101.</p>
120	SL211	<p>Ask if SL201=1. Have you used any smokeless tobacco products in the last 12 months?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p><i>"Use" in the question includes just trying – i.e. include any products that the respondent has used one or more times. Accept "don't know" without pressing for an answer.</i></p> <p>If response=1, go to SL221. Otherwise, go to SL301.</p>
121a	SL221	<p>Ask if SL211=1. <i>Read out product names. Select all that apply.</i> Have you used . . . Chewing tobacco.</p>

		<p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p><i>"Use" in the question includes just trying – i.e. include any products that the respondent has used one or more times.</i></p>
121b	SL223	<p>Read out product names. Check all that apply. 'Snus' is pronounced to rhyme with 'goose.'</p> <p>Moist snuff or "Snus" put in the mouth.</p>
121c	SL225	<p>Read out product names. Select all that apply.</p> <p>Nasal snuff.</p>
121d	SL617	Ariva.
121e	SL621	Exalt.
121f	SL227	<p>Any other smokeless tobacco products?</p> <p>If none of (SL221-SL227o)=1, go to SL301.</p>
121g	SL227o	<p>Ask if SL227=1.</p> <p>Which other product have you used?</p> <p>Enter text response.</p>
122a	SL241	<p>Ask if SL201=1 and SL221=1.</p> <p>Read out response options.</p> <p>How often do you currently use [product]? Would that be . . .</p> <p>Chewing tobacco.</p> <p>1 Daily 2 Less than daily, but at least once a week 3 Less than weekly, but at least once a month 4 Less than monthly 5 Or have you stopped altogether? 7 Not applicable 8 Refused 9 Don't know</p>
122b	SL243	<p>Ask if SL201=1 and SL223=1.</p> <p>Moist snuff or snus.</p>
122c	SL245	<p>Ask if SL201=1 and SL225=1.</p> <p>Nasal snuff.</p>
122d	SL667	<p>Ask if SL617=1.</p> <p>Ariva.</p>
122e	SL671	<p>Ask if SL621=1.</p> <p>Exalt.</p>
122f	SL247	<p>Ask if SL201=1 and SL227=1.</p> <p>Other smokeless tobacco product mentioned in SL227o.</p>
123a	SL291	<p>Ask if SL211=1.</p> <p>In the last 12 months, did you use [this product/ any of these products] as an alternative to quitting?</p> <p>1 Yes 2 No</p>

		<p>7 Not applicable 8 Refused 9 Don't know</p>
123b	SL293	<p>Ask if smoking status=1-3 and SL211=1. In the last 12 months, did you use [this product/ any of these products] as a way of cutting down on your cigarette smoking?</p>
123c	SL295	<p>Ask if smoking status=4-5 OR (smoking status=1-3 and QA231v<6months). In the last 12 months, did you use [this product/ any of these products] to help you quit?</p>
124a	SL301	<p>Ask if SL201=1. As far as you know, are ANY smokeless tobacco products less harmful than ordinary cigarettes? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SL311. If response=2, go to SL316. Otherwise, go to SL205.</p>
124b	SL311	<p>Ask if SL301=1. Are they a little or a lot less harmful than ordinary cigarettes? 1 A little less 2 A lot less</p> <p>Go to SL205.</p>
124c	SL316	<p>Ask if SL301=2. Are they more harmful or the same as ordinary cigarettes? 1 More harmful 2 The same</p>
125	SL205	<p>Ask if [SL301<>1] OR [SL301=1 AND SL311<>2] OR [SL311=2 AND SL211<>1]. SL301<>1 OR SL311<>2: Suppose some smokeless tobacco products are proven to be a lot less harmful than cigarettes. Would you be interested in trying them as an alternative to cigarettes? SL311=2 AND SL211<>1: Are you interested in trying them as an alternative to cigarettes? 1 Yes 2 Maybe; don't know 3 No 4 Contests proposition (i.e. doesn't believe they exist) 7 Not applicable 8 Refused 9 Don't know</p> <p><i>If respondent asks, does this question refer to products that are safe or harmless, answer NO, just products that are a lot less harmful than cigarettes.</i></p>
Stop-smoking Medications		
126	SM101	<p>Ask all. Have you heard about medications to help people stop smoking, such as Nicotine Replacement Therapies like nicotine gum or the patch, or pills such as Zyban?</p>

		<p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SM106. Otherwise, go to CH801.</p>
127a	SM106	<p>Ask if SM101=1. Have you ever used any stop-smoking medication?</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p> <p>If response=1, go to SM111. Otherwise, go to SM361.</p>
127b	SM111	<p>Ask if SM106=1. In the last year -- since [12M anchor] -- have you used any stop-smoking medications, such as Nicotine Replacement Therapies like nicotine gum or the patch, or other medications that require a prescription, such as Zyban?</p> <p>1 Yes 2 No 3 Can't remember</p> <p>If response=1, go to SM161. Otherwise, go to SM361.</p>
128a	SM161	<p>Ask if SM111=1. <i>Read out reasons. Select all that apply.</i> Which of the following were reasons you used stop-smoking medications? To stop smoking completely.</p> <p>1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know</p>
128b	SM162	To reduce the amount you smoke.
128c	SM163	To cope with times when you could not or were not allowed to smoke.
128d	SM164	Or some other reason.
128e	SM164o	<p>Ask if SM164=1. What other reason?</p>
129	SM104	<p>Ask if SM161=1: If FR309v=1-3: Did you use medications on your last quit attempt? If FR309v=4-5: Did you use medications on your current quit attempt?</p> <p>1 Yes 2 No</p>

		<p>7 Not applicable 8 Refused 9 Don't know</p>
130a	SM200	<p><i>Interviewer Training Notes on Classification of Stop-smoking Medications:</i></p> <p>1. There is confusion between NRTs (Nicotine replacement therapies/ products) and prescription (Rx) medications, mostly because patients often get NRTs with a doctor's prescription. The availability of NRTs without a prescription varies over countries. If a medication is a nicotine replacement product, we want it to be classified as NRT regardless of whether or not a prescription was used to obtain it. By "prescription meds" we mean pills that do not contain nicotine and always require a prescription.</p> <p>2. NRTs come in various forms, like patch, gum, lozenges, spray (see list in survey); some NRTs are in tablet form, but they are placed under the tongue rather than swallowed. Prescription medications are always pills and are always swallowed. Probe for this kind of information if the respondent doesn't know whether his/her med is NRT or prescription.</p>
130b	SM201	<p>Ask if SM161=1: We are interested in their MOST RECENT use of medications FOR THE PURPOSE OF QUITTING SMOKING. We can't use BRAND of nicotine product (e.g., Nicorette). We want the FORM of NRT (e.g., gum, patch). Prescriptions are shown with both brand and generic names. If respondent mentions a product not listed, probe to classify as either NRT or prescription (see interviewer training notes). Use "other" only if medication cannot be classed as either NRT or prescription. "Quitting" refers to the first 3 months after they actually stopped smoking. Anything beyond those first 3 months is considered to be "staying quit." Do not read out products, unless necessary. Select all that apply. The last time you used medications TO QUIT SMOKING, which product or combination of products did you use? This includes both NRTs and prescription medications. NRT: Nicotine gum. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know</p> <p>This product or combination of products constitutes the respondent's prescription and NRT referents for the follow-up questions.</p>
130c	SM202	NRT: Nicotine patch.
130d	SM203	NRT: Nicotine lozenges.
130e	SM204	NRT: Nicotine (sublingual) tablets.
130f	SM210	NRT: Other nicotine replacement product (specify).
130g	SM211	Prescription: Zyban (or Bupropion, or Wellbutrin).
130h	SM212	Prescription: Champix (UK, EU)/ Chantix (US)/ Varenicline
130i	SM215	Prescription: Other prescription medication (specify)
130j	SM220	Other medication (specify).
130k	SM210o	Ask if SM210=1.

		Which other NRT have you used? This product or combination of products constitutes the respondent's referent for the follow-up questions.
130l	SM215o	Ask if SM215=1. Which other prescription medication have you used?
130m	SM220o	Ask if SM220=1. Which other stop-smoking medication have you used?
131	SMRxInt	Ask if any of (SM211, SM212, SM215)=1. Thinking [first] about the PRESCRIPTION medication[s] that you used for this quit attempt ... (1) "First" is needed if referent includes both NRT and prescriptions. (2) Insert below the names of prescription products used by respondent in SM211, SM212, SM215, including open-ended response in SM215o if applicable.
132a	SM260	Ask if any of (SM211, SM212, SM215)=1. <i>Read out list. Select all that apply.</i> How did you get [referent prescription medication(s)]? By prescription. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
132b	SM262	From a friend.
132c	SM263	Free, from a doctor, health service, or quit-smoking service.
132d	SM259	Left over from an earlier quit attempt.
133a	SM265	Ask if any of (SM211, SM212, SM215)=1 AND SM263<>1. (RL: this is incorrect; changed for C7 only, on Nov 7, to 'Ask if any of (SM260, SM262, SM259)=1.') <i>Read out list. Select all that apply.</i> When you bought or got [referent prescription medication(s)], did you pay full price, get a discount, or did you get it free? Paid full price. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
133b	SM266	Got it at a discount. <i>"At a discount" includes getting the medication partly or completely paid for by insurance.</i>
133c	SM267	Got it free.
133d	SM268	Ask if SM266=1. Was the discount because of a government subsidy or an insurance plan, or was it some other kind of discount? 1 Government subsidy or insurance plan 2 Some other kind of discount
134	SM269	Ask if any of (SM211, SM212, SM215)=1. Are you still using [referent prescription medication(s)]?

		<ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
135a	SM270a	<p>Ask if any of (SM211, SM212, SM215)=1. <i>For medications used together, time includes from start of first medication used through end of last medication.</i> If SM269=1: In total, how long have you been using [referent prescription medication(s)]? If SM269<>1: In total, how long did you use [referent prescription medication(s)]? (days)</p>
135b	SM270b	(weeks)
135c	SM270c	(months)
136	SM309	<p>Ask if any of (SM211, SM212, SM215)=1. Did you smoke regularly while using [any of] [the referent prescription medication(s)], apart from any lead-in period recommended by your doctor? <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know </p>
137a	SM272	<p>Ask if SM269=2: <i>Do not read out options. Select all that apply.</i> Why did you discontinue using the medication(s)? Quit / It worked <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know </p>
137b	SM273	Didn't work / Went back to smoking
137c	SM274	Side-effects / Made me feel sick
137d	SM275	Ran out.
137e	SM276	Too expensive / Insurance coverage ran out
137f	SM277	Stressful situation
137g	SM278	Social situation.
137h	SM299	Or some other reason.
137i	SM299o	<p>Ask if SM299=1. What other reason?</p>
138	SMNRTInt	<p>Ask if any of (SM201-SM210)=1. Thinking [next] about the nicotine replacement medication(s) that you used for this quit attempt ... 1) "Next" is needed if respondent mentioned both NRT and prescriptions.</p>

		(2) Insert below the names of NRT product(s) last used for quitting.
139a	SM310	Ask if any of (SM201-SM210)=1. <i>Read out list. Select all that apply.</i> How did you get [referent NRT medication(s)]? By prescription. 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
139b	SM311	From a pharmacy [or drugstore (CA, US)], without a prescription.
139c	SM314	From a store other than a pharmacy [or drugstore (CA,US)].
139d	SM312	From a friend.
139e	SM313	Free, from a doctor, health service, or quit-smoking service.
139f	SM319	Left over from an earlier quit attempt.
140a	SM315	Ask if any of (SM310, SM311, SM314, SM312, OR SM319)=1. <i>Read out list. Select all that apply.</i> When you bought or got [referent NRT medication(s)], did you pay full price, get a discount, or did you get it free? Paid full price. 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
140b	SM316	Got it at a discount. <i>"At a discount" includes getting the medication partly or completely paid for by insurance.</i>
140c	SM317	Got it free.
140d	SM318	Ask if SM316=1. Was the discount because of a government subsidy or an insurance plan, or was it some other kind of discount? 1 Government subsidy or insurance plan 2 Some other kind of discount
141	SM329	Ask if any of (SM201-SM210)=1. Are you still using [referent NRT medication(s)]? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
142a	SM330a	Ask if any of (SM201-SM210)=1. <i>For medications used together, time includes from start of first medication used through end of last medication.</i> If SM329=1: In total, how long have you been using [referent NRT medication(s)]? If SM329<>1: In total, how long did you use [referent NRT medication(s)]?

		(days)
142b	SM330b	(weeks)
142c	SM330c	(months)
143	SM345	<p>Ask if any of (SM201-SM210)=1. Did you smoke regularly while using [referent NRT medication(s)]?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
144a	SM452	<p>Ask if any of (SM201-SM210)=1. Did you start using [any of] [referent NRT medication(s)] before you actually quit smoking, on the same day that you quit smoking, or some time after you quit? If more than one of (SM201-SM210)=1, add: If you started the nicotine replacement medications at different times, we are interested here in when you started the FIRST one.</p> <ol style="list-style-type: none"> 1 Before I quit smoking 2 On the same day that I quit 3 Some time after I quit 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to SM453. Otherwise go to SM458.</p>
144b	SM453	<p>Ask if SM452=1. Was that LESS than a week before you quit smoking, about a week before, or MORE than a week before?</p> <ol style="list-style-type: none"> 1 LESS than a week before 2 About a week before 3 MORE than a week before
145a	SM458	<p>Ask if any of (SM201-SM210)=1. If SM452=1: During the period immediately after you stopped smoking, were you using the medication every day, 4 to 6 days a week, 1 to 3 days a week, or less often than once a week? If SM452<>1: When you started using the medication, were you using it every day, 4 to 6 days a week, 1 to 3 days a week, or less often than once a week?</p> <ol style="list-style-type: none"> 1 Every day 2 4-6 days a week 3 1-3 days a week 4 Less than once a week 7 Not applicable 8 Refused 9 Don't know
145b	SM459	<p>Ask if SM458=1 and any of (SM201, SM203, SM204, SM210)=1. About how many pieces [are/ were] you using per day? <i>Enter number of pieces. If respondent was using multiple NRTs at once, we want the daily total for all meds except the nicotine</i></p>

		<i>patch. For nicotine spray, inhaler or water, number of uses per day should count as "pieces".</i>
146a	SM332	<p>Ask if SM329=2: <i>Do not read out options. Select all that apply.</i> Why did you discontinue using the nicotine replacement medication(s)?</p> <p>Quit / It worked</p> <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know
146b	SM333	Didn't work / Went back to smoking
146c	SM334	Side-effects / Made me feel sick
146d	SM335	Ran out.
146e	SM336	Too expensive / Insurance coverage ran out
146f	SM337	Stressful situation
146g	SM338	Social situation.
146h	SM339	Or some other reason.
146i	SM339o	<p>Ask if SM339=1. What other reason?</p>
147	SM119	<p>Ask if SM161=1: In the last 12 months -- that is, since [12M anchor] -- have you used any OTHER stop-smoking medications in order TO QUIT?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to SM121. Otherwise, go to SM497.</p>
148a	SM121	<p>Ask if SM119=1. <i>We can't use BRAND of nicotine product (e.g., Nicorette). We want the FORM of NRT (e.g., gum, patch). Prescriptions are shown with both brand and generic names.</i> <i>If respondent mentions a product not listed, probe to classify as either NRT or prescription. Use "other" only if medication cannot be classed as either NRT or prescription.</i></p> <p><i>Do not read out products, unless necessary. Select ALL that apply.</i> Which other medication or medications have you used?</p> <p>NRT: Nicotine gum.</p> <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable

		8 Refused 9 Don't know 1. "Use" in the question includes just trying – i.e. include any products that the respondent has used one or more times. 2. If the respondent answers "chewing tobacco" or "snuff" say: "We will be asking you about smokeless products shortly. For the moment, do you use any other tobacco products that are SMOKED?"
148b	SM122	Which other medications did you use? NRT: Nicotine patch.
148c	SM123	NRT: Nicotine lozenges.
148d	SM124	NRT: Nicotine (sublingual) tablets.
148e	SM130	NRT: Other nicotine replacement product (specify).
148f	SM135	Prescription: Other prescription medication (specify)
148g	SM140	Other medication (specify).
148h	SM130o	Ask if SM130=1. Which other NRT have you used?
148i	SM135o	Ask if SM135=1. Which other prescription medication have you used?
148j	SM140o	Ask if SM140=1. Which other stop-smoking medication have you used?
149	SM497	Ask if any of (SM162, SM163, SM164)=1. The following questions are about use of stop-smoking medications for reasons OTHER THAN TO QUIT smoking.
150a	SM498	Ask if SM161=1 and SM162=1. You indicated earlier that you used medications to CUT DOWN on the amount you smoke, as well as to quit. Did you use medication to cut down at times when you were NOT trying to quit smoking, or was that only when you were trying to quit? 1 Yes, used when not trying to quit 2 No, only when trying to quit 7 Not applicable 8 Refused 9 Don't know
150b	SM499	Ask if SM161=1 and SM163=1. You indicated earlier that you used medications to COPE with times when you couldn't smoke, as well as to quit. Did you use medication to cope with nonsmoking situations at times when you were NOT trying to quit smoking, or was that only when you were trying to quit?
151	SM500	Ask if SM498=1 and SM499=1. Which of these did you do most recently -- use medications to cut down or use medications to cope with non-smoking situations? 1 Cut down 2 Cope with non-smoking situations 7 Not applicable 8 Refused 9 Don't know
152a	SM501	Ask if SM498=1 OR SM499=1 OR [SM161<>1 and (SM162=1 OR SM163=1)] OR SM164=1. <i>We are interested in their use of medications FOR PURPOSES OTHER THAN QUITTING smoking.</i>

		<p>We can't use BRAND of nicotine product (e.g., Nicorette). We want the FORM of NRT (e.g., gum, patch). Prescriptions are shown with both brand and generic names. If respondent mentions a product not listed, probe to classify as either NRT or prescription. Use "other" only if medication cannot be classed as either NRT or prescription.</p> <p>Do not read out products, unless necessary. Select all that apply. Which product or combination of products did you use [to cut down on the amount you smoke/ to cope with non-smoking situations/for reasons other than quitting? This includes both NRTs and prescription medications.</p> <p>NRT: Nicotine gum.</p> <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned 7 Not applicable 8 Refused 9 Don't know <p>Any NRT product(s) mentioned (but not prescription medications) constitutes the respondent's referent for the follow-up questions.</p>
152b	SM502	NRT: Nicotine patch.
152c	SM503	NRT: Nicotine lozenges.
152d	SM504	NRT: Nicotine (sublingual) tablets.
152e	SM510	NRT: Other nicotine replacement product (specify).
152f	SM511	Prescription: Any prescription medication(s) (specify)
152g	SM512	Other: Unknown or generic medicine (specify)
152h	SM510o	Ask if SM510=1. Which other NRT have you used?
152i	SM511o	Ask if SM511=1. Which prescription medication?
152j	SM512o	Ask if SM512=1. Which other stop-smoking medication have you used?
153a	SM520	Ask if any of (SM501-SM510)=1. <i>Read out list. Select all that apply.</i> The last time you bought or got [referent NRT medication(s)], how did you get it? By prescription. <ul style="list-style-type: none"> 1 Mentioned 2 Not mentioned <p><i>Note that in this section follow-up questions are asked only about nicotine replacement products, not about prescription medications.</i></p>
153b	SM521	From a pharmacy [or drugstore (CA, US)], without a prescription.
153c	SM524	From a store other than a pharmacy [or drugstore (CA,US)].
153d	SM522	From a friend.
153e	SM523	Free, from a doctor, health service, or quit-smoking service.

153f	SM529	<p>Left over from an earlier quit attempt.</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
154a	SM535	<p>Ask if any of (SM520-SM522, SM529)=1.</p> <p><i>Read out list. Select all that apply.</i></p> <p>The last time you bought or got [referent NRT medication(s)], did you pay full price, get a discount, or did you get it free?</p> <p>Paid full price.</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
154b	SM536	<p>Got it at a discount.</p> <p><i>"At a discount" includes getting the medication partly or completely paid for by insurance.</i></p>
154c	SM537	<p>Got it free.</p>
154d	SM538	<p>Ask if SM536=1.</p> <p>Was the discount because of a government subsidy or an insurance plan, or was it some other kind of discount?</p> <p>1 Government subsidy or insurance plan</p> <p>2 Some other kind of discount</p>
155	SM544	<p>Ask if any of (SM501-SM510)=1.</p> <p><i>Read out response options.</i></p> <p>Thinking about your use of NICOTINE REPLACEMENT products in order to cut down on the amount you smoke. . . did this happen shortly after a failed quit attempt or at a time unrelated to any quit attempt?</p> <p>1 After a failed quit attempt</p> <p>2 Time unrelated to a quit attempt</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
156	SM545	<p>Ask if any of (SM501-SM510)=1.</p> <p>Are you still using [referent NRT medication(s)] [to cut down] or [to cope when you can't smoke] or [for reasons other than quitting]?</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
157a	SM550a	<p>Ask if any of (SM501-SM510)=1.</p> <p>In total, how long [have you been using/ did you use] [referent NRT medication(s)] [to cut down/ to cope when you can't smoke/ for reasons other than quitting]?</p> <p>(days)</p> <p>98 Not regularly</p> <p>99 Don't know how long</p>

		<i>Do not read out non-responses 98 and 99, but code if mentioned.</i>
157b	SM550b	(weeks)
157c	SM550c	(months)
158a	SM552	<p>Ask if any of (SM501-SM510)=1 and SM550<>98.</p> <p>If SM439=1: Are you using the medication every day, 4 to 6 days a week, 1 to 3 days a week, or less often than once a week?</p> <p>If SM439=2-9: When you were LAST using the medication, were you using it every day, 4 to 6 days a week, 1 to 3 days a week, or less often than once a week?</p> <ul style="list-style-type: none"> 1 Every day 2 4-6 days a week 3 1-3 days a week 4 Less than once a week 7 Not applicable 8 Refused 9 Don't know
158b	SM554	<p>Ask if SM552=1 and any of (SM501, SM503, SM504, and SM510)=1.</p> <p>About how many pieces [are/ were] you using per day?</p> <p><i>Enter number of pieces. If respondent was using multiple NRTs at once, we want the daily total for all meds except the nicotine patch. For nicotine spray, inhaler or water, number of uses per day should count as "pieces".</i></p>
159	SM350	<p>Ask if any of (SM329, SM545)=1.</p> <p><i>Read out response options.</i></p> <p>Do you consider yourself addicted to nicotine replacement therapy?</p> <ul style="list-style-type: none"> 1 Yes, strongly addicted 2 Yes, somewhat addicted 3 No 4 Not sure 7 Not applicable 8 Refused 9 Don't know
160	SM351	<p>Ask if SM350=1 or 2 AND any form of NRT (e.g. gum, patch, etc) was used -- i.e. mentioned in (SM201-210, SM121-130, SM501-510).</p> <p>If any of (SM329, SM439, SM545)=1: Do you ENJOY using [any of] the nicotine replacement products(s), or do you use it ONLY to control urges to smoke?</p> <p>If NONE of (SM329, SM439, SM545)=1: Did you ENJOY using [any of] the nicotine replacement products(s), or did you use it ONLY to control urges to smoke?</p> <ul style="list-style-type: none"> 1 Enjoyed using 2 Used only to control urges 7 Not applicable 8 Refused 9 Don't know
161a	SM352	<p>Ask if SM351=1 AND MORE THAN ONE form of NRT (e.g. gum, patch, etc) was used -- i.e. mentioned in (SM201-210, SM121-130, SM501-510).</p> <p>Of the nicotine replacement products that you have used -- which did you enjoy the most?</p>

		<ul style="list-style-type: none"> 1 Nicotine gum 2 Nicotine patch 3 Nicotine lozenges 4 Nicotine (sublingual) tablets 5 Other nicotine replacement product (specify) 7 Not applicable 8 Refused 9 Don't know
161b	SM352o	Ask if SM352=5. Which other product?
162a	SM361	<p>Ask if SM101=1.</p> <p>Now I'm going to read out a list of statements about stop-smoking medications. In these statements we are referring to BOTH nicotine replacement medications and prescription medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>If FR309v=1-3: If you decided you wanted to quit, stop-smoking medications would make it easier.</p> <p>If FR309v=4-5: Stop smoking medications make it easier to quit.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
162b	SM362	<p>Ask if SM101=1 AND [(smoking status=1-3) OR (smoking status=4-5 and SM111=1)].</p> <p>If FR309v=1-3: If you decided you wanted to quit, you would be able to quit without stop-smoking medications.</p> <p>If FR309v =4-5 and SM111=1: You would have been able to quit without stop smoking medications.</p>
162c	SM363	Ask if SM101=1. Stop-smoking medications are too expensive.
162d	SM364	You don't know enough about how to use stop-smoking medications properly.
162e	SM365	Stop-smoking medications are too hard to get.
162f	SM366	Stop-smoking medications might harm your health.
163a	SM370	<p>Ask if SM101=1.</p> <p>If any referent includes NRTs:</p> <p>Now, thinking about NICOTINE REPLACEMENT MEDICATIONS as a group, not just the ones you have tried... As far as you know, are nicotine replacement medications less harmful than smoking cigarettes?</p> <p>If no referent includes NRTs, or SM111<>1:</p> <p>Now, thinking about nicotine replacement medications... As far as you know, are nicotine replacement medications less harmful than smoking cigarettes?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused

		<p>9 Don't know</p> <p>If response=1, go to SM373.</p> <p>If response=2, go to SM375.</p> <p>Otherwise, go to CH801.</p>
163b	SM373	<p>Ask if SM370=1:</p> <p>Are they a little or a lot less harmful than ordinary cigarettes?</p> <p>1 A little less harmful</p> <p>2 A lot less harmful</p> <p>Go to CH801.</p>
163c	SM375	<p>Ask if SM370=2:</p> <p>Are they more harmful or the same as ordinary cigarettes?</p> <p>1 More harmful</p> <p>2 The same</p>
Cessation Help		
164	CH801	<p>Ask all.</p> <p>In the last 12 months – since [12M anchor] – have you visited a doctor or other health professional?</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p>If response=1, go to CH811.</p> <p>Otherwise, go to CH861.</p>
165a	CH811	<p>Ask if CH801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . .</p> <p>Advice to quit smoking?</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p>If response=1, go to CH812.</p> <p>Otherwise, go to CH813.</p>
165b	CH812	<p>Ask if CH811=1.</p> <p>Did this make you think about quitting smoking?</p>
166a	CH813	<p>Ask if CH801=1.</p> <p>During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . .</p> <p>Additional help or a referral to another service to help you quit?</p> <p>1 Yes</p> <p>2 No</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>

		If response=1, go to CH814. Otherwise, go to CH815.
166b	CH814	Ask if CH813=1. Did this make you think about quitting smoking?
167	CH815	Ask if CH801=1. During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . . A prescription for stop-smoking medication? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
168a	CH817	Ask if smoking status=1-4 and CH801=1. During ANY visit to the doctor or other health professional in the last 12 months, did you receive . . . Pamphlets or brochures on how to quit? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to CH818. Otherwise, go to CH811v.
168b	CH818	Ask if CH817=1. Did this make you think about quitting smoking?
169a	CH811v	(Derived Variable: received advice from doctor to quit, overall (incl those who did not visit the doctor))
169b	CH813v	(Derived Variable: referral from doctor to quit, overall (incl those who did not visit the doctor))
169c	CH815v	(Derived Variable: quitting RX from doctor, overall (incl those who did not visit the doctor))
169d	CH817v	(Derived Variable: pamphlet on quitting, from doctor, overall (incl those who did not visit the doctor))
170a	CH861	Ask all. In the last 12 months, have you received advice or information about quitting smoking from . . . Telephone or quit line services? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to CH863. Otherwise, go to CH865.
170b	CH863	Ask if CH861=1 AND [(smoking status=1-3 and QA231v<6 months) OR (smoking status=4-5)]. Did this help you in your quit attempt?
171a	CH865	Ask all. In the last 12 months, have you received advice or information about quitting smoking from . . .

		<p>The Internet.</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to CH867. Otherwise, go to CH869.</p>
171b	CH867	<p>Ask if CH865=1 AND [(smoking status=1-3 and QA231v<6 months) OR (smoking status=4-5)]. Did this help you in your quit attempt?</p>
172a	CH869	<p>Ask all. In the last 12 months, have you received advice or information about quitting smoking from . . . Local stop-smoking services (such as clinics or specialists)?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to CH871. Otherwise, go to CH880.</p>
172b	CH871	<p>Ask if CH869=1 AND [(smoking status=1-3 and QA231v<6 months) OR (smoking status=4-5)]. Did this help you in your quit attempt?</p>
173	CH880	<p>Ask all. In the last month -- that is, since [1M anchor] -- have you noticed any advertisements for stop-smoking medications?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
Beliefs About Quitting		
174a	BQ111	<p>Ask if smoking status=1-3. <i>Respondent does not need to be intending to quit to respond. Emphasize "IF" in wording.</i> <i>Read out response options.</i> Now we would like to ask you some questions on any thoughts you might have had about quitting smoking. If you decided to give up smoking completely in the next 6 months, how sure are you that you would succeed?</p> <ul style="list-style-type: none"> 1 Not at all sure 2 Slightly sure 3 Moderately sure 4 Very sure 5 Extremely sure 7 Not applicable 8 Refused 9 Don't know

174b	BQ116	<p>Ask if FR309v=4 or 5. <i>Read out response options.</i> Smoking status=4: Now we would like to ask you some questions about quitting smoking. Smoking status=5-7: Now some questions about having quit. You said earlier that you are currently attempting to quit. How sure are you that you will succeed in quitting smoking for good at this attempt?</p>
175a	BQ121	<p>Ask if smoking status=1-3. <i>Read out response options.</i> How easy or hard would it be for you to quit smoking if you wanted to? 1 Very easy 2 Somewhat easy 3 Neither easy nor hard 4 Somewhat hard 5 Very hard 7 Not applicable 8 Refused 9 Don't know</p>
175b	BQ126	<p>Ask if FR309v=4 or 5. How easy or hard will it be to stay quit? Go to BQ201.</p>
176a	BQ141	<p>Ask if smoking status=1-3. <i>Read out response options.</i> Are you planning to quit smoking . . . 1 Within the next month 2 Within the next 6 months 3 Sometime in the future, beyond 6 months 4 Or are you not planning to quit? 7 Not applicable 8 Refused 9 Don't know If response=1, go to BQ146. If response=2 or 3, go to BQ153. If response=4, go to BQ151. Otherwise, go to BQ155.</p>
176b	BQ146	<p>Ask if BQ141=1. Have you set a firm date? 1 Yes 2 No</p>
177a	BQ151	<p>Ask if smoking status=1-3 and BQ141=4. Do you want to quit smoking at all? 1 Yes 2 No 7 Not applicable 8 Refused</p>

		<p>9 Don't know</p> <p>If response=1, go to BQ153.</p> <p>Otherwise, go to BQ155.</p>
177b	BQ153	<p>Ask if (1) smoking status=1-3 AND (2) (BQ141=1-3) OR (BQ141=4 AND BQ151=1).</p> <p><i>Read out response options.</i></p> <p>How much do you want to quit smoking?</p> <p>1 A little</p> <p>2 Somewhat</p> <p>3 A lot</p>
178	BQ155	<p>Ask if smoking status=1-3.</p> <p><i>Read out response options.</i></p> <p>When was the last time that you seriously thought about quitting smoking?</p> <p>1 Within the last month</p> <p>2 1 to 6 months</p> <p>3 7 to 12 months -- up to but not including 1 year</p> <p>4 1 to 5 years</p> <p>5 More than 5 years</p> <p>6 Never</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
179	BQ161	<p>Ask if smoking status=1-3.</p> <p>One year from now, how much do you expect to be smoking, compared to now: More than now, the same amount, less than now, or not smoking at all?</p> <p>1 A lot more than now</p> <p>2 A little more than now</p> <p>3 The same amount as now</p> <p>4 A little less than now</p> <p>5 A lot less than now, or...</p> <p>6 Not smoking at all</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p><i>If respondent answers 'more' or 'less', prompt with 'would that be a LITTLE [more/ less] or a LOT [more/ less]?'</i></p>
180a	BQ201	<p>Ask all.</p> <p>Smoking status=1-3 AND BQ141=4:</p> <p>Even though you mentioned that you are not currently planning to quit, in the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much?</p> <p>Smoking status=1-3 AND BQ141=1-3:</p> <p>In the past 6 months, have each of the following things led you to think about quitting -- not at all, somewhat, or very much?</p> <p>Smoking status=4-5:</p> <p>To what extent, if at all, were the following reasons for your current quit attempt?</p> <p>Concern for your personal health?</p> <p>1 Not at all</p>

		2 Somewhat 3 Very much 7 Not applicable 8 Refused 9 Don't know
180b	BQ203	Concern about the effect of your cigarette smoke on non-smokers?
180c	BQ207	That society disapproves of smoking?
180d	BQ209	The price of cigarettes?
180e	BQ211	Smoking restrictions at work?
180f	BQ213	Smoking restrictions in public places like [restaurants or bars/ cafes or pubs]?
180g	BQ217	Advice from a doctor, dentist, or other health professional to quit?
180h	BQ221	Free, or lower cost, stop-smoking medication?
180i	BQ223	Availability of telephone helpline/ quitline/ information line?
180j	BQ225	Advertisements or information about the health risks of smoking?
180k	BQ227	Warning labels on cigarette packages?
180l	BQ229	Setting an example for children?
180m	BQ214	Ask if FR309v=1-3: That close friends and family disapprove of your smoking. Ask if FR309v=4-5: That close friends and family disapproved of your smoking.
181	BQ301	Ask all. <i>Read out response options.</i> Smoking status=1-3: How much do you think you would benefit from health and other gains if you were to quit smoking permanently in the next 6 months? Smoking status=4-5: How much do you think you would benefit from health and other gains if you were to continue not to smoke? 1 Not at all 2 Slightly 3 Moderately 4 Very much 5 Extremely 7 Not applicable 8 Refused 9 Don't know
182	BQ309	Ask if smoking status=1-3. <i>Read out response options.</i> Still thinking about quitting permanently within the next 6 months: If you were to quit smoking, would your ability to enjoy life be improved, made worse, or stay the same? 1 Improved a lot 2 Improved a little 3 Stay the same 4 Made a little worse 5 Made much worse

		<p>7 Not applicable 8 Refused 9 Don't know</p> <p><i>If respondent answers "improved" or "made worse", prompt with "Would that be [improved a little/ made a little worse] or [improved a lot/ made a lot worse]?"</i></p>
183a	BQ311	<p>Ask if FR309v=4 or 5. Since you quit, has your capacity to enjoy the simple pleasures of life improved, gotten worse or stayed the same?</p> <p>1 Improved 2 Got/ gotten worse 3 Stayed the same 7 Not applicable 8 Refused 9 Don't know</p>
183b	BQ313	Since you quit, has your ability to calm down when you feel stressed or upset improved, gotten worse or stayed the same?
183c	BQ315	Since you quit, has your ability to control feelings like anger, grumpiness or annoyance improved, gotten worse or stayed the same?
Environmental Tobacco Smoke		
184	ET221	<p>Ask all. <i>Read out response options.</i> Which of the following best describes smoking inside your home?</p> <p>1 Smoking is allowed anywhere in your home 2 Smoking is NEVER allowed ANYWHERE in your home 3 Something in between 7 Not applicable 8 Refused 9 Don't know</p>
185	ET220	<p>Ask if ET221<>2. Are you intending to make your home totally smoke-free within the next year?</p> <p>1 Yes 2 No 3 Unsure 7 Not applicable 8 Refused 9 Don't know</p>
186	ET885	<p>Ask if ET221<>2. <i>Note that quitter wording refers to "people", while smoker wording refers to "you."</i></p> <p>If FR309v=1-3: Compared to a year ago, do YOU now smoke fewer cigarettes inside your home, more cigarettes inside your home, or about the same amount? If FR309v=4-5: Compared to a year ago, do PEOPLE now smoke fewer cigarettes inside your home, more cigarettes inside your home, or about the same amount?</p> <p>1 Smoke fewer cigarettes inside the home. 2 Smoke about the same. 3 Smoke more cigarettes inside the home.</p>

		<ul style="list-style-type: none"> 7 Not applicable 8 Refused 9 Don't know
187	ET115	<p>Ask if smoking status=1-3. <i>Read out response options.</i> How much, if at all, do you try to minimize the amount that non-smokers are exposed to your cigarette smoke?</p> <ul style="list-style-type: none"> 1 A lot 2 Somewhat 3 Not at all 7 Not applicable 8 Refused 9 Don't know <p><i>Accept DK without pressing for an answer. [If smoking status=4 or 5, say] Please answer for when you WERE smoking.</i></p>
188	ET321	<p>Ask if smoking status=1-3. <i>Read out response options.</i> When you are in a car or other private vehicle with non-smokers, do you . . .</p> <ul style="list-style-type: none"> 1 Smoke as you normally smoke 2 Never smoke 3 Something in between 7 Not applicable 8 Refused 9 Don't know <p><i>Accept "don't know" without pressing for an answer.</i></p>
189	ET421	<p>Ask all. <i>Read out response options.</i> Which of the following best describes the rules about smoking in drinking establishments, bars, and pubs where you live?</p> <ul style="list-style-type: none"> 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 No rules or restrictions 7 Not applicable 8 Refused 9 Don't know
190a	ET431	<p>Ask all. In the last 6 months -- that is, since [6 M anchor] -- have you visited a drinking establishment, bar, or pub where you live?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ET433. Otherwise, go to ET521.</p>
190b	ET433	<p>Ask if ET431=1. Would that be at least weekly or less often?</p> <ul style="list-style-type: none"> 1 At least weekly

		2 Less often
190c	ET812	Compared to a year ago, do you now visit pubs and bars more often, less often, or the same amount? 1 More often 2 Less often 3 Same amount 4 Don't visit pubs now and/ or didn't visit pubs a year ago
191	ET434	Ask if ET431=1. The last time you visited, were people smoking inside the pub or bar? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
192	ET438	Ask if smoking status=1-3 and ET431=1. Did you go outside for a smoke? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
193	ET521	Ask all. <i>Read out response options.</i> Which of the following best describes the rules about smoking in restaurants or cafés where you live? 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in all indoor areas 4 Every restaurant, café has its own rules 7 Not applicable 8 Refused 9 Don't know
194a	ET531	Ask all. In the last 6 months -- since [6M Anchor] -- have you visited a restaurant or café where you live? 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know If response=1, go to ET533. Otherwise, go to ET601.
194b	ET533	Ask if ET531=1. Would that be at least weekly or less often? 1 At least weekly 2 Less often

195	ET841	<p>Ask if ET531=1. Compared to a year ago, do you now visit restaurants or cafes more often, less often, or the same amount?</p> <ol style="list-style-type: none"> 1 More often 2 Less often 3 Same amount 4 Don't visit restaurants now and/ or didn't visit restaurants a year ago 7 Not applicable 8 Refused 9 Don't know
196	ET534	<p>Ask if ET531=1. The last time you visited, were people smoking inside the restaurant or cafe?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
197a	ET540	<p>Ask if ET531=1 and ET521=2. The last time you visited, was smoking restricted to a separate smokers' room?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
197b	ET541	The last time you visited, was smoking restricted to certain bar areas?
198	ET601b	<p>Are you currently employed outside the home?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know <p>If response=1, go to ET621. Otherwise go to ET851.</p>
199	ET621	<p>Ask if ET601b=1. <i>Read out response options.</i> Which of the following best describes the smoking policy where you work?</p> <ol style="list-style-type: none"> 1 Smoking is not allowed in any indoor area 2 Smoking is allowed only in some indoor areas 3 Smoking is allowed in any indoor areas 7 Not applicable 8 Refused 9 Don't know
200a	ET634	<p>Ask if ET601b<>1. In the last month, have people smoked in indoor areas where you work?</p>

		<ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
200b	ET851	<p>Ask if any of: (1) country=US and (state is Arizona or New Mexico); (2) country=UK; (3) country=AU and (state is any of (Victoria, NSW, ACT, WA)).</p> <p>As you probably know, new laws restricting where you can smoke have been introduced in the past year. I'm going to read a list of things that you may or may not have done to adjust to the new smoke-free law. Please answer YES, NO, or NOT APPLICABLE TO ME for each.</p> <p>Smoking status=1-3: Has the smoke-free law made you more likely to quit smoking? Smoking status=4-5: Was the smoke-free law a reason for your quitting smoking?</p> <ul style="list-style-type: none"> 1 Yes 2 No 3 Not applicable to me
200c	ET864	<p>Ask if smoking status=4-5 AND any of: (1) country=US and (state is Arizona or New Mexico); (2) country=UK; (3) country=AU and (state is any of (Victoria, NSW, ACT, WA)).</p> <p>Has the smoke-free law helped you stay quit?</p>
200d	ET866	<p>Ask if smoking status=1-5 AND any of: (1) country=US and (state is Arizona or New Mexico); (2) country=UK; (3) country=AU and (state is any of (Victoria, NSW, ACT, WA)).</p> <p>Smoking status=1-3: Has the smoke-free law made you cut down on the number of cigarettes you smoke? Smoking status=4-5: When you were still smoking, did the smoke-free law make you cut down on the number of cigarettes you smoked?</p>
201a	ET703	<p>Ask all. For each of the following public places, please tell me if you think smoking should be allowed in all indoor areas, in some indoor areas, or not allowed indoors at all:</p> <p>Workplaces?</p> <ul style="list-style-type: none"> 1 All indoor areas 2 Some indoor areas 3 Not at all 7 Not applicable 8 Refused 9 Don't know
201b	ET705	Indoor areas of drinking establishments (e.g. pubs/ bars).
201c	ET707	Indoor areas of restaurants and cafes?
201d	ET711	And now thinking about the OUTDOOR eating areas of restaurants and cafes -- do you think that smoking should be allowed in all outdoor eating areas, in some outdoor eating areas, or not allowed in outdoor eating areas at all?

		<ul style="list-style-type: none"> 1 All outdoor eating areas 2 Some outdoor eating areas 3 No outdoor eating areas at all
201e	ET719	<p>And now thinking about the OUTDOOR areas of drinking establishments such as pubs and bars -- do you think that smoking should be allowed in all outdoor areas, in some outdoor areas, or not allowed in outdoor areas at all?</p> <ul style="list-style-type: none"> 1 All outdoor areas 2 Some outdoor areas 3 No outdoor areas at all
201f	ET327	<p>Would you support a law that banned smoking in cars when children are in them?</p> <ul style="list-style-type: none"> 1 Yes 2 No
Psychosocial Beliefs About Smoking		
202a	PS220	<p>Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements.</p> <p>Smoking status=1-3: You enjoy smoking. Smoking status=4-5: You enjoyed smoking.</p> <ul style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
202b	PS214	Cigarette smoke is dangerous to non-smokers.
202c	PS215	If you had to do it over again, you would not have started smoking.
202d	PS217	<p>Smoking status=1-3: Smoking calms you down when you are stressed or upset. Smoking status=4-5: Smoking used to calm you down when you were stressed or upset.</p>
202e	PS219	<p>Smoking status=1-3: You spend too much money on cigarettes. Smoking status=4-5: When you were smoking, you used to spend too much money on cigarettes.</p>
202f	PS223	<p>Smoking status=1-3: Smoking is an important part of your life. Smoking status=4-5: Smoking was an important part of your life.</p>
202g	PS227	You have strong mixed emotions both for and against smoking, all at the same time.
202h	PS229	People who are important to you believe that you should not smoke.
202i	PS231	<p>Smoking status=1-3: There are fewer and fewer places where you feel comfortable about smoking. Smoking status=4-5: There are fewer and fewer places where you would feel comfortable about smoking.</p>
202j	PS233	Society disapproves of smoking.
202k	PS241	If a cigarette tastes lighter, it means you get less tar.
202l	PS243	The harsher the smoke feels in your throat, the more dangerous the smoke is likely to be.

203	LM701	<p>Ask all. Have you ever smoked menthol cigarettes?</p> <ol style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
204a	LM703	<p>Ask if LM701=1. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statements about menthol cigarettes. Menthol cigarettes are less harmful than regular cigarettes.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
204b	LM705	Menthol cigarettes are smoother on your throat and chest than regular cigarettes.
205a	PS313	<p>Ask all. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. The medical evidence that smoking is harmful is exaggerated.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
205b	PS315	You've got to die of something, so why not enjoy yourself and smoke.
205c	PS317	Smoking is no more risky than lots of other things that people do.
206a	DI251	<p>Ask if smoking status=1-3. <i>Read out response options.</i> Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. You worry that your smoking will influence the children around you to start or continue smoking.</p> <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree

		5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
206b	DI421	Ask all. Before you make a decision, you like to talk to close friends and get their ideas.
206c	DI422	You would give up an activity you really enjoy if your family did not approve.
206d	DI424	It annoys you when other people do better than you at something.
206e	DI423	You enjoy being different from others.
Beliefs About The Tobacco Industry		
207a	IN213	Ask all. I am going to read you some statements about tobacco companies. Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statements. Tobacco products should be more tightly regulated. <ol style="list-style-type: none"> 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
207b	IN214	Tobacco companies should not be allowed to promote cigarettes at all, but merely make them available to adults who want to smoke them.
207c	IN220	Tobacco companies should be required to sell cigarettes in plain packages -- that is, in packs without any brand names or fancy designs.
207d	IN217	Tobacco companies should take responsibility for the harm caused by smoking.
207e	IN311	The government should do more to tackle the harm done by smoking.
Perceived Risk		
208	PR221	Ask if smoking status=1-3. <i>Read out response options.</i> Let's say that you continue to smoke the amount you do now. How would you compare your own chance of getting heart disease in the future to the chance of a nonsmoker? Would you say that you are ... <ol style="list-style-type: none"> 1 Much more likely to get heart disease than a nonsmoker 2 Somewhat more likely 3 A little more likely 4 Just as likely 7 Not applicable 8 Refused 9 Don't know

209a	PR311	<p>Ask all. <i>Read out response options.</i> To what extent, if at all, has smoking damaged your health?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 Not applicable 8 Refused 9 Don't know
209b	PR313	<p>Ask if smoking status=1-3. How worried are you, if at all, that smoking WILL damage your health in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried
210	PR321	<p>Ask all. <i>Read out response options.</i> To what extent, if at all, has smoking lowered your quality of life?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 Not applicable 8 Refused 9 Don't know
211	PR327	<p>Ask if smoking status=1-3. <i>Read out response options.</i> How worried are you, if at all, that smoking will lower your quality of life in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused 9 Don't know
212	PR329	<p>Ask if FR309v=4 or 5. How worried are you that, even though you quit smoking, you will still get some smoking-related illness in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 Not applicable 8 Refused

		9 Don't know
Moderators Time Perspective, Sensation Seeking		
213a	DI241	Ask all. Of the five closest friends or acquaintances that you spend time with on a regular basis, how many of them are smokers? <i>Record number between 0 and 5.</i>
213b	DI242	Ask if DI241 = 1-5. In the last year, how many of them have talked about wanting to quit? 7 Not applicable 8 Refused 9 Don't know <i>Record a number that is smaller than or equal to DI241.</i>
214a	DI211	Ask all. Now I'm going to read some statements. For each, please indicate how much you agree or disagree with it. Your choices are strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. You spend a lot of time thinking about how what you do today will affect your life in the future. 1 Strongly agree 2 Agree 3 Neither agree nor disagree 4 Disagree 5 Strongly disagree 7 Not applicable 8 Refused 9 Don't know
214b	DI216	You like to explore strange places.
214c	DI221	You like to do thrilling things.
214d	DI226	You like new and exciting experiences, even if you have to break the rules.
214e	DI231	You like to be with friends who are exciting and unpredictable.
215	DI301	Ask all. <i>Read out response options.</i> What is your overall opinion of smoking? Is it . . . ? 1 Very positive 2 Positive 3 Neither positive nor negative 4 Negative 5 Very negative 7 Not applicable 8 Refused 9 Don't know
216a	DI311	Ask all. I am now going to ask you a few questions about your experience of stress in the last 6 months -- that is, since [6M anchor]. Your choices are never, almost never, sometimes, often or very often. How often have you felt that you were unable to control the important things in your life?

		<ul style="list-style-type: none"> 1 Never 2 Almost never 3 Sometimes 4 Often 5 Very often 7 Not applicable 8 Refused 9 Don't know
216b	DI326	How often have you felt difficulties were piling up so high that you could not overcome them?
217a	DI503	<p>Ask all. During the last month, have you often been bothered by little interest or pleasure in doing things?</p> <ul style="list-style-type: none"> 1 Yes 2 No 7 Not applicable 8 Refused 9 Don't know
217b	DI504	During the last month, have you often been bothered by feeling down, depressed, or hopeless?
217c	DI505	<p>Ask if DI503 or DI504=1. In the last year, have you been told by a doctor or other health care provider that you have depression?</p>
218a	DI701	<p>Ask all. <i>Choose only one. Responses 1-6 refer to the respondent's average over the year.</i> During the last 12 months – that is, since [LSD anchor] -- about how often did you have any kind of drink that contained alcohol?</p> <ul style="list-style-type: none"> 01 Every day 02 5-6 days per week 03 3-4 days per week 04 1-2 days per week 05 Less than once a week but at least once a month 06 Less than once a month 07 Did not drink any alcohol in the past year 77 NA 88 Refused 99 Don't Know
218b	DI703	<p>Ask if DI701<>7. Now I want you to think about a typical day when you did drink alcohol. I am interested in how much you typically drink. We define a drink as [5 oz wine or a 12 oz can of beer (CA & US); 5 oz/ 150 mL wine or a 13 oz can of beer (UK); 150 ml of wine or a 375 ml can or stubby of beer (AU)]. On a typical day when you did drink alcohol, how many alcoholic drinks did you usually have?</p> <ul style="list-style-type: none"> 01 12 or more drinks 02 9-11 03 7-8 04 5-6 05 3-4

		06 2 07 1 drink or less 08 Other number of drinks
218c	DI704	Ask if DI403=8. <i>Enter a specific number of drinks.</i>
218d	DI705	Ask if DI701<>7. <i>Choose only one.</i> Think about any times in the past year when you had more than [5 (male)/ 4 (female)] alcoholic drinks within a two-hour period. How often did you do this in the past year? 01 Every day 02 5 to 6 days a week 03 3 to 4 days a week 04 2 days a week 05 1 day a week 06 2-3 days a month 07 1 day a month 08 3-11 days in the past year 09 1-2 days in the past year 10 Never 77 NA 88 Refused 99 Don't Know
Demographic Questions		
219a	DE211wx	Ask if country=CA or US. Which of the following categories best describes your ANNUAL household income, that is the total income before taxes, or gross income, of all persons in your household combined, for one year? 1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over 77 NA 88 Refused 99 Don't Know
219b	DE211y	Ask if country=UK. 01 Under £6,500 02 £6,500-15,000 03 £15,001-30,000 04 £30,001-40,000

		05 £40,001-50,000 06 £50,001-65,000 07 £65,001-95,000 08 £95,001 and over
219c	DE211z	Ask if country=AU. 1 Under \$10,000 2 \$10,000-29,999 3 \$30,000-44,999 4 \$45,000-59,999 5 \$60,000-74,999 6 \$75,000-99,999 7 \$100,000-149,999 8 \$150,000 and over