Delving Deeper: The Relationship between Culture, Leisure, and Wellbeing

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Leisure has been consistently linked to wellbeing for its many potential benefits for over a decade. While a variety of links have been established between leisure and wellbeing, researchers have seldom investigated the role culture plays in this relationship, especially as cultural diversity continues to grow in North America. Self-construal theory is one perspective that is believed to provide insight into how culture affects one's leisure choices. In order to investigate the relationships between culture, leisure, and wellbeing, this study compared Canadian and Chinese international students and the role that self-construal might play. A sample of 556 students enrolled in the Faculty of Mathematics at the University of Waterloo was drawn and a self-administered questionnaire completed, which included measures of all key concepts. Findings were consistent with previous studies in that leisure motivation, participation, satisfaction were each important contributors to subjective wellbeing. Cultural variations in leisure were noted; however, membership in a specific cultural group did not significantly contribute to wellbeing. The two forms of self-construal (i.e., independent and interdependent) were also not significantly related to wellbeing, which was inconsistent with the expectations of the theory. Findings were mixed overall in terms of both supporting and disagreeing with the theory of self-construal and its role in the relationship between leisure and wellbeing. These inconsistencies were exemplified by a positive relationship between independent and interdependent self-construal and no differences being noted across the culture groups, suggesting that the two types are not as culturally-aligned as theorized. This study recommends that future research should further study how to best conceptualize and measure self-construal reliably. The extent to which international students are incorporating their new cultural

environment into their lives remains unclear; in other words, to what extent have international students in this sample already become somewhat acculturated? Therefore, it is recommended that future research should conduct a comparison of students from two different cultural samples (e.g., Canada and China).

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Chapter 1 – The Benefits of Leisure and the Increase of Cultural Diversity in Canada

Leisure is a central component to our society and intertwines with most facets of daily life. From affecting social cohesion to enhancing mental and physical health, leisure is directly connected with a person's overall quality of life across the world (Downward & Rasciute, 2011; Mannell, 2007; Stubbe, De Moor; Boomsma & De Geus, 2007). This association between leisure and wellbeing has been well documented by researchers in the past.

Due to its complex nature, wellbeing has been defined in a number of different ways but some common characteristics can be found in most definitions. In defining wellbeing, researchers have frequently combined wellbeing with related concepts such as happiness, life satisfaction, and health (Diener, 2000; Ryff, 1989). The characteristics of wellbeing are well represented by the World Health Organization's definition of a dimension of wellbeing, health; "health is a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity" (WHO, 1948, p.100). Diener (1984) echoes this definition as he describes that wellbeing is subjective and includes psychological, mental, and social elements within the broader context of different life domains. According to the Canadian Index of Wellbeing (CIW) (2011), wellbeing is measured by eight domains including, for example, health, community, living standards, and leisure and culture.

Many scholars have documented the beneficial effects leisure has for wellbeing (Balatsky & Diener, 1993; Downward & Rasciute, 2011; Lu & Argyle, 1994; Mannell, 2007; Stubbe et al., 2007; Reich & Zautra, 1981). Sirgy (2012) succinctly describes that satisfaction with leisure results in increased wellbeing. Other authors have further emphasized that leisure satisfaction is an important predictor of subjective wellbeing (Brown, Frankel, & Fennell, 1991; Hribernik & Mussap, 2010).

Scholars have associated leisure with a variety of benefits (Downward & Rasciute, 2011; Russell, 2005; Yau & Packer, 2002) and with these benefits come the potential for leisure to increase wellbeing. These benefits include: the ability to increase physical (Downward & Rasciute, 2011; Zuzanek, Robinson, & Iwasaki, 1998) and mental health, such as coping with stress (Brooks & Magnusson, 2007; Caldwell, 2005; Chun, Lee, Kim, & Heo, 2012; Iwasaki & Mannell, 2000; Yau & Packer, 2002; Zuzanek et al., 1998); and opportunities to build social relationships (Glover, 2004; Glover & Parry, 2008; Kleiber, Hutchinson, & Williams, 2002). Throughout all of these ideas remains a clear connection between leisure and wellbeing.

While the field has consistently established a variety of links between leisure and wellbeing for well over a decade, there has been little research exploring the role that culture has in affecting this relationship (Iwasaki, 2007). Leisure scholars have recently begun to investigate the relationship of culture with leisure (Iwasaki, 2008; Spiers & Walker, 2009; Walking, 2009; Walker, Deng, Dieser, 2005; Yau & Packer, 2002). And while many insights have been gained in terms of the implications culture has for leisure, especially in terms of leisure motivations and satisfaction, few have included a consideration of wellbeing in their research (Iwasaki, 2007; Spiers & Walker, 2009).

There are many factors that motivate why we partake in some forms of leisure as opposed to others. These elements primarily correspond with the culture in which we were raised and live (Kleiber, Walker, & Mannell, 2011). For example, some cultures may value personal achievement over social bonds in leisure participation, while others may value the opposite. These values and how they may vary between cultural groups likely have a pervasive impact on a person's leisure motivations and choices.

One perspective that may provide greater insight into how culture is related to leisure is self-construal theory, developed by Markus and Kitayama (1991). Self-construal proposes that a person's culture can affect one's cognitions, emotions, and motivations, thereby influencing the choices one makes. There are two types of self-construal, independent and interdependent. Individuals are more predisposed towards one or the other. People who are inclined towards independent self-construal (e.g., independent selves, individualists, or individualism) are more focused on themselves, autonomy, self-esteem, and uniqueness (Markus & Kitayama, 1991). Independent self-construal is generally more typical of Western cultures. Cultures from Asia, Southern Europe, and Africa (e.g., non-Western) are more likely to value relationships, harmony, and belonging, which is interdependent self-construal (e.g., interdependent selves, collectivists, or collectivism). Notably, while different cultural groups have unique qualities, all cultures also share similarities, leading to variations within these self-construal trends (Gudykunst, 2001). These variations are exemplified by Leung, Wu, Lue, and Tang (2004) and Suh, Diener, Oishi, and Triandis (1998) when they explain that within any culture, there is always variability in the degree to which people embrace individualism or collectivism. This unpredictability is especially true for females as they are typically reported as being more interdependent than males (Cross, Hardin, & Gercek-Swing, 2011; Li, 2002; Walker, 2008). Furthermore, immigration and the process of acculturation have been recognized as affecting the self-construal of individuals (Juniu, 2002; Norasakkunkit & Kalick, 2002). In North America, acculturation has been depicted by immigrants as a catalyst for them to exhibit increased individualistic ideas and behaviours even though they originated from collectivist cultures. The theory of self-construal and the insight it offers reinforces the need for research that investigates the relationship between different cultures, leisure, and subjective wellbeing.

In North America, cultural diversity continues to grow every year and has been identified by several studies (Spiers & Walker, 2009; Stodolska & Walker, 2007), which, in turn, continues to create a more diverse society with varying cultural values and customs (Gudykunst, 2001; Kleiber et al, 2011). This growth adds further complexity to leisure choices (Iwasaki, 2007; Spiers & Walker, 2009; Yau & Packer, 2002; Yu & Barryman, 1996), thereby having an impact on the relationship between leisure and wellbeing. As Walker (2007) explains, culturally diverse groups are typically identified in Western countries, such as Canada, if they are not Caucasian or of Aboriginal descent. In 2006, for example, Canada's culturally diverse groups accounted for 16.2% of its population (Statistics Canada, 2008). By 2031, Canada's culturally diverse groups are estimated to account for as much as 31% of the country's population (Statistics Canada, 2010). Canada's two largest of such groups, South Asians and Chinese, are projected to account for 49% of the visible minority population.

Regardless of cultural diversity, individuals are motivated and participate in leisure for various reasons, such as relaxation, physical fitness, and to build social relationships (Walker, Courneya, & Deng, 2006). The nature of these leisure motivations leads to inherent links between certain dimensions and self-construal. This is due to leisure choices occurring within a broader social and cultural context, which influences a person's decisions (Chen & Pang, 2012). For example, participating in leisure to develop relatedness may be more associated with interdependent selves (Iyengar & Lepper, 1999) while participating in leisure to become more competent in an activity may be more akin to independent selves (Walker, 2008). Further research has similarly noted a trend for interdependently inclined individuals to be most satisfied in their leisure in regards to personal relationships whereas, personal achievement provided the most leisure satisfaction for independently inclined individuals (Spiers & Walker, 2009). If

different cultural groups do indeed result in a tendency toward particular leisure motivations and satisfactions for independent and interdependent selves then we may be able to map the links among culture, leisure, and wellbeing more effectively.

Research to this point has not fully explored the association between these three core concepts of culture, leisure, and wellbeing. While the links between culture and leisure have begun to be studied (Iwasaki, 2008; Spiers & Walker, 2009; Walker et al., 2005; Walking, 2009; Yau & Packer, 2002), ways in which they contribute to wellbeing have been significantly less investigated.

To date there has been limited research focused specifically on the interrelationships involving culture, leisure, and wellbeing. Some scholars have discussed the potential knowledge to be gained from this type of research, they have also pointed out that cross-cultural comparative research is the most advantageous (Iwasaki, 2007, 2008; Walker & Deng, 2003; Walker & Wang, 2009).

Purpose

The purpose of this study is to investigate the relationships among culture, leisure, and wellbeing by conducting a cross-cultural study comparing Canadian and new immigrant Chinese university students. Essentially, this study examines the relationship among key aspects of leisure (i.e., motivation, participation, and satisfaction), self-construal, and subjective wellbeing for two culture groups. A comparison of these two groups is of particular interest in the context of this study because previous research has identified these groups as being culturally distinct (Suh et al., 1998; Walker et al., 2005). This investigation seeks provide insight into the leisure motives, behaviours, and satisfactions expressed by two different cultural groups and how these

aspects of leisure may affect wellbeing, consequently enhancing our knowledge of the role that culture plays in our leisure lives.

Research Questions

The following research questions have enabled this study:

1. Are there cultural differences in leisure?
    a. What are the principal leisure motives expressed by Canadian and Chinese students?
    b. Considering self-construal, are Canadian students more highly motivated in their leisure for independent reasons and are Chinese more highly motivated in their leisure for interdependent reasons?
    c. What are the principal forms of leisure participation for Canadian and Chinese students?
    d. What are the principal sources of leisure satisfaction of Canadian and Chinese students?
2. Are there cultural differences in subjective wellbeing?
    a. Considering self-construal, do Canadian students report higher levels of psychological wellbeing and Chinese students report higher levels of social wellbeing?
3. Are there cultural differences in the leisure-wellbeing relationship?
    a. Considering self-construal, do Canadian students report higher levels of leisure satisfaction and wellbeing in areas associated with independent selves (e.g., psychological) and Chinese students report higher levels of leisure satisfaction and wellbeing in areas associated with interdependent selves (e.g., social)?

Significance of the Study

The findings of this study provide insight into how cultural differences and self-construal are associated with leisure participation, motivation, and satisfactions, and subjective wellbeing. Given the increased cultural diversity noted across North America, the findings will enable practitioners and policymakers to make more informed decisions to best serve a multicultural society and increase subjective wellbeing. This research has been conducted with the goal of expanding the field's knowledge and understanding of these relationships, thereby providing a basis for future consideration of cultural differences when investigating leisure and wellbeing in a diverse society.

Chapter 2 – Where Culture, Leisure and Wellbeing Connect

Culture is an emerging area of study that carries with it substantial significance due to the increasing cultural diversity in North America. To better understand the variables and concepts involved in this thesis, the following sections discuss: (1) culture, (2) leisure (3) leisure's relationship to wellbeing, and (4) the role of culture in the leisure-wellbeing relationship. Each of the initial three areas begins by defining key concepts and then examining the findings and knowledge that have been gained from previous research. The fourth section then comprehensively discusses the association among culture, leisure, and wellbeing.

To begin, a review is provided of how culture has been understood and defined in the past and how this study conceptualizes culture. This is done to emphasize the pervasive connection culture has with daily life and, therefore, the importance of taking culture into consideration when discussing leisure and wellbeing. Using this format is further significant as most leisure research is based in Western society (Mannell, 2007; Rojek, 2010) and culture has only recently become a consideration when investigating leisure and wellbeing (Iwasaki, 2007). The review concludes by presenting the "Culture, Leisure, Wellbeing Relationship Model" (adapted from Kleiber et al., 2011) as a framework to bring focus on those concepts central to this study and to illustrate the nature of the associations among them.

What is Culture?

Defining Culture

Researchers have discussed that culture is socially constructed and is related to a person or group's racial and ethnic characteristics (Chick, 2009; Tsai, 2010; Walker, 2007). More succinctly, culture is a particular way of life (Juniu & Henderson, 2001; Wearing, 1998). Culture also involves the values and beliefs of a group that distinguish one culture from another and

inform what members of a group have to know in order to be accepted (Harb & Smith, 2008; Kleiber et al., 2011). In Tylor's (1871) much cited definition, he wrote "culture is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capability and habits acquired by man as a member of society" (as cited in Smedley & Smedley, 2005, p. 17). Chick (2009) explains that culture needs to be defined as a construct in order to make comparisons between cultural groups. He cites Goodenough's (1957) definition as ideal for research. Similar to Kleiber et al. (2011) and resembling Tylor's explanation of culture, Goodenough (1957) describes that "a society's culture consists of whatever it is one has to know in order to operate in a manner acceptable to its members" (Chick, 2009, p. 307). Gudykunst (2001) agrees that individuals need to adhere to general principles and 'rules' as a part of being in a cultural group. These shared values, beliefs, and principles each affect members' behaviour and how they interpret what they encounter (Gudykunst, 2001; Richerson & Boyd, 2005; Smedley & Smedley, 2005). For the purpose of this study, culture will be conceptualized to include one's country of birth, amount of time lived in a country if the person has immigrated, language, and cultural heritage. These factors will be considered in order to encapsulate the ideas presented by Chick (2009), Goodenough (1957), and Kleiber et al. (2011).

Both racial and ethnic characteristics of an individual influence what cultural group or groups they may associate themselves with (Walker, 2007). Race is informed by the shared physical features of people such as skin colour, eye shape, and hair colour (Walker, 2007). These features are socially formed and rooted in European history as there are no distinct biological characteristics that define a particular racial group (Haney-Lopez, 1994; Smedley & Smedley, 2005). Therefore, claims that racial groups are objectively defined are faulty (Haney-Lopez, 1994). Ethnicity is detailed by areas such as "language, religion, traditions, ancestral origin,

family patterns, and value systems" (Walker, 2007, p. 151). However, race and ethnicity are both open and flexible (Smedley & Smedley, 2005; Haney-Lopez, 1994). It is also important to note that cultures are further characterized by regions, social classes, occupations, and other factors like sport groups (Gudykunst, 2001). Individuals may identify themselves using their race and ethnicity, such as Chinese, or more than one ethnicity such as Chinese-Canadian (Walker, 2007). This means that cultures are not homogenous and neat categories of people. On the contrary, cultural groups can be mixed, especially in areas with increased diversity, resulting in mixed cultures (e.g., Chinese-Canadian) further detailed by sub-culture groups (e.g., sport groups).

This mixing of cultural groups can lead to diverse findings. In a study by Gudykunst (2001) it was thought that identifying with one's cultural group would be more significantly associated with individualism, however, it was also associated to collectivism. Similarly, a study investigating two American cities and their unique cultures provided evidence that individualism and, to a lesser extent, collectivism were both present (Plaut, Markus, Treadway, & Fu, 2012).

As Tsai (2010) describes, "our culture influences who we are, and self-concepts are not only responsive to situational variations, but are also effective in guiding and shaping our behaviour" (p. 149). This quote succinctly conveys the pervasive relationship culture has with our daily lives. And from this discussion, it is apparent that this effect influences each of us both consciously and unconsciously. For this reason, the following sections will take culture into account when discussing leisure and wellbeing.

Characteristics of Canadian and Chinese Culture

This thesis seeks to examine the role of culture in the leisure and wellbeing relationship for Chinese and Canadian students, so a necessary first step is to discuss some of the characteristics of Canadian, Chinese, and East Asian culture. Canadian culture is often described

as having a mixture of identities due to the country's history of immigration, bilingualism, and regional distinctiveness (Kim, 1993). As Courchêne (1996) describes, predominant Canadian culture is based upon Judeo-Christian values, symbols, and traditions with additional importance placed on being geographically distinct from America. Although regional differences exist across Canada, Canadians typically value multiculturalism, peace, and tolerance and have an affinity towards certain national traditions such as hockey, curling, and skating (Courchêne, 1996, Hinch, 2006). Furthermore, Searle and Brayley (1999) discuss that Canadians commonly view themselves as consumers of leisure by frequently purchasing leisure opportunities (e.g., sporting events, shopping).

According to Fan (2000), Chinese people retain a unique culture regardless of if they reside in China or somewhere else due to the particular cultural identity and atmosphere that exists in China. Confucianism and, to a lesser extent, Taoism and their respective teachings are widely regarded as the most influential aspects of Chinese culture (Fan, 2000; Hudson, Walker, Simpson, & Hinch, 2013; Tsai & Zhou, 2014). These ideologies are pervasive in Chinese culture and have helped structure societal norms and values.

Confucianism has become a dominant source of philosophy due to it being widely used through history by emperors and dynasties in East Asia (e.g., China, Japan, and Korea). As Yum (1988) describes, the official adoption of Confucianism and the rational nature of the philosophy resulted in it being taught formally in education and commonly accepted. Yum defined Confucianism as "a philosophy of human nature which considers proper human relationships as the basis of society" (p. 377). Consequently, the wide practice of Confucius thought has caused many cultural norms and values in China and East Asia to be based around human interaction and collective ideals.

These norms and values provide guidance for people and their interpersonal relationships. In particular, Chinese and East Asian countries that use Confucius philosophy typically exhibit a patriarchal family structure, male dominance over females, worshipping of ancestors, respect for elders, and group/collective orientation (Fan, 2000; Liang, Yamashita, & Brown, 2013). These beliefs impact women and how they are viewed as they are seen as subservient to men and women's opportunities, especially for leisure, are limited (Tsai & Zhou, 2014). However, this trend in Chinese culture appears to be changing. Chinese people are continually becoming more exposed and welcome to Western lifestyles largely due to economic reforms (Fan, 2000; Yin, 2005). As a result, for example, traditional roles women have held in Chinese society are witnessing greater flexibility, which has enabled Chinese women to enjoy a broader array of leisure pursuits that have typically been more accessible to men. Changes in cultural norms and values such as these have the potential to affect tendencies observed in Chinese culture in the past. Consequently, differences and similarities are likely to be observed when investigating cultures such as those in countries such as China and Canada (Gudykunst, 2001).

Leisure Participation

Defining Leisure

The definition of leisure has been a consistent discussion among scholars. The definitions vary from depicting leisure as freedom, a state of mind, non-work, free-time activity, consumption, and relaxation (Goodale & Godbey, 1988; Rojek, 2010; Searle & Brayley, 1999; Schor, 2007). Chick (1998) points out that Western ideas of leisure have primarily been based on leisure as free-time, activity a part from obligation, and as a state of mind. While this provides insight into the commonly used Western definitions of leisure, Chick (1998) depicts that "though

[leisure] may be called something else and conceptualized somewhat differently" (p. 127) its presence is clear in non-Western cultures.

With all of these definitions in mind and recognizing the complex ways in which leisure is understood by different cultures, leisure must necessarily be defined here in a holistic manner. Using a holistic approach to define leisure is particularly useful to ensure that all forms of leisure activities and pursuits are included, especially those that are not commonly participated in by Western cultures (Heintzman, 2007). This perspective has been used by several studies in discussing leisure in a cross-cultural context (Iwasaki, 2008; Iwasaki, Bartlett, Gottlieb, & Hall, 2009; Iwasaki, Nishino, Onda, & Bowling 2007). Researchers have utilized the term "leisure-like pursuits", enabling them to include whatever types of engagement participants and scholars chose to call leisure. Using this terminology and avoiding the use of Western-specific terms, such as "leisure" and "recreation," enables researchers "to gain culturally accurate insights" in non-Western studies (Iwasaki, 2007, p. 116). Iwasaki et al. (2007) also argue that researchers should try to avoid using any specific terms to further provide culturally accurate insights. For these reasons, leisure in this study will be defined as whatever activity or pursuit an individual participates in that they deem to be leisure.

On a similar note, McDowell (1981) argues that leisure is subjectively defined and may be seen as connecting with other areas of life such as work, family, community, or education. Consequently, this means that work and leisure are not necessarily mutually exclusive (Barnett, 2011; McDowell, 1981). Taking a holistic approach to defining leisure additionally depicts the interconnectivity between leisure and other areas of a person's life that can involve their culture, such as work and worship (Joblin, 2009). Walker and Deng (2003) conclude that similar terms to leisure in Chinese cultures portray leisure as being a subjective experience, which facilitates

comparisons between North American and Chinese forms of leisure. Joblin (2009) further signifies that using this approach enables studies to better understand associations between leisure and wellbeing.

Utilizing a holistic leisure definition is helpful as it does not exclude or filter out forms of leisure that may not be typical of Western cultures. This point is further significant given that most leisure research is published in North America and Europe (Rojek, 2010). Employing a subjective view of leisure further parallels the ideas of wellbeing that will be presented later on is this review. This will provide an ideal situation to investigate the relationship between leisure and wellbeing while exploring the effect of culture. Consequently, the following sections will examine leisure as to retain its dynamic and subjective nature.

Leisure Motivation

What motivates someone to participate in a leisure activity? Over the years, several researchers have developed theories to explain what motivates our leisure choices (Deci & Ryan, 2002; Hagger & Chatzisarantis, 2008; Iwasaki & Mannell, 1999; Koivula, 1999; Kleiber et al. 2011; Ryan & Deci, 2000; Walker, 2009; Walker, Deng, & Dieser, 2001, 2005). These theories have been characterized by several factors that modify motivation, such as needs, culture, age, and gender. This section will begin by discussing prominent leisure motivation theories, the impact of culture and self-construal on motivation, and the influence of socio-demographic characteristics on leisure choices.

Motivation theories have been a topic of discussion among scholars for decades. Hills, Argyle, and Reeves (2000) provide a good review of leisure motivation theories. They describe that leisure motivation theories have observed people being motivated to participate in leisure that: is highly enjoyable and intrinsically rewarding, provides a balance of skill and challenge or

"flow" (Csikzentmihalyi, 1997); provides enjoyment in reaching a goal or by participation alone (Apter, 1982); and offers opportunity for social contact (Argyle & Lu, 1990). Chen and Pang (2012) contend that "leisure motivation can be defined as a need, reason, or satisfaction that stimulates involvement in a leisure activity" (p.1076). Ragheb and Beard (1983) summarize these theories by illustrating that leisure motivation is defined by psychological and social reasons for participating in leisure, and can be measured by four dimensions: intellectual, social, competence-mastery needs, and stimulus avoidance. Ragheb and Beard's (1983) method of measuring leisure motives has been widely used by the field for several decades. For example, Ryan and Glendon (1998) applied Ragheb and Beard's method to measure people's reasoning for going on vacation. Other studies have used this method to measure how motivated an individual is within each dimension (Chen, Li, & Chen, 2013; Lounsbury & Franz, 1990; Ragheb & Tate, 1993).

Leisure motivation is complicated by the culture within which a person lives. As one's cultural background intertwines with a person's values and beliefs, it has some effect on the leisure pursuits that are chosen. When culture, self-construal, and leisure have been discussed, motivation theories have been commonly cited (Chen & Pang, 2012; Kleiber, et al. 2011; Walker, 2009; Walker et al., 2005; Walker, Deng, Dieser, 2001). Therefore, it is important to first explore self-construal more generally. Take for example, the research of Cross, Bacon, and Morris (2000), which was conducted focusing solely on variations in self-construal in America. They observed that people who have higher interdependent self-construal are likely to have more close friendships when compared to lower interdependent selves. This finding was consistent with Cross and Morris (2003), however, they added that as an independent selves' relationship with roommates became closer, their wellbeing decreased. They postulate that this surprising

observation may have been caused by independent selves perceiving that close roommate relationships infringed on their autonomy. This is similar to how Walker et al. (2005) describe that people inclined towards independent self-construal participate in leisure that supports their freedom and allows for personal choice. Interdependent self-construal materializes as people being more inclined to participate in leisure that focuses on relatedness.

The idea of self-construal discussed by Markus and Kitayama (1991) was further detailed by Triandis (1995, as cited in Hudson et al., 2013). The theory presented by Triandis involved a 2x2 matrix that included hierarchy and equality with interdependent and independent self-construal. As Walker (2009) details, "the result is a two-by-two matrix composed of (a) vertical collectivism (i.e., hierarchy and interdependence), (b) horizontal collectivism (i.e., equality and interdependence), (c) horizontal individualism (i.e., equality and independence), and (d) vertical individualism (i.e., hierarchy and independence)" (p. 348). This is a similar orientation that Harb and Smith (2008) used in their study of a self-construal measure. They focused on horizontal and vertical forms of relational (e.g., closeness to friends and family) and collective (e.g., other students and social groups) self-construal and separately, individualistic self-construal. Overall, these scholars depict that differences between the two types of self-construal exist within cultures. However, they acknowledge that these internal variations are not as strong as the external differences between, for example, North American and East Asian cultures.

It is important to note that concerns have been raised by researchers as to the validity of studying self-construal. Gudykunst and Lee (2003) argue that common methods of measuring self-construal pass validity tests, while other researchers have argued in the contrary (Levine, Bresnahan, Park, Lapinski, Lee, & Lee, 2003). Levine et al. (2003) describe that while current methods of investigating self-construal are far from ideal, they acknowledge that there is clearly

something important being measured but not consistently enough as findings have been mixed. This again illustrates the multi-faceted characteristics of self-construal and that variations in one's alignment with the two forms of self-construal exist within cultural groups.

Pulling the research together, an association seems to appear between a person's self-construal tendencies and leisure motivation. As Walker et al. (2005) note, those who are associated with independent self-construal will be inclined towards competence and personal driven motives while people who align with interdependent self-construal will likely lean towards social motives. This agrees with the findings of Walker et al. (2001) as Asian participants reported higher importance on being motivated by group membership, while Euro-North American participants indicated higher importance on autonomy.

While culture can effect leisure motivations, different cultural contexts can also have tendencies towards certain forms of leisure. Iwasaki (2007) focused on leisure in three non-Western geographical contexts, East-Asia, Middle-Eastern, and Aboriginal, and found that Asian populations are more inclined towards leisure that allows for relaxation, harmony, and tranquility. T'ai Chi, reading, eating with others, yoga, playing Majiang, and spending time with family are all activities that exemplify these characteristics that are popular among people in East Asia (Iwasaki, 2007; Wang & Stringer, 2000; Yau & Packer, 2002; Yin, 2005). Li & Stodolska (2007) additionally found that Chinese students frequently participated in badminton in order to spend time with friends. Middle-Eastern cultures similarly tended to value spending time with family and friends, festivals, and more relaxed forms of leisure. Meanwhile, Aboriginal populations had an affinity towards participating in leisure that reinforced harmony and balance with others and nature (Iwasaki, 2007). These contexts all align with the ideas of self-construal

and agree that there is a clear inclination towards interdependent self-construal in non-Western settings.

Socio-Demographic Influences

Research has also documented that variables such as age, income, and gender affect leisure. As mentioned previously, this study's concentration on students results in age having a minimal effect on motivation. However, age can make people more inclined towards particular forms of leisure (Rojek, 1999, 2010). Similar to age, income is a variable that can alter one's leisure preferences. Several scholars have noted that financial constraints can prevent individuals from partaking in certain forms of leisure (Crawford, Jackson, & Godbey, 1991; Taylor & Doherty, 2005; Shifman, Moss, D'Andrade, Eichel, & Forrester, 2011; Tsai & Coleman, 2009). Further research has provided evidence that leisure choices do not automatically alter due to these constraints as they can be negotiated (Campagna et al., 2002; Jackson, Crawford, & Godbey, 1993). Therefore, the type of leisure one participates in may change; however, like age, the ability to participate in leisure does not.

Gender has also been observed to have varying effects on leisure but, predominantly, gender can motivate individuals to make particular leisure choices (Russell, 2005; Shaw, 1994; Shilling & Bunsell, 2009). For instance, Koivula (1999) found that women regarded physical appearance as a more important reason for participation than competitiveness or excitement, while men responded in the opposite. While Greenberg, Sherry, Lachlan, Lucas, and Holmstrom (2010) examined that male teenagers are twice as likely to play video games as compared to girls. And several studies have documented that men are more inclined to participate in sport activities while women lean towards social forms of leisure (Barnett, 2006 & 2011; Koivula, 1999). This finding is particularly interesting in the context of self-construal theory. Cross et al.

(2011) note that women within individualist cultures report higher levels of interdependence than men, however, these authors illustrate that this form of interdependence is more associated to close relationships than the group-oriented interdependence experienced by collectivist cultures.

For the purposes of this study, the effect of age and income are both likely to be diminished due to the small range in age and the greater focus on leisure motivation than on any particular type of leisure. In contrast, gender is recognized as being an important variable to consider as variations in wellbeing based on gender have been well documented. Research has indicated that females may exhibit lower levels of wellbeing compared to males (Fujita, Diener, & Sandvik, 1991; Skevington, Lotfy, O'Connell, 2004). However, these differences might also be a function of a person's life stage and circumstances (i.e., parenthood, age). But overall, it is critical to recall that similar to leisure and wellbeing, all three of these socio-demographic influences have the potential of being affected by an individual's culture.

Leisure and Wellbeing

Defining Wellbeing

Carruthers and Hood (2007) define wellbeing as "a state of successful, satisfying, and productive engagement with one's life and the realization of one's full physical, cognitive, and social-emotional potential" (p.280). Although this definition is directed towards therapeutic recreation intervention, hence the use of the term 'potential', there are some important elements to highlight. Most significant is the introduction of wellbeing's association with "successful, satisfying, and productive engagement" (Carruthers & Hood, 2007). Engagement connotes participation and is consequently important as individuals participate in leisure, which is a part of their life. Satisfaction itself is another key point, as wellbeing is consistently associated with satisfaction (Chen & Davey, 2008; Diener, 1984, 2000; Hribernik & Mussap, 2010; Payne,

Ainsworth, & Godbey, 2010; Rapley, 2003). MacKian (2009) agrees with these ideas and states that wellbeing is "a good or satisfactory condition of existence; a state characterized by health, happiness, and prosperity; the state of feeling healthy and happy" (p.235). Overall, the subjective idea of wellbeing is defined here as the self-evaluation and identification of satisfaction and happiness.

While wellbeing's definition has been widely debated, it is often understood as a multidimensional concept (Diener, 1984; Payne et al., 2010). According to the CIW (2010), there are five central elements that each contribute to a person's leisure-related wellbeing – physical, psychological/emotional, spiritual, social, and environmental. Physical, psychological, spiritual, and social elements are most commonly associated with wellbeing for an individual, while environmental aspects can relate to wellbeing for both an individual and the community (CIW, 2010). MacKian (2009) agrees and expands on each of these facets of wellbeing, adding political and economic (p. 237). The physical element relates to health, fitness, lack of illness, and disability. Psychological is defined by self-esteem, happiness, self-image, and personal growth. The spiritual dimension of wellbeing is characterized by ideas of faith, religion, inner peace, and having a sense of purpose/life path. The social element relates to relationships with other people, groups, or society in general. Lastly, environmental dimensions of wellbeing are defined by a person's home, living conditions, and connection with nature. The other elements of wellbeing that MacKian (2009) presents, political and economic, are both relevant to wellbeing; however, they are better captured by other areas of the CIW.

These elements parallel the characteristics of wellbeing that Diener (2000) discusses. He details that subjective wellbeing research typically investigates levels of life satisfaction, satisfaction with important life areas (e.g., work) and positive and negative affect (Diener, 1984,

2000). Scholars have also highlighted that the values, goals, needs, and cultural background of individuals have the ability to interact with one's assessment of wellbeing (Chen & Davey, 2008; Diener, 2000; Seligman & Csikszentmihalyi, 2000; Suh et al., 1998).

In order to measure wellbeing, several life domains are typically used to gain insight into how people consider their wellbeing. It is important to emphasize that leisure makes up only one of these domains that affect overall wellbeing. The CIW (2011) uses a total of eight domains to indicate the overall wellbeing of Canadians while the Organization for Economic Co-operation and Development (OECD, 2013) uses 11 to assess wellbeing. The CIW's (2011) domains include: community vitality, democratic engagement, education, healthy populations, environment, time use, and leisure and culture. The OECD (2013) measures leisure in terms of work-life balance.

Similar to leisure, wellbeing is subject to confusion. Part of the issue lies in how it is rare for authors to clearly define wellbeing and how it can overlap with other terms, such as quality of life (Payne, Ainsworth & Godbey, 2010; Rapley, 2003). A person's overall quality of life is understood to describe the intersection between both objective and subjective wellbeing factors (Ziegler & Britton, 1981). It is noteworthy that objective views of wellbeing have been criticized because studying wellbeing objectively assumes that some individuals are disadvantaged, by, for example, living with a physical or mental disability or a lower income (Rapley, 2003). Consequently, if an individual has a low income level or disability, they are automatically seen as having lower wellbeing. Liao (2009) and Zapf (1984, as cited in Rapley, 2003) describe that objective wellbeing is most commonly associated with a person's living conditions, which can be affected by potential disadvantages. However, Noll (2002) demonstrates how combining objective and subject levels of wellbeing can be informative. He categorizes subjective wellbeing

according to four main areas using a 2x2 matrix. These four areas are: wellbeing (i.e., good living conditions and positive evaluation), deprivation (i.e., bad living conditions and negative evaluation), dissonance (i.e., good living conditions and negative evaluation), and adaptation (i.e., bad living conditions and good evaluation) (Rapley, 2003). Therefore, an individual can perceive his or her wellbeing to be good at the subjective level even if an objective measure of wellbeing suggests it should be bad (or vice versa).

For these reasons, this thesis adopts and measures wellbeing according to the eight CIW domains. These domains are subjectively evaluated and encompass the various elements of a person's life that are recognized contributors to wellbeing.

Linking Leisure to Wellbeing

As mentioned earlier, leisure and wellbeing are associated through the benefits individuals may gain and their level of satisfaction from participation (Balatsky & Diener, 1993; Downward & Rasciute, 2011; Lu & Argyle, 1994; Mannell, 2007; Stubbe et al., 2007; Reich & Zautra, 1981). For instance, leisure participation can lead to greater happiness and life satisfaction (Iso-Ahola, 1997), help individuals cope with stress (Brooks & Magnusson, 2007; Zuzanek et al., 1998), increase physical health (Downward & Rasciute, 2011), and build social relationships (Glover, 2004; Helliwell & Putnam, 2004).

In a review of these links, Mannell (2007) outlined that leisure has the ability to increase physical and psychological health both in the short and long-term. Stubbe et al. (2007) found that twins in their study who exercised, compared to those who didn't, had higher levels of wellbeing across all age groups. Downward and Rasciute (2011) made a parallel observation in reporting that a person's wellbeing increased with participation in sport and also added that being physically active by simply walking is linked to increases in wellbeing. Zuzanek et al. (1998)

also found the same relationship between leisure and physical health and added that participation has the ability to reduce stress, especially for elderly individuals. Several researchers have further documented that leisure has the ability to help individuals cope with stress (Brooks & Magnusson, 2007; Caldwell, 2005; Chun et al., 2012; Iwasaki & Mannell, 2000; Yau & Packer, 2002). Helliwell and Putnam (2004) also found that subjective wellbeing can be increased by spending time with family, friends, and neighbours.

Further, having satisfying experiences is crucial for individuals to gain the benefits discussed above. Beard and Ragheb (1980) defined leisure satisfaction as "the positive perceptions or feelings which an individual forms, elicits, or gains as a result of engaging in leisure" (p. 22). As illustrated by Brown et al. (1991), of all predictors, increased leisure satisfaction leads to increased wellbeing. Similarly, Hribernik and Mussap (2010) noted that when leisure satisfaction was added to the investigation of subjective wellbeing it explained more of wellbeing than other variables, such as health, safety, and community.

With all of these connections and potential benefits to be gained from leisure participation, Mannell (2007) cautions that most of what the leisure field knows about leisure and wellbeing is based on ideas arising out of Western society. Moreover, Hribernik and Mussap (2010) state that "leisure is one of the more robust life domains, with sufficient influence to be a truly cross-cultural life area consistently contributing to subjective wellbeing" (p.703). Therefore, it is important to consider how other cultures intertwine with this relationship.

Culture's Affect

Culture's Effect on Leisure and Wellbeing

Now that the relationship between leisure and wellbeing has been established, its connection to culture needs to be explored further. To help visualize this complete relationship,

the Culture, Leisure, Wellbeing Relationship Model (see Figure 1) is presented following this section to provide a focused view of what this study seeks to investigate.

As satisfaction is central to wellbeing, it is important to identify research that has observed the relationship between leisure satisfaction and subjective wellbeing (Payne et al., 2010; Rapley, 2003; Sirgy, 2012). Spiers and Walker (2009) provide a good example of such research in investigating leisure among Chinese and British Canadians. As would be expected with the construct of self-construal in mind, satisfaction for Chinese-Canadians was more related to personal relationships (Spiers & Walker, 2009). While at the same time, satisfaction for British-Canadians was more associated with personal achievement (Spiers & Walker, 2009). In a longitudinal study by Walker, Halpenny, Spiers and Deng (2011), results showed that Chinese-Canadian immigrants' leisure satisfaction was consistently associated with relaxation. Walker and Wang (2009) and Yu and Barryman (1996) further observed that Chinese individuals in both studies were associated with enjoying more passive and less strenuous forms of leisure. Having consistent behaviour has also been associated with wellbeing. As Cross, Gore, and Morris (2003) illustrate, individuals who aligned with independent self-construal depicted a stronger relationship between behaving consistently and wellbeing than those who were more interdependently inclined.

Some activities in particular are common among certain cultures and influence a person's perception of wellbeing, such as yoga, T'ai Chi, and Maijang (Iwasaki, 2007; Yin, 2005). In a study by Yau and Packer (2002), older adult participants in T'ai Chi portrayed their wellbeing as supplying them with a "meaning and pattern to life," better health, social supports, and "a sense of calmness and control when dealing with adversity" (p. 175). This finding indicates that T'ai Chi enables participants to increase wellbeing socially, psychologically, and in terms of

relaxation. In their study, participation benefits were linked to characteristics of interdependent self-construal. Similarly, another study conducted in East Asia portrayed findings that were characteristic of a collectivist culture. In Leung et al. (2004), research on elderly adults indicated that their subjective wellbeing was reliant on being independent of others, helping others (e.g., volunteering), closeness with family members, and being able to integrate oneself with nature. Although the participants in this study reported the desire for independence, which is associated with individualism, their purpose was to minimize the burden they placed on others.

For several female Canadian immigrants from countries including Taiwan, Ukraine, and Mexico, they often valued being able to socialize in their native language and relax from daily stress in their leisure (Suto, 2013). These leisure pursuits provided vital social support for the women of this study and helped to increase their wellbeing. Research by Juniu (2002) on female Latino immigrants to America displayed an affinity towards interdependent driven leisure participation. Stack and Iwasaki (2009) similarly found that Afghan immigrants partake in leisure generally to build new relationships, learn about other cultures, and adjust to their new setting. While Iwasaki, et al. (2009) reported that Aboriginal populations participated in leisure to build relationships, help the community, and partake in spiritual activities. However, Juniu (2002) points out that the Latino women who had immigrated were beginning to seek leisure to gain confidence, self-esteem, and autonomy, which are each characteristics of independent self-construal. This observation along with findings from several other studies (Gudykunst, 2001; Norasakkunkit & Kalick, 2002; Plaut et al., 2012; Suto, 2013) suggests that the self-construal of new immigrants is modified by acculturation to some degree and that people have propensities to exhibit individualism or collectivism, but not one exclusively (Leung et al, 2004; Suh et al., 1998). However, Stodolska (2007) observed that immigrants whose primary social group and

leisure companions were from the same cultural group had increased psychological and emotional wellbeing, but delayed acculturation into mainstream society.

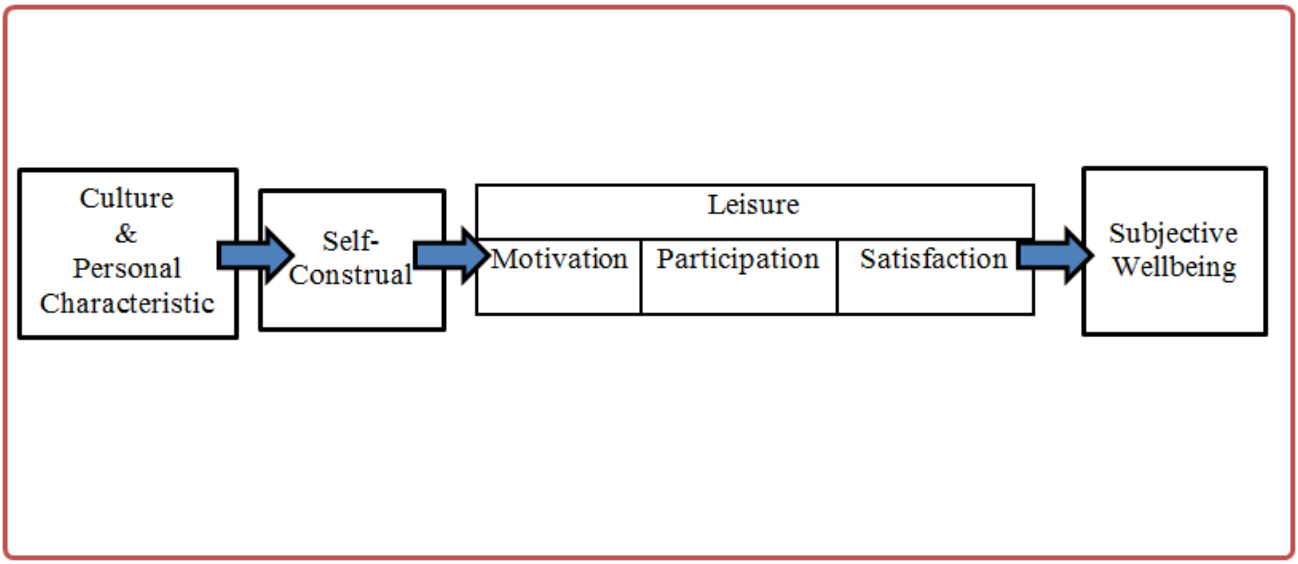
In China and Hong Kong, research has been conducted to assess the levels of wellbeing within these regions (Chan, Kwan, & Shek, 2005; Chen & Davey, 2008; Smyth et al., 2010). One interesting theme that has appeared in this literature is that Chinese individuals are noted as being culturally modest or, in other terms, their responses are lowered to avoid the appearance of being boastful (Lau, Cummins, & McPherson, 2005; Smyth et al., 2010, 2011). Relationship harmony, especially with family, was also often associated with wellbeing in Chinese cultures (Chen & Davey, 2008; Kitayama, Mesquita, & Karasawa, 2006; Leung et al., 2004; Smyth et al., 2010; Yau & Packer, 2002). The study by Smyth et al. (2010) is of further significance as it provides evidence that cross-cultural assessments of wellbeing can be reliable and valid. This is due to the measurement tool utilized to observe wellbeing in China also being effective in assessing wellbeing in Australia.

Iwasaki (2007) provides an interesting insight when the elements of wellbeing are connected with his research. A tendency appears that certain cultures value select wellbeing elements over others: Euro-North American cultures value the psychological element, Asian cultures value the social element, and Aboriginal and Middle-Eastern cultures value the spiritual element. These tendencies also relate to the idea of self-construal and how Euro-North American cultures are depicted as having affinities towards independent self-construal, whereas Asian, Southern European, and African cultures have an affinity towards interdependent self-construal (Spiers & Walker, 2009; Walker et al, 2005; Walker et al., 2001). This finding parallels Kitayama et al. (2006) and Uchida, Norasakkunkit, and Kitayama (2004) as they explain that happiness for North Americans is more defined by personal achievement and self-esteem, while

East Asians associated happiness with interpersonal relationships. Taking these differences into account has significant implications as to how the results of this study may provide insight to future research.

To help organize these relationships, Figure 1 provides an overview of the previous discussions. In essence the Culture, Leisure, Wellbeing Relationship Model depicts that one's cultural background and personal characteristics (especially gender) impact the type of self-construal a person is likely to exemplify. Whether more independent or interdependent, self-construal interacts with their motivation to participate in leisure and how satisfied they are with their experiences. This consequently influences wellbeing by way of helping to fulfill various domains of wellbeing (e.g., mental and physical health, sense of community). Overall, the model illustrates the relationship between culture, leisure, and wellbeing and provides a useful snapshot of what this study seeks to investigate.

Figure 1: The Culture, Leisure, Wellbeing Relationship Model



Chapter 3 - Methods

The following chapter describes the methods that were utilized in carrying out this study. In particular, the survey design, sample population, survey administration, survey instrumentation, pilot testing, and data analysis are examined.

Survey Design

To investigate the research questions presented in Chapter 1, a quantitative study was conducted. Specifically, a cross-sectional survey was employed to investigate the relationship between culture, leisure, and subjective wellbeing among Canadian and Chinese students at the University of Waterloo. The survey was offered in two versions – English and traditional Chinese. The Chinese version of the questionnaire was translated and back-translated to ensure reliability (Walker, 2009). This was done to ensure that Chinese international students are fully able to understand posed questions. Canadian and international Chinese students at the University of Waterloo were studied as previous research has identified these groups to be culturally distinct (Suh et al., 1998; Walker et al., 2005).

The questionnaire was structured on asking students about their leisure motivations, behaviours, and satisfactions, along with their perceptions of wellbeing, self-construal, and socio-demographic information. Completed surveys were hand coded by the researcher in a SPSS 22 dataset. Both survey versions (English and traditional Chinese) were identically formatted to ensure that both would be coded into the SPSS dataset in the same way.

Sample Selection

The survey population of this study are University of Waterloo undergraduate students approximately aged 18 to 25. Drawing on data from the University's Institutional Analysis and

Planning Department (IAP), the Faculty of Mathematics was selected for the sampling of both Canadian and Chinese international students due to well over half of the Chinese international student population being enrolled in this faculty in the fall term of 2012 (see Appendix A). Using this criterion for sample selection was also ideal as Canadian and their Chinese international peers would likely have a similar knowledge base when it comes to the key themes of this study. This is important as students from other faculties (e.g., Applied Health Sciences) would likely have greater familiarity with this study's concepts and theories, such as leisure. Should the need arise for further responses, other faculties, such as Science and Engineering, would be included based on IAP's statistics on Chinese international students enrollment.

The criterion to include only those Chinese international students who were born in China and have been in Canada for four years or less was used to avoid potential acculturation that can occur with long residence abroad (Gudykunst, 2001; Juniu, 2002). According to IAP statistics, most enrolled students fell into this range. For this reason, Chinese students who had permanent resident status but satisfied these criteria were also be included in analyses. The survey also included a Canadian student population that consisted of those who were born in Canada, learned English as a first language, and consider their cultural identity to be Canadian or British-Canadian. This method is similar to that of Walker (2009) to emphasize the majority of Canadians.

Classes were selected to maximize expected enrollment numbers and to avoid overlapping between surveyed courses using a cluster sampling method. The largest Faculty of Mathematics classes from each department from first, second, and third year were targeted. Courses that fit this criterion but have a high probability of including an overlapping student enrollment, due to cross-listed required classes, were excluded. If this should occur, the next

largest class was selected and then similarly assessed. This provided for 15 different courses to sample. Of these 15 classes, several were selected that have a combined enrollment of at least 500 students and are from varying years and departments. This likely provided for a robust sample of both Canadian and Chinese international students.

Instructors of selected classes in Mathematics (or subsequent faculties if necessary) will be contacted for permission to enter classes to distribute the questionnaire. Instructors were briefed on the purpose of the study, its potential benefits for the university, and what data collection will entail. The importance of this research and how it will be advantageous for the Faculty of Mathematics itself was stressed given the number of Chinese international students that enroll in this faculty. Instructors were told that a findings summary will be provided to distribute to students by the end of the term. Also, instructors were offered the opportunity to have the researcher return to the class to provide a brief summary of the results and implications of the study.

Survey Administration

At a pre-arranged time of convenience to the instructor, the researcher attended the class and provided a brief overview of the study using a prepared script (see Appendix B). For example, the script covered a brief overview of the study and explained that students are being asked to complete an anonymous, self-administered questionnaire. The students were informed that their participation is entirely voluntary and that there are no consequences for declining to participate. Along with the researcher were at least two or three assistants to help distribute and collect questionnaires in order to minimize the time taken from the class.

Students were asked not to partake if they had already completed the survey previously. Students were also notified that a traditional Chinese version of the questionnaire was available

upon request. Students were further informed that at any time they have the option of ending their participation. Attached to the distributed questionnaires will be a ballot form (see Appendix C) that students can choose to fill out to participate in a random draw to win a $10 gift card to a local coffee shop. One student per surveyed classroom won a gift card. The ballots were not linked to completed questionnaires in order to ensure the anonymity of the students' responses to the survey. Following the draw, the researcher exited the classroom and later destroyed all ballot forms.

Survey Instrument

The self-administered questionnaire employed in this study asked students to complete several questions related to their leisure motivations, participation frequency, and satisfaction. Self-construal was next measured with a sequence of questions pertaining to independent and interdependent selves. Self-construal was followed by an assessment of the respondents' satisfaction with the eight domains of subjective wellbeing. Finally, socio-demographic questions were included to determine personal characteristics of each student, such as age, sex, and country of birth. Each of these elements helped to provide for a complete picture of the relationship between leisure and wellbeing and how culture plays into this association.

Questionnaire

Leisure

To fully investigate leisure, three sets of questions were used to measure leisure motivations, behaviours, and satisfaction. To measure motivation, the Leisure Motivation Scale (LMS) developed by Beard and Ragheb (1983) was used. The much cited LMS has been recognized as having strong validity and reliability (Chen, Li, & Chen, 2013; Lounsbury &

Franz, 1990; Ragheb & Tate, 1993). The scale measures motivation on four dimensions with eight items per dimension – intellectual, social, competence-mastery, and stimulus avoidance. To focus on those dimensions conceptually linked to the relationship between leisure and wellbeing presented earlier, the LMS was modified to include only items concerned with the social, competence-mastery, and stimulus avoidance dimensions. Therefore, the intellectual dimension of motivation was dropped from the questionnaire, which also helped in reducing the length of the survey. Examples of items related to the three dimensions include: "to build friendships with others" (social), "to develop my physical skills and abilities" (competence-mastery), and "to unstructure my time" (stimulus avoidance). Respondents were asked to answer these items by indicating on a 7-point Likert scale as to whether they disagree or agree (1 = "very strongly disagree" to 7 = "very strongly agree") with each statement. The LMS helped this study understand how motivation is affected by the two cultures being investigated in this thesis.

To measure the behavioural components of leisure, a set of questions were asked pertaining to participation in a number of activities. The questions are taken and adapted from those developed by the CIW for its Community Wellbeing Surveys (2013), and gauge the number of times individuals partake in certain leisure behaviours. The first group of questions asked about participation frequency in types of physical activities (e.g., team sports, light exercise) and social activities (e.g., socializing, attending the movies) in a typical month. The next set asked about activities done at home in an average week (e.g., reading, doing puzzles), and the final set of questions was geared towards daily online leisure activities (e.g., using social media, computer games). Each group provided insight into the actual leisure behaviours students are engaging.

The final component of leisure to be measured was leisure satisfaction using the Leisure Satisfaction Scale (Beard & Ragheb, 1980). Like the LMS, the Leisure Satisfaction Scale (LSS) has been cited by many authors and has proven to be highly valid and reliable (Chen et al., 2013; Ragheb & Tate, 1993). The LSS looks to measure how satisfied a person is with six dimensions associated with leisure: psychological, educational, social, relaxation, physiological, and aesthetic. For the purposes of this research, the LSS was modified and only included the psychological, social, relaxation, and physiological aspects of leisure satisfaction. Similar to the LMS, the educational and aesthetic dimensions were dropped as they were not central to how this study conceptualizes leisure's role in wellbeing and allowed for the questionnaire to be more concise. Examples of items used to measure each of these dimensions included – "my leisure gives me self-confidence" (psychological), "I have social interactions with others through leisure" (social), "my leisure helps relieve stress" (relaxation), and "my leisure is physically challenging" (physiological). Respondents were asked to indicate the extent to which they agree with each item using 7-point Likert scale ranging from "very strongly disagree" (value=1) to "very strongly agree" (value=7). The link between leisure satisfaction and wellbeing has been documented in several studies (Balastky & Diener, 1993; Downward & Rasciute, 2011, Hribernik & Mussap, 2010) and represents one of the key relationships being explored in this study.

Combined with the previously explored measures of leisure, these three survey components ensured that this study was able to measure what may lead people to participate in certain forms of leisure and how satisfied they are with these leisure experiences.

Subjective Wellbeing

To provide a more holistic view of subjective wellbeing, a global measure was utilized. This measure was derived from the Gross National Happiness (GNH) survey that measures wellbeing in a comprehensive way similar to other organizations (e.g., CIW & OECD). This is done by including levels of satisfaction with varying domains that have been recognized contributors to wellbeing (CIW, 2011; OECD, 2013). The GNH survey was created by The Happiness Initiative, which filtered through several longer versions of the survey until narrowing it down to key items representing larger domains that showed validation in several samples (The Happiness Initiative, 2011). The CIW then modified this measure, including additional items to better correspond with their domains of wellbeing. For instance, these items include: mental and physical wellbeing, personal relationships, environment, sense of belonging to the community, time use, financial situation, and access to recreation and parks (Hilbrecht, Smale, Shifman, & Wenger, 2013). Participants are to respond to these 16 questions by indicating on a 7-point Likert-type scale their level of satisfaction (1= "extremely dissatisfied" to 7= "extremely satisfied"). This wellbeing measure provided the means to assess the significance of multiple factors in contributing to wellbeing overall as well as within each of its domains. This provided for a more complete view of wellbeing that was dynamic and did not focus on any particular domain, unlike many studies that have used single item measures (e.g., assessment of life satisfaction) to assess the wellbeing of individuals (Diener, 1984).

Self-Construal Scale

To fully test culture and its level of self-construal, a self-construal centred scale was employed in the questionnaire. The 12 question scale designed by Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, and Heyman (1994, 1996) uses six items with each regarding either

independent or interdependent self-construal. Several alternate self-construal scales exist; however, this scale was chosen as it was substantially more concise and included questions that are more relevant in today's society compared to when the scale was first designed. An example in the Gudykunst et al. scale of an independent self-construal item is – "I enjoy being unique and different from others" while an example of an interdependent self-construal item is "I respect decision made by my group." The items were presented to respondents along with a 7-point Likert scale (1 = "very strongly disagree" to 7 = "very strongly agree"). As noted in the previous literature review, there is debate as to the validity of self-construal scales (Gudykunst & Lee, 2003; Levine et al., 2003). For this reason, the self-construal scale in this questionnaire will be used in comparison with the cultural background that participants declare they are from. Approaching self-construal in this way provided the potential to enhance the field's understanding as to the value of measuring self-construal directly.

Socio-Demographic Information

Students were asked to fill out several socio-demographic questions to help provide a profile of the sample, most critically in terms of cultural background. The questions pertained to the participants' sex, age, country of birth, and how long they have been living in Canada if they were born elsewhere. Following Walker's (2009) methods when investigating different cultures, the survey asked students about their preferred language and the cultural group to which their ancestors belong. The format of the cultural group question was based on the Statistic Canada's Canadian Community Health Survey (2010) to ensure that the wording would not stigmatize any groups. A final question asked students the current year of their study. Each of these questions helped to characterize the group in terms of their sex, age, year of study, language, and cultural heritage to explore potential variations in the relationship between leisure and wellbeing.

Pilot Testing

Though all scales used in this survey have been previously validated for use, pilot testing was conducted to identify any potential issues and ensure that the final survey versions were easy to comprehend for all students. The pilot test was completed using a convenience sample of approximately 10 students who fell into the same age range of this study's participants (i.e., 18 to 25 years). Seven of these students pilot tested the English version of the survey while an additional three, who are fluent in Chinese, completed the Chinese version of the survey. The Chinese pilot tests lead to a few language modifications to ensure the clarity of the survey and its alignment with the English version. Further, simple formatting issues were also reported by the pilot testers of the English version and corrected. The pilot test also helped to provide an idea of how long students will need to answer the survey. Pilot testers took between 8 and 12 minutes to fully complete the survey. This was particularly useful as many of the subsequently sampled classes had time constraints and gave a good indication of how much time would be needed to administer the questionnaires and draw the ballot prize.

Data Analysis

Collected data were analyzed using SPSS version 22. Before assessing the data, derived variables were calculated in order to examine the central themes of this study. In particular, leisure motivation, leisure satisfaction, both forms of self-construal, and wellbeing were derived from their many dimensions. Importantly, a few cultural variables were derived from a combinations of different demographic characteristics, such as country of birth, years lived in Canada (if born elsewhere), preferred language, and ancestral culture background. Multiple derived culture variables were created due in part to response issues (that will be discussed in Chapter 4) and, more significantly, due to particular variables (e.g., country of birth and years in

Canada) being more advantageous when examining culture as this thesis has defined it. This orientation enabled this study to best analyse the differences that one's cultural background may cause. Next, data was reviewed to determine if any errors were made by the research in hand coding the surveys into the dataset and to check for any outliers. Outliers that were detected were either grouped with the highest logical response (i.e., 10 days of participation per week was changed to seven) or removed from analysis.

First, descriptive statistics were calculated and analyzed to characterize the sample and provide the basic measures for the subsequent analyses. Characterizing the sample also included the use of bivariate crosstabulations to examine the leisure participation of students within the sample. To test the differences between subgroups (e.g., sex, country of birth), t-tests and analyses of variances (ANOVAs) were used. For example, the data was analyzed to determine if there were differences in the self-construal, leisure satisfaction, and wellbeing between respondents born in Canada and China. Meanwhile, factorial ANOVAs were employed to determine whether interaction effects existed, demonstrating that a combination of factors (e.g., sex and cultural group) lead to differences in dependent variables (e.g., wellbeing). Correlations were then utilized to determine relationships between variables (e.g., independent self-contrual, leisure satisfaction, and wellbeing). These correlation analyses ultimately led to the calculation of regression models (e.g., hierarchical) to determine the contribution of each key factor to wellbeing and to assess the extent to which culture – country of birth and self-construal – interacts with the relationship of leisure and the other key concepts in explaining variations in wellbeing.

Chapter 4 – Characteristics of University Students, their Leisure, and Wellbeing

This chapter provides an overview of the results and analyses conducted for this study. A profile of the final sample is provided along a description regarding the students' leisure participation as well as their perceptions of leisure motivation and satisfaction, self-construal, and wellbeing. The student sample is characterized by sex, age, country of birth, years in Canada, language, and year of study. Additional analyses are presented comparing cultural groupings of students with self-construal, leisure, and overall wellbeing. These analyses will be conducted to determine if there are differences or relationships between the central variables of this study.

Sample Profile

Over the course of four weeks, surveys were distributed to 10 classes of first through fourth year students in the Faculty of Mathematics at the University of Waterloo. Approximately 1,000 surveys were distributed to students with a total of 556 being returned complete and usable, representing a response rate of 55.6%. English versions of the survey were distributed while a traditional Chinese version was made available to students. Even with the high amount of students who reported they were born in China, only one student chose to complete the survey in Chinese.

Of the 556 student respondents, 57.5% were male and 42.5% were female, and the average age was 20.09 years old (SD = 1.66). This percentage falls in line with a previous notion that more male students are enrolled in the Faculty of Mathematics as compared to females. The largest group of surveyed students were in their first year of study (32.7%) with each subsequent year having a smaller number of students, which is characteristic of university class sizes being smaller for upper year courses (see Table 1). Over three quarters (77.7%) of the students

preferred to use the English language while almost all of the remaining students (20.1%) used Chinese as their preferred language. Nearly 100 students reported that they preferred more than one language, and interestingly, almost all of these cases indicated a preference towards both English and Chinese.

Almost half of the students were born in China (46.4%) with another 29.7% having been born in Canada. The remaining 23.9% of individuals were born in countries such as India (2.9%), Malaysia (2.2%), South Korea (1.8%), and Pakistan (1.6%). Of those who were born in other countries, 50.7% have been in Canada for less than four years, likely representing international students. The remaining 49.3% have resided in Canada for five years or more and are likely compromised of students who have some type of Canadian status. Even though almost half of the sample was born in China, a large proportion of the group prefer to use the English language. This tells us that many students who are born abroad have either come to Canada knowing and speaking English predominantly or have lived in Canada for long enough to now prefer English.

Student Leisure Participation

In order to describe the leisure participation of students, several summary indicators were created from the questionnaire. Each indicator measures total reported participation in leisure activities by each student and then calculates the mean rate of participation for the entire sample. Individual activities are grouped in four categories of leisure, and reported as average rates either per month or per day.

Table 1
Demographic Characteristics of Sample

Characteristic Attribute	**n**	**Pct.**
Gender		
Female	236	42.5
Male	319	57.5
Age Group		
16 to 18 years	126	22.9
19 to 20 years	204	37.0
21 to 22 years	181	32.8
23 to 25 years	40	7.3
Year of Study		
First year	180	32.7
Second year	138	25.0
Third year	123	22.3
Fourth year	89	16.2
Fifth year or higher	21	3.8
Preferred Language[a]		
English	348	77.7
Chinese	90	20.1
French	3	0.7
Other language[b]	7	1.5
Country of Birth		
Canada	165	29.7
China	258	46.4
Other country[c]	133	23.9
Years in Canada (if born elsewhere)		
Four years or less	194	50.7
Five years or more	189	49.3

[a] Many cases were missing (n=108) due to multiple responses.
[b] Other languages included: Spanish, German, and Urdu.
[c] Other countries included: India, Malaysia, South Korea, Pakistan, Taiwan, and Japan.

Students most frequently participated, on average, in home-based activities, such as reading, puzzles, and hobbies, per month (M = 36.35, SD = 44.03). Also in a typical month, students showed that they participated in physical leisure activities an average of 19.55 times (SD = 18.51) and an average of 12.93 times (SD = 13.14) in social leisure activities (see Table 2). This translates into the usual student participating in home activities about once or more per day, physical leisure approximately once every two days, and social leisure activities around every third day in an average month. Students further reported that they participated in a lot of online leisure activities, including computer games, web browsing, and socializing, with an average engagement of 25.79 times per day (SD = 31.26). While these rates might seem high, some of these activities may be occurring simultaneously; for example, a student could participate in his/her hobby (home-based leisure activity) while also socializing with friends (a social leisure activity).

Table 2
Leisure Participation in Major Categories of Leisure (times per month or day)

Type of Leisure Activity	**N**	**Min.**	**Max.**	**Mean**	**Std. Dev.**
Home activities (per month)	556	0	428	36.35	44.03
Online activities (per day)	556	0	152	25.79	31.26
Physical activity (per month)	556	0	152	19.55	18.51
Social activity (per month)	556	0	152	12.93	13.14

Leisure Participation Differences by Sex

When comparing leisure activity participation between males and females, several differences in leisure engagement were present. A significantly greater proportion of male students reported that they participated in team sports (42.9%) (X^2 = 46.87, p < .001) in a typical month and playing computer games (62.4%) (X^2 = 20.07, p < .001) in a typical day compared to female students (15.7% and 43.2% respectively) (see Table 3). Additional significant differences

in participation were observed as females engaged more frequently in socializing with friends (97.9%) (X^2 = 4.24, p = .039) and going to the movies (74.2%) (X^2 = 19.74, p < .001) in a typical month, and reading (83.9%) (X^2 = 9.70, p = .002) and "doing puzzles" (44.1%) (X^2 = 12.60, p < .001) in a typical week. These significant leisure participation differences are consistent with previous studies that have found that men participate more often in computer games and physical activity (Greenberg et al., 2010) while females have tendencies toward more social forms of leisure (Barnett, 2006 & 2011; Koivula, 1999). Other types of leisure activity that showed similar rates of participation by both males and females included individual sports, going to clubs, playing cards, and surfing the internet for interest (see Table 3).

Leisure Participation Differences by Country of Birth

Turning to country of birth, differences in rates of participation between those born in Canada, China, or another county (see Table 4) were revealed for several activities. Half of those students born in China (50.0%) and 41.4% of those students born elsewhere reported that they played individual sports as compared to about one third of Canadian born students (32.1%) (X^2 = 13.27, p = .001). A significantly greater proportion of Chinese students also participated in reading (82.2%) (X^2 = 10.08, p = .006) and playing cards (52.3%) (X^2 = 6.31, p = .043) than students born in Canada or another country. These findings are consistent with previous research that has found that Chinese students typically enjoy individual sports, such as badminton (Li & Stodolska, 2007) and that more solitary leisure activities, such as reading and hobbies, are popular among Chinese individuals (Wang & Stringer, 2000; Yin, 2005). More Canadian students reported participation in team sports (41.2%) (X^2 = 12.03, p = .002) and nearly half of all Canadians went out to clubs or bars in an average month (47.9%) (X^2 = 11.15, p = .004), as compared to students born in China or another country. No significant differences in online

Table 3
Leisure Participation by Sex

Category	**Participation**[a]				
Activity	**Female**	**Male**	**Total**	X^2	*p*
Physical Activities (per month)					
Team sports	15.7 (37)	42.9 (137)	31.4 (174)	**46.87**	**<.001**
Individual sports	44.5 (105)	41.4 (132)	42.7 (237)	.54	.464
Vigorous exercise	58.5 (138)	64.3 (205)	61.8 (343)	1.93	.165
Light exercise	83.1 (196)	77.1 (246)	79.6 (442)	2.95	.086
Social Activities (per month)					
Socializing with friends	97.9 (231)	94.4 (301)	95.9 (532)	**4.24**	**.039**
Going to the movies	74.2 (175)	55.8 (178)	63.6 (353)	**19.74**	**<.001**
Going to clubs	37.3 (88)	39.5 (126)	38.6 (214)	.28	.597
Going to sport events	18.6 (44)	24.8 (79)	22.2 (123)	2.95	.086
Home Activities (per week)					
Reading	83.9 (198)	72.7 (232)	77.5 (430)	**9.70**	**.002**
Playing cards	50.0 (118)	47.3 (151)	48.5 (269)	.39	.535
Doing puzzles	44.1 (104)	29.5 (94)	35.7 (198)	**12.60**	**<.001**
Hobbies or crafts	37.3 (88)	31.3 (100)	33.9 (188)	2.14	.144
Online Home Activities (per day)					
Surfing the internet for interest	94.5 (223)	93.1 (297)	93.7 (520)	.44	.506
Computer games	43.2 (102)	62.4 (199)	54.2 (301)	**20.07**	**<.001**
Socializing online	91.9 (217)	87.1 (278)	89.2 (495)	3.24	.072

[a] Percentages reported above with frequencies below in parentheses.

home activities (e.g., playing computer games) participation were found between students with different countries of birth as there were between males and females. This finding is perhaps not surprising considering the relatively narrow range in age of the sample.

Reflecting on the theory of self-construal, these observations suggest that Chinese students are engaging less in social leisure and more passive forms of leisure. In particular, participation in less social leisure is more characteristic of independent self-construal. However, research by Li and Stodolska (2007) depicted that playing badminton was seen as an opportunity for Chinese students to spend time with friends. Additional studies have observed that more passive forms of leisure have been noted to be common among Chinese people (Wang & Stringer, 2000; Yin, 2005) while the leisure satisfaction of Chinese students was most associated with relaxation in previous studies (Walker et al., 2011). The other leisure activities examined, in particular online home activities, showed no significant differences in rates of participation for all three groups (see Table 4). These results likely speak to the similarity in leisure preferences of the sample, as all of the participants were students around the same age.

Leisure, Wellbeing, and Self-Construal

To assess the leisure motivations of students, respondents completed the Leisure Motivation Scale (LMS) developed by Beard and Ragheb (1983). The scale was composed of 24 items, which were evenly split between three leisure motivation dimensions: social, competence-mastery, and stimulus avoidance. Cronbach's alpha indicated strong internal reliability for each of social ($\alpha = .880$), competence-mastery ($\alpha = .910$), and stimulus avoidance ($\alpha = .836$) leisure motivations. These three dimensions were then combined to provide a measure of overall leisure motivation, which showed a relatively mediocre internal reliability ($\alpha = .532$) suggesting that, while these dimensions are linked, they may, too, reflect independent motives for leisure in this

Table 4
Leisure Participation by Country of Birth

Category	**Participation**[a]					
Activity	**Canada**	**China**	**Other**	**Total**	X^2	*p*
Physical Activities (per month)						
Team sports	41.2 (68)	25.2 (65)	30.8 (41)	31.3 (174)	**12.03**	**.002**
Individual sports	32.1 (53)	50.0 (129)	41.4 (55)	42.6 (237)	**13.27**	**.001**
Vigorous exercise	65.5 (108)	58.1 (150)	64.7 (86)	61.9 (344)	2.86	.239
Light exercise	81.2 (134)	78.7 (203)	79.7 (106)	79.7 (443)	.40	.820
Social Activities (per month)						
Socializing with friends	95.2 (157)	96.1 (248)	96.2 (128)	95.9 (533)	.30	.860
Going to the movies	60.0 (99)	66.7 (172)	61.7 (82)	63.5 (353)	2.18	.336
Going to clubs	47.9 (79)	31.8 (82)	39.8 (53)	38.5 (214)	**11.15**	**.004**
Going to sport events	25.5 (42)	19.8 (51)	22.6 (30)	22.1 (123)	1.91	.385
Home Activities (per week)						
Reading	69.1 (114)	82.2 (212)	78.9 (105)	77.5 (430)	**10.08**	**.006**
Playing cards	49.7 (82)	52.3 (135)	39.1 (52)	48.5 (269)	**6.31**	**.043**
Doing puzzles	41.2 (68)	33.7 (87)	32.3 (43)	35.7 (198)	3.28	.194
Hobbies or crafts	29.7 (49)	39.1 (101)	29.3 (39)	33.9 (188)	5.71	.058
Online Home Activities (per day)						
Surfing the internet for interest	94.5 (156)	93.8 (242)	92.5 (123)	93.7 (520)	.54	.764
Computer games	53.9 (89)	55.4 (143)	51.9 (69)	54.2 (301)	.45	.799
Socializing online	89.1 (147)	87.2 (258)	93.2 (133)	89.2 (495)	3.31	.191

[a] Percentages reported above with frequencies below in parentheses.

sample. Further, with only three of the original four dimensions from the LMS included here, the Cronbach's alpha is typically stronger when all of the dimensions are included (Vaske, 2008).

The students reported that they were similarly motivated in their leisure by competence (*M* = 4.90, *SD* = 1.00), social (*M* = 4.89, *SD* = 0.90), and stimulus avoidance (*M* = 4.82, *SD* = 0.91) reasons (see Table 5). In some instances, therefore, students have a relatively equal motivation to participate in leisure to gain competence, engage in social interactions, and participate in leisure that helps relieve stress, whereas in others, only one motive might be at play in prompting their participation.

Table 5
Descriptive Statistics for Dimensions of Leisure Motivation

Dimensions of Motivation[a]	**N**	**Mean**	**Std. Dev.**	**α**
Competence-Mastery.....	555	4.90	1.00	.910
Social	556	4.89	0.90	.880
Stimulus Avoidance.....	554	4.82	0.91	.836
Overall Leisure Motivation.....	556	4.87	0.68	.532

[a] based on 7-point scales where higher scores reflect greater agreement with motive.

Turning to the Leisure Satisfaction Scale (LSS), four dimensions were measured to assess leisure satisfaction – psychological, social, relaxation, and physiological. Cronbach's alpha revealed strong internal consistency for each dimension: psychological (α = .802), social (α = .835), relaxation (α = .859), and physiological (α = .915). When combined, the overall leisure satisfaction variable had an acceptable level of reliability (α = .694), and is consistent with previous studies (Chen et al., 2013; Ragheb & Tate, 1993).

When thinking about their leisure satisfaction, students indicated that relaxation in their leisure (*M* = 5.49, *SD* = 0.91) provided them with the most satisfaction, followed by social interactions (*M* = 5.06, *SD* = 0.90) and psychological stimuli (*M* = 4.89, *SD* = 0.94). Satisfaction

from leisure for one's physical health (M = 4.42, SD = 1.28) was deemed to be less important for the students (see Table 6). Overall, these students reported that they were reasonably satisfied with their leisure (M = 4.96, SD = 0.75).

Table 6
Descriptive Statistics for Dimensions of Leisure Satisfaction

Dimensions of Satisfaction[a]	**N**	**Mean**	**Std. Dev.**	**α**
Relaxation	552	5.49	0.91	.859
Social	551	5.06	0.90	.835
Psychological	554	4.89	0.94	.802
Physiological.....	552	4.42	1.28	.915
Overall Leisure Satisfaction.....	554	4.96	0.75	.694

[a] based on 7-point scales where higher scores reflect greater agreement with dimension

When asked about the eight indicators of wellbeing (CIW, 2011), students reported that their overall wellbeing was fairly good (M = 4.57, SD = 0.79) (see Table 7). Cronbach's alpha showed strong internal reliability with the overall wellbeing variable (α = .829). These findings are consistent with previous research and demonstrate the consistent reliability of examining wellbeing by this method (Hilbrecht et al., 2013; The Happiness Initiative, 2011). Although students were generally satisfied with their wellbeing, more specifically, students reported that they were most satisfied with the education (M = 5.17, SD = 1.23) and community vitality domains (M = 4.74, SD = 1.14). As the respondents are all students completing the survey within an education environment with a strong scholastic reputation, satisfaction with the education domain could be the result of the indicator measuring educational opportunities in the community. Consequently, respondents likely were focused on their current student status and the educational opportunities it solely provides. Similarly, the community vitality domain result fits the sample well as the students participants are presented with a school environment that has

a high potential for social interaction, especially considering that these students are very active in socializing online (Antoci, Sabatini, & Sodini, 2012; 2014; Burke, Marlow, & Lento, 2010).

Table 7
Descriptive Statistics for Dimensions of Wellbeing

Dimensions of Wellbeing[a]	**N**	**Mean**	**Std. Dev.**
Education	555	5.17	1.23
Community Vitality	556	4.74	1.14
Health	556	4.73	1.11
Environment	555	4.63	1.23
Living Standards	555	4.51	1.36
Democratic Engagement	549	4.34	0.98
Leisure & Culture	556	4.28	1.04
Time Use	556	4.17	1.29
Overall Wellbeing	556	4.57	0.79

[a] based on 7-point scales where higher scores reflect greater agreement with dimension

Conversely, students were least satisfied with the leisure and culture (M = 4.28, SD = 1.04) and time use (M = 4.17, SD = 1.29) domains. The lower satisfaction with these domains is particularly troubling considering the many benefits leisure opportunities can have (Downward & Rasciute, 2011; Russell, 2005; Yau & Packer, 2002). These lower satisfactions are further interesting due to the clear association between leisure and time use. Furthermore, students may also experience additional time pressure, which could have caused this lower satisfaction score (Laftman, Almquist, & Ostberg, 2013).

Turning to self-construal, measures of both independent (α = .807) and interdependent (α = .830) self-construal demonstrated strong levels of internal reliability. These strong Cronbach's alpha scores demonstrate that this particular scale (Gudykunst et al., 1994, 1996) demonstrates promise in measuring the two types of self-construal. However, broader questions about the

validity of these types of self-construal scales are still being debated (Gudykunst & Lee, 2003; Levine et al., 2003).

Overall, the student sample aligned slightly more with independent self-construal (M = 5.61, SD = 0.78) than with interdependent self-construal (M = 5.11, SD = 0.80) (see Table 8). This is particularly interesting given this study's focus on self-construal and that much of the sample was not born in Canada. According to the theory of self-construal, one might have expected that more students would report stronger interdependent self-construal rather than independent self-construal (Markus & Kitayama, 1991), but both types are evident and strong. However, this finding does provide some evidence that societies and immigrant groups demonstrate both self-construals and not one exclusively (Leung et al., 2004; Suh et al., 1998).

Table 8
Descriptive Statistics for Independent and Interdependent Self-Construal[a]

	N	Mean	Std. Dev.	α
Independent Self-Construal	553	5.61	0.78	.807
Interdependent Self-Construal ..	553	5.11	0.80	.830

[a] based on 7-point scales where higher scores reflect greater agreement

Leisure, Self-Construal, and Wellbeing by Sex and Culture

Several analyses where conducted to determine if sex and cultural group were associated with the core concepts in this study: leisure, self-construal, and wellbeing. Specifically, males and females were compared on leisure motivation, leisure satisfaction, the two types of self-construal, and wellbeing. Then sex and cultural group (i.e., Canadian, Chinese-Canadian, and Chinese international) were examined for their independent and joint effects on the core concepts. For the following analyses, cultural group is defined by both the student's country of birth and how long he/she has lived in Canada if they were born elsewhere. Those students who

were born in Canada were simply grouped as "Canadian." Individuals were classified as "Chinese-Canadian" if they had been born in China and had lived in Canada for five years or more and as "Chinese international" if they had been born in China and had lived in Canada for four years or less. Chinese born students were divided at five years in order to separate international students, who are in Canada for a short amount of time to complete their degree (which is typically four years in length), from those who may be permanent residents of Canada. This orientation also helped limit the degree to which a Chinese student may have acculturated to Canadian society.

Leisure Motivation and Satisfaction, Wellbeing, and Self-Construal Differences by Sex

Leisure motivation and its three dimensions were examined first and the findings showed that females (M = 5.01, SD = .88) were significantly more motivated than males (M = 4.80, SD = .92) by social aspects of leisure (t = -2.675, p = .008) (see Table 9). A similar result was found for the stimulus avoidance dimension (t = -2.633, p = .009) as females (M = 4.93, SD = .85) were significantly more motivated by this dimension than males (M = 4.73, SD = .95). Overall, then, females were observed to be significantly more motivated than males in their leisure (t = -2.138, p = .033). The remaining leisure motivation dimension, competence, showed no significant difference between males and females. These outcomes appear to align with reported differences in leisure participation. Females participated more frequently in social leisure and less frequently in active/stimulating leisure (e.g., socializing, going to the movies, reading, and doing puzzles).

Leisure satisfaction and its four dimensions – psychological, social, relaxation, and physiological – did not reveal any significant differences between males and females (see Table 9). Although not statistically significant, males almost displayed a significant higher level of satisfaction with the psychological dimensions (t = 1.835, p = .067) as compared to females,

Table 9
Perceptions of Leisure Motivation and Leisure Satisfaction by Sex

Dimension	Perceptions				
Sex	n	Mean[a]	SD	*t*	*p*
Leisure Motivation					
Social					
Male	319	4.80	.92	**-2.675**	**.008**
Female	236	5.01	.88		
Competence					
Male	319	4.91	1.01	.380	.704
Female	235	4.88	1.00		
Stimulus Avoidance					
Male	318	4.73	.95	**-2.633**	**.009**
Female	235	4.93	.85		
Overall Leisure Motivation					
Male	319	4.81	.68	**-2.138**	**.033**
Female	236	4.94	.67		
Leisure Satisfaction					
Psychological					
Male	318	4.95	.98	1.835	.067
Female	235	4.80	.88		
Social					
Male	316	5.05	.95	-.287	.778
Female	234	5.07	.84		
Relaxation					
Male	317	5.49	.93	.019	.985
Female	234	5.49	.89		
Physiological					
Male	316	4.42	1.34	.130	.896
Female	235	4.41	1.20		
Overall Leisure Satisfaction					
Male	318	4.98	.76	.643	.520
Female	235	4.34	.73		

[a] Based on a 7-point scale where higher scores represent more agreement with the dimension.

which would have paralleled previous research that has noted males as being more independently inclined in their leisure (Cross et al., 2011). Interestingly, the differences noted in leisure motives (i.e., social and stimulus avoidance) were not found for similar dimensions of leisure satisfaction (i.e., social and relaxation). Females might be particularly motivated to participate in leisure that promotes, for example, social contexts while both sexes gain comparable satisfaction in their leisure regardless of their initial motivation and the leisure activity.

Differences between both sexes and their perceptions of independent and interdependent self-construal were examined next and the results indicated that there were no significant differences between males and females for either self-construal (see Table 10). This is particularly interesting as previous studies have reported that females seem to be more inclined towards interdependent self-construal whereas males have been more independent in self-construal (Cross et al., 2011; Li, 2002; Walker, 2008). Males and females were also not significantly different in their overall wellbeing. This finding also is in contrast to some previous studies which indicate that females report lower levels of wellbeing (Fujita et al., 1991; Skevington et al., 2004) although findings have been mixed. The similarity in reported wellbeing could also be a function of a sample that is composed of students who are similar in their life circumstances (i.e., generally young in age, no children, similar in socio-economic status), which is an important factor in the wellbeing of males and females of different cohorts (Argyle, 2001).

Leisure Motivation and Satisfaction, Wellbeing, and Self-Construal Differences by Culture

When comparing the three culture groups (Canadian, Chinese-Canadian, and Chinese international) on their leisure motivation, the results indicated that there was a significant difference among the three groups ($F = 3.643$, $p = .027$) with Chinese international students being more motivated for social reasons ($M = 5.08$, $SD = .74$), than both Canadian students ($M =$

4.86, *SD* = .79), and Chinese-Canadian students (*M* = 4.81, *SD* = 1.06) (see Table 11). These differences were confirmed using a Scheffé post hoc test which observed that Chinese international students were significantly different in their social motivations from Canadian and Chinese-Canadian students.

Table 10
Perceptions of Independent and Interdependent Self-Construal and Wellbeing by Sex

Concept	**Perceptions**				
Sex	**n**	**Mean**[a]	**SD**	***t***	***p***
Independent Self-Construal					
Male	317	5.63	.79	.505	.614
Female	235	5.59	.76		
Interdependent Self-Construal					
Male	317	5.11	.85	.231	.818
Female	235	5.10	.73		
Overall Wellbeing					
Male	319	4.52	.79	-1.65	.099
Female	236	4.64	.78		

[a] Based on a 7-point scale where higher scores represent more agreement with the dimension

A significant difference was also noted for the stimulus avoidance dimension (*F* = 3.854, *p* = .022) with Chinese-Canadian students (*M* = 4.94, *SD* = .86) and Chinese international students (*M* = 4.93, *SD* = .91) appearing to be more motivated than Canadian students (*M* = 4.69, *SD* = .99). However, the Scheffé post hoc test revealed that the differences in stimulus avoidance motivation between Canadians and both Chinese international and Chinese-Canadian students were marginally above the .05 probability convention for a statistically significant difference. No significant differences were found among the cultural groups for competence based leisure motivation or overall leisure motivation. The findings appear to partially support self-construal theory with Chinese international students being the most socially motivated group (Iyengar & Lepper, 1999; Yin, 2005), and yet, Canadians are *not* more motivated by competence as the theory would suggest (Walker, 2008).

Table 11
Culture Differences in Perceptions of Leisure Motivation and Leisure Satisfaction

Dimension	**Perceptions**				
Cultural Group	**n**	**Mean**[a]	**SD**	***F***	***p***
Leisure Motivation					
Social					
Canadian	164	4.86[a]	.79		
Chinese-Canadian	122	4.81[a]	1.06	**3.643**	**.027**
Chinese International	128	5.08[b]	.74		
Competence					
Canadian	164	4.94	1.10		
Chinese-Canadian	122	4.85	.93	.354	.702
Chinese International	128	4.86	.90		
Stimulus Avoidance					
Canadian	164	4.68[a]	.99		
Chinese-Canadian	122	4.94[a]	.86	**3.854**	**.022**
Chinese International	128	4.93[a]	.91		
Overall Leisure Motivation					
Canadian	164	4.82	.64		
Chinese-Canadian	122	4.86	.71	1.522	.220
Chinese International	128	4.96	.66		
Leisure Satisfaction					
Psychological					
Canadian	163	4.97	.95		
Chinese-Canadian	122	4.86	.89	.589	.556
Chinese International	127	4.93	.86		
Social					
Canadian	163	5.22	.84		
Chinese-Canadian	122	5.02	.97	1.983	.139
Chinese International	127	5.06	.81		
Relaxation					
Canadian	163	5.54	.88		
Chinese-Canadian	122	5.52	.91	.276	.759
Chinese International	127	5.46	.93		
Physiological					
Canadian	163	4.43	1.44		
Chinese-Canadian	122	4.47	1.26	.052	.949
Chinese International	127	4.48	1.10		
Overall Leisure Satisfaction					
Canadian	163	5.04	.75		
Chinese-Canadian	122	4.97	.73	.410	.664
Chinese International	127	4.98	.66		

[a] Based on a 7-point scale where higher scores represent more agreement with the dimension.
Note: different superscripts indicate groups that are significantly different based on Scheffé post hos test ($p < .05$).

Subsequent comparisons of the three cultural groups on the leisure satisfaction dimensions revealed no significant differences, which also challenges expectations based on the theory of self-construal. Given that the groups were not different on the psychological, social, relaxation, and physiological dimensions, not surprisingly, they also were not significantly different on overall leisure satisfaction. In addition, these findings further demonstrate the independence of leisure motivation and leisure satisfaction because differences revealed in one area – motivation – were not found on similar dimensions in the other – satisfaction.

Turning to self-construal, no significant differences between Canadian, Chinese-Canadian, or Chinese international students were found for either independent or interdependent self-construal (see Table 12). This finding directly challenges the ideas presented by self-construal theory. In accordance with the theory, the Chinese international students should have demonstrated a significantly different relationship towards interdependent self-construal as Chinese culture is believed to be more collectivist while Canadian students should have portrayed a significantly different relationship with independent self-construal as Western cultures are believed to be more individualist (Markus & Kitayama, 1991).

A significant difference was found when examining overall wellbeing ($F = 3.467$, $p = .032$) with Chinese-Canadian students ($M = 4.76$, $SD = .78$) reporting higher levels of wellbeing compared to Canadian ($M = 4.56$, $SD = .69$) and Chinese international students ($M = 4.54$, $SD = .81$). This result indicates that Chinese-Canadian students rate their wellbeing more highly, albeit slightly, than the other two cultural groups.

Table 12
Culture Differences in Perceptions of Self-Construal and Overall Wellbeing

Dimension	**Perceptions**				
Cultural Group	**n**	**Mean**[a]	**SD**	***F***	***p***
Self-Construal					
Independent					
Canadian.....	165	5.63	.79		
Chinese-Canadian.....	127	5.47	1.06	2.958	.053
Chinese International.....	122	5.70	.74		
Interdependent					
Canadian.....	165	5.01	1.10		
Chinese-Canadian.....	127	5.20	.93	2.059	.129
Chinese International.....	122	5.10	.90		
Overall Wellbeing					
Canadian.....	165	4.56[a]	.99		
Chinese-Canadian.....	128	4.76[a]	.86	**3.467**	**.032**
Chinese International.....	123	4.54[a]	.91		

[a] Based on a 7-point scale where higher scores represent more agreement with the dimension.
Note: different superscripts indicate groups that are significantly different based on Scheffé post hos test ($p < .05$).

To determine if both sex and cultural group operated together in explaining variations in wellbeing, a factorial ANOVA was conducted to determine if an interaction effect existed. Consistent with earlier findings, there was no significant difference in the wellbeing of males and females, but there was a difference in the wellbeing of the cultural groups ($F = 3.126$, $p = .045$) (see Table 13). Taken together, sex and cultural group showed a significant interaction effect ($F = 4.122$, $p = .017$). This interaction illustrated that the student's sex was linked to his/her cultural group in affecting wellbeing. Both male and female Chinese-Canadian students had very similar and generally higher levels of wellbeing (see Figure 2). For Canadian students, males ($M = 4.60$, $SD = .72$) reported higher levels of wellbeing compared to Canadian females ($M = 4.46$, $SD = .60$). The largest difference existed between male ($M = 4.38$, $SD = .83$) and female ($M = 4.77$, $SD = .73$) Chinese international students with males having significantly lower levels of wellbeing. These results suggest that the period of adjustment to a new country among male, Chinese

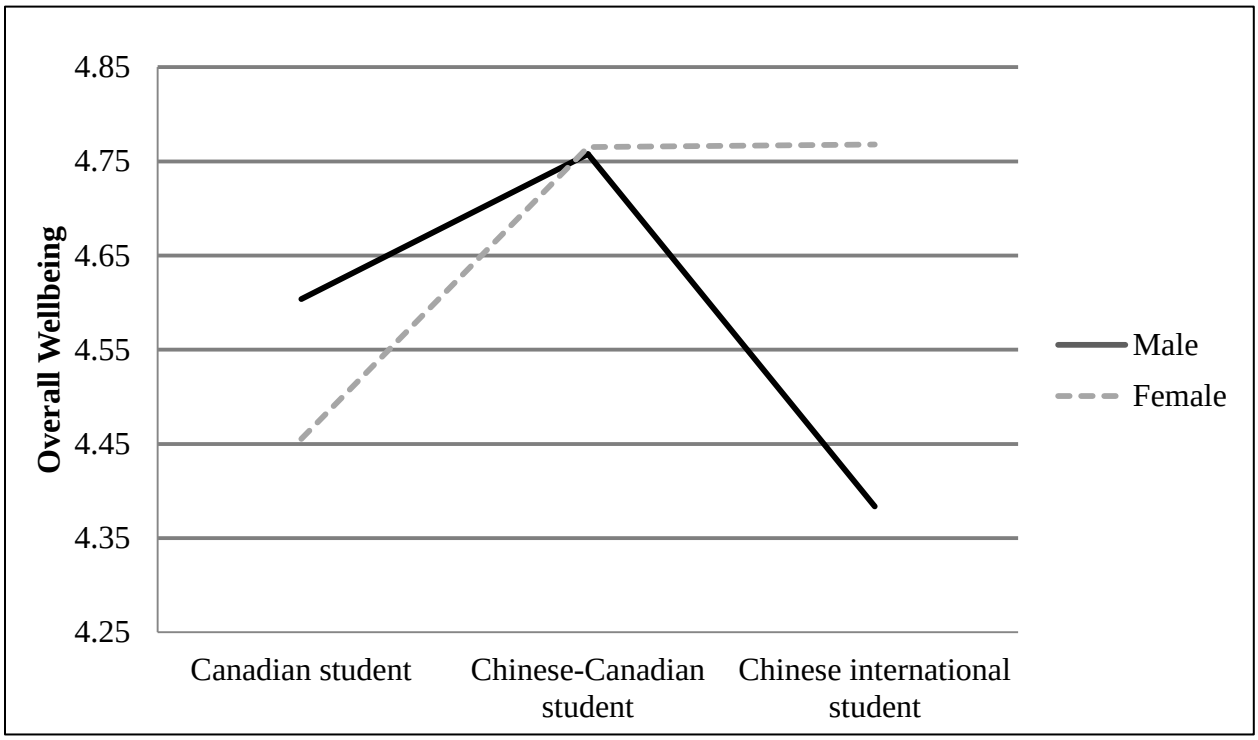
international students is perhaps more difficult than it is for female, Chinese international students, who achieve and maintain higher levels of wellbeing similar to their Chinese-Canadian counterparts. Alternatively, cultural group might be a significant factor in differentiating the wellbeing of male and female students – Canadian males have higher levels of wellbeing than Canadian females, but among Chinese international students, the reverse is true. These differences may be attributable to lifestyle, as previous studies have indicated females may display lower levels of wellbeing depending on their life circumstances (e.g., parenthood) (Argyle, 2001; Skevington et al., 2004). Pressure to succeed in the Faculty of Mathematics may also be a reason for female Canadian and male Chinese international students displaying lower levels of wellbeing compared to their male and female counterparts (Chang, 2006).

Table 13
Differences in Subjective Wellbeing by Culture and Sex

Characteristic	**Perception of Wellbeing**				
Attribute	**n**	**Mean**[a]	**Std.**	***F***	***p***
Sex					
Male	231	4.56	.76	1.056	.305
Female	185	4.69	.76		
Culture					
Canadian	165	4.56	.69		
Chinese-Canadian	128	4.76	.78	**3.126**	**.045**
Chinese International	123	4.54	.81		
Sex by Culture					
Male Canadian	118	4.60	.72		
Male Chinese-Canadian	40	4.76	.69		
Male Chinese International	73	4.38	.83	**4.122**	**.017**
Female Canadian	47	4.46	.60		
Female Chinese-Canadian	88	4.77	.83		
Female Chinese International	50	4.77	.73		

[a] Based on a 7-point scale where higher scores represent more agreement with the dimension.

Figure 2: Differences in Wellbeing by Sex and Cultural Group



Relationships among Core Concepts of Leisure, Self-Construal, and Wellbeing

In this section, the strength of the associations among the study's core concepts of leisure motivation, leisure satisfaction, independent and interdependent self-construal, and wellbeing are examined. Overall, the findings showed several strong relationships among the core concepts, many of which have been examined in previous research.

Highly significant, positive relationships were found among leisure motivation and satisfaction, both types of self-construal, and overall wellbeing (see Table 14). The relationship between leisure motivation and leisure satisfaction was the strongest of all those examined (r = .634, $p < .001$). This finding is consistent with previous research that also found that leisure motivation and leisure satisfaction have a very strong association (Chen et al., 2013). Leisure motivation also showed a strong positive relationship with both independent self-construal (r =

.423, $p < .001$) and interdependent self-construal ($r = .423$, $p < .001$). This outcome might have been expected considering that the core elements of each self-construal (i.e., competence and social motivations) are well represented in the leisure motivation measure. Leisure satisfaction similarly had a positive association with both independent ($r = .383$, $p < .001$) and interdependent ($r = .365$, $p < .001$) self-construal. This finding is again likely attributable to the leisure satisfaction scale including key elements of both types of self-construal (i.e., psychological and social satisfaction). Finally, overall wellbeing also was associated strongly and positively with leisure motivation ($r = .313$, $p < .001$) and leisure satisfaction ($r = .395$, $p < .001$). This result indicates that both leisure concepts are meaningfully associated with wellbeing, which is consistent with many previous studies, especially in terms of leisure satisfaction (Brown et al., 1991; Hribernik & Mussap, 2010; Mannell, 2007).

Table 14
Relationships among Core Concepts:
Leisure Motivation, Leisure Satisfaction, Self-Construal, and Overall Wellbeing
($n = 556$)

	Core Concepts			
Core Concepts	**Leisure Motivation**	**Leisure Satisfaction**	**Ind. Self-Construal**	**Inter. Self-Construal**
Leisure Satisfaction.....	**.634 (<.001)**			
Independent Self-Construal.....	**.401 (<.001)**	**.383 (<.001)**		
Interdependent Self-Construal	**.423 (<.001)**	**.365 (<.001)**	**.413 (<.001)**	
Overall Wellbeing.....	**.313 (<.001)**	**.395 (<.001)**	**.236 (<.001)**	**.248 (<.001)**

Note: Correlations (*r*) are presented above with probabilities in parentheses below.
Significant relationships at or below .05 are in bold.

Subjective wellbeing also displayed a positive and significant relationships with independent self-construal ($r = .236$, $p < .001$) and independent self-construal ($r = .248$, $p < .001$). While these results are statistically significant, the associations are not quite as strong as the others. This could be the result in part of self-construal being predominantly focused on psychological and social dispositions while wellbeing, as it has been measured here, examines a much more diverse set of areas related to one's overall quality of life.

Independent self-construal and interdependent self-construal showed a strong and positive relationship ($r = .413$, $p < .001$). This finding is particularly noteworthy as it appears to provide evidence that individuals possess both forms of self-construal rather than aligning just with one. If the sample was aligning with just one type of self-construal, the relationship would have been negative or non-significant. These results are consistent with other studies indicating that individuals, especially those who are immigrants, may display both types of self-construal and not one exclusively (Leung et al., 2004; Suh et al., 1998). However, these finding may also be indicating that all students strongly align with both forms a self-construal. This would explain the lack of differences between cultural groups and self-construal that was reported in the previous section.

Relationships between Self-Construal and Dimensions of Leisure and Wellbeing

An examination of the relationships among both types of self-construal and the constituent dimensions of leisure motivation, leisure satisfaction, and wellbeing for the entire sample provided several more nuanced insights. The findings provide some evidence that aligns with the theory of self-construal as originally presented by Markus and Kitayama (1991).

To begin, significant, positive relationships were observed between independent and interdependent self-construal and the three dimensions of the leisure motivation – social,

competence-mastery, and stimulus avoidance (see Table 15). The relationship between interdependent self-construal and the social motivation for leisure was the strongest (r = .396, p < .001), which is particularly noteworthy because interdependent self-construal is aligned with relational elements of daily life (Iyengar & Lepper, 1999; Markus & Kitayama, 1991). Consistent with this finding, the relationship between independent self-construal and social leisure motivation was substantially weaker (r = .293, p < .001), albeit still statistically significant. Likewise, independent self-construal, which is driven by desires for competence and autonomy in life (Markus & Kitayama, 1991; Walker, 2008), showed a slightly stronger relationship with the competence-mastery motivation for leisure (r = .292, p < .001) as compared to interdependent self-construal (r = .280, p < .001).

Table 15
Relationships between Self-Construal and Dimensions of Leisure Motivation

	Type of Self-Construal	
Dimensions of Leisure Motivation	**Independent**	**Interdependent**
Social	**.293 (<.001)**	**.396 (<.001)**
Competence-Mastery	**.292 (<.001)**	**.280 (<.001)**
Stimulus Avoidance	**.282 (<.001)**	**.242 (<.001)**

Note: Correlations (r) are presented above with probabilities in parentheses below. Significant relationships at or below .05 are in bold.

When examining the relationships among both types of self-construal and the four dimensions of leisure satisfaction, similar outcomes to those found for leisure motivation were revealed (see Table 16). Psychological leisure satisfaction showed a strong positive relationship with independent self-construal (r = .327, p < .001) and a somewhat weaker, but still positive relationship with interdependent self-construal (r = .236, p < .001). Similar to the findings for

competence-mastery motivation, psychological leisure satisfaction fits well with the meaning of independent self-construal (Markus & Kitayama, 1991; Walker, 2008). A comparably stronger positive association was found between social leisure satisfaction and interdependent self-construal ($r = .397$, $p < .001$) as compared to independent self-construal ($r = .318$, $p < .001$). In contrast to these results, the remaining two leisure satisfaction dimensions (i.e., relaxation and physiological) both had similarly strong positive relationships with both types of self-construal. The high correlations for relaxation suggest that more so than any other source of satisfaction in leisure, relaxation provides a meaningful outcome for individuals regardless of their predisposition towards independent or interdependent self-construal. This cannot be said for the physiological dimension of leisure satisfaction, which despite being significantly related to self-construal, is considerably weaker.

Table 16
Relationships between Self-Construal and Dimensions of Leisure Satisfaction

	Type of Self-Construal	
Dimensions of Leisure Satisfaction	**Independent**	**Interdependent**
Psychological	**.327 (<.001)**	**.236 (<.001)**
Social	**.318 (<.001)**	**.397 (<.001)**
Relaxation	**.412 (<.001)**	**.416 (<.001)**
Physiological	**.142 (<.001)**	**.112 (<.001)**

Note: Correlations (*r*) are presented above with probabilities in parentheses below. Significant relationships at or below .05 are in bold.

When examining the relationship of the two forms of self-construal with the eight domains of wellbeing, some noteworthy findings were revealed (see Table 17). In almost every instance, the two types of self-construal have positive and significant relationships with

wellbeing. The three exceptions to this pattern were the relationships of independent self-construal with the leisure and culture and time use domains, and interdependent self-construal with the living standards domain.

Table 17
Relationships between Self-Construal and Domains of Wellbeing

	Type of Self-Construal	
Domains of Wellbeing	**Independent**	**Interdependent**
Community Vitality	**.236 (<.001)**	**.314 (<.001)**
Healthy Populations	**.203 (<.001)**	**.102 (<.016)**
Education	**.296 (<.001)**	**.257 (<.001)**
Democratic Engagement	**.102 (.017)**	**.200 (<.001)**
Environment	**.174 (<.001)**	**.222 (<.001)**
Living Standards	**.133 (.002)**	.050 (.237)
Leisure and Culture	.069 (.107)	**.117 (.006)**
Time Use	.067 (.116)	**.104 (.014)**

Note: Correlations (*r*) are presented above with probabilities in parentheses below. Significant relationships at or below .05 are in bold

The strongest of these relationships was between community vitality and both interdependent self-construal ($r = .314$, $p < .001$) and independent self-construal ($r = .236$, $p < .001$). This finding continues a pattern whereby interdependent self-construal is consistently correlated strongly with factors that have social characteristics, such as the social leisure motivation and satisfaction dimensions. Strong, positive correlations were also noted between the education domain and both independent self-construal ($r = .296$, $p < .001$) and interdependent

self-construal (r = .257, p < .001). These strong relationships between the two forms of self-construal and the community vitality and education domains may be the result of the respondents being students in an academic institution with a strong scholastic reputation. Furthermore, this setting is likely to encourage students to socialize and build friendships, especially given that this age group is socially active online (Antoci et al., 2012; 2014; Burke et al., 2010).

The healthy populations domain was strongly related with independent self-construal (r = .203, p < .001) and to a lesser extent with interdependent self-construal (r = .102, p = .016). Although this domain was relatively weaker in its relationships, the pattern seen earlier with leisure motivation and satisfaction appears to persist as independent self-construal is aligned more so with variables that have psychological characteristics. Both independent and interdependent self-construal also exhibited significant and positive relationships with the democratic engagement and environment domains. In contrast, living standards was only associated with independent self-construal (r = .133, p = .002), and leisure and culture (r = .117, p = .006) and time use (r = .104, p = .014) both presented significant correlations with only interdependent self-construal. These relationships suggest that the living standards domain has characteristics that are associated with independent selves, while the social attributes of the leisure and culture and time use domains are related to interdependent selves.

Relationships between Self-Construal and Dimensions of Leisure by Cultural Group

While the above relationships are interesting, they only provide insight into self-construal for the whole sample. Therefore, it is equally important to understand how these relationships between the two types of self-construal and aspects of leisure play out for each of the cultural groups.

First, an analysis between the two forms of self-construal and the three leisure motivations, showed relationships that are more pronounced among the culture groups (see Table 18). Findings indicated that all three dimensions of leisure motivation are significantly and positively correlated with both types of self-construal for Canadian, Chinese-Canadian, and Chinese international students. Overall, Chinese international students consistently displayed the strongest correlations.

Table 18
Relationships between Self-construal and Dimensions of Leisure Motivation by Cultural Group

Self-Construal (Cultural Group)	n	Dimensions of Leisure Motivation		
		Social	Competence-Mastery	Stimulus Avoidance
Independent (Canadian).....	**165**	**.172 (.027)**	**.241 (.002)**	**.204 (.009)**
Interdependent (Canadian).....	**165**	**.204 (.008)**	**.155 (.047)**	**.187 (.017)**
Independent (Chinese-Canadian).....	**123**	**.398 (<.001)**	**.283 (.001)**	**.208 (.019)**
Interdependent (Chinese-Canadian)	**123**	**.328 (<.001)**	**.274 (.002)**	**.227 (.010)**
Independent (Chinese International).....	**128**	**.268 (.003)**	**.286 (.001)**	**.365 (<.001)**
Interdependent (Chinese International) ...	**128**	**.528 (<.001)**	**.462 (<.001)**	**.327 (<.001)**

Note: Correlations (*r*) are presented above with probabilities in parentheses below.
Significant relationships at or below .05 are in bold.

Students from each cultural group showed significant and positive relationships between both forms of self-construal and social leisure motivation. Analyses revealed that among Chinese international students, interdependent self-construal was more strongly related to social leisure motivation ($r = .528$, $p < .001$) than independent self-construal ($r = .268$, $p = .003$). For Chinese-Canadians, independent self-construal exhibited a somewhat stronger association with social leisure motivation ($r = .398$, $p < .001$) compared to interdependent self-construal ($r = .328$, $p <$

.001). Further, among Canadian students, interdependent self-construal held a marginally stronger relationship with social motivation (r = .204, p = .008) than independent self-construal (r = .172, p = .027).

Looking next to the competence-mastery leisure motivation, again, it was significantly and positively related to both forms of self-construal within each cultural group. For Canadian students, independent self-construal showed a stronger correlation (r = .241, p = .002) relative to interdependent self-construal (r = .155, p = .047). Correlations for Chinese-Canadians indicated that independent (r = .283, p = .001) and interdependent forms of self-construal (r = .274, p = .002) were similarly, significantly related to competence-mastery motivation. Meanwhile, Chinese international students showed a strong relationship between interdependent self-construal and the competence-mastery dimension (r = .462, p < .001) compared to independent self-construal (r = .286, p = .001).

The last motivation dimension, stimulus avoidance, displayed relatively similar significant and positive correlations between each form of self-construal for the three cultural groups. Independent self-construal for Chinese international students held a somewhat stronger correlation (r = .365, p < .001) compared with interdependent self-construal displaying a similarly positive relationship (r = .327, p < .001). All Chinese-Canadian respondents had comparable correlations with stimulus avoidance as interdependent self-construal was somewhat stronger (r = .227, p = .010) relative to independent self-construal (r = .208, p = .019). Lastly, independent (r = .204, p = .009) and interdependent (r = .187, p = .017) self-construal for Canadian students exhibited positive and similar relationships to stimulus avoidance.

These findings provide additional evidence that the theory of self-construal is not readily apparent, especially when observing leisure motivations. In accordance with the theory, these

correlations should have resulted in interdependent self-construal being associated with social motivations, especially for Chinese international students, while independent self-construal should have been related with competence-mastery motivations, especially in the case of Canadians. Chinese-Canadian students could in turn portray mixed findings depending on how aligned they are with Canadian or Chinese cultures (Leung et al., 2004; Suh et al., 1998). Some of the results do correspond with self-construal theory, such as social motivations being more associated with interdependent Canadians and competence-mastery motivations being stronger related to independent Canadians. Furthermore, Chinese international students displayed a stronger correlation between social motivation and interdependent self-construal than did independent self-construal. However, Chinese international students also indicated a stronger relationship between interdependent self-construal and the competence-mastery domain, which is in the contrary to self-construal theory. All of these findings suggest that the theory of self-construal has more complexity.

When comparing the culture groups with the dimensions of leisure satisfaction, some of the expected links to self-construal theory are more evident (see Table 19). Almost all of the dimensions of leisure satisfaction were positively and significantly related with both forms of self-construal for all three cultural groups. Notably, self-construal was not significantly related to satisfaction with the physiological leisure dimension, with the exception of Chinese international students on interdependent self-construal.

First, among Chinese-Canadian students, a strong correlation was shown between psychological leisure satisfaction and independent self-construal ($r = .343$, $p < .001$) as well as with interdependent self-construal ($r = .315$, $p < .001$). Both independent and interdependent self-construal for Canadian students held identically strong relationships with psychological

leisure satisfaction (both $r = .298$, $p < .001$). Finally, independent self-construal displayed a positive and significant relationship with the psychological dimension for Chinese international students whereas interdependent self-construal was not significantly related ($r = .163$, $p = .073$). In accordance with self-construal theory, these results indicated that independent self-construal for each cultural group related more strongly than interdependent self-construal with this motive.

Table 19
Cultural Group Relationships between Self-construal and Dimensions of Leisure Satisfaction

Self-Construal (Culture Group)	n	Dimensions of Leisure Satisfaction			
		Psycho-logical	**Social**	**Relax-ation**	**Physio-logical**
Independent (Canadian).....	**165**	**.298 (<.001)**	**.268 (<.001)**	**.286 (.001)**	.130 (.096)
Interdependent (Canadian).....	**165**	**.298 (<.001)**	**.375 (<.001)**	**.370 (<.001)**	.023 (.775)
Independent (Chinese-Canadian).....	**123**	**.343 (<.001)**	**.198 (<.001)**	**.421 (<.001)**	.112 (.210)
Interdependent (Chinese-Canadian)	**123**	**.315 (<.001)**	**.232 (.009)**	**.412 (<.001)**	.016 (.855)
Independent (Chinese International).....	**128**	**.183 (.044)**	**.355 (<.001)**	**.497 (<.001)**	.115 (.208)
Interdependent (Chinese International) ...	**128**	.163 (.073)	**.460 (<.001)**	**.488 (<.001)**	**.262 (.004)**

Note: Correlations (*r*) are presented above with probabilities in parentheses below.
Significant relationships at or below .05 are in bold.

A similarly expected pattern was observed in social leisure satisfaction. Interdependent self-construal consistently correlated more strongly with this dimensions and its social aspects relative to independent self-construal for each cultural grouping. First, it was observed that interdependent self-construal held a stronger relationship with social leisure satisfaction ($r = .460$, $p < .001$) compared to independent self-construal ($r = .355$, $p < .001$) for Chinese

international students. Analysis further illustrated that for Canadians, interdependent self-construal displayed a stronger correlation ($r = .375$, $p < .001$) compared to independent self-construal ($r = .268$, $p < .001$). Lastly, within the Chinese-Canadian group, interdependent self-construal exhibited a stronger significant and positive relationship to social leisure satisfaction ($r = .232$, $p = .009$) as related to independent self-construal ($r = .198$, $p < .001$).

For the remaining two types of leisure satisfaction, several very strong correlations were observed for the relaxation dimension while only one relationship was significant with physiological leisure satisfaction. In particular, interdependent self-construal for Chinese international students was the only group to hold a significant and positive relationship with physiological leisure satisfaction. Correlations with the relaxation dimension indicated that Chinese international students displayed similarly strong relationships with relaxation and independent self-construal ($r = .497$, $p < .001$) and interdependent self-construal ($r = .488$, $p < .001$). Similarly strong, positive, and significant correlations were also observed between independent ($r = .421$, $p < .001$) and interdependent self-construal and relaxation ($r = .412$, $p < .001$) for Chinese-Canadians. Lastly observing Canadian students, interdependent self-construal exhibited a stronger relationship to relaxation leisure satisfaction ($r = .370$, $p < .001$) as compared to independent self-construal ($r = .286$, $p < .001$). Interestingly, a similar trend between relaxation leisure satisfaction and stimulus avoidance leisure motivation is exhibited as Chinese international students demonstrated very strong relationships with both dimensions that appear to contain similar characteristics. This would seem to fit previous research suggesting that Chinese individuals are more inclined towards leisure that is more relaxing (Walker et al., 2011; Walker & Wang, 2009; Yu & Barryman, 1996).

Overall, these correlations results provide some evidence that supports the theory of self-construal. Specifically, social elements, such as those found in social leisure satisfaction, were strongly related to interdependent self-construal for Chinese international students. Furthermore, competence and autonomy elements, such as those found in psychological leisure satisfaction were not significantly related to interdependent self-construal for Chinese international students. These results are each in accordance with the expectations of self-construal theory. However, there were mixed findings as well, since independent and interdependent self-construal for Canadian students displayed similarly strong correlations with psychological leisure satisfaction. Instead, independent self-construal for Canadian students should have demonstrated a stronger positive relationship with autonomy and competence elements compared to interdependent students in order to correspond with the theory of self-construal. These findings suggest that there are some tendencies appearing in the data that follow the expectations presented by self-construal theory, however, they are inconsistent. Although some of these results follow the ideas of self-construal theory and show potential promise for comparing leisure satisfaction with self-construal, these findings are overall inconsistent with many previous studies and demonstrate that a more nuanced understanding of self-construal is needed.

Regression Analyses of Sex, Culture, Self-Construal, and Leisure on Overall Wellbeing

In order to fully examine the intersection of culture, leisure, and wellbeing, two models using hierarchical linear regression were generated. The first regression model investigated how variations in the students' wellbeing could be explained by sex, cultural group, self-construal, and leisure in its three aspects – motivation, participation, and satisfaction. To facilitate their use in regression analysis, both sex and cultural group were recoded into binary variables. Sex was recoded so that females were coded as 1 and males as 0. Similarly, culture was recoded so that

Chinese international students were coded as 1 and Canadian students as 0. Chinese-Canadian students were excluded from this first model as the central focus of this thesis has been to determine if variations in wellbeing are attributable to being Canadian or Chinese international. To determine if the role of the key variables in explaining wellbeing was different for Chinese-Canadian students, a second regression analysis was undertaken that followed the same process as the first model, but included just this sub-group.

A Model of Factors Contributing to Overall Wellbeing of Students

The first hierarchical regression explained 23.7% (see Table 20) of the variance in overall subjective wellbeing of Canadian and Chinese international students (Overall $F = 5.516$, $p < .001$). The first stage of the model explained just 0.5% of wellbeing and neither being female nor a Chinese international student made a significant contribution ($F = .675$, $p = .510$). Further, at no later stage in the model did either of these characteristics become significant factors. When both forms of self-construal were introduced at the second stage, only interdependent self-construal ($\beta = .136$, $p = .034$) made a significant contribution to wellbeing. Interdependent self-construal being significant at this stage fits with earlier findings in this chapter as students reported that they were most satisfied with social elements of wellbeing (i.e., the community vitality domain). Furthermore, interdependent self-construal positively and significantly correlated with all but one of the wellbeing domains. This second stage accounted for an additional 4.5% of the variance in wellbeing ($F = 3.650$, $p = .006$).

The following stages involved entering dimensions of leisure motivation, participation, and satisfaction to determine their respective contributions to explaining variations in wellbeing. The three dimensions of leisure motivation explained a further 5.4% of wellbeing ($F = 4.556$, $p < .001$) with the competence-mastery dimension being the only one to make a significant

contribution (β = .194, p = .003). Entering leisure motivation to the model had the additional effect of removing any significant contribution made by interdependent self-construal to wellbeing. Introducing the different types of leisure participation resulted in an added 3.0% of the variance in wellbeing being explained (F = 3.798, p < .001). In particular, participating in home-based activities, such as reading, doing puzzles, and hobbies, was the only category of leisure pursuits that contributed to higher levels of wellbeing (β = .128, p = .028). Of note, the competence-mastery leisure motive remained significant, which suggests that it might be more important than the specific form of leisure activity in which the students choose to participate.

At the fifth and final stage, the four dimensions of leisure satisfaction were entered and explained an additional 10.3% of the total variance in wellbeing (F = 5.516, p < .001), which is more than any other stage. Of the leisure satisfaction dimensions, psychological (β = .194, p = .005), social (β = .230, p = .002), and physiological (β = .180, p = .017) each made a significant contribution to wellbeing. Interestingly, even though relaxation was the only dimension of satisfaction to be highly related to self-construal, it was not significantly related to wellbeing in this model. Outside of the contribution of leisure satisfaction to wellbeing, participation in home-based activities was the only other factor to continue to contribute significantly to wellbeing. The competence-mastery leisure motive is no longer significant.

Table 20

Contributions of Selected Personal Characteristics, Self-Construal, and Leisure to Overall Wellbeing of Students (n = 283)

Factor	**Model 1**		**Model 2**		**Model 3**		**Model 4**		**Model 5**	
Attribute	***β***	***p***	***β***	***p***	***β***	***p***	***β***	***p***	***β***	***p***
Personal Characteristics										
Female[a]	.068	.262	.055	.353	.056	.336	.044	.458	.060	.290
Chinese International[b]	-.027	.659	-.040	.496	-.012	.839	-005	.936	.016	.780
Self-Construal										
Independent Self-Construal			.118	.068	.101	.121	.103	.111	.075	.232
Interdependent Self-Construal			**.136**	**.034**	.083	.217	.077	.247	.051	.435
Leisure Motivation										
Social					.077	.240	.063	.337	-.049	.475
Competence-Mastery					**.194**	**.003**	**.183**	**.004**	.016	.838
Stimulus Avoidance					-.107	.080	-.105	.084	-.097	.126
Leisure Participation[c]										
Physical Activities (typical month)							.040	.496	.006	.911
Social Activities (typical month)							.100	.085	.083	.134
Home Activities (typical week)							**.128**	**.028**	**.124**	**.027**
Online Activities (typical day)							-.016	.779	-.006	.907
Leisure Satisfaction										
Psychological									**.194**	**.005**
Social									**.230**	**.002**
Relaxation									-.094	.226
Physiological									**.180**	**.017**
R^2 change	.005		.045		.054		.030		.103	
R^2 total	.005		.050		.104		.134		.237	
F	.675		3.650		4.556		3.798		5.516	
p	.510		.006		<.001		<.001		<.001	

[a, b] Binary variables indicating the contribution of "being female" and "being a Chinese international student" to overall wellbeing

[c] Binary variables indicating the contribution of activity participation in the previous month, week, or day to overall wellbeing

The results from the first regression analyses have several implications for this study. First, and perhaps most importantly, being a Chinese international or Canadian student appears to have no significant effect on the wellbeing of respondents. Similarly, a student's sex – being female or male – does not make a difference to his or her overall wellbeing. These results align with earlier findings that indicated no differences between male and female students and that cultural group differences in wellbeing were predominantly related to Chinese-Canadian students. While these results also appear to contrast with the earlier factorial ANOVA in which Chinese international students had higher levels of wellbeing than males and Canadian males had somewhat higher levels of wellbeing compared to female students, the wellbeing of Chinese-Canadian students seem to have been the source of significant differences. Neither forms of self-construal made a significant contribution to wellbeing once elements of leisure were added to the model. Interestingly, participation in home-based leisure was the only group of activities to contribute to wellbeing. The contribution of home-based leisure participation to wellbeing may be due to these types of activities helping to relieve daily stress (Caldwell, 2005; Chun et al., 2012; Reynolds, 2010).

At the final stage of the regression model, the introduction of the dimensions of leisure satisfaction results in the only leisure motivation dimension, competence-mastery, to lose its significance as a contributor to wellbeing. These results suggest that aspects of leisure satisfaction are the most critical in explaining students' overall wellbeing regardless of the motives and the types of activities in which they engage. This suggestion is particularly evident in that social leisure *satisfaction* explains a unique amount of the variance in wellbeing while social leisure *motivation* did not significantly contribute to wellbeing at any stage of the model. The results generated by this model do provide additional support to several previous studies

which also reported that leisure satisfaction has a consistent and positive relationship with wellbeing (Brown et al., 1991; Hribernik & Mussap, 2010; Mannell, 2007).

A Model of Factors Contributing to Overall Wellbeing of Chinese-Canadian Students

The second regression analysis explained 35.2% (see Table 21) of the total variance in overall wellbeing for Chinese-Canadian students ($F = 4.376$, $p < .001$). At the first stage of the model, being female did not contribute to wellbeing ($F < .001$, $p < .990$). Adding self-construal at the second stage resulted in independent self-construal making a significant contribution to wellbeing ($\beta = .265$, $p = .013$) and explained 17.5% of its variance ($F = 8.720$, $p < .001$). Although this contrasts with the results of the first regression model where interdependent self-construal was the significant contributor to wellbeing, in both models, both forms of self-construal played a role even though only one was significant (i.e., with probabilities hovering around both sides of .05). As before, when dimensions of leisure motivation are entered, independent self-construal is no longer significant in contributing to wellbeing. Even though none of the motives is significant on its own, collectively, leisure motivation explains an additional 10.0% of wellbeing ($F = 7.619$, $p < .001$), which is significant.

Table 21
Contributions of Selected Personal Characteristics, Self-Construal, and Leisure to Overall Wellbeing of Chinese-Canadian Students (n = 127)

Factor	**Model 1**		**Model 2**		**Model 3**		**Model 4**		**Model 5**	
Attribute	***β***	***p***	***β***	***p***	***β***	***p***	***β***	***p***	***β***	***p***
Personal Characteristics										
Female[a]	-.001	.990	.056	.502	.000	.996	.017	.843	.041	.627
Self-Construal										
Independent Self-Construal			**.265**	**.013**	.170	.106	.154	.149	.100	.348
Interdependent Self-Construal			.204	.054	.134	.187	.111	.280	.130	.207
Leisure Motivation										
Social					.116	.257	.097	.351	.102	.325
Competence-Mastery					.191	.052	**.212**	**.037**	.095	.374
Stimulus Avoidance					.143	.095	.160	.067	.118	.189
Leisure Participation[b]										
Physical Activities (typical month)							-.027	.730	-.001	.993
Social Activities (typical month)							-.139	.090	-.175	.055
Home Activities (typical week)							.052	.518	.097	.230
Online Activities (typical day)							.022	.788	.036	.647
Leisure Satisfaction										
Psychological									.099	.376
Social									-.024	.825
Relaxation									.025	.823
Physiological									**.241**	**.012**
R^2 change	.000		.175		.100		.021		.056	
R^2 total	.000		.175		.275		.296		.352	
F	.000		8.720		7.619		4.903		4.376	
p	.990		<.001		<.001		<.001		<.001	

[a] Binary variable indicating the contribution of "being female" to overall wellbeing
[b] Binary variables indicating the contribution of activity participation in the previous month, week, or day to overall wellbeing.

Introducing the four types of leisure participation at the next stage contributes an additional 2.1% of explained variance to wellbeing ($F = 4.903$, $p < .001$) although none of the categories of leisure activity is significantly related to wellbeing on its own. Interestingly, the competence-mastery leisure motivation dimension makes a significant contribution to wellbeing at this stage ($\beta = .212$, $p = .037$), but this result should be taken with caution as this could be a Type 1 error due to competence-mastery almost being significant at the previous stage (Vaske, 2008). Lastly, when dimensions of leisure satisfaction are included at the final stage of the analysis, an additional 5.6% of the variance in wellbeing is explained ($F = 4.376$, $p < .001$). At this final stage, competence-mastery is, again, not significant while satisfaction derived from physiological outcomes of leisure significantly contribute to the overall wellbeing of Chinese-Canadian students ($\beta = .241$, $p = .012$). Of interest, even though its contribution is not quite significant, participation in social leisure activities is *negatively* associated with the wellbeing of Chinese-Canadian students ($\beta = -.175$, $p = .055$), suggesting such participation is not consistent with the physiological satisfaction gained from other forms of leisure.

These results are consistent with earlier findings in this study that have suggested that Chinese-Canadian students are somewhat more homogenous as a group than the other two cultural groups when considering wellbeing. This finding could also be indicating that there is something unique about mixed cultural groups such as the Chinese-Canadian students. Consequently, variables that were associated with wellbeing in the earlier regression model are not significant contributors for this distinct group of students.

Chapter 5 – Contrasts between Culture and Self-Construal in Leisure and Wellbeing

The following chapter discusses some of the principal findings that have been observed in this study. Limitations to this research are also considered in this section. Results are considered in terms of their implications for practitioners and policymakers, especially those at post-secondary institutions that have large cohorts of international students. Lastly, recommendations for future research are discussed with an evaluation of what contributions this thesis has made to the field in regards to the relationship between culture, leisure, and wellbeing.

Summary of Key Findings

Leisure Motivation, Participation, and Satisfaction

Previous research has suggested that there are many factors that can influence the type of leisure in which people partake. These factors include one's sex, age, and cultural background. Analysis from this study revealed several differences that have previously been found in studies. To begin, female students were significantly more motivated overall to participate in leisure than males. Specifically, women had increased levels of leisure motivation for social and stimulus avoidance reasons as compared to men. These results are consistent with differences between the men and women that were found in their leisure participation. Females participate in leisure activities such as socializing with friends, going to the movies, reading, and doing puzzles, significantly more frequently than males. Meanwhile, male students were significantly more engaged in team sports (e.g., soccer, hockey) and playing computer games compared to female students. These results are consistent with previous investigations that have indicated a propensity for females to participate in more socially oriented forms of leisure (Koivula, 1999) while males are more frequently engaged in physical activities and playing video games (Barnett, 2006, 2011; Greenberg et al., 2010). No significant differences were found in competence

oriented leisure motivation nor any of the four dimensions of leisure satisfaction (i.e., psychological, social, relaxation, and physiological) or overall leisure satisfaction. Subsequent analysis revealed a robust and positive correlation between leisure motivation and satisfaction regardless of the divergent findings in these analyses, which is consistent with findings from Chen et al. (2013).

Previous research has documented that females are likely to show a greater affinity for interdependent self-construal while males are more likely to align with independent self-construal (Cross et al., 2011; Li, 2002; Walker, 2008). Similarly, this study's findings provide partial support as women were more socially motivated in their leisure. Conversely, men and women were indistinct in their competence driven leisure motivation and psychological and social leisure satisfaction. These differences, and lack thereof, may reveal some patterns in the leisure lifestyles of men and women that align with the ideas presented by self-construal theory.

When examining one's country of birth, several preferences in leisure participation parallel previous studies. Canadian born students participated significantly more in team sports and going out to watch movies. Students who had been born in China more frequently participated in individual sports (e.g., badminton, tennis), reading, and playing card games. These results are consistent with those reported by Li and Stodolska (2007) that noted badminton was a very popular sport among Chinese students. Additional research has shown that solitary and passive forms of leisure, such as reading and hobbies, are also common among Chinese individuals (Iwasaki, 2007; Wang & Stringer, 2000; Yin, 2005).

Analyzing a student's country of birth in combination with the number of years lived in Canada, if they were born elsewhere, provided the means to investigate a student's cultural background. Similar to the differences noted between males and females, Chinese international,

Chinese-Canadian, and Canadian students displayed relatively few significant results. Of the findings that were significant, Chinese international students were significantly more socially motivated to participate in leisure as compared to Canadian or Chinese-Canadian students. This finding alone offers support for the ideas presented by self-construal theory as Chinese international students appear to be associating with interdependent characteristics (Iyengar & Lepper, 1999; Kitayama et al., 2006; Yin, 2005); however, these comparisons presented several results that challenge expectations based on the theory of self-construal. Significant differences were not observed between any of the cultural groups for competence driven leisure motivation or both psychological and social dimensions of leisure satisfaction.

Self-Construal and its Interaction with Culture, Leisure, and Wellbeing

As seen, the results have provided several inconsistent outcomes concerning how students perceive their leisure motivation, participation, and satisfaction. This inconsistency persists in further analyses involving the two forms of self-construal. Perhaps most captivating of these findings was that neither type of self-construal displayed significant differences between the three cultural groups. Succinctly, analyses depicted that no differences existed in how Canadian, Chinese-Canadian, and Chinese international students rated their alignment with independent and interdependent self-construal. This finding directly challenges the notions of self-construal theory. Subsequent analysis raised even more questions concerning self-construal theory as independent and interdependent forms of self-construal were positively and strongly correlated with each other. A relationship of this nature is not entirely surprising since previous studies have documented that individuals can exemplify both forms of self-construal (Leung et al., 2004; Suh et al., 1998). However, Gudykunst (2001) explained that while similarities can be shared, differences should also persist. This was not the case here considering that significant

differences were not present when both forms of self-construal were directly analyzed with the three cultural groups and again with males and females.

Both independent and interdependent self-construal displayed positive and significant relationships with leisure motivation, leisure satisfaction, and overall wellbeing. Additional correlation analyses were conducted to better understand the nature of these relationships. For the dimensions of leisure motivation (i.e., social, competence-mastery, and stimulus avoidance) significant and positive correlations were observed for each element with the two types of self-construal. Tendencies did appear that aligned with previous research on self-construal theory as independent self-construal had a stronger relationship with competence driven motivation whereas interdependent self-construal reported a greater association with social motivations (Iyengar & Lepper, 1999; Markus & Kitayama, 1991; Walker, 2008).

These findings parallel what has been documented in the relationships between both forms of self-construal and the four dimensions of leisure satisfaction (i.e., psychological, social, relaxation, and physiological) and also the eight domains of wellbeing (i.e., community vitality, healthy populations, education, democratic engagement, environment, living standards, leisure and culture, and time use). Similar to leisure motivations, dimensions of leisure satisfaction each held a positive and significant correlation with independent and interdependent self-construal. Psychological leisure satisfaction better aligned with independent self-construal as compared to interdependent self-construal whereas social leisure satisfaction had a stronger relationship with interdependent self-construal instead of independent self-construal. Within the domains of wellbeing, the healthy population domain, which contains psychological characteristics, was more strongly correlated with independent self-construal. In contrast, the domain that held the most social properties, community vitality, had a stronger relationship with interdependent self-

construal as compared to independent self-construal. Again, each of these instances portrays a pattern within the data that echoes the expectations of self-construal theory presented by previous studies (Markus & Kitayama, 1991; Spiers & Walker, 2009) while also suiting the elements of wellbeing that prior studies have documented to be important among North American and East Asian cultures (Kitayama et al., 2006; Uchida et al., 2004). However, it is noteworthy that in each instance, both forms of self-construal also presented significant and positive relationships, adding complexity to the applicability of self-construal theory, at least in this context.

Further investigation of the leisure motivation and satisfaction dimensions and the two forms of self-construal by each cultural group presented more inconsistencies in the expectations of self-construal theory. As with the overall sample, each dimension of leisure motivation had significant and positive correlations with both independent and interdependent self-construal among Canadian, Chinese-Canadian, and Chinese international students. For leisure satisfaction, independent and interdependent self-construal for the three groupings correlated positively and significantly in almost all analyses with the physiological dimension being the main exception.

Fitting with the theory of self-construal was that independent self-construal among Canadian students more strongly affiliated with the competence-mastery leisure motivation dimension while interdependent self-construal for Canadians aligned more strongly with the social motivation dimension. Furthermore, interdependent self-construal for Chinese international students was more related to both social leisure motivation and satisfaction dimensions as compared to independent self-construal. Psychological leisure satisfaction was not significantly related with interdependent self-construal for Chinese international students. Meanwhile, both forms of self-construal for Chinese international students exhibited strong

relationships with the stimulus avoidance and relaxation dimensions of leisure motivation and satisfaction, which corresponds with findings from previous studies (Walker et al., 2011; Walker & Wang, 2009; Yu & Barryman, 1996). Each of these instances is consistent with previous research in which independent self-construal aligns more with competence and psychological areas, especially for students from independently inclined cultures (e.g., Canada), and interdependent self-construal is related to social areas, especially for interdependently inclined countries (e.g., China) (Iyengar & Lepper, 1999, Markus & Kitayama, 1991; Spiers & Walker, 2009; Walker, 2008).

Additional results were contrary to the notions of self-construal and previous research. In the case of leisure motivations, interdependent self-construal for Chinese international students related more strongly with the competence-mastery dimensions relative to independent self-construal while in contrast, independent self-construal related stronger with this dimension compared to interdependent self-construal for Canadian students. Both forms of self-construal for Canadian students also held identical positive and significant associations to the psychological elements of leisure satisfaction. To follow the tenets of self-construal theory, interdependent self-construal with Chinese international students should have held a weaker relationship to competence and psychological subjects compared to independent self-construal while Canadian independent self-construal should have correlated more weakly to social areas as compared to interdependent self-construal (Iyengar & Lepper, 1999, Markus & Kitayama, 1991; Spiers & Walker, 2009; Walker, 2008).

Each of these circumstances further challenge the expectations presented by self-construal theory and underscore two overarching concerns: that no significant differences were observed in how the three cultural groups regarded independent and interdependent self-

construal; and that both forms of self-construal were positively and significantly related. These two concerns are likely related as differences usually do not occur when strong relationships exist between two factors (i.e., independent and interdependent self-construal). This was evidenced by both forms of self-construal for Canadian, Chinese international, Chinese-Canadian students each displaying positive and significant correlations to dimensions of leisure motivation and satisfaction with few exceptions.

An explanation for this strong relationship between both forms of self-construal could be the process of acculturation. Previous studies have indicated that immigrants to North American countries encounter many changes to their inclination towards the two forms of self-construal, leisure lifestyles, and wellbeing as they adapt to their new surroundings (Gudykunst, 2001; Norasakkunkit & Kalick, 2002; Plaut et al., 2012; Suto, 2013). For instance, in one particular study, immigrants were beginning to participate in leisure to gain self-esteem and autonomy (Juniu, 2002). This process of adaptation has the potential to modify the degree to which new immigrants exhibit independent or interdependent self-construal; however, these individuals are unlikely demonstrate one form of self-construal entirely (Leung et al, 2004; Suh et al., 1998).

Implications of Culture, Sex, Self-Construal, and Leisure on Wellbeing

A central focus of this thesis was to investigate how the core factors of interest help to explain subjective wellbeing. Students reported that they were most satisfied in their wellbeing in the education, community, and health-related domains. These findings appear to logically fit with the sample as the student respondents have easy access to educational opportunities and are in a highly social environment (Antoci et al., 2012, 2014; Burke et al., 2010). However, students rated the leisure and culture and time use domains to be their least fulfilled areas of wellbeing. These results are particularly troubling considering the consistent association between having

opportunities for leisure and wellbeing (Downward & Rasciute, 2011; Russell, 2005; Yau & Packer, 2002) and could also indicate that students are experiencing added time pressure in their daily lives (Laftman et al., 2013).

In addition, analyses were conducted to determine if differences existed in wellbeing according to sex and cultural groups and, also, if relationships to wellbeing existed with the primary variables of this study. In regards to one's sex, initial analyses indicated that there were no significant differences between the wellbeing of males and females. This result varies from past research as females have typically showed lower levels of wellbeing compared to males (Fujita et al., 1991; Skevington et al., 2004). However, life circumstances (i.e., having children, socio-economic status, and age) are often key ingredients to these differences (Argyle, 2001) and could have been diminished by the relative homogeneity of the student sample. Analysis assessing the three cultural groupings and wellbeing indicated a significant difference. Chinese-Canadian students were found to have significantly higher levels of wellbeing compared to Canadian and Chinese international students.

To further investigate, a subsequent analysis was conducted to determine if differences existed between males and females for each cultural group. Again, the findings indicated no significant differences between the wellbeing of males and females and a significant difference in the wellbeing of Canadian, Chinese-Canadian, and Chinese international students. When both factors were considered together, male and female Chinese-Canadian students displayed similar levels of wellbeing, which were the highest among students. Interestingly, male Canadians showed higher ratings of wellbeing compared to females whereas for Chinese international students, females had higher levels of wellbeing compared to males. This result adheres to previous studies involving wellbeing and sex as there was inconsistency in females showing

lower levels of wellbeing (Fujita et al., 1991; Skevington et al., 2004) and these differences may be affected by lifestyle (Argyle, 2001; Ryff, 1989). These findings also appear to indicate that male Chinese international students may be encountering a more challenging experience adapting to their new surroundings in Canada than females. These findings could also indicate that one's cultural background is a useful factor when trying to distinguish the wellbeing of men and women.

With respect to the relationships among overall wellbeing and leisure motivation, leisure satisfaction, and both forms of self-construal, independent and interdependent self-construal each displayed positive and significant relationships with wellbeing. Leisure motivation and leisure satisfaction were each significantly and positively related to the subjective wellbeing of respondents as well. These results support prior studies that have found leisure motivation and satisfaction hold a strong relationship (Chen et al., 2013) while leisure satisfaction frequently related to perceptions of wellbeing (Balastky & Diener, 1993; Brown et al., 1991; Downward & Rasciute, 2011; Hrbernik & Mussap, 2010).

When the relationships among culture, sex, self-construal, leisure, and wellbeing were examined in two hierarchical linear regression models for Chinese international and Canadian cultural students, being female or being a Chinese international student did not significantly contribute to wellbeing at any point in the analysis. These results are consistent with earlier findings that observed no differences between the wellbeing of males and females and Chinese-Canadian students being the source of significant differences in wellbeing. These findings further align with previous studies indicating that females inconsistently display lower levels of wellbeing (Fujita et al., 1991; Skevington et al., 2004). Being a Chinese international student does not make any significant contribution to wellbeing, which appears to suggest that overall

wellbeing is equally relevant to all students regardless of the culture with which they affiliate and follows a similar assessment made by Smyth et al. (2010). At the next stage of analysis, independent self-construal did not significantly contribute to wellbeing whereas interdependent self-construal did. However, the influence of interdependent self-construal on wellbeing discontinued once leisure factors were introduced. This finding further throws into question the applicability of self-construal theory as past research has indicated that wellbeing is related to the two forms of self-construal (Kitayama et al., 2006; Uchida et al., 2004). This result also indicated that one's leisure lifestyle is apparently a more important factor for wellbeing than the presence of any alignment with a form of self-construal.

The results of the regression model next revealed that the competence-mastery leisure motivation was the only dimension to significantly affect wellbeing. At the following stage, leisure participation in home-based activities (i.e., reading, doing puzzles, hobbies) was the only group of activities to significantly contribute to overall wellbeing. The significant contribution of home-based activities to wellbeing may have been due to these leisure activities helping students cope with daily stressors. This finding is particularly interesting because the dimensions of leisure motivation (i.e., stimulus avoidance) and leisure satisfaction (i.e., relaxation), which both best aligned with this group of leisure activities, did not significantly affect wellbeing. Accordingly in the final stage, psychological, social, and physiological elements of leisure satisfaction significantly affected the wellbeing of students in this study. At this stage, competence-mastery leisure motivation was no longer related to wellbeing while the home-based leisure activities group was nearly unchanged. These findings appear to demonstrate that dimensions of leisure satisfaction are the most important component of a person's leisure lifestyle in explaining wellbeing. This is evidenced by competence-mastery leisure motivation no

longer explaining a unique amount of variance in wellbeing once psychological leisure satisfaction is introduced. These two dimensions share several characteristics and previous research has indicated that while leisure motivation relates to leisure satisfaction (Chen et al., 2013), leisure satisfaction is associated with wellbeing (Mannell, 2007). Furthermore, social leisure satisfaction significantly contributed to wellbeing whereas social leisure motivation exhibited no influence at any point in the regression. This means that students may not necessarily get involved in leisure for social motives but they do recognize the social benefits of their participation. Physiological leisure satisfaction having a significant effect on wellbeing also supports prior studies that have documented the many potential physical health benefits that can be accrued through leisure (Downward & Rasciute, 2011; Zuzanek et al., 1998). Overall, this model upholds the findings of several previous studies that have documented the consistent relationship between leisure satisfaction and wellbeing (Brown et al., 1991; Downward & Rascuite, 2011; Hribernik & Mussap, 2010; Mannell, 2007; Sirgy, 2012).

The second regression model was used to understand the effects of self-construal and leisure on the wellbeing of Chinese-Canadian students. Results indicated that being female and interdependent self-construal had no significant impact on wellbeing. Independent self-construal significantly contributed to wellbeing when first introduced; however, this it no longer a significant factor once areas of leisure were added to the model. It should be noted that although this contrasts with the first model, in both analyses, each form of self-construal contributed to wellbeing with one of the two narrowly missing a significant relationship. This observation may have been due to the very robust relationships between independent and interdependent self-construal that was detected earlier. This provides for yet another instance of inconsistency between both forms of self-construal measured in this study and the expectations of self-

construal theory (Markus & Kitayama, 1991). Competence-mastery is also the sole dimension of leisure motivation to have explained a unique amount of variance in wellbeing while none of the four forms of leisure activity make significant contributions. As with the previous model, once dimensions of leisure satisfaction are included, competence-mastery leisure motivation is no longer a significant factor in wellbeing. Physiological leisure satisfaction remains the only variable to explain a unique amount of variance in wellbeing. This leisure satisfaction dimension being significant likely points to the important and well noted potential physical health benefits that can be received through leisure (Downward & Rasciute, 2011; Zuzanek et al., 1998). It is interesting to highlight that social leisure participation, which was close to being significant, displayed a negative relationship with the wellbeing of Chinese-Canadian students. This is troublesome as it potentially signifies that Chinese-Canadian students perceive social leisure engagement as limiting to their satisfaction with domains of wellbeing, such as education or health.

This model's findings are consistent with earlier analyses suggesting that this cultural grouping is perhaps more homogenous than either Canadians or Chinese international students. Moreover, these analyses may also reveal that cultural groups that become mixed due to immigration, such as the Chinese-Canadians of this study, are unique from new immigrant and multi-generation Canadians. This notion is supported by the observation that factors which contributed to the wellbeing of students in the earlier regression model do not significantly relate to the wellbeing of Chinese-Canadian students in the second model.

Study Limitations

Several limitations were documented throughout the completion of this study, which if avoided would have potentially provided for richer data. While these factors limit the results of

this study and its applicability to the field of knowledge, many insights were gained due to the rarity of research that investigates the relationships between culture, self-construal, leisure, and wellbeing. One of the most obvious of these limitations was the method used for measuring both forms of self-construal. Previous studies have advocated for the examination of self-construal and its potential usefulness, however, the validity of current measurement tools has been a source of debate (Gudykunst & Lee, 2003; Levine et al., 2003). In this scenario, many inconsistencies were noted with both types of self-construal in relation to the theory itself. This places concern on the accuracy of findings as differences and relationships, and lack thereof, could be the result of a measure of self-construal that was invalid, unreliable, or perhaps both. More work needs to be done to develop a measure of self-construal that captures the salient aspects of the theory while also being able to be used reliably in a variety of contexts.

Leisure participation frequencies were measured by asking students about a variety of leisure activities across four categories and students were solely responsible for determining their frequency of participation. This last point became a source of confusion for some students in regards to their online leisure pursuits in a typical day. Some students encountered trouble responding to these questions due to their very frequent use of smartphones and similar technologies for accessing social media, internet, and playing computer games. This issue resulted in several responses needing to be adjusted to diminish the effects of outliers.

Another limitation arose from the collection of the preferred language variable. Due to the question's structure, nearly 100 students reported multiple preferred languages. As the question's wording implied, the variable was intended to inquire as to which language students most preferred and was meant to have a note reminding students to select one language, which was mistakenly left out of the questionnaire. This issue was recorded once a substantial amount

of data had already been collected. Consequently, some students selected one language correctly whereas other students, many of which were born outside of Canada, reported multiple preferred languages. In order to solve this issue, numerous responses had to be removed from analyses in order to maintain the comparability of the data. This resulted in language needing to be removed from consideration when culture was being examined. Consequently, this study was limited in its ability to use preferred language as one of the factors to reliably determine cultural group affiliation.

The composition of the cultural grouping variables were further simplified due to data stemming from the cultural heritage questions. In this case, data were observed to vary drastically with students coming from very multicultural backgrounds. This included students reporting Canadian and East Asian backgrounds. A decision was ultimately made to remove these variables from consideration because they overly complicated the derived culture variables instead of enriching them.

There were a few additional overarching limitations to this study that were apparent from the outset. In particular, this study specifically focused on university students from a particular faculty within a narrow age range to learn more about culture, leisure, and wellbeing. While this decision proved useful in learning more about these factors and their relationships, it ultimately limited the generalizability of this study's findings to the broader population.

Implications for Practitioners and Policymakers, and for Future Research

Based on the findings of this thesis, several suggestions for practitioners, policymakers, and future research are offered. In regards to practitioners who help offer opportunities to participate in leisure, students reported that they were similarly motivated in their leisure for competence, social, and stimulus avoidance reasons. Further, social and relaxation areas

provided students with the greatest level of leisure satisfaction. These findings indicate that programs need to be versatile and offer opportunities for students to be socially engaged and relax while providing the chance to be challenged and active from time to time.

Differences were noted in how males and females and the three cultural groups were motivated for leisure whereas no differences were recorded in leisure satisfaction. However, subsequent analyses demonstrated that psychological, social, and physiological dimensions of leisure satisfaction made significant contributions to the wellbeing of students. Females in this study indicated that they were especially motivated in their leisure for social and stimulus avoidance reasons compared to males. Practitioners that serve university aged female students should ensure that participants are provided with programs that offer opportunities to build friendships and unwind from daily stress. Social leisure motivation was similarly observed to be more important to Chinese international students compared to Canadian and Chinese-Canadian students. Consequently, leisure professionals who serve international students should also make efforts to promote social opportunities in their programs.

Meeting the motivational needs of these students could materialize in the form of specific leisure activities that were more frequently engaged in by females and Chinese born students. For example, female students may be attracted to participate in informal activities that are simply for the purpose of socializing or formal leisure pursuits such as book clubs. Chinese born students may also be inclined to participate in book clubs or individual sports such as badminton. As leisure motivation, satisfaction, and wellbeing were found to have significant relationships, utilizing a purposeful approach to leisure provision could result in participants gaining greater leisure satisfaction and, in turn, increase their wellbeing.

As the implications for practitioners are very much focused on students, implications directed at policymakers are associated. The aforementioned findings related to gender and cultural groupings could assist universities in better ensuring that students are having a successful experience at their academic institution. These implications are especially applicable for the University of Waterloo and its Faculty of Mathematics in which survey responses where collected. In particular, students that are from another country and have international status could potentially benefit from leisure provisions that cater to their preferences. Feeling more included in their new surroundings is one such benefit that could be derived from such an orientation. This is pertinent considering that findings suggest male Chinese international students were enduring more difficulty adjusting to their new surroundings and that the men displayed lower levels of wellbeing compared to women. Efforts could be made to mitigate these findings by, again, offering leisure programs that motivate Chinese international students more (i.e., social leisure motivation) and by presenting leisure opportunities that are associated with activities that men were found to be more frequently engaged (i.e., team sports, computer games).

Students in this study reported that they were most satisfied in the education, community, and health domains of wellbeing whereas they were least satisfied in the time use and leisure and culture domains. It is likely most logical for the University of Waterloo that students rated education to be their most satisfied domain. While it is equally troubling that students were unfulfilled with their time use and access to leisure opportunities. Institutions should make efforts to improve these domains by, for example, being watchful that students have appropriate amounts of coursework and ensuring that they are aware of the leisure programs that are offered on campus and off. This latter point is especially important given the robust and consistent relationship found between leisure satisfaction and wellbeing (Hribernik & Mussap, 2010;

Mannell, 2007; Sirgy, 2012) and that wellbeing was observed to alter among culture groupings. Furthermore, previous research by Shifman et al. (2011) observed that international students were frequently unaware of the leisure opportunities (e.g., intramural sports) that were offered at a similar academic institution. These details are particularly significant for Canadian universities and colleges as many are actively pursuing increased international student enrollment.

This study also held several implications for future research as results helped advance current understanding of core concepts such as leisure, wellbeing, and self-construal in the context of cultural groups. Data analyses paralleled previous studies in observing a strong relationship between leisure motivation and satisfaction (Chen et al., 2013) and leisure satisfaction and wellbeing (Brown et al., 1991; Downward & Rascuite, 2011; Hribernik & Mussap, 2010; Mannell, 2007). Furthermore, several dimensions of leisure satisfaction (i.e., psychological, social, physiological) and home-based leisure participation (i.e., reading, hobbies) contributed significantly to the overall wellbeing of Chinese international and Canadian students. These findings provide evidence that leisure, in these three areas, is very insightful for research that seeks to investigate subjective wellbeing. Future research should also have confidence in using the Leisure Motivation and Leisure Satisfaction Scales presented by past researchers (Ragheb & Beard, 1983; Beard & Ragheb, 1980) in order to measure these concepts as they were again found to be valid and reliable in this study.

Results indicated that cultural differences can also play a role in leisure motivation, leisure participation, and perceptions of wellbeing. Chinese international students demonstrated that social sources of motivation were more important in their leisure choices. Individuals who were born in China revealed that they engaged in individual sports (e.g., tennis, badminton, skiing), reading, and playing cards more frequently compared to other students. Male and female

Chinese-Canadian students appeared to enjoy the highest levels of wellbeing whereas male and female Canadian and Chinese international students reported varied levels of wellbeing. These findings confirm that cultural differences affect the leisure pursuits and wellbeing of individuals. Future investigations should continue to explore these relationships in different settings to determine if consistencies exist. Studies may also find it useful to utilize one's sex in combination with cultural groups to help examine differences in wellbeing as this thesis has done. This could potentially enable researchers to better observe differences in wellbeing between males and females. Furthermore, researchers should continue to explore the tendency for Chinese students to participate in individual sports such as badminton (Li & Stodolska, 2007) in order to better understand the benefits students are accruing and the importance of their participation.

Self-construal theory showed several inconsistencies in this study. Perhaps most critically, a strong positive relationship between independent and interdependent self-construal was unexpected theoretically. Previous studies have suggested that individuals are likely to display affinity towards both forms of self-construal to varying degrees (Leung et al, 2004; Suh et al., 1998); however, the findings in this study suggest that students are similarly aligning with independent and interdependent self-construal. Further, a basic tenet of self-construal theory was not met again when no differences were found in how students from three different cultural groups aligned with both forms of self-construal. Subsequent analyses further indicated that independent and interdependent forms of self-construal varied in how they related to dimensions of leisure motivation and satisfaction for Canadian, Chinese-Canadian, and Chinese international students. Some relationships appear to agree with self-construal theory while others demonstrated additional inconsistencies. Finally, one's leisure lifestyle appeared to be more

important to wellbeing compared to both types of self-construal. This was observed in both regression models as neither form of self-construal significantly contributed to wellbeing once leisure was entered.

One possible explanation for these varied findings could be the acculturation of Chinese born students in this study. Data were collected and analyzed in order to make cross-cultural comparisons in one cultural setting. Preferably, the research would have compared Canadian students enrolled at a Canadian university with Chinese students enrolled at a Chinese university to help mitigate the impact of processes such as acculturation. However, due to practicality reasons, this was not the case. Acculturation's influence may have also been the reason why only one student completed the Chinese version of the survey while all remaining students responded in English. Although efforts were made to mitigate this effect, acculturation has been recognized as having the potential to influence one's inclination towards the two forms of self-construal as they adjust to their new setting after immigrating (Gudykunst, 2001; Norasakkunkit & Kalick, 2002; Plaut et al., 2012; Suto, 2013). For this reason, future research should consider utilizing measures of acculturation when considering self-construal. Subsequent studies could alternatively attempt to avoid the effects of acculturation by conducting cross-cultural comparative research between two countries. Comparing two samples taken from settings in, for example, Canada and China could hold the potential for several new insights.

Given the potential limitations of how self-construal was measured, this study also advises future research to consider alternative methods in order to more reliably understand the role that self-construal theory plays on leisure and wellbeing. One potentially fruitful option could be to evaluate self-construal by using more detailed dimensions. This orientation could follow suit with previous research by Hudson et al. (2013) and Walker (2009) as they have used

horizontal and vertical characteristics to help distinguish varying aspects of self-construal theory that may become lumped together when examining independent and interdependent forms exclusively. It is equally important that future studies test the validity and reliability – especially when translation is necessary – of these types of scales, which has been a concern in the past (Levine et al., 2003). Nonetheless, leisure in its three capacities appears to be an advantageous concept to explore when investigating the effects of self-construal theory.

Research to date has documented a continued growth in cultural diversity in Canada and North America (Spiers & Walker, 2009; Stodolska & Walker, 2007) with many individuals immigrating from China and across the world (Statistics Canada, 2008). Although this study did not specifically observe a contribution from cultural background on the overall wellbeing of students, differences associated with culture were detected in how students' perceived their wellbeing. By delving more deeply, this thesis has revealed that the relationship and trends that are said to exist between culture and self-construal were not readily apparent. Meanwhile, results exhibited similar associations between leisure and wellbeing that have been found in prior studies. Continued investigations into these relationships are likely to advance the field's knowledge, especially for research that is conducted using cross-cultural comparative methods. Consequently, these studies would provide for increased understanding of culture's implications on leisure and wellbeing in an increasingly diverse society.

The significance of this line of research is particularly important for students as academic institutions, such as the University of Waterloo, regularly strive to attract more international students from across the world to enroll in their programs. Enrolling international students in these institutions adds greater complexity to what motivates students to partake in particular forms of leisure and how satisfied they are with their participation and wellbeing. For these

reasons, scholars, practitioners, and policymakers need to pay attention to these societal changes in order to not only understand their effects but help ensure that all individuals enjoy satisfying levels of wellbeing.

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Appendix A

University of Waterloo Chinese Students by Faculty - 2012

Faculties*	International	Permanent Resident	Total
Applied Health Sciences	5	5	10
Arts	35	35	70
Engineering	40	40	80
Environment	60	10	70
Mathematics	430	150	580
Science	70	25	95

*****_Chinese student numbers rounded to protect student identity_.

Appendix B

In Class Script

Good morning/afternoon, my name is Robbie Shifman and I am a graduate student in the Faculty of Applied Health Sciences. I am here today to ask you to complete a short questionnaire that asks about your leisure time and wellbeing.

And while I am talking my colleagues will be coming around to hand out the surveys.

For example, I am interested in what motivates you to participate in a variety of different leisure activities and how satisfied you are with your participation. When I say "leisure", I am including anything from sports to socializing with friends and family to relaxing. The questionnaire also asks for some basic demographic information, such as age, gender, and cultural background. Part of the goal of my study is to investigate if these personal characteristics are related in any way to your leisure and wellbeing.

Your involvement in the study is completely voluntary and anonymous. Whether you choose to participate or not is entirely up to you and there will be no consequences for choosing not to participate. You do not have to put your name on the questionnaire. It should only take you approximately 10 to 15 minutes to complete. I have a Chinese version of the questionnaire, too, if anyone would prefer to complete it.

I have tried to avoid asking the same students to participate in this survey, so if you have already completed the questionnaire in another class, please just hand back a blank questionnaire.

As thanks for participating in this study, we are also going to distribute a ballot form for a draw that will give you a chance to be the lucky winner of a $10 gift card to Tim Hortons! Please hand your ballot in along with your questionnaire. We will not be linking your ballot to the questionnaire so your responses will remain entirely anonymous.

You can also retain the first page of the survey if you would like to contact me.

Please let me know if you have any questions. Thank you very much!

Appendix C

Survey Ballot

Survey Ballot

In appreciation of the time you have given to this study, you can enter your name into a draw for a chance to win a $10 Tim Horton's gift card.

Name: _____

(please print)

Your odds of winning the prize are based on the number of individuals who participate in the study from this class. Information collected to draw for the gift card will not be linked to the study data in any way, and this identifying information will be stored separately, then destroyed after the prize has been provided. The amount received is taxable. It is your responsibility to report this amount for income tax purposes.

Appendix D
English Questionnaire

UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES

An Exploration of Leisure, Culture, and Wellbeing

Student Investigator: Robbie Shifman <rshifman@uwaterloo.ca>
Faculty Supervisor: Dr. Bryan Smale <smale@uwaterloo.ca>

Please note:

- Your participation is *completely voluntary*, is not part of your course requirements, and has no impact on your grade in this course.
- You may choose to leave questions unanswered if you wish, and/or can stop your participation at any time.
- The questionnaires gathered will remain *completely anonymous*. You do not have to provide identifying information on the questionnaire. The data gathered in the study will be kept confidential and securely stored for two years and then confidentially destroyed. Electronic data will be kept indefinitely on a secure server.
- There are no known or anticipated risks to your participation in the study.
- The questionnaire can be made available in traditional Chinese.
- If you have any further questions about the study or wish to obtain a copy of the results, feel free to contact me, Robbie.
- If you would like a summary of the study results, please e-mail me at <rshifman@uwaterloo.ca> and I will send it to you when I have completed the study later this summer.
- This study has received ethics clearance through a University of Waterloo Research Ethics Committee. Any questions or concerns may be directed to Dr. Maureen Nummelin in the ORE at 519-888-4567, ext. 36005.

Thank you in advance for taking the time to participate in this study!

An Exploration of Leisure, Culture, and Wellbeing

1) For each of the following statements, thinking about your reasons for leisure participation please indicate the extent to which you agree or disagree.

"One of my reasons for engaging in leisure activities is…"	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
	↓	↓	↓	↓	↓	↓	↓
to build friendships with others	○	○	○	○	○	○	○
to interact with others	○	○	○	○	○	○	○
to develop close friendships	○	○	○	○	○	○	○
to meet new and different people	○	○	○	○	○	○	○
to reveal my thoughts, feelings, or physical skills to others	○	○	○	○	○	○	○
to be socially competent and skillful	○	○	○	○	○	○	○
to gain a feeling of belonging	○	○	○	○	○	○	○
to gain others' respect	○	○	○	○	○	○	○
to challenge my abilities	○	○	○	○	○	○	○
to be good in doing them	○	○	○	○	○	○	○
to improve my skill and ability in doing them	○	○	○	○	○	○	○
to be active	○	○	○	○	○	○	○
to develop physical skills and abilities	○	○	○	○	○	○	○
to keep in shape physically	○	○	○	○	○	○	○
to use my physical abilities	○	○	○	○	○	○	○
to develop physical fitness	○	○	○	○	○	○	○
to slow down	○	○	○	○	○	○	○
because I sometimes like to be alone	○	○	○	○	○	○	○
to relax physically	○	○	○	○	○	○	○
to relax mentally	○	○	○	○	○	○	○
to avoid hustle and bustle of daily activities	○	○	○	○	○	○	○
to rest	○	○	○	○	○	○	○
to relieve stress and tension	○	○	○	○	○	○	○
to unstructure my time.	○	○	○	○	○	○	○

2) For each of the categories of physical activities listed below, please indicate the *total number of times* you participated in each activity *in a typical month*. If you do *not* participate in the activity, please report "0" (zero) or leave the space blank.

	Total number of times in a typical month
Team sports (e.g., soccer, hockey, volleyball, basketball).....	_____ times
Individual sports (e.g., tennis, badminton, skiing).....	_____ times
Physical exercise (e.g., aerobics, jogging, weight training, T'ai Chi).....	_____ times
Light exercise (e.g., going for a walk, bicycling).....	_____ times

3) For each of the activities listed below, please indicate the *total number of times* you participated in each activity *in a typical month*. If you do *not* participate in the activity, please report "0" (zero) or leave the space blank.

	Total number of times in a typical month
Socializing with friends (e.g., getting together at someone's home, dining out).....	_____ times
Going out to movies.....	_____ times
Going out to clubs, bars, taverns.....	_____ times
Going to sports events as a spectator.....	_____ times

4) For each of the activities listed below that are typically done at home, please indicate the *total number of times* you participated in each activity *in a typical week.*

	Total number of times in a typical week
Reading books, newspapers, and/or magazines for pleasure	_____ times
Playing board or card games	_____ times
Doing puzzles such as crosswords, Sudoku, jigsaw	_____ times
Hobbies such as knitting, crafts, woodworking	_____ times

5) For each of the ***online activities*** listed below, please indicate the ***total number of times*** you participated in each activity ***on a typical day*** (be sure to count *each separate time* you participated).

	Total number of times in a typical day
Search the internet for interest	_____ times
Playing computer games online	_____ times
Socializing with others online (e.g. Facebook, Twitter, texting)	_____ times

6) For each of the following statements, please indicate the extent to which you agree by checking the circle that best describes how content you are with the leisure activities you participate in.

	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
	↓	↓	↓	↓	↓	↓	↓
My leisure is very interesting to me	○	○	○	○	○	○	○
My leisure gives me self-confidence	○	○	○	○	○	○	○
My leisure gives me a sense of accomplishment	○	○	○	○	○	○	○
I use many different skills and abilities in my leisure	○	○	○	○	○	○	○
I have social interaction with others through leisure	○	○	○	○	○	○	○
My leisure has helped me to develop close relationships with others	○	○	○	○	○	○	○
The people I meet in my leisure are friendly	○	○	○	○	○	○	○
I associate with people in my free time who enjoy participating in leisure a great deal	○	○	○	○	○	○	○
My leisure helps me to relax	○	○	○	○	○	○	○
My leisure helps relieve stress	○	○	○	○	○	○	○
My leisure contributes to my emotional wellbeing	○	○	○	○	○	○	○
I engage in leisure simply because I like it	○	○	○	○	○	○	○
My leisure is physically challenging	○	○	○	○	○	○	○
I participate in leisure that develops my physical fitness	○	○	○	○	○	○	○
I participate in leisure that restores me physically	○	○	○	○	○	○	○
My leisure helps me to stay healthy	○	○	○	○	○	○	○

7) For the following, consider how these statements relate to your life and indicate the level at which you agree or disagree.

	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
	↓	↓	↓	↓	↓	↓	↓
My personal identity is important to me.....	○	○	○	○	○	○	○
I prefer to be self-reliant rather than depend on others	○	○	○	○	○	○	○
I will sacrifice my self-interest for the benefit of my group	○	○	○	○	○	○	○
I stick with my group even through difficulties .	○	○	○	○	○	○	○
I respect decisions made by my group	○	○	○	○	○	○	○
I maintain harmony in the groups of which I am a member	○	○	○	○	○	○	○
It is important to consult close friends and get their idea before making a decision.....	○	○	○	○	○	○	○
I take responsibility for my own actions	○	○	○	○	○	○	○
I respect the majority's wishes in groups of which I am a member	○	○	○	○	○	○	○
It is important for me to act as an independent person	○	○	○	○	○	○	○
I should decide my future on my own	○	○	○	○	○	○	○
I enjoy being unique and different from others .	○	○	○	○	○	○	○

8) For each of the following statements, please indicate how satisfied you are by checking the circle that best describes how you feel.

	Extremely dissatisfied ↓	↓	↓	↓	↓	↓	Extremely satisfied ↓
My *mental* wellbeing	○	○	○	○	○	○	○
My *physical* wellbeing	○	○	○	○	○	○	○
My leisure time	○	○	○	○	○	○	○
My sense of belonging to this community	○	○	○	○	○	○	○
My personal relationships	○	○	○	○	○	○	○
My access to educational opportunities in the community	○	○	○	○	○	○	○
The balance of activities in my daily life	○	○	○	○	○	○	○
The way I spend my time	○	○	○	○	○	○	○
My access to *arts and cultural* opportunities in the community	○	○	○	○	○	○	○
My access to *recreational and parks* opportunities in the community	○	○	○	○	○	○	○
My neighbourhood as a place to live	○	○	○	○	○	○	○
The environmental quality of my neighbourhood	○	○	○	○	○	○	○
The way my local government responds to community needs	○	○	○	○	○	○	○
How well democracy is working in our community	○	○	○	○	○	○	○
My financial situation	○	○	○	○	○	○	○
My work situation	○	○	○	○	○	○	○

Personal Characteristics

9) What is your sex?

- ○ Male
- ○ Female
- ○ Transgendered

10) What is your current age? _____ years of age

11) Were you born in Canada?

- ○ Yes (go to **question 14**)
- ○ No (go to **question 12**)

12) If no, in what country were you born? _____

13) And how many years have you been in Canada?

- ○ Less than 1 year
- ○ 1 year
- ○ 2 years
- ○ 3 years
- ○ 4 years
- ○ 5 years or more

14) What is your preferred language?

- ○ English
- ○ French
- ○ Chinese (Cantonese or Mandarin)
- ○ Japanese
- ○ Spanish
- ○ Other: _____

15) To which ethnic or cultural groups did your ancestors belong? (Check all that apply)

○ Canadian
○ French
○ Chinese
○ English
○ Welsh
○ Scottish
○ Irish
○ German
○ Spanish
○ Portuguese
○ South Asian (e.g., India, Pakistan, Sri Lanka)
○ Japanese
○ Other: _____

16) What year of study are you currently enrolled in?

○ 1
○ 2
○ 3
○ 4
○ 5 or more

Thank You For Participating!

Be sure to submit your ballot form along with your questionnaire

Appendix E

Traditional Chinese Questionnaire

UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES

探索休閒，文化，和健康

學生調查員: Robbie Shifman <rshifman@uwaterloo.ca>
學院主管: Dr. Bryan Smale <smale@uwaterloo.ca>

請注意:

- 你的參與是完全自願的，不是你課程要求的一部分，並且對你的成績沒有影響。
- 你可以選擇不回答任何問題，和/或可以在任何時間停止你的參與。
- 收集的調查問卷將保持完全匿名。你不必提供任何別你身份的資料。這個問卷所收集的數據將完全保密，安全地存儲兩年，然後銷毀。電子數據將被無限期保存在安全的服務器上。
- 這項研究上, 你的參與沒有任何已知或預期的風險。
- 我們可以提供繁體版的調查問卷。
- 如果你有任何進一步的問題關於此研究，或希望得到果的副本，請隨時與我, Robbie, 聯繫。
- 如果你想要研究結果的總結，請發電郵給我 <rshifman@uwaterloo.ca>，當我在今年夏天完成了這項研究時, 我會發送給你。
- 這項研究已進行了審查，並通過滑鐵盧大學研究倫理辦公室（Office of Research Ethics）的道德批準。如有任何問題或疑慮，可詢問 Dr. Maureen Nummelin, 519-888-4567，分機 36005 。

預先感謝你抽出寶貴的時間來參與這項研究！

對於每個下面的語句，想著你參與休閒活動的原因，請選擇你同意或不同意的程度。

"我參加休閒活動的原因是..."	非常強烈不同意	強烈不同意	不同意	中立	同意	強烈同意	非常強烈同意
	↓	↓	↓	↓	↓	↓	↓
建立與他人的友誼。.....	○	○	○	○	○	○	○
與他人互動。.....	○	○	○	○	○	○	○
發展好的友誼。.....	○	○	○	○	○	○	○
以認識新的和不同的人。.....	○	○	○	○	○	○	○
跟他人分享我的想法，感受，或體能。.....	○	○	○	○	○	○	○
增強自己的人際關係。.....	○	○	○	○	○	○	○
獲得一種歸屬感。.....	○	○	○	○	○	○	○
得到他人的尊重。.....	○	○	○	○	○	○	○
挑戰自我。.....	○	○	○	○	○	○	○
在休閒活動上做得好。.....	○	○	○	○	○	○	○
提高自己休閒活動的技術和能力。.....	○	○	○	○	○	○	○
讓自己更有活力。.....	○	○	○	○	○	○	○
發展體能。.....	○	○	○	○	○	○	○
保持良好體型。.....	○	○	○	○	○	○	○
用我的體能。.....	○	○	○	○	○	○	○
發展體能。.....	○	○	○	○	○	○	○
平緩自己的情緒。.....	○	○	○	○	○	○	○
因為我有時喜歡獨處。.....	○	○	○	○	○	○	○
放鬆身體。.....	○	○	○	○	○	○	○
放鬆精神。.....	○	○	○	○	○	○	○
逃避日常活動的煩躁。.....	○	○	○	○	○	○	○
休息。.....	○	○	○	○	○	○	○
緩解壓力和緊張。.....	○	○	○	○	○	○	○
放慢生活的腳步。.....	○	○	○	○	○	○	○

2) 對於每個下面列出體力活動的類別，請註明你在*普通一個月*中的*參與次數*。如果你*不*參加此項活動，請報告"0"（零）或保留空白。

	在一個典型月中的參與次數
團隊運動（如足球，曲棍球，排球，籃球）.....	_____ 次
個人運動（如網球，羽毛球，滑雪）.....	_____ 次
體育鍛煉（如健美操，跑步，舉重，太極).....	_____ 次
輕鬆運動（如散步，騎自行車）.....	_____ 次

3) 對於每個下面列出活動的類別，請註明你在*普通一個月*的*參與次數*。如果你*不*參加此項活動，請報告"0"（零）或保留空白。

	一個典型月中的參與次數
與朋友聚會（比如，大家一起聚在別人的家裡，或外出聚餐）.....	_____ 次
出去看電影.....	_____ 次
出去夜總會，酒吧.....	_____ 次
出去看體育賽事(旁觀者身分)	_____ 次

4) 對於每個下面列出在家裡做的活動，請註明你在*普通一週*的*參與次數*。

	一個典型週中的參與次數
閱讀書籍，報紙和/或雜誌為了樂趣	_____ 次
玩桌遊或牌類遊戲	_____ 次
做拼圖，如填字遊戲，數獨，拼圖	_____ 次
愛好，如編織，做手工藝品，雕刻木工藝品	_____ 次

5) 對於以下每項***線上活動***，請註明你在***普通一天***中***參與的次數***（請確保*每一次參加*的次數都要算）。

	一天中的參與次數
在互聯網上搜索興趣	_____ 次
上線玩電腦遊戲	_____ 次
與他人在網上交流（如 Facebook，Twitter，短信）	_____ 次

6) **請選擇你對於以下語句的同意度。請選擇最能描述你對於休閒活動的滿意度的**程度。

	非常強烈不同意	強烈不同意	不同意	中立	同意	強烈同意	非常強烈同意
	↓	↓	↓	↓	↓	↓	↓
我的休閒對我來說是非常有趣的	○	○	○	○	○	○	○
我的休閒給了我自信	○	○	○	○	○	○	○
我的休閒給了我一種成就感	○	○	○	○	○	○	○
在我的休閒中，我用很多不同的技巧和能力	○	○	○	○	○	○	○
我通過休閒與他人有社交互動	○	○	○	○	○	○	○
我的休閒幫助我與他人發展好的關係	○	○	○	○	○	○	○
我在休閒中認識的人是友好的	○	○	○	○	○	○	○
在我的空閒時間，我跟一些很喜歡參加休閒活動的人交流	○	○	○	○	○	○	○
我的休閒幫助我放鬆	○	○	○	○	○	○	○
我的休閒有助緩解壓力	○	○	○	○	○	○	○
我的休閒有利於我的情緒健康	○	○	○	○	○	○	○
我參與休閒活動完全是因為我喜歡這些活動	○	○	○	○	○	○	○
我的休閒對身體具有挑戰性	○	○	○	○	○	○	○
我喜歡參與能發展我的體能的休閒活動	○	○	○	○	○	○	○
我喜歡參與能恢復我的身體的休閒活動	○	○	○	○	○	○	○
我的休閒幫助我保持健康	○	○	○	○	○	○	○

7) 對於以下的語句，考慮這些語句如何與你的生活有關連，並指出你同意或不同意的程度。

	非常強烈不同意	強烈不同意	不同意	中立	同意	強烈同意	非常強烈同意
	↓	↓	↓	↓	↓	↓	↓
我個人身份對我很重要	○	○	○	○	○	○	○
我寧願自食其力，而不願依賴別人	○	○	○	○	○	○	○
我願意為我團體的利益而犧牲自我利益	○	○	○	○	○	○	○
就算有困難, 我堅持跟我的團體一起	○	○	○	○	○	○	○
我尊重我團體做出的決定	○	○	○	○	○	○	○
我在我所屬的團體中保持和諧	○	○	○	○	○	○	○
在作出決定之前, 諮詢親密的朋友而得到他們的想法是很重要的	○	○	○	○	○	○	○
我對我自己的行為負責	○	○	○	○	○	○	○
我在我所屬的團體中尊重多數人的意願	○	○	○	○	○	○	○
對我來說，自我主張是很重要的	○	○	○	○	○	○	○
我應該決定我自己的未來	○	○	○	○	○	○	○
我喜歡做獨一無二的，與別人不同	○	○	○	○	○	○	○

8) 對於每一個下面的語句，請在圓圈內打勾來表示你的滿意程度。

	非常不滿意 ↓	↓	↓	↓	↓	↓	非常滿意 ↓
我的*精神*健康	○	○	○	○	○	○	○
我的*身體*健康	○	○	○	○	○	○	○
我的休閒時間	○	○	○	○	○	○	○
我對這個社區的歸屬感	○	○	○	○	○	○	○
我的人際關係	○	○	○	○	○	○	○
在社區中, 我接觸教育的機會	○	○	○	○	○	○	○
我在日常生活的平衡	○	○	○	○	○	○	○
我用時間的方式	○	○	○	○	○	○	○
在社區中, 我接觸*藝術和文化*的機會	○	○	○	○	○	○	○
在社區中, 我接觸到社區組織的*體育活動和公園*的機會	○	○	○	○	○	○	○
我的居住環境	○	○	○	○	○	○	○
我家附近的環境質素	○	○	○	○	○	○	○
我當地政府回應社會需求的方式	○	○	○	○	○	○	○
在我社區的民主運轉的程度	○	○	○	○	○	○	○
我的財務狀況	○	○	○	○	○	○	○
我的工作情況	○	○	○	○	○	○	○

個人 資訊

9) 你的性別是什麼? ○ 男生

○ 女生

○ 變性

10) 你今年幾歲? _____ 歲

11) 你在加拿大出生嗎? ○ 是 (**跳到第 14 號問題**)

○ 否 (**去下一題**)

12) **如果**你**第二題的答案是**"否", **你在那個國家出生**?

13) **你在加拿大住了幾年**?

- ○ 少**於一**年
- ○ **一年**
- ○ **兩年**
- ○ **三年**
- ○ **四年**
- ○ 多**於五**年

14) 你習慣用的語言是什麼？

- ○ **英語**
- ○ **法語**
- ○ 中文 **(廣東話或國語)**
- ○ **日語**
- ○ 西班牙語
- ○ **其他**:_____

15) 你的祖先屬於哪個種族或文化群體?（選擇所有適用）

○ 加拿大人
○ 法國人
○ 中國人
○ 英國人
○ 威爾士人
○ 蘇格蘭人
○ 愛爾蘭人
○ 德國人
○ 西班牙人
○ 葡萄牙人
○ 南亞人（如東印度，巴基斯坦，斯里蘭卡）
○ 日本人
○ 其他: _____

16) 你今年幾年級?

○ 一
○ 二
○ 三
○ 四
○ 五年或多

謝謝你的參與!

記得提交你的調查問卷和你的抽獎卷