

**MID-LIFE PATTERNS AND THE
RESIDENTIAL MOBILITY OF THE ELDERLY:
PLANNING FOR AN AGING POPULATION**

by

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Abstract

Population aging in Canada will create major local planning challenges in Ontario over the next few decades. Although there are a plethora of ways to integrate the elderly into local communities, many are contingent upon whether they will decide to age-in-place, make a local move, or migrate out of the community. The research objective of this dissertation has been two fold: to establish how life course (especially mid-life) patterns are related to residential mobility in later life; and to examine how this knowledge can contribute to the development of a new style of planning for an aging population. Using a life course perspective on aging, it is argued that a number of inter-related life course trajectories, specifically residential history, social and family relations, socio-economic status, and health, influence the decision to move in later life, either directly or indirectly through their effect on earlier residential trajectories. On the basis of a review of the literature on the residential mobility of the elderly, several hypotheses were put forward concerning the relationships between these trajectories and residential mobility outcomes of interest to planners. These were tested using data on a sample of 1063 men studied over a period of 30 years - the Ontario Longitudinal Study of Aging. Multi-variate models were developed using survival analysis procedures, specifically Kaplan-Meier survival curves and Cox proportional hazards models. The remarkable overall finding was that, although this was an analysis of a single birth cohort of Ontario men using mid-life measures of life course trajectories, most of the associations found in the three models were what the literature based on studies of elderly people of both genders would lead one to expect, with the exception of education. Recommendations with regard to future directions for research are discussed, in addition to the challenges associated with planning for an aging population, and the implications of this research for local planners in Ontario.

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Chapter I

Introduction

The population of Canada is aging (McDaniel, 1986). Hodge (1991a:11) has argued that the coming "seniors surge" represents a major challenge to community planners of the future, as a contextual change in society which demands a response. With accompanying societal changes in the nature of work and family life, the "post-retired society" will be much less well-structured, less normative, and less predictable (Featherman *et al.*, 1990).

With uncertain futures, planning practice will need to be more "responsive to the rapidity, complexity and inter-relatedness of change" (Seasons, 1991:33). The "styles of thinking that underlie social planning and policy formation in a society faced with a greater volume and range of ill-structured dilemmas" would benefit from a shift to a more reflective planning orientation which places a greater emphasis on adaptive learning and recognizes a multitude of possible solutions (Featherman *et al.*, 1990:80; Rittel and Webber, 1973; Seasons, 1991).

To facilitate this shift in orientation, common tools used by planners will also have to be adapted to be more flexible and reflective. In particular, traditional mechanistic and formula driven predictive tools are problematic. Such tools are based on an assumption of temporal stability, which is not viable in a planning environment with no assurances that regularities will persist over time (Serow, 1992).

When planning for an aging population in Canada, and especially for the large "baby boom" cohorts (born 1947-1966), one cannot assume that it is simply a question of a greater proportion of elderly. Old age is often described as a period of change, however "on becoming old, people do not all experience the same stressful events or cope in identical ways with their consequences" (Golant, 1986:36). They have very different life histories, social and cultural backgrounds, personalities and needs. Researchers have become aware that the baby boomers

have had very different life experiences when compared with the present elderly, and that being old today may be a very different proposition than being old tomorrow (Marcil-Gratton and Légaré, 1987; Silverstone, 1996). Planning tools need to be developed which generate a variety of scenarios as part of a continuous feedback planning process.

At the substantive level, it has also been argued that planning for an aging population is not only a question of numbers, for seniors have special needs which impinge on the domain of planners in terms of housing, transportation, community support services (Hodge, 1990), economic development (Gnaedinger and McFarlane, 1991; Hodge, 1991b), and subsequently in terms of land use and urban form (Greenberg, 1982; Laws, 1994; Yeates, 1978). Moreover, these are dynamically inter-related (Joseph and Fuller, 1991). A change in one can affect the others. As such, planners decisions can have unanticipated effects on seniors (McClain, 1991). Hence, it is increasingly important that planners know more about the great diversity in residential, transportation and service needs, and the underlying adaptive strategies used by the elderly. In sum, the aging population represents a challenge to both the substance and style of planning practice in Canada (Hodge, 1990).

Moreover, concern about the political, economic and social implications of this demographic trend, coupled with the current economic climate and rising health care costs has led to "a growing awareness that traditional methods of planning and delivering service are not always effective, efficient or respond to actual need" (Ontario, 1993:5). Consequently, a shift in policy is developing from a medical model of service delivery to a more community-based integrated approach which is focused on the promotion of wellness and the creation of community alternatives to institutionalization. As the National Advisory Council on Aging (1992:6) has argued, seniors are full members of our society and should not be excluded from the mainstream of social and community activity. However, "Canadian urban environments in the past have not been built with the *direct* purpose of encouraging the integration of age groups and services ...

[and] the present forces of urban growth seem to lead to age, life-cycle and ethnic separation [author's emphasis]" (Yeates, 1978:102). Similar problems can be seen in rural environments, although transportation issues are more evident (Joseph and Fuller, 1991). Many of the baby boomers are living in areas, such as the outer suburbs, with lower densities of life support facilities and with a higher dependence on personal transport (Hodge *et al.*, 1994; Rogers, 1992a; Wiseman and Virden, 1977) than was the case for preceding cohorts.

There is a plethora of ways in which future elderly, notably the baby boomers, can be integrated into our community, many of which are contingent upon whether they will move from their current housing or will decide to age-in-place, where they will move, and when. As Rossi (1980a:54) has argued, "basic research into residential mobility is of importance because mobility is one of the most important forces underlying changes in urban areas". This can apply equally to rural communities (Longino, 1980; Joseph and Cloutier, 1991; Everitt and Gfellner, 1996). Moreover, the baby boomers are known to have very different characteristics from previous cohorts which could influence their residential mobility choices. For example, they are more educated, have higher female labour force participation, a higher home ownership rate (Moore and Rosenberg, 1993), greater marriage instability, smaller families (Marcil-Gratton and Légaré, 1987), and may have very different pre-retirement migration patterns (Frey, 1986). In sum, residential mobility represents a dynamic element which warrants consideration in the development of a more reflective orientation to planning for an aging population.

Within the residential mobility literature there is an increasing awareness that moving decisions are not made in isolation but are based on a life time of experiences. As a result, perception of and responses to life cycle changes vary (Gurney and Means, 1993). Many of the factors that have been found to predict the probability of moving for older people, such as socio-economic status, health, marital status, social and kinship networks, and ties to place, are variables that evolve through time. Moreover, these decisions reflect both micro-level characteristics of the

individual such as personality and coping skills, and macro-level economic, political and structural influences throughout the life cycle. We know very little about how the elderly have reached their present housing situations or what effect this has on their future housing decisions and destinations (Clapham *et al.*, 1993). Few attempts have, "been made to place the experience of moving in longitudinal context, to view it as a series of moves over time in which each relocation is linked to moves that occurred previously and to those that are anticipated to follow" (Rowles, 1987:342). A greater understanding of how life course experiences are associated with residential mobility in later life could greatly aid the development of a different style of planning for an aging population.

1.1 The Research Problem

To summarize, the general problem to be addressed by this research is planning for an aging population. The literature has suggested that this requires rethinking the way we plan and the tools used. Within this context, the specific research focus of this dissertation will be on one dynamic in a complex inter-related system - residential mobility. Because the mobility choices of the elderly can have very different planning implications, it is important that planners gain some understanding of this process, if they are to anticipate possible impacts of planning style and decisions on present and future elderly. Consequently, the objective of this research has been two fold:

- to establish how life course (especially mid-life) patterns are related to residential mobility in later life; and
- to examine how this knowledge can contribute to the development of a new style of planning for an aging population.

With the baby boom cohorts now entering mid-life, this research is particularly timely.

However, to meet these objectives it was also necessary to further narrow the scope of this

research because of the complex nature of planning for an aging population in Canada.

1.2 Scope of the Research

In the Canadian welfare state, much of the planning, regulation, and the funding of programs for the elderly has been controlled by the public sector. The British North America Act of 1867, reinforced by the Constitution in 1982, made health, social services, and housing, provincial responsibilities, partially supported by federal funds. This "has led to a complex and uncoordinated system with provincial differences in service availability, standards (including access criteria), and funding" (McDaniel and Gee, 1993:62). Moreover, with service delivery frequently administered at a local level, there can also be considerable variation within provinces. Hence, this research has concentrated on issues associated with the residential mobility of the elderly as it relates to local planning for an aging population in the province of Ontario, and on those planning domains which the literature has found to be associated with the residential mobility of the elderly, as described in Chapter II. Nevertheless, because of the nested nature of federalism in Canada, the study of planning for an aging population in Ontario communities necessarily involves the consideration of policy at the federal, provincial, and municipal (both upper and lower tier) levels.

Consistent with a focus on Ontario, this investigation of how mid-life patterns can be related to residential mobility in later life has been conducted as a secondary analysis of a 30 year study of a specific birth cohort of Ontario men - the Ontario Longitudinal Study of Aging. In this way possible societal influences are held in common throughout the research.

1.3 Overview

The remainder of this dissertation has been organized into six chapters beginning with the provision of a contextual background for the research in Chapter II, which examines the varying

policy implications of different residential mobility choices of the elderly, the development of the environment for planning for the elderly in Ontario, and how issues associated with the residential mobility in later life are reflected in current planning practice.

The next three chapters (III, IV, V) address one primary objective of this research, which is to establish that the residential mobility decisions of the elderly reflect mid-life experiences in a way which could be used to inform the process of planning for an aging population.

After a brief review of alternative theoretical perspectives on residential mobility and aging discussing their relative merits from a planning perspective, the theoretical framework developed for this research and the expected relationships between mid-life variables and subsequent post-retirement residential mobility outcomes are outlined in Chapter III.

Methodological considerations associated with this research are discussed in Chapter IV, beginning with an examination of longitudinal research in general. This is followed by a description of the nature and limitations of the data to be used in this analysis and the development of each of the measures of the variables.

Chapter V contains a detailed description and discussion of the results concerning the relationship between mid-life patterns and the residential mobility of one cohort of elderly Ontario men.

The second component of this research is addressed in Chapter VI through an examination population aging in Canada, associated planning challenges, and how knowledge of a relationship between mid-life patterns and the residential mobility choices of a specific cohort of elderly men can contribute, at a variety of levels, to the development of planning for an aging population in Ontario.

Finally, a brief summary of this dissertation and its conclusions are presented in Chapter VII.

Chapter II

Aging Issues in Public Policy and Planning

Planners are challenged by a complexity of inter-related policy issues which has developed in response to "questions about the provision of income security for the aged, the increased demands on the health-care system, housing, transportation and other service needs" (Marshall, 1987a:1). Taber (1980) has suggested that such issues have many of the characteristics of the complex, ill-structured problems described by Rittel and Webber as "wicked" (1973). For example, although issues associated with the care of the elderly have a high priority in advanced countries, policy debates reflect the lack of a consensual definition of "the problem(s)". Moreover, such ill-structured planning environments "resist concerted social action because they mobilize conflicting interests" (Taber, 1980:247). As Kane and Kane have observed, "discussions of long-term care alternatives tend to resemble cacophony more than symphony" (1980:249). This chapter examines the varying policy implications of different residential mobility choices of the elderly and associated planning dilemmas faced by policy makers seeking to facilitate the integration of the elderly into the community; the historical development of the planning environment in Ontario with regard to aging issues; and how issues associated with residential mobility are reflected in current planning for the elderly population.

2.1 Policy Implications of Residential Mobility Choices in Later Life

The shift in policy from a medical model of service delivery to a more community-based integrated approach and the associated popularity of the concept of "aging-in-place", have contributed to the development of a myth "that the elderly are geographically stable and generally immobile, at least until forced to move into an institution" (McPherson, 1988). On the contrary, there is evidence of considerable residential movement in the elderly population, most of which

is local (Northcott, 1988).

For the purpose of this research, residential mobility is defined as a "physical movement, that is, a [permanent] change in the place of residence" (Northcott, 1988:5), regardless of distance. The term migration is used to denote residential mobility involving the crossing of a boundary, usually that of a municipality or province, while local mobility refers to movement within this boundary. On the other hand, the term aging-in-place describes "the tendency for older adults to remain in the same home and neighbourhood in which they have lived most of their adult life" (McPherson, 1990:457).

Research on elderly residential mobility specifically is a relatively recent phenomenon (Northcott, 1988). Much of the research has tended to be empirical and descriptive, focusing on population age distributions, migration streams, or socio-demographic characteristics of movers as compared with non-movers. The early taxonomic work quickly established that movers and non-movers had different characteristics, and that there were different types of movers (*e.g.* Biggar, 1980; Wiseman and Roseman, 1979). Senior migrants as compared with local movers were found to have very different profiles, suggesting a social and economic selectivity in the type of move made, with the healthier and wealthier being more likely to migrate (Biggar, 1980). Differences have also been found with regard to the timing and type of a move (Litwak and Longino, 1987; Rogers, 1988; Yee and Van Arsdol, 1977).

Overall, the great proliferation of decision-making models (Rudzitis, 1979) and theories of elderly residential mobility, reinforce the impression that this is a very complex process, influenced by a wide variety of factors. A number of dilemmas are appearing as we begin to plan for an aging population, in part because associated with these observed differences in mobility groups are outcomes (aging-in-place, local mobility or migration) which can have very different policy implications.

2.1.1 *Aging-in-place*

Researchers of aging-in-place have been studying the meaning of home and attachment to place (e.g. O'Bryant, 1982) as explanations of elderly residential satisfaction. Inertia and differences between movers and stayers (O'Bryant and Murray, 1986). Residential inertia is thought to be a result of: residential stability, as indicated by length of residence, a small number of previous moves, and home ownership; social bonds, both formal (e.g. church membership) and informal local friendship and kinship ties, and an associated neighbourhood satisfaction; an economic accumulation of "location specific capital" (Oldakowski and Roseman, 1986); and psychological ties, such as the need to maintain a sense of environmental and temporal continuity through the home, as a repository for meaning and personal identity (Rowles, 1987).

The policy implications of aging-in-place are numerous. The trend in policy development has been to place a strong emphasis on the role of formal community support services (Wheeler, 1982), with some acknowledgement of the roles of informal caregivers, and little recognition of the inter-related housing, transportation and land use issues. Over the past decade there has been considerable discussion of models of care and service delivery. Although the community care model is gaining acceptance, issues concerning how this will be implemented, the relationship between informal and formal care, privatization of services, and the co-ordination of service delivery, remain in contention (Gee and McDaniel, 1994).

The affordability, suitability, and condition of homes for aging-in-place can also be important. With regard to affordability, policy issues include such things as income security, home equity conversion, tax abatements, renter protection, and shelter allowances/subsidies (Brink, 1986; Golant, 1992a; Howe et al., 1994). Sources of supplementary income, such as home occupations, home sharing, or the rental of accessory apartments, can be contentious issues for local planners (Howe et al., 1994; Pollak and Gorman, 1989). Concern about the suitability and condition of homes suggests a need for policies regarding the rehabilitation or repair of existing

housing and the promotion of barrier-free or adaptable design (Brink, 1986; Dunn, 1991; Howe *et al.*, 1994; Leather and Mackintosh, 1993; Wheeler, 1982). One dilemma faced by planners trying to facilitate aging-in-place is associated with private ownership, property rights, and the constitutional extent to which private housing can or should be regulated to be barrier-free or adaptable. Alternatively, they must be prepared to adopt a continuing policy to subsidize the rehabilitation of private housing, or to compensate for unsuitable housing with a higher level of community support service.

At a larger scale, considerations of community composition and the availability of physical and social supports for aging-in-place within the neighbourhood are important planning policy issues (Greenberg, 1982; Hodge, 1990; McClain, 1991). Hodge (1991a:12) has argued that "the main challenge for community planners is to design (or more likely, redesign) communities amenable to the needs of seniors". Even when planners have little control over factors influencing the local accessibility of services and facilities, the "planning system can ameliorate or accentuate the difficulties caused, and that in itself might make an impact on the independence of old people" (Greenberg, 1982:410).

During recent decades the suburbanization of older people as they age-in-place and their children mature and leave home has raised a number of policy concerns, such as a reorientation of local community services and facilities designed for young families to those required by the elderly, and an associated concern with the need for planning and policy initiatives to create enabling physical environments for suburban elderly (Golant, 1992b; Hodge *et al.*, 1994; Patrick, 1980). In addition, there is an increasing regional disparity in the demand for social services for elderly who are aging-in-place, associated with the differential maturity of relatively homogeneous post-war suburbs (Moore and Rosenberg, 1994).

The local environment of seniors aging-in-place can also represent familiar surroundings which contain informal sources of support (*e.g.* friends, neighbours, and kin) and more formal

social bonds such as churches and clubs (Hodge, 1990), which could influence their moving decisions (Connerly, 1986). Evidence of an increasing social and spatial separation of the elderly from relatives and friends (Warnes, 1982), suggests that planners who wish to facilitate aging-in-place will need to rethink the meaning of community for the elderly and the potential role community-building as a policy alternative (Hodge, 1990).

To summarize, the option of aging-in-place has a broad range of policy implications associated with the provision and delivery of community support services, the design or adaptation of housing, the development of physically and socially supportive local environments, and the inter-relationships of these factors. However, for a number of reasons, aging-in-place may not be suitable for many seniors (Leather and Mackintosh, 1993). Once residential mobility enters the equation, policy implications change, even when the moves are local.

2.1.2 Local Mobility

Although elderly residential mobility mostly involves local moves, research on local mobility is sparse (Carter, 1988), especially in Canada (Moore and Rosenberg, 1993). Wiseman (1980) has suggested that there are five different types of elderly local movers, those making: an amenity move; an environmental push away from undesirable housing; a relatively involuntary assistance seeking move; a continuing pattern of chronic mobility; or forced relocation. A potential sixth group which have issues in common with local movers would be involuntary stayers, those who would like to move but are unable to due to a lack of options and/or resources. With the exception of the amenity movers, these groups tend to share a relatively low resource level, particularly low income, poor health and widowhood. In general, seniors make local moves at a later developmental stage associated with declining health and a need for assistance (Carter, 1988). Although one might expect that these moves would be towards the city centre where there is a higher density of life support facilities and less dependence on personal transport, Wiseman

and Virden (1977) found that most of the movement was outward or lateral, within and between suburbs.

The policy implications for planners wishing to facilitate local mobility are varied. Since local movers remain in their greater community or neighbourhood and in the same service delivery system, their needs often appear to be synonymous with those who are aging-in-place, a possible explanation for the lack of research interest in this group. Local moves are often thought to be primarily housing adjustments (Wiseman, 1980; Joseph and Cloutier, 1991). However, a move to a more manageable home near kin, for example, could also influence the type and balance of informal and formal support services used, and may reduce transportation-related problems (Joseph and Hallman, 1996).

Even a local move can be mentally and physically demanding and at times overwhelming for the elderly (Lawton, 1986; Levi and Petty, 1992). With the exception of moves into institutions, little policy attention has been given to relocation services, such as help with the search for alternative housing, financial and physical help with moving, and help to get settled in the new residential situation (Leung, 1990). There are a few examples of the use of financial incentives to encourage "over housed" seniors to move into smaller units (Brink, 1986). However, Lawton (1986) has expressed concern that such programs may result in the exploitation of older people.

With local mobility, planning issues associated with housing and/or neighbourhood specialization become important. The policy focus shifts to the provision of housing options that "respond effectively to the varying needs and preferences of seniors" (Canada Mortgage and Housing Corporation, 1990:15). Moreover, different housing may be appropriate for people at different stages of the life cycle, suggesting that over-regulation for the benefit of one group may restrict the choices available to people in other stages of the life cycle. A continuing debate has developed concerning the distribution and condition of housing stock, the "over housing" of

seniors, and their place in the housing market (Golant, 1986: 1994; Greenberg, 1982; Lawton, 1986; Struyk, 1987). In addition, if housing is to be designed specifically for seniors, there has also been much discussion concerning whether it should be age-integrated or segregated at the building level and/or at the neighbourhood scale (Sayegh, 1987).

Many have found that the provision of housing alternatives for the elderly is a problem because of restrictive land use regulations (Golant, 1992a; Hodge, 1990; Laws, 1994; Rossi and Shlay, 1982). For example, "many types of seniors' accommodations fall between traditional zoning categories. Public, non-profit, and private housing providers often find themselves thwarted by the rigamarole of trying to meet development control procedures and regulations" (Hodge, 1990:11). Through official plans, land development regulations, zoning, subdivision, site planning, and building codes, "a locality can control the types, size, density, arrangement, numbers, physical features, and quality of the housing alternatives it offers" (Golant, 1992a: 287). Moreover, even in cases where appropriate zoning is possible, many of the best sites are not zoned and development has been effectively blocked by neighbours for a variety of reasons. Opposition comes from old and young alike. In effect, "the distribution of housing and population, therefore, is not simply determined by market forces but in part is influenced by collectively negotiated local political decisions" (Rossi and Shlay, 1982:28). As a result, Golant (1992a) has suggested that there are many possibilities but few choices of housing options for seniors. Somehow planners need to find a way to address these dilemmas, if they are going to meet the needs of seniors. Although land use regulation has often created barriers, there also are a growing number of examples of how it can be used to facilitate or encourage the provision of housing options for older people (Brink, 1986; Energy Pathways Inc., 1995; Howe *et al.*, 1994; Pollak and Gorman, 1989; Shifman, 1983).

In sum, while local movers share many policy issues with those who are aging-in-place, debates concerning housing options are important additions. Longer distance migration further

complicates planning for an aging population.

2.1.3 Migration

Researchers have discovered that elderly migration is substantially different from that of younger age groups (Meyer and Speare, 1985; Serow, 1987a). The elderly make three basic types of long-distance moves - amenity, assistance, and return migration (Wiseman, 1980). Of the three, the distinct component represented by return migration is more difficult to separate since it often is associated with a need for assistance. Long-distance moves are more likely to occur at the time of retirement, although there is evidence that some amenity moves are followed by assistance seeking return migration (Longino and Serow, 1992). Elderly migrants tend to be younger, wealthier, healthier, better educated, and more likely to be married than other senior mobility groups (Biggar, 1980).

With migration, policy concerns tend to focus on issues associated with the distribution of the elderly population. As argued by Rosenberg and his associates :

the decline of the elderly population in some areas and its concentration in others have serious implications for the vitality of communities, their vulnerability to policy changes at higher levels of government [through income transfers], and their ability to provide and sustain effective levels of service. (1989:227)

Concentrations of elderly can appear either through amenity migration to retirement communities or through aging-in-place coupled with the out-migration of younger age groups. These patterns create very different types of elderly communities with different policy concerns (Serow, 1992). Moreover, "elderly migration is more 'channelled' than non-elderly migration and may have more serious consequences for service delivery in major receiving and sending [communities]" (Northcott, 1988:102).

Because of the differential selection of migrants in terms of health and economic status, planners have begun to look at the economic development potential associated with an affluent

retired population (Gnaedinger and McFarlane, 1991; Hodge, 1991b; Laws, 1994). The magnitude of income and asset transfers associated with elderly migration is thought to be a positive stimulus to economic growth, however little is known concerning the long-term economic impact of these migrants as they age-in-place and require an increasing level of community support services (Bryant and El-Attar, 1984; Crown and Longino, 1991; Northcott, 1988; Serow, 1992). There is some evidence that elderly long-distance migrants can become more dependent on formal community services than other elderly residents, possibly because of a lack of local familial or social supports (Joseph and Cloutier, 1991). However, a continuing in-migration of the newly retired could somewhat offset this potential burden (Bryant and El-Attar, 1984; Northcott, 1988). Nevertheless, administrators of retirement communities have expressed a growing dilemma over how to respond to residents who are aging-in-place in a community designed for and marketed to healthy, independently living seniors (Bowers, 1989). On the other hand, with increased longevity more and more of the newly retired are caring for elderly parents, creating a market for retirement communities with accommodations for both generations, such as dwelling units with accessory apartments (Longino, 1992), or with nearby long-term care facilities such as retirement or nursing homes. Although private and community services can evolve to meet changing needs, this is contingent upon available resources and diligent planning (Bryant and El-Attar, 1984). The growing trend of amenity moves to more dispersed less accessible communities, could mean that "migration-induced stresses will overlay and exacerbate long-standing problems of providing services to scattered communities within the context of finite budgets" (Joseph and Cloutier, 1991:443).

Less attention has been given to the consequences of elderly amenity migration to the community of origin (Serow, 1992). As pointed out by Crown and Longino (1991:201), "regions that gain income as a result of elderly migrants do so at the expense of other regions". Many of these communities of origin may be both losing their younger relatively well-off elderly through

amenity migration, and gaining older more dependent elderly through return migration (Northcott, 1988). As a result they may be carrying the bulk of the burden of caring for the dependent elderly population. Moreover, an increased level of service to meet the demand may in turn attract older people as they lose their capacity for independent living. Such in-migration would also create an increased need for suitable housing and transportation alternatives.

Communities with elderly concentrations due to aging-in-place coupled with the out-migration of younger age groups would have similar concerns, especially if their younger, healthier and wealthier seniors are also leaving. However, since the out-migration of the younger population is sensitive to economic conditions, these communities have the added problem of a local population which ages in fits and starts (Bergob, 1995).

In sum, the differential residential migration of the elderly can lead to localized service demand differences. Often resource allocation is based on numbers, however "while the distribution of gains and losses provides indications of shifts in the *potential* demand for services, the *actual* demand is also a function of the health and mobility of the local population [authors' emphasis]" (Rosenberg *et al.*, 1989:227). Communities with similar concentrations of the elderly may have very different needs. In planning for an aging population, it will become increasingly important to use a finer scale and to recognize local contextual differences.

2.1.4 Summary

The residential mobility choices of the elderly are part of a dynamic system of inter-related issues associated with housing, transportation, community support services and land use which present planners with a number of dilemmas which are particularly sensitive to local context. Examples would include issues associated with competing models of care and service delivery, provision of appropriate housing, access to facilities and services, community development, the introduction of housing options within neighbourhoods, and localized differences in demand, to mention a few.

As Hodge (1991a:12) has argued, "next to health care professionals, [community] planners probably have the most to offer seniors in maintaining their independence". At present, local planners in Ontario show considerable variation in their recognition of issues associated with an aging population, and the approaches they use to address them.

2.2 Planning for the Elderly in Ontario

During the postwar period in Canada, there was a rapid growth in health and social programs for the elderly (Havens, 1989; Novick, 1985) at a time when gerontological expertise and research was underdeveloped (Marshall, 1987a). As a result, the research and planning of the '50s and the '60s was "ad hoc, intuitive, fragmented, single-problem and single-discipline oriented" (Havens, 1989:276). As problems would come to the attention of policy makers, in the form of citizen demands or practitioner concerns (Pringle, 1989), the government was pressured to respond (Novick, 1985). Aging came to be perceived as a social problem. Moreover, problems were considered in isolation, without pursuing their inter-relationships (Havens, 1989; Novick, 1985). As Novick (1985:330-331) has argued, "the concept of a 'direct response' to a specific problem was easier to get into a political system of negotiation and compromise than a general reshaping of programs, or the rationalization of inter-governmental and public/private roles". Hence, the planning process in Canada during this period was essentially that described by Lindblom's (1959) theory of disjointed incrementalism. This process involves the division of large problems into smaller ones distributed among a large number of actors making independent decisions (Friedmann, 1987), each contributing a small incremental step toward an overall improvement (Rittel and Webber, 1973). One end product of this process has been a long-term care system in Ontario which, "is a patchwork of aggregated programs and facilities of uneven quality and accessibility, operating under a fragmented government structure of partial planning, management and monitoring" (Ontario, 1993:37).

However, the application of an incremental planning process to an ill-structured problem can have unexpected results (Taber, 1980; Rittel and Webber, 1973). As argued by Rittel and Webber (1973:165), "if, however, the problem is attacked on too low a level (an increment), then success of resolution may result in making things worse, because it may become more difficult to deal with the higher problems". Each new solution changes the problem. Since there is no objectively "right" or "wrong" answer, "powerful interest groups have grown up around each of these program changes and are mobilized at any threat" (Taber, 1980:247), often regardless of the program's effectiveness (Binstock *et al.*, 1985). As a result, the current planning process for the development of policy for older Canadians is one which more closely approximates the pluralistic advocacy planning model described by Davidoff (1965). This theory is based on the premise that "planning action cannot be prescribed from a position of value neutrality" (Davidoff, 1965:331). It is largely an adversarial model in which plural plans, developed by special interest groups, compete in the public domain (Hudson, 1979). One possible advantage of an advocacy planning process is that it may make the rationales and potential repercussions of policy decisions more explicit (Rittel and Webber, 1973).

In Canada, the result has been "an uncoordinated panoply of aging and health policy initiatives at federal, provincial, and local levels" (Marshall, 1994:240). The federal government's primary policy area associated with aging is income security. It is constitutionally limited in its role in health, community and social services and housing policy, which are considered to be under provincial jurisdiction. However, it has considerable influence in these policy areas through a variety of cost-sharing arrangements with the provinces (McDaniel and Gee, 1993). Within the provinces, aging policy tends to be compartmentalized by ministry and delivered at the local level, also involving a variety of cost-sharing arrangements. In addition, "service delivery policies are made throughout Canada at community and district levels, often without guidance, mandate, or financial support from higher levels" (Marshall, 1994:233). Interest groups influence decisions

at all levels. One example of the extent of their involvement can be seen in the relatively recent public consultation concerning reform of the long-term care system in Ontario which had over 75,000 participants, received more than 2,000 written submissions, and heard from a wide variety of professional, occupational and citizen interest groups, 23 of which were quoted in the final report (Ontario, 1993). Moreover, in these times of fiscal restraint, the influence of macro-level political, social and economic variables are becoming more apparent, as difficult choices are being discussed.

To summarize, "there is not much that is systematic about aging and health policy in Canada. It is ill-developed and often ill-advised; its policies are fragmented and sometimes contradictory" (Marshall, 1994:233). The associated environment for planning for an aging population is ill-structured, turbulent and unpredictable. Although many of the issues associated with the differential residential mobility of the elderly are sensitive to local context, because of the fragmented nature of planning for aging in Canada, "these problems often require policy solutions from all levels of government - local, provincial, and federal" (Northcott, 1988:102). This is due, not so much to the nested nature of federalism, as to the structural differentiation of responsibilities with respect to aging issues which has evolved in Canada, within and between different levels of government. As a result, a number of different governmental interests are involved at the local level depending on the issue. Although other nongovernmental organizations and private interests also play a part, the public sector controls much of the planning, regulation, and funding of programs and services for the elderly in Ontario. In order to examine current planning practice in Ontario, it is important to understand what local planning bodies have jurisdiction over issues associated with aging, the extent to which such issues are acknowledged and acted upon, and how these planning initiatives come together within a local context.

2.2.1 Local Planning Bodies

As mentioned earlier, responsibilities of the federal and provincial governments are constitutionally determined, with the federal government largely responsible for the income security of the elderly, and provincial governments responsible for health and social services, and housing (McDaniel and Gee, 1993). Local government institutions have no constitutional status, other than as a responsibility of the province (Hodge, 1991c). As is the case for most of the provinces, Ontario has maintained a paternalistic approach in the delegation of local planning responsibilities.

The provision of health and social services for the elderly has largely remained the prerogative of the Province, presently under the Ministry of Health (Ontario, 1994). Local planning and resource allocation of long-term care services and facilities for the elderly has been delegated, subject to Ministerial approval, to District Health Councils which are special purpose bodies appointed by the Ministry. The Long-Term Care Division of the Ministry of Health also maintains area offices, whose function is to implement the District Health Councils' plans. In addition to their administrative and regulatory tasks, these offices are also expected to "support community planning and local decision-making" with respect to long-term care, and form liaisons with local municipalities and planning bodies (Ontario, 1996a:35). Although local municipal governments in Ontario have taken leadership in the integrated planning of health and social services for the elderly in the past (Novick, 1985), they presently have very limited roles, usually at the upper-tier level as administrators/providers of provincially supported services such as municipal homes for the aged and social housing projects (Ontario, 1997). The federal government plays a relatively small role in health and social policy areas affecting the elderly, through a variety of grants and cost-sharing arrangements (Marshall, 1994; McDaniel and Gee, 1993).

Responsibility for the planning of land use, local infrastructure and transportation systems, associated urban design, cultural and recreational services and facilities, community and economic

development, and the implementation of Provincial housing policy, has been delegated to local municipalities - subject to the approval of the Ontario Ministry of Municipal Affairs and Housing (*i.e.* Ontario, 1983; 1996b). In addition, the current provincial government is developing highly controversial legislation which changes the roles of provincial and municipal governments, such that municipal governments would also be responsible for social assistance and various forms of social and special housing (Ontario, 1997).

However it should be noted that with regard to housing issues, broad housing policy is centralized at the federal government level under the auspices of the Canada Mortgage and Housing Corporation (Golant et al., 1991), largely due to the link between the housing industry and the economy. Within a structure of federal-provincial co-operation, the provincial responsibility is generally the delivery of social housing programs for the elderly. Unlike those for other social programs, federal grants to provinces for housing have strict conditions and are carefully monitored. This has resulted in provincial and local governments which tend to have a bricks and mortar mentality with little recognition given to the inter-relationship between housing and community services, especially in Ontario (Schwenger, 1989). For example, the housing and support service components of supportive housing have been treated as distinct and separate (Ontario, 1991; Ontario, 1992). Recent Ontario housing policy has not explicitly addressed issues associated with aging, rather it has focused on the creation of opportunities to provide affordable housing, small scale intensification, and on ensuring that there is sufficient land designated for residential development to meet anticipated growth for the next decade (Ontario, 1995a). Although lacking jurisdictional authority, in effect, the Canada Mortgage and Housing Corporation represents senior governmental interests in issues associated with the housing of the elderly in Ontario. At the local level they have actively promoted the development of housing options for older people through their regional offices, arguing that they "are in a strong position to serve as a catalyst to encourage appropriate linkages between services and housing" (Canada

Mortgage and Housing Corporation, 1992:26). However, such links do not appear to have developed in Ontario. Because of their extensive research program and growing resource centre, the main role of the Canada Mortgage and Housing Corporation in local planning for an aging population in Ontario has been as an initiator and supporter of pilot projects (*e.g.* Portable Living Units for Seniors), a developer of planning tools (*e.g.* the SENIORS computer program, an information tool kit), and as an important source of information concerning issues associated with the housing of the elderly.

In addition, there are other local planning bodies (*e.g.* social planning councils), or local advisory committees (*e.g.* the Toronto Mayor's Committee on Aging), which "act in an advisory capacity without decision-making responsibilities" with respect to issues associated with aging (Ontario, 1988:105). Some municipalities have social planning councils whose responsibilities include, "local planning, research, information sharing and advocacy. [However,] substantial differences exist among social planning councils with respect to their resources and their ability to provide effective planning services" (Ontario, 1988:104).

Other non-governmental organizations, professional, or private interests are represented in local planning activities through membership in committees, or through public consultation which is encouraged, or mandated in the case of municipal planning through the Planning Act (*i.e.* Ontario, 1983; 1996b), as part of the planning process.

In sum, there are two types of local planning bodies which have provincially delegated authority with respect to planning for older people: the District Health Councils, and municipal governments. However, they are answerable to two different provincial ministries - the Ministry of Health, and the Ministry of Municipal Affairs and Housing, and "interministerial coordination mechanisms are generally weak" (Marshall, 1994:241). In addition, each of these local bodies, especially municipalities, also have an internal compartmentalization of planning activities by department or committee. This is further compounded by a two-tiered municipal system for many

communities in Ontario.

To examine, how current planning practice in Ontario addresses issues associated with an aging population, it would be useful to first look at the general awareness of this trend exhibited by local planning bodies across the province, particularly as they envision the future of their communities.

2.2.2 General Awareness of Aging Issues

During the extended process of long-term care reform in Ontario, the aging population was acknowledged as a major factor shaping policy (Ontario, 1993). Since this reform process resulted in the delegation of local planning responsibilities to Long-Term Care Committees in District Health Councils, these special purpose planning bodies have a mandate to examine issues associated with the provision of health and social services for the elderly. General awareness of these issues is high since even in districts with relatively young populations there is a demand for community services for the elderly. However, inter-related issues associated with land use, housing, and urban design are only marginal to their mandate which is primarily focused on funding allocations for health and social services.

On the other hand, municipal planning bodies have a more general mandate. The extent to which they identify and address issues associated with an aging population is quite variable. One way to examine their interpretation of this trend is to look at their visions of the future and associated planning documents. The materials accumulated by Shipley (1997) for his recent research into the practice of visioning as a municipal planning tool in Ontario, provide some interesting insights¹. He collected documents from 40 Ontario municipalities who had participated in some form of visioning, usually as part of the development of strategic or official

¹ See Appendix A for a detailed description of the research methods used for this study.

plans. A total of 36 of these municipalities (9 upper-tier and 27 lower-tier) supplied sufficient documentation to be of use in the present analysis of the extent to which they identified planning issues associated with an aging population in their visions of the future. However, since this information was not collected for the purpose of the present research, only aggregated results have been reported, and no reference has been made to specific municipalities in the text.

It is interesting that less than half (44.4%) of these visioning exercises had associated documentation (frequently including the resulting strategic or official plans) that explicitly mentioned the aging population as a trend affecting the future. In addition to these, 8.3 per cent of the municipalities reported population statistics by age but made no mention of a trend, and one municipality (2.8%) mentioned the baby boomers with respect to their impact on retail trade but no other age-related trends. However, it should be noted that of the 47.3 per cent who made no mention of age with respect to population characteristics, over half of them went on to discuss issues associated with senior citizens or older people in their communities, usually related to community services or housing. Overall, 41.7 per cent of the municipalities explicitly mentioned issues associated with community services for older people (*e.g.* appropriate and accessible services, various roles in service provision, and family responsibilities), 36.1 per cent mentioned housing issues (*e.g.* accessible or barrier free housing, local housing options, and residential segregation), 11.1 per cent mentioned transportation-related issues (*e.g.* access to transit, and suitable pedestrian walkways), 13.9 per cent mentioned economic development issues (usually municipalities in high amenity areas), and 22.2 per cent mentioned other or general issues associated with older residents (*e.g.* physical accessibility to public and private facilities). Only 19.4 per cent, usually the upper-tier municipalities, mentioned a need to integrate or co-ordinate their planning for older people with other local planning bodies, primarily the District Health Council with respect to community services. One lower-tier municipality specifically mentioned a need to integrate land use and community services planning. This would suggest that there is

a general lack of awareness concerning the inter-related nature of aging issues, which is consistent with the historical trend of structural compartmentalization of aging issues at all levels of government. In a few instances (5.6%) the aging population was found to be a non-issue in the municipality, because provisions for their senior citizens were thought to be relatively good and not of critical importance. One municipality with an extensive, multi-phase visioning exercise, was not able to follow through on a number of issues identified early in the process because of a stated lack of understanding as to the aggregated impact of an aging population on their community. It would be interesting to know how prevalent this problem is among the remaining 19.4 per cent of the municipalities who made no mention of future aging trends or of specific issues associated with older residents in the documentation they supplied with respect to their visioning exercises. Their visions and associated policies usually incorporated inclusionary phrases such as "for all residents", or in a couple of cases, somewhat qualified statements similar to "for residents of all ages".

The use of inclusionary policy statements was common among both those who did and those who did not identify planning issues related to older people (61.1% in total). Such statements could reflect legal concerns (*e.g.* City of Etobicoke, 1990) with the possible violation of the Canadian Charter of Rights and Freedoms (Canada, 1982) or the Ontario Human Rights Code (Ontario, 1981), which prohibit discrimination on the basis of age. However, the Charter of Rights permits affirmative action to benefit the disadvantaged, and as of 1996 there were no examples in Canadian case law of challenges to policies or programs for senior citizens, with the exception of mandatory retirement age policies (Meehan et al., 1997). Similarly, the Ontario Human Rights Code explicitly states that "a right ... to non-discrimination because of age is not infringed where an age of sixty-five years or over is a requirement, qualification or consideration for preferential treatment" (Ontario, 1981:254). Moreover, in Ontario there was a planning law precedent set in 1995, when the Ontario Municipal Board "held that a by-law for a residential care

facility whose residents were required to be over 65 years of age did not infringe the Ontario Human Rights Code ... [or] the Canadian Charter of Rights and Freedoms" (Weir and Foulds, 1997:PA59). It would appear that the development of planning and policy initiatives specifically for senior citizens is permitted in Ontario provided that it is to their advantage. However, there is also a growing concern about what has become known as "people planning" by land use planners in Ontario, which has resulted in an amendment to the Planning Act in 1989 to the effect that zoning by-laws could not specify the relationship of people occupying a building (Ontario, 1989). More recently, municipal policies to control the distribution of social housing have raised similar concerns (City of Etobicoke, 1995). This has led to a general understanding that municipal planners should regulate the use of land, not the characteristics of the users, which could also be contributing to the more inclusionary approaches. Although it is not illegal to plan for the special needs of senior citizens in Ontario, inclusionary wording can be used to avoid potentially exclusionary impacts on other age groups, and possible legal challenges in the future. However, associated with these inclusionary approaches is a general assumption that if a variety of options (often unspecified) is available, then the needs of all residents will be met. While general inclusionary wording does not create barriers and could be used to enable or facilitate planning for older people, in the absence of specific policies dealing with issues associated with planning for an aging population, it provides little direction or incentive to address these issues.

In sum, a large majority of these municipalities across Ontario (80.6%) demonstrated some awareness of planning issues associated with an aging population in the documentation associated with their visioning exercises. On the other hand, with respect to specific policy areas, such as community services or housing, less than half of the municipalities mentioned issues. There also was a considerable variation in the issues that were identified. Given the information provided, it is difficult to determine whether this variation reflected a lack of awareness, differences in local context, or different, possibly more inclusionary, approaches to the issues. However, there were

examples of municipalities that acknowledged the aging trend in their visioning exercises, even though it was not an issue in their communities at the time. There also were municipalities with below average proportions of elderly residents who mentioned local issues associated with an aging population, which suggests that awareness is not simply a result of the population profile. On the other hand, there were examples of municipalities who tended to use inclusive wording for their policies but addressed a number of planning issues associated with an aging population. Moreover, an absence of planning or policy initiatives regarding issues associated with an aging population in the documents provided to Shipley (1997) does not preclude the discussion of these issues in other municipal documents not associated with the visioning exercise.

A more comprehensive appreciation of the complexity and variation of issues related to the residential mobility of the elderly and associated planning initiatives at the local level in Ontario can be gained by comparing the planning activity at various levels within and between local planning districts.

2.2.3 Examples of Local Planning for the Elderly

By comparing the planning activity in different upper-tier municipalities, plus their constituent lower-tier municipalities and corresponding District Health Councils, considerable insight can be gained into current planning for the elderly at a local level in Ontario.

The Municipality of Metropolitan Toronto (Metro), and Simcoe County are good candidates for such a comparison for a number of reasons. In both instances the political boundaries of the upper-tier municipalities correspond with those of the District Health Council, which means that the major local planning bodies are contained within the same geographical area. In addition, the proportion of the population that was 65 years of age and over in 1991 was similar for both municipalities (12.8% for Metropolitan Toronto; 12.9% for Simcoe County) and

only slightly above the provincial average (11.7%)². On the surface the aging of their populations appears to be much the same as that for the province as a whole.

However, Metropolitan Toronto is a highly urbanized community which contains about a quarter of Ontario's elderly population in a relatively small geographical area. As such, it represents an important component of planning for aging in Ontario. It has been argued that, "perhaps, nowhere else in Canada will aging be more strongly felt than in Metro in the next decade or so" (Municipality of Metropolitan Toronto, 1996:50). Moreover, Metro is a sending community, characterized by a net outflow of the elderly which would be even greater if not for international immigration (Northcott, 1988; Rosenberg *et al.*, 1989).

By way of contrast, Simcoe County is largely a rural area offering a high level of recreational amenities which attract elderly migrants from all across Ontario (Dahms, 1996). It has about three per cent of Ontario's elderly population, distributed over a land area which is 7.5 times larger than Metropolitan Toronto (Ontario, 1995b). Although Simcoe County is only one of many receiving communities in Ontario (Dahms, 1996; Rosenberg *et al.*, 1989), it has the added advantage that recent political restructuring has stimulated a great deal of planning activity in the County providing excellent examples of current planning practice.

In combination, these two examples present a broad range of issues associated with the residential mobility of the elderly and planning for an aging population. To facilitate comparison, requests for information regarding local planning for the elderly were sent to each of the planning bodies within the two districts as part of the present research³. In total, 29 local planning bodies were contacted and 26 (90%) responded providing a wide range of information and up to date

² Based on Statistics Canada 1991 census data as compiled by Strategic Projections Inc.

³ See Appendix B for methodological details concerning the requests for information from planning bodies in the Municipality of Metropolitan Toronto and Simcoe County.

planning documents. On the basis of this information, it was possible to obtain an overview of local planning practice with regard to issues associated with the residential mobility of the elderly within the two districts. Each will be examined in turn, beginning with a general profile.

Metropolitan Toronto

At the time of this research, the Municipality of Metropolitan Toronto, encompassed six lower-tier municipalities - the Cities of Etobicoke, North York, Scarborough, Toronto, and York, plus the Borough of East York (Figure 2.2.3.1). The Metropolitan Toronto District Health Council was responsible for the planning and allocation of funds for the long-term care health and social services provided to Metro's elderly by 113 different agencies (Metropolitan Toronto District Health Council, 1996).

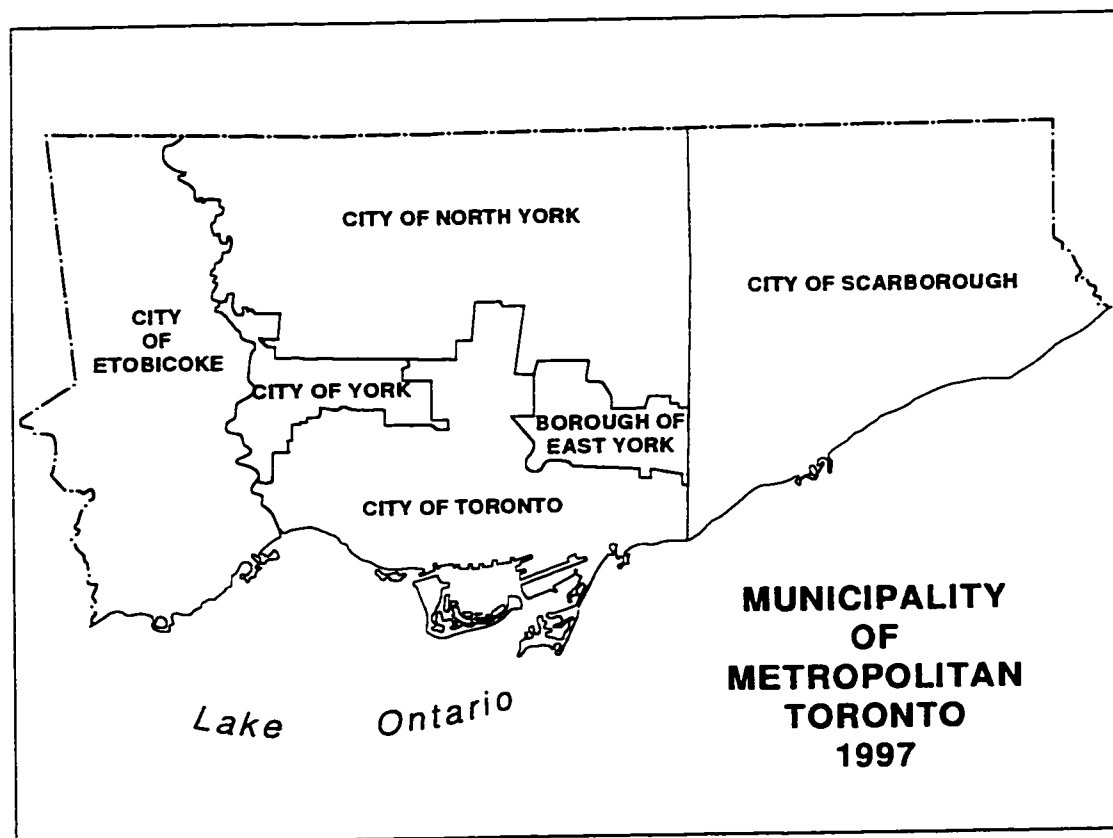


Figure 2.2.3.1 Political boundaries of the Municipality of Metropolitan Toronto in 1997

This large metropolitan centre can be characterized as a sending community with a net outflow of the elderly, primarily to the surrounding regional municipalities which form the urban fringe and to high amenity areas elsewhere in Ontario (Rosenberg *et al.*, 1989). Migration schedules for Metro show more pronounced retirement peaks over a broader age range than for the nation as a whole (Liaw and Nagnur, 1985). Nonetheless, the municipality's own internal momentum associated with past growth in younger age groups who have remained in the community as they aged, plus international immigration, has resulted in the continued growth of its elderly population (Rosenberg *et al.*, 1989). As can be seen in Table 2.2.3.1, the numbers of people aged 65 and over have increased throughout Metro in the period between 1981 and 1991. With such large numbers of elderly in their constituent populations, it is reasonable to expect that local planning bodies would give consideration to the needs of this age group, as has been the case. All have dealt with a wide range of issues associated with an aging population in their planning documents.

However, the elderly population and associated planning issues are not equally distributed across the metropolis. Using an index of segregation, Hodge and his associates (1994) found a pattern of generational separation in the Toronto Census Metropolitan Area that is unique in Canada. In 1991, age groups were intermixed in the central core of the city, while the elderly were highly concentrated in the inner suburbs, and younger age groups were dominant in the outer suburbs in what has come to be known as the "Greater Toronto Area". An alternative measure of the distribution of the elderly is location quotients, which basically indicate the extent to which the proportion of a group in the local population is above or below that of the province overall. For example, a location quotient of 2.0 would indicate that the proportion in the local population is twice that for the province as a whole. As can be seen in Table 2.2.3.1, there is considerable variation in the magnitude and the trends of location quotients for seniors (aged 65 and over) among the lower-tier municipalities in Metro. In the period between 1981 and 1991, the Cities

Table 2.2.3.1 Location quotients for seniors (65+) and "baby boomers" (born 1947-1966) in Metropolitan Toronto and Area Municipalities, 1981 - 1991

Municipality	Location Quotients (number)		
	1981	1986	1991
Municipality of Metropolitan Toronto			
Seniors	1.05 (226,115)	1.05 (252,160)	1.09 (291,105)
Boomers	1.03 (777,947)	1.07 (805,330)	1.06 (814,650)
City of Etobicoke			
Seniors	1.04 (31,209)	1.12 (37,045)	1.25 (45,455)
Boomers	.99 (104,239)	.98 (102,240)	.97 (101,660)
City of North York			
Seniors	.96 (54,293)	1.07 (65,155)	1.19 (78,430)
Boomers	1.01 (199,860)	1.00 (191,120)	.96 (182,765)
City of Scarborough			
Seniors	.76 (34,067)	.81 (42,725)	.89 (54,535)
Boomers	1.02 (160,886)	1.02 (170,120)	1.01 (179,000)
City of Toronto			
Seniors	1.24 (74,668)	1.10 (73,275)	1.02 (76,285)
Boomers	1.09 (230,546)	1.21 (255,010)	1.22 (262,175)
City of York			
Seniors	1.17 (15,808)	1.18 (17,405)	1.17 (19,295)
Boomers	1.00 (47,858)	1.08 (50,210)	1.08 (51,255)
Borough of East York			
Seniors	1.57 (16,070)	1.50 (16,555)	1.42 (17,105)
Boomers	.96 (34,558)	1.05 (36,630)	1.09 (37,795)

Source: Statistics Canada 1981, 1986 and 1991 census data as compiled by Strategic Projections Inc.

of Etobicoke and North York have experienced a considerable aging of their population, above the provincial average in 1991, while the population of the City of Scarborough has also aged but remained below the provincial average. The population in the City of Toronto, which contains the central core, became increasingly less elderly during this period and closely resembled the provincial average by 1991. The Borough of East York had a similar decline in location quotients but remained well above the provincial average. Of the six municipalities, only the City of York maintained a relatively constant location quotient, also above average. With such localized differences in population aging, one would expect associated differences in planning.

When one examines the planning documents of the various planning bodies of Metro with regard to issues associated with the residential mobility of the elderly, it can be seen that the out-migration of older people is of little policy concern (*e.g.* City of Toronto, 1991). The possible impact of elderly migration is dwarfed by the large flow of young families out of Metro into the urban fringe in the "Greater Toronto Area" (Municipality of Metropolitan Toronto, 1996). This trend, coupled with a large number of older homeowners that are aging-in-place, has resulted in major changes in the demographic profiles of area municipalities as suburbs mature, beginning earlier in East York, now evident in Etobicoke and increasingly in North York. As can be seen in Table 2.2.3.1, not only the proportions of baby boomers (born 1947 to 1966), but also their numbers, have declined in Etobicoke and North York in the period from 1981 to 1991. It has been estimated that "by 2011, over half of Metro's homeowners will be over the age of 55" (Municipality of Metropolitan Toronto, 1996:ii). As homeowners age-in-place and their children leave home, the associated decrease in the average household size has led to population losses in parts of Metro (Municipality of Metropolitan Toronto, 1996). Moreover, since growth has occurred in stages, there is considerable variation by neighbourhood within municipalities (City of Etobicoke, 1988a; City of York, 1989). As a result, the prevention of population decline and the maintenance of mixed community profiles have become major planning challenges requiring

intervention in a number of the local municipalities (e.g. City of Etobicoke, 1988b). It should be noted that although the net effects of this trend are similar to those of rural communities who also have concentrations of the elderly due to aging-in-place coupled with the out-migration of younger age groups (Rosenberg et al., 1989), the reasons for this trend differ, as do potential planning responses. While younger age groups are predominantly leaving rural communities for employment reasons, triggering economic development responses, an analysis of Metro's housing market has suggested that many young families are leaving because of a shortage of appropriate housing (Municipality of Metropolitan Toronto, 1996). Due to a limited supply of land for new or redevelopment, many of Metro's municipalities have formed what are basically local mobility policies encouraging the development of medium or high density housing options for older homeowners (especially condominiums), explicitly to make more low density housing available to young families (Borough of East York, 1995; City of Etobicoke, 1988a; City of North York, 1996; City of Scarborough, 1997; City of York, 1989; Municipality of Metropolitan Toronto, 1996).

It is interesting that the City of Scarborough with an overall proportion of elderly well below the provincial average, has recognized the aging trend in their population and has also adopted this policy. However, this should not be surprising since there are large parts of Scarborough that were developed during the same period as Etobicoke or North York, and share many characteristics with these communities. Scarborough's relatively young age profile can be attributed to its unique position in Metro as a municipality which still is developing "greenfields", albeit not for much longer (Municipality of Metropolitan Toronto, 1996; City of Scarborough, 1995). As a result of a more prolonged development period, coupled with changing patterns of immigration, the City of Scarborough's neighbourhoods exhibit a considerable diversity in population profiles (City of Scarborough, 1996).

Although the policy direction has been similar in these municipalities with maturing

suburbs, they differ in the planning tools employed/proposed to ensure the implementation of these policies. Most have used more inclusionary land use designations permitting a broader range of uses, either as-of-right or under conditions (*e.g.* City of York, 1994) and zoning by-laws including the use of temporary zoning for garden suites (*e.g.* Borough of East York, 1995) and holding by-laws (*e.g.* City of Etobicoke, 1988b), but the specifics of these measures vary considerably. Additional examples of planning tools used/proposed in their planning documents to ensure a full range of options for older people are: location criteria for the redesignation of land (*e.g.* City of Etobicoke, 1990); secondary plans (*e.g.* City of Etobicoke, 1990; and City of Scarborough, 1997); special policy areas (*e.g.* Borough of East York, 1995); site plan control (*e.g.* City of Etobicoke, 1988c; and City of Scarborough, 1990); density bonusing (*e.g.* Borough of East York, 1995; City of Etobicoke, 1990; City of Scarborough, 1997; and City of York, 1994); relaxing of parking or open space requirements (*e.g.* Borough of East York, 1995; and City of York, 1994); flexibility in development and other standards (*e.g.* City of Scarborough, 1994; City of York, 1994; and Municipality of Metropolitan Toronto, 1994); the wording of condominium declarations and other registered agreements (*e.g.* City of Etobicoke, 1990); partnerships with community organizations and the private sector (City of North York, 1996; Municipality of Metropolitan Toronto, 1994); innovative financial mechanisms (Municipality of Metropolitan Toronto, 1994); tax incentives (Municipality of Metropolitan Toronto, 1996); direct provision of housing (Municipality of Metropolitan Toronto, 1994; 1996); development of government land (City of Etobicoke, 1988b; Municipality of Metropolitan Toronto, 1996); support of demonstration projects (Municipality of Metropolitan Toronto, 1994; 1996); and streamlining of the development process (*e.g.* City of North York, 1996; and City of Scarborough, 1994). This long list suggests that, although any one municipality may focus on only a few strategies to obtain this goal, the current planning system in Ontario would appear to have sufficient flexibility to accommodate a wide variety of

approaches. However, the successful application of many of these strategies requires a careful monitoring of neighbourhood change on an ongoing basis, first to indicate a need for intervention and later to gauge its effectiveness and unintended impacts (Municipality of Metropolitan Toronto, 1996). Moreover, given the overall aging of the population in Ontario, it is unlikely that such interventions will be able to recreate a young age profile in the suburbs, which means that local planners will still be faced with the challenge of converting services, facilities, and physical environments designed for young families to also accommodate an older population which requires services increasingly at a more decentralized, local or neighbourhood level (City of Etobicoke, 1988c).

In contrast to these more suburban municipalities in Metro, the City of Toronto has experienced a net inflow of younger age groups over the last decade. As can be seen in Table 2.2.3.1, the numbers of residents 65 years of age and older has remained fairly constant, while the numbers and proportion of baby boomers in the City have increased. Moreover, there is little evidence of age segregation at the census tract/neighbourhood level in the central core of the Census Metropolitan Area, which is largely the City of Toronto (Hodge et al., 1994). As one would expect, different planning issues associated with aging have developed. The main thrust of the City of Toronto's policy has been the physical and social integration of older people into the community, relying heavily on integrated housing policies and inclusionary wording in the Official Plan (City of Toronto, 1994) and Zoning By-laws, based on recommendations from the Toronto Mayor's Committee on Aging (City of Toronto, 1991). This committee, composed of 21 appointed citizens, the majority of whom must be age 55 and over, plus a member of Council and the Mayor, "advises City Council and City departments on matters affecting seniors" (City of Toronto, 1997). As such, it has a strong role to play in ensuring an integrated approach to planning for aging across City departments. For example, upon their recommendation, the community services and facilities section of the new Official Plan has a sub-section dealing with

planning for the integration of older people and people with disabilities in the community, which includes a statement that: "Council will adopt policies and goals for housing, transportation, health, recreation, community services and facilities, and public works that will promote the provision of appropriate services" (City of Toronto, 1994:7.5). This advisory group has also advocated the involvement of older people in all aspects of the planning process, including representation on boards and committees such as the Toronto Transit Commission. The existence of such an advisory group at the municipal level in Metro appears to be unique to the City of Toronto. Other area municipalities appear to rely heavily on consulting firms or their planning departments, for advise/research on issues associated with planning for an aging population, which may or may not involve public consultation. The North York Planning Department also mentioned research done at York University concerning aging issues in the City (Bergum *et al.*, 1994), and by the City's Public Health Department.

An additional challenge associated with residential mobility mentioned by a number of the Metro municipalities has been planning for the great diversity within the elderly population, which has been exacerbated by the large volume and changing cultural and ethnic backgrounds of post-war immigrants to the area (City of Etobicoke, 1988c; City of Toronto, 1991; City of York, 1989; Municipality of Metropolitan Toronto, 1996). Family reunification policies have resulted in an increase in the number of older immigrants arriving in Metro, which "will probably not have much effect on the proportion of older people ... but it may create significant new needs for service" (City of Toronto, 1991:18). Moreover, if as the migration literature suggests, the healthy and wealthy elderly are those migrating out of Metro, then those who remain in the community could be relatively needy. It may have been this great diversity that provided some of the impetus for the Metropolitan Toronto District Health Council's development of "a population needs-based approach to planning" for long-term care which is being tested throughout Ontario (Ontario, 1996c:3). This approach emphasized a "shift in focus from a compartmentalized

approach to health planning (long-term care) to a population based approach (seniors 65+)". which facilitates the inclusion of broader community-based health determinants (Ontario, 1996c:32) and issues associated with an aging population. It also "encourages the comprehensive development of complementary strategies and collaboration between organizations/agencies" (Ontario, 1996c:42). However, this diversity plus increasing life expectancy have made it difficult to predict both the future numbers and the needs of Metro's aging population (City of Toronto, 1991). This has led to an emphasis by some of Metro's municipalities on the need for flexibility in planning for an aging population, arguing that the:

trends point to the need for greater flexibility in planning and policy making ... for example, the increasing proportion of elderly residents, coupled with government policies to keep people in the community mean the need to plan for a broader range of living environments and provision of facilities and programs". (City of Etobicoke, 1988c:39)

Nonetheless, as desirable as flexibility may be, community capacity and resource constraints will require some prioritizing of issues and the appropriate means of addressing these (Ontario, 1996c). To accomplish this, data at the appropriate level of aggregation are required, particularly at the neighbourhood level (Municipality of Metropolitan Toronto, 1996; Ontario, 1996c). A general lack of readily available data at this level with regard to health needs, has prompted the suggestion that, "one means of addressing the collection and assembling of baseline data is by way of agencies and service providers forming coalitions with planning agencies, academic institutions and others" (Ontario, 1996c:43). Similarly, to enable the development of healthy communities, Metro's Official Plan (Municipality of Metropolitan Toronto, 1994:46) proposes to set up a coordinated data management system to facilitate efficient research and information sharing, in addition to "assessing, in cooperation with other planning agencies and service providers, needs, characteristics, and changes within Metropolitan Toronto communities".

It is interesting that few of the lower-tier municipalities appear to have planning issues associated with the integration of planning for the elderly. The City of Toronto has internally

addressed such issues through the work of the Mayor's Committee on Aging. A second exception is the City of Etobicoke, which recognized a number of integration issues associated with planning for human service needs. In addition to the difficulty of making accurate projections, Etobicoke's planners observed that much of the funding for community services came from the Province with little local input, and argued the need for a local coordinating and planning body (City of Etobicoke, 1991). Since that time, the responsibility for the planning of local health and social services for the elderly has been delegated to local District Health Councils, supposedly filling that role. However, the City also observed a blending of distinctions between leisure and social service needs for the elderly in Etobicoke that required a more integrated delivery system (City of Etobicoke, 1988c), which would be beyond the mandate of the present District Health Council. It will be interesting to see how such issues are handled with the restructuring of Metro into a single-tier municipality in 1998. At present, the upper-tier municipality appears to be the main municipal planning body in Metro expressing an interest in "cooperating with the Province, the Area Municipalities and the providers of health care, social services and housing" (Municipality of Metropolitan Toronto, 1994:46), and this is with specific reference to anticipating the impact of future residential development.

In sum, all Metro planning bodies currently address issues associated with the aging population. However, specific issues related to the residential mobility of the elderly, and the particular approaches used to address them, differ across the metropolis. To reiterate, the more suburban municipalities are concerned with aging population profiles, associated losses of population and changing service needs, and have chosen to approach these as local mobility issues. On the other hand, the City of Toronto has focused on the general integration of older people into the urban fabric, largely addressing issues associated with aging-in-place and to a lesser extent with local mobility. Most of the planning bodies are trying to come to grips with the planning implications of the great diversity in Metro's elderly population, which is further

complicated by evidence of considerable variation in population characteristics and aging issues within municipalities at the planning district or neighbourhood level. A lack of data, particularly at this level, has made planning for an aging population difficult for all planning bodies. In addition, little attention has been given to the integration of planning for an aging population, particularly across planning bodies, with the exception of some discussion of the advantages of pooling resources to create a better data collection and information management system upon which to base decisions. It is interesting to see how these findings compare with those for a different planning district such as Simcoe County.

Simcoe County

Covering a large geographical area, Simcoe County has recently been restructured to form sixteen lower-tier municipalities, in addition to the two separated Cities of Barrie and Orillia which are not formally part of Simcoe County's governmental structures or subject to its Official Plan. Before this decade there were more than 30 different municipalities within the County. The restructuring which took place in 1991 and 1994 has been major, not just involving amalgamation but also changes in borders, and some lands have yet to be transferred in 1998. For example, as can be seen in Figure 2.2.3.2, parts of what used to be the Township of Medonte are now in four different municipalities. After the restructuring, many of the newly formed municipalities had four or more sets of Official Plans and Zoning By-laws. As a result, there has been considerable recent planning activity in the County, at both the upper- and lower-tier levels. Hence, many of the planning documents supplied by the municipalities are very current. In addition, the County has a wide range of contrasting community types, from the rapidly growing urban centre that is the City of Barrie, to the sparsely populated rural agricultural Township of Adjala-Tosorontio, to the rapidly aging recreation-oriented community of Wasaga Beach. Compared with Metropolitan Toronto, even the restructured County has a daunting number and variety of municipalities. On

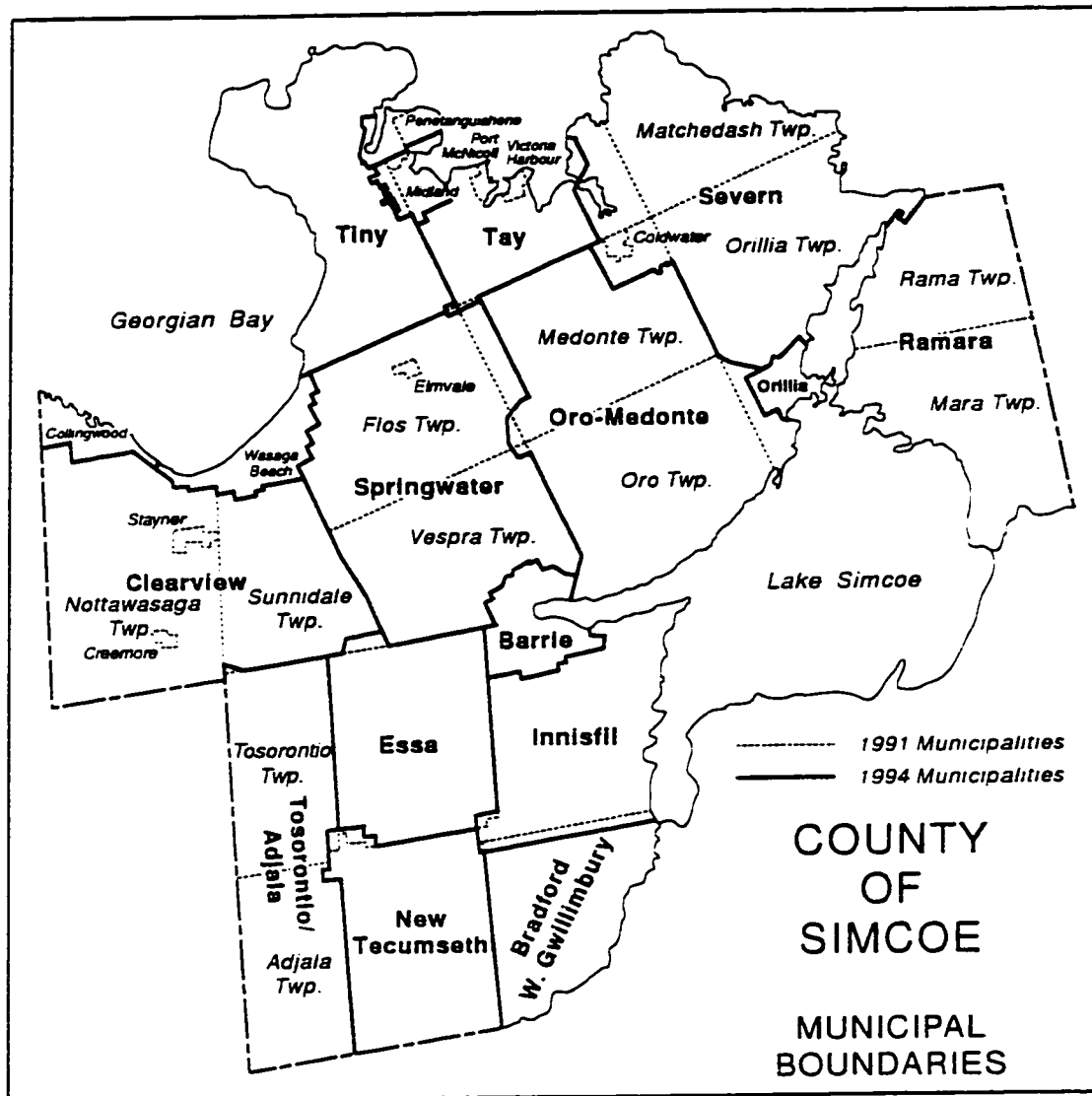


Figure 2.2.3.2 Political boundaries of Simcoe County, 1991 and 1994

the other hand, the District Health Council only has to deal with approximately 25 local agencies providing long-term care health and social services (Simcoe County District Health Council, 1996a), as compared with more than 113 in Metro. There are also a number of First Nation lands in the County which are under Federal and Band jurisdiction, and not dealt with in detail in this analysis.

In general, this county is a receiver of large numbers of elderly migrants to the high

amenity areas on Georgian Bay (Dahms, 1996), and migrants of all ages to the southern communities which are on the fringe of the "Greater Toronto Area". Preliminary figures from the 1996 Census of Canada indicate that Simcoe County's growth rate over the preceding five years was more than twice the provincial average (Canada, 1997). As can be seen in Table 2.2.3.2, the number of elderly residents in Simcoe County increased by 42.4 per cent in the decade from 1981 to 1991. However, the declining location quotient in 1991 indicates that this increase had not kept up with that of the general population. Unfortunately, population statistics were not available for the 1994 municipalities, however in Table 2.2.3.2, the 1991 municipalities have been grouped together to approximate the new municipalities. For example, the new Township of Clearview contains the major portions of the old Township of Notawasaga, the Village of Creemore, the Town of Stayner, and the Township of Sunnidale, which have been grouped together. As can be seen in Table 2.2.3.2, there is considerable variation in the distribution of the elderly population both within and between the municipalities in Simcoe County. The majority of the municipalities bordering on Georgian Bay, specifically the Towns of Collingwood, Midland, Penetanguishene, and Wasaga Beach, plus the Townships of Tay, Tiny, and the old Township of Matchedash (now part of the Township of Severn), have proportions of elderly in their populations which are well above the provincial average. On the other hand, the Town of Bradford West Gwillimbury on the southern border of the County has an increasing number of older people in its population, but a rapidly declining proportion of elderly, well below the provincial average. The Town of New Tecumseth, also on the southern border, shows a different pattern with the proportion of older people in the population increasing rapidly, possibly because of its retirement communities. In general, the rural townships that are not bordering large bodies of water have relatively low proportions of elderly in their populations except in their larger settlements such as Creemore, Stayner, Coldwater, and Elmvale. These are probably what are commonly termed "local service centres" which are known to attract the retired rural residents, although Creemore has also become

Table 2.2.3.2 Location quotients for seniors (65+) in Simcoe County and Area Municipalities.
1981 - 1991

Municipality	Location Quotients (number)		
	1981	1986	1991
Simcoe County	1.15 (26,064)	1.18 (30,750)	1.10 (37,110)
City of Barrie	.99 (4,315)	1.03 (5,415)	.93 (6,820)
City of Orillia	1.48 (3,560)	1.58 (4,160)	1.52 (4,625)
Town of Bradford West Gwillimbury	.79 (919)	.75 (1,070)	.59 (1,230)
Town of Collingwood	1.48 (1,792)	1.52 (2,020)	1.44 (2,290)
Town of Innisfil	1.68 (2,271)	1.70 (2,710)	1.26 (3,215)
Town of Midland	1.29 (1,582)	1.36 (1,785)	1.42 (2,305)
Town of New Tecumseth	.89 (1,444)	.91 (1,675)	1.04 (2,475)
Town of Penetanguishene	1.41 (781)	1.27 (775)	1.23 (960)
Town of Wasaga Beach	2.11 (1,000)	2.00 (1,120)	1.90 (1,390)
Township of Adjala	.73 (284)	.65 (290)	.73 (385)
Township of Tosorontio	.68 (195)	.64 (235)	.50 (240)
Township of Notawasaga	1.18 (556)	1.08 (565)	.98 (605)
Village of Creemore	1.71 (204)	1.87 (240)	1.78 (275)
Town of Stayner	2.05 (522)	2.07 (645)	1.71 (690)
Township of Sunnidale	.77 (183)	.78 (195)	.72 (235)
Township of Essa	.44 (602)	.48 (700)	.48 (795)
Township of Oro	1.12 (781)	1.20 (990)	1.13 (1,200)
Township of Medonte	.96 (396)	.90 (445)	.83 (570)
Township of Rama	1.56 (222)	1.40 (230)	1.09 (255)
Township of Mara	1.43 (545)	1.57 (730)	1.64 (930)

(continued)

Table 2.2.3.2 (continued)

Municipality	Location Quotients (number)		
	1981	1986	1991
Township of Orillia	1.18 (818)	1.30 (1,015)	1.29 (1,230)
Village of Coldwater	1.97 (191)	1.66 (195)	1.73 (255)
Township of Matchedash	1.64 (85)	1.59 (90)	1.11 (80)
Township of Vespra	.61 (311)	.65 (415)	.62 (565)
Township of Flos	.84 (212)	.80 (225)	.72 (255)
Village of Elmvale	2.26 (269)	2.03 (330)	1.82 (355)
Township of Tay	1.07 (684)	1.30 (925)	1.31 (1,075)
Village of Port McNicoll	.98 (185)	.81 (160)	.84 (175)
Village of Victoria Harbour	1.50 (167)	1.38 (175)	.98 (180)
Township of Tiny	1.31 (936)	1.39 (1,180)	1.32 (1,395)

Source: Statistics Canada 1981, 1986 and 1991 census data as compiled by Strategic Projections Inc.

a trendy tourist community (Dahms, 1996). The two major urban centres, the Cities of Barrie and Orillia, show contrasting patterns, with Orillia's proportion of seniors remaining well above the provincial average, while the proportion of elderly in Barrie's population has dropped to below the provincial average.

Before planning for local health and social long-term care services for the elderly was delegated to the Simcoe County District Health Council, the County of Simcoe had a small Senior Citizens' Planning Department, and a Senior Services Committee of Council. The County had a pivotal position in local planning for the elderly, in that it was both a planner and provider of local community services, administratively connected to the lower-tier municipality's planning departments. For example, in 1989 the County's Senior Citizens' Planner put together a

Municipal Planners Task Force with the goal "to provide a forum in which planning recommendations are formulated with regard to senior services and housing" (Simcoe County, 1990:Appendix A). Their recommendations to Council "were drawn up to assist communities in addressing the needs of seniors when they conduct the required updates of their Municipal Housing Policy Statements and Official Plans and in their review of specific development proposals" (Simcoe County, 1991:1), and specifically addressed issues associated with accessory housing (apartments and garden suites), adaptable housing, and accessible housing. Shortly after this time, with the restructuring of the County and the transfer of many local health and social planning responsibilities to the District Health Council, the position of Senior Citizens' Planner was terminated, and the link with many local municipalities was lost. The County has representation on the District Health Council's Long-Term Care Committee as a service provider, primarily Homes for the Aged. Although the District Health Council's Multi Year Plan speaks of the importance of linking with other service systems, they predominantly refer to linkages within the health care community. Hence, as a result of a provincial initiative to co-ordinate local health and social services planning, Simcoe County has become a classic example of the sectorial separation of the planning of housing and the planning of community services for the elderly observed by Schwenger (1989) and Marshall (1994). This is probably the case throughout Ontario. However, in Simcoe County an initiative towards a more integrated approach to planning for an aging population at the local level has been lost.

However, this does not mean that the recommendations of the Municipal Planners Task Force have been lost. General awareness of issues associated with an aging population is quite high in the County's municipalities. A number of the municipalities have since developed policies regarding accessory apartments (*e.g.* Simcoe County, 1997; Town of Midland, 1994; the old Township of Orillia, 1991; Township of Tay, 1994; Township of Tiny, 1997), and garden suites (*e.g.* Simcoe County, 1997; Township of Clearview, 1996; Town of Innisfil, 1997; Township of

Tay, 1994; Township of Tiny, 1997), albeit only for rural/agricultural land use designations in most cases. Given the great range of land uses in many of these rural municipalities, from urban to agricultural, it is not unusual to have policies that apply to specific designations, or specific settlements. Like Metropolitan Toronto, there is considerable variation between and within municipalities in the identification of issues associated with an aging population, and the particular approaches used to address them in Simcoe County.

As a receiving community, a common planning issue in Simcoe County associated with the residential mobility of the elderly, not found in Metro, is the development of retirement/adult lifestyle communities. Although these developments are commonly located in rural areas, there also is one situated in the City of Orillia. This exception was an interesting example of a proactive approach taken by a local municipal government to supply much needed seniors housing by inviting proposals to buy and develop City land as a "Continuing Care Retirement Community" (City of Orillia, 1987). A number of Simcoe County municipalities have developed or proposed policies concerning retirement communities, usually as a land use designation that requires site specific amendments of the Official Plan and possibly the Zoning By-law (*e.g.* City of Orillia, 1988; Town of Innisfil, 1997; Town of New Tecumseth, 1996a; Township of Oro-Medonte, 1997; Township of Springwater, 1997). One municipality was able to sidestep the issue when the proponent was not able to demonstrate a market for this type of community, and another is in the early stages of reviewing the Official Plan and is just beginning to look at these issues (Town of Bradford West Gwillimbury, 1997). To some extent, retirement communities are a "wild card" in Simcoe County. The population projections and scenarios developed for the proposed Simcoe County Official Plan (Simcoe County, 1997) did not include estimates of growth from the development of retirement communities. However, an adult lifestyle community the size of Briar Hill in the Town of New Tecumseth (1996b) which will have 900 units with an estimated 1660 residents predominantly from outside the local area, will have a considerable effect on the age

profile of a town which had 2,475 residents aged 65 and over in 1991. The planning issues are very different from those for a comparably sized condominium development in Metro which would predominantly attract local seniors. The long-term impact is not clear, especially with regard to the future demand for community services. Some of Simcoe's municipalities have location criteria for these communities, to ensure that they are near community services and facilities (e.g. Township of Springwater, 1997). Others encourage the developer to plan for a continuum of care on the site, so that residents can age-in-place (e.g. City of Orillia, 1988; Town of Innisfil, 1997; Town of New Tecumseth, 1996b). However, given the present difficulty obtaining long-term care bed allocations in under-serviced areas of the County (Simcoe County District Health Council, 1996b), this may not be possible. The new Official Plan of one municipality (Township of Springwater, 1997) has limited the number of adult lifestyle communities which can be developed during the life of the Plan, to help regulate this growth.

On the other hand, it is interesting that there is a general absence of special planning policies for the elderly in a number of the municipalities on Georgian Bay, where so many retired people have settled (Dahms, 1996). In their responses to the request for information, the planners in the Towns of Collingwood, Penetanguishene, and Wasaga Beach, indicated that special policies were not required since their land use designations and Zoning By-laws were sufficiently permissive or inclusive to allow for a wide range of housing options for seniors, and that they were generally receptive to development proposals targeting older people. One can only speculate on the apparent lack of aging issues in these communities. The location quotients (Table 2.2.3.2) indicate that the proportions of elderly in their populations are well above the provincial average, but appear to be dropping or stabilizing, possibly contributing to a lack of concern about future aging trends. In addition, these towns are more geographically concentrated than the more rural municipalities in the County, possibly resulting in fewer concerns about access to community services and facilities.

In general, the great geographical diversity within this third largest county in Southern Ontario has meant that issues associated with an aging population are very localized, presenting major challenges to those trying to plan for the County as a whole. To meet these challenges and respond to local needs, the Simcoe County District Health Council has set up its own two tiered planning system for long-term care services. They have divided the County into planning areas whose borders, interestingly enough, correspond more closely to the old municipal borders than the new. Three representatives from each of these districts sit on the County Committee, in addition to representatives from the Native and Francophone communities, the County, and the Cities of Barrie and Orillia. The First Nations in Simcoe County generally do their own planning and delivery of community services, although the Long-Term Care Act (Ontario, 1994) does allow for agreements with First Nations for the provision of services. The local committees found a considerable variation between planning areas in terms of service needs, access to and utilization of community services. Moreover, they found the prediction of future needs to be difficult, particularly in the rapidly changing high growth areas of the south where it was difficult to estimate numbers of potential users, let alone the severity of disability and utilization rates. More information, concerning the characteristics of migrants likely to be attracted to specific communities would be helpful.

In sum, the sectorial separation between planning for community health and social services and planning for housing, land use and urban design has become more polarized in recent years in Simcoe County. Developments, such as retirement communities, which are bringing large numbers of older people into the community, could benefit from a more integrated approach. In particular, these developments exacerbate the difficulties of predicting the number and characteristics of the future elderly in the County. Once again as was the case in Metro, it can be seen that the aging of the population differs considerably within the County, and within lower-tier municipalities, as do associated planning issues and the approaches taken to address them.

If additional examples of local planning for an aging population were examined, it seems reasonable to expect that specific issues and approaches would similarly differ, however the general findings would be much the same as for the two examples described.

General Findings from the Examples

Although situationally different, the Municipality of Metropolitan Toronto and Simcoe County illustrate some important common aspects of local planning for an aging population in Ontario. While both appeared to have average population age profiles, they exhibited a considerable variation in the geographical distribution of their older population within and between the lower-tier municipalities. Under these conditions, it would be unreasonable to expect that the same aging issues would be common throughout the district, but rather that they would be sensitive to local context. However, in the absence of other contextual information, the proportion of the elderly in the population *per se* can be a poor indicator of the specific planning issues which develop. For example, the two planning districts had similar overall aging profiles but very different planning issues, while on the other hand, the Cities of Scarborough and Etobicoke had very different proportions of elderly in their populations but identified a common housing issue associated with elderly homeowners aging-in-place. Specific issues associated with the residential mobility choices of the elderly population and approaches used to address them, also were found to vary considerably with local context. As a result, there was a common need expressed by local planning bodies for more shared information concerning the characteristics and residential mobility choices of older residents at a local/neighbourhood level, on which to base planning decisions. However, sectorial barriers at both the provincial and local level have made it difficult for local planners to take an integrated approach to address these issues, particularly those concerning the links between community services and housing (Marshall, 1994). There is little reason to believe that other local planning districts in Ontario would be much different.

2.3 Summary

To summarize, an environment has evolved for planning for an aging population in Canada that is fragmented, ill-structured, turbulent and unpredictable. Each of the residential mobility choices of the elderly (aging-in-place, local mobility, or migration) have a broad range of inter-related, sometimes conflicting, planning issues associated with housing, transportation, community services and land use, which are particularly sensitive to local context. However, local planning for an aging population in Ontario is multi-sectorial, involving a variety of policy initiatives, limited jurisdictions, and a complex funding system. Although it would appear that a large proportion of local planning bodies in Ontario are aware of issues associated with an aging population, the specific issues that are identified and the approaches used to address them vary considerably. Issues also differ within planning districts at a very local, often neighbourhood level. However, there is a lack of information at this level of detail on which to base planning decisions with regard to issues associated with the residential mobility of the elderly.

A greater understanding of people's current housing situations and how these could affect their moving behaviour when they are older could help fill this gap. It can be argued that the residential mobility decisions of the elderly are based on a life time of experiences. Local planners need to know more about how life experiences are associated with older people's choice to move out of their pre-retirement homes or to age-in-place, and if they move, their choice to remain in the local community or to migrate to another area. An appreciation of these relationships could help local planners anticipate some of the aging issues associated with residential mobility which could occur in their communities and neighbourhoods in the future.

In sum, this chapter has served to provide a contextual background for the present research. The next three chapters primarily address the first research objective which is to establish that mid-life patterns can be associated with residential mobility choices in later life, beginning with the development of a theoretical perspective to structure this enquiry.

Chapter III

Residential Mobility, Life Course Continuity and Change

The study of elderly residential mobility has been relatively neglected until recent decades. For the general population, mobility rates peak between the teens and the late 20's, and tend to be associated with age-related life cycle changes and economic factors such as job or career opportunities. After this period, mobility rates rapidly decline, with similar levels for middle-age and older age groups, except for a small peak around retirement, and possibly an increase towards the end of life (Rogers and Wilkins, 1987). As a result, it has traditionally been "the economically motivated geographic mobility of the non-elderly that dominated the attention of those who have studied the patterns, determinants, and consequences of residential change" (Northcott, 1988:ix). With our aging population and increasing volumes of elderly migration (Rogers and Wilkins, 1987), there has been a growing impetus to understand the distinctive residential mobility of older people who are not likely to move for job reasons, but still maintain mobility rates that are similar to middle-aged individuals (Meyer and Speare, 1985). In the pursuit of a better understanding of the relationship between the process of aging and residential mobility, a variety of theoretical approaches have been used by researchers. In this chapter, a number of different models are briefly reviewed, examining their relative advantages and disadvantages with regard to planning for an aging population. Based on this review, a life course theoretical perspective is developed to structure this enquiry, the generation of hypotheses to be tested, and the discussion of these expected relationships between mid-life patterns in a number of inter-related life course trajectories and residential mobility in later life.

3.1 Aging and Residential Mobility

Aging, as defined by McPherson (1990:5), "is a dynamic process that involves physical,

psychological, and social change and adaptation throughout the life cycle". Old age is often conceptualized as a period of change associated with declining biological and psychological functioning, forming a "continuum of loss", and resulting in a gradual reduction of an aging individual's "life space" (Pastalan, 1982). As such, aging is often seen to involve an ongoing process of adaptation to change in which the residential environment has increasing significance. The relationship between aging and successful adaptation is one of the oldest and most persistent topics of enquiry in the social science of gerontology (Maddox and Campbell, 1985).

A diversity of theoretical approaches have been developed to study older individuals' adaptation to change and associated residential mobility (or lack thereof) which can be roughly classified into: developmental life cycle, equilibrium, decision-making, successful aging, and life course models. Each contributes to our understanding of elderly residential mobility, however they vary considerably in their utility from a planning perspective.

3.1.1 Developmental Life Cycle Models

Drawing on demographic and human development perspectives (Longino, 1990), developmental life cycle models postulate that age-related differences in residential mobility rates are associated with life cycle events or stages, which trigger moves (Rogers, 1992b; Speare, 1970; Yee and Van Arsdol, 1977). For example, the high mobility rates of young adults in their mid 20's is argued to reflect a concentrated period of mobility-related life cycle events: pursuit of post secondary education, entrance into the work force, marriage, and the advent of childbearing (Moore and Rosenberg, 1994). Commonly underlying this perspective is the conceptualization of the "typical" family life cycle as a normatively ordered set of age statuses and associated behaviour (Yee and Van Arsdol, 1977). As a result, this approach has also been described as a structural functional perspective (Silverstein, 1995).

The use of a developmental life cycle approach, has led to the discovery that elderly make

different types of moves depending on their stage in the life cycle (Litwak and Longino, 1987; Rowles, 1987). Briefly, these are: an amenity or life style move made upon retirement; a support or kinship seeking move that accompanies the development of chronic disabilities, and a institutional move when seniors can no longer live independently. However, not all elderly make these moves (Litwak and Longino, 1987), suggesting that although useful, a normative developmental perspective has limitations with respect to planning.

A common source of criticism of a developmental perspective focuses on the assumption of a "normal" patterned progression through time. Researchers have found a great diversity of possible event patterns associated with distinct residential mobility patterns (Stapleton, 1980), with only the minority exhibiting what is thought to be the "normal" pattern (Hogan, 1985). In addition, this perspective does not take into consideration subjective interpretations of patterns of events (Gubrium and Holstein, 1995) or how "constraints and inertia factors may prevent housing adjustments in accordance with the life cycle" (Clark and Onaka, 1983:56). As summarized by Kendig (1990a:137):

the complexity and processes of housing choices can be obscured by life cycle analyses unless full account is taken of interrelationships with economic resources, diversity of life-cycle experiences, and the biographies through which people come to arrive at their present life-cycle and housing circumstances.

3.1.2 *Equilibrium Models*

A different approach linking aging with residential mobility can be found in a number of theoretical models that have been developed to study older individuals' adaptation to change as a function of the person-environment transaction (Lawton *et al.*, 1982; McPherson, 1990). Within this tradition, successful aging and residential satisfaction are thought to reflect an ecological balance between an individual's needs and environment. Well known examples of such equilibrium models of aging are: Lawton and Nahemow's (1973) ecological theory of adaptive

behaviour and aging, and Kahana's (1975) congruence model of person-environment fit. In the housing economics literature, similar spacial equilibrium (Rudzitis, 1979) and consumption disequilibrium models (Quigley and Weinberg, 1977; Struyk, 1987) can be found. Implicit in these approaches is the assumption that "mismatching between the individual and his habitat may induce an escalation of stress" (Wolpert, 1966:97-98) which can be reduced through environmental adjustments to establish a new state of equilibrium, such as can be accomplished with residential mobility. Hence "a major task for planning has been that of matching individuals with environments meeting their needs" (Lawton and Nahemow, 1973:624).

These models are frequently criticized for their failure to take into consideration the symbolic, socio-cultural, evolutionary, and contextual aspects of the person-environment transaction (Anderson *et al.*, 1984; Filion *et al.*, 1992; O'Bryant and Murray, 1986; Rapoport, 1982). From a planning perspective, equilibrium models such as these have a limited capacity to explain the underlying dynamics and resulting outcome. They may be used to anticipate situations which may lead to maladaptive behaviour, but have little to say about the adaptive process by which a new equilibrium is reached.

3.1.3 *Decision-making Models*

The dynamics of the relationship between aging and residential mobility have been addressed in process-oriented decision models, which generally view "residential status as being constantly determined by a series of ongoing decisions that include the decision to remain in place" (Lawton, 1985:451-452). This perspective commonly takes a functional approach to elderly housing adjustments which is similar to economists' cost-benefit models, in that it depicts the decision to move as a rational process which involves weighing the relative merits of staying or moving (Rudzitis, 1979). One of the more comprehensive residential mobility decision models is Wiseman's (1980) two-stage model which distinguishes the decision to move (a continuous

evaluation of environmental satisfaction) from the decision of where to move. Other examples would be Lee's (1966) early push-pull model, Quigley and Weinberg's (1977) cost-benefit model, or Haas and Serow's (1993) more recent model of the amenity retirement migration process.

From a planning perspective, a strength of this approach is that the decision is seen to be a complex process involving triggering mechanisms, such as life cycle changes, and facilitating or inhibiting factors such as personal resources or housing markets. However, it is focused on the decision process specifically and offers no theoretical bases for understanding the relationships between specific factors and mobility outcomes. Moreover, "the development of truly dynamic models from discrete choice theory has received surprisingly little attention" (Davies and Pickles, 1985a:201). Much of the controversy and development within this perspective is associated with the number and order of steps in the process (*e.g.* Cuba, 1991) and associated refinements of models to better explain specific types of moves such as the amenity move (*e.g.* Haas and Serow, 1993).

3.1.4 Successful Aging Models

At a more abstract level, insights can be gained regarding the relationship between aging and residential mobility from theories of successful aging found in social psychology. Although this research can get bogged down in discussions of the normative nature of criteria to evaluate success (Baltes and Carstensen, 1996), there are at least two models which can make useful contributions from a planning perspective: Baltes and Baltes' (1990) selective optimization with compensation theory of successful aging, and Atchley's (1989) continuity theory of aging.

The Selective Optimization with Compensation Theory of Aging

Baltes and Baltes (1990) have argued that the general process of adaptation to the challenges

associated with aging is one of selective optimization with compensation. The selection element of this process involves a concentration in domains of functioning which have high priority for the individual and in which his or her remaining competencies are relatively high. This could also entail an adjustment of an individual's expectations. Through optimization "people engage in behaviors [*sic*] to enrich and augment their general reserves and to maximize their chosen life courses ... with regard to quantity and quality" (Baltes and Baltes, 1990:22). When behavioural capacity is lost, psychological or technological compensation comes into play. The individualization of this process varies according to interests, health, preference and resources. Societal resources and opportunities are considered to be a prerequisite for successful adaptation. For example, within this perspective an amenity move could be seen as a result of a selection of a particular leisure life-style which can be optimized by moving to an appropriate retirement community where the loss of social ties associated with relocation can be compensated through participation in organized activities.

As a process-oriented approach, this successful aging model shares many of the limitations of the decision-making models. In common with all of the perspectives discussed above, it also is a micro-level theory that focuses on the individual. However, implicit in this model of adaptation is a cumulative specialization throughout the life course that could explain the great heterogeneity that has been observed in the elderly population. Moreover, with specialization, each adaptive cycle can influence the range of resources and options available for the next cycle. This emphasis on adaptive resources coupled with the notion of a cumulative, ongoing adaptive process throughout the life cycle, may prove to be the key to planning for an aging population.

The Continuity Theory of Aging

An alternative approach is suggested by Atchley's (1989) observation that, although aging is associated with change, there is also a great deal of continuity in the aging process in the form

of a coherence and consistency of patterns across adult life. In developing his continuity theory of aging, he argued that:

in making adaptive choices, middle-aged and older adults attempt to preserve and maintain existing internal and external structures; and they prefer to accomplish this objective by using strategies tied to their past experiences of themselves and their social world (1989:183).

That is, they choose strategies which have some consistency with their life histories, social and cultural backgrounds and personalities.

At one level, continuity is sought in internal self-identity. Under normal circumstances of gradual change, this would be manifest in an identity evolution through an "active, cumulative, and lifelong process of restructuring ideas to fit current realities" (Atchley, 1989:187).

At another level, external continuity is sought in the outward manifestation of self in terms of social roles, skills and daily activities, within a structure of physical and social environments. It is at this level that changes in environments would be expected to have the most effect, and continuity could have the greatest potential as an adaptive strategy. Atchley pointed out that environments structure daily routines, contributing to feelings of familiarity, belonging, comfort and security, and "contain the physical and organizational infrastructure needed for continuity in meeting all sorts of needs" (1989:188). Hence, he argued that the continuity provided by the residential environment can be an important reason why many older adults resist residential mobility. This is a recurring theme in the aging-in-place literature (*e.g.* Rowles, 1987). The adaptive behaviour observed by Filion and his associates (1992), would be an example of the typical continuity strategy described by Atchley (1989) - a gradual absorption of change without disruption, requiring few adaptations of their environment. However, Wiseman and Roseman (1979) have argued that this theory could also be used to explain a continued pattern of chronic moving in old age. Similarly, "the need to maintain life-span continuity also would help explain why some older people migrate to places geographically close to their grown children, thereby

ensuring the continued exchange of social and psychological supports" (Golant, 1980:276).

If internal continuity is well established by mid-life (age 40 to 64), as argued by Atchley (1972; 1983; 1989), then one might expect that associated patterns of external continuity are also observable at this time, and it is these patterns that the elderly draw upon when adapting to change. Many of the variables which have been associated with the probability of residential mobility for the elderly can be argued to be measures of external continuity, either in the form of residential experiences (*e.g.* length of residence, housing tenure) or social roles (*e.g.* social economic status, kinship, and marital status), which are well established by mid-life. From a planning perspective, this suggests a predictive capacity that is absent from many of the models discussed above.

However, as Fox (1982) has pointed out, older people have multiple roles and multiple sources of continuity, hence a move to a retirement community, for example, could be a source of continuity or discontinuity depending on the factors being examined. Moreover, continuity has been measured in a variety of ways, as: a lack of variability, a stability or sameness; a lack of direction or pattern of change; or the continuance of a career like progression or trend. She suggested that prospective longitudinal studies are needed to document aging patterns, if we are to develop objective criteria with which to judge continuity.

One of the shortcomings of Atchley's formulation of the continuity theory of aging, is the limitation he places on context, as seen in his hesitancy to apply the theory to situations he considers to be anomalies, such as amenity migration, or to situations which he defines as pathological - those associated with a high degree of discontinuity and/or involving individuals who had an inability to successfully meet their needs due to disease or poverty. However, it can be argued that the applicability of the theory is simply a question of degree. For example, Becker (1993) found that stroke patients were using external continuity strategies to create a sense of continuity with past lives, as they reorganized their identities, albeit in a small way. She

concluded that continuity theory could be expanded to incorporate discontinuity and context. Similarly, Covey (1981) and Fox (1982) argued that external constraints such as poverty are experienced by all individuals to varying degrees, and that continuity strategies needed to be placed in a socio-cultural context. This could be accomplished if continuity theory was situated within the broader life course perspective.

3.1.5 *Life Course Models*

The life course perspective on aging is a bridging theory that incorporates normative (rule-based and deductive) and interpretive (negotiated and inductive) components at the individual micro-level and the societal macro-level (Marshall, 1987b). As such it shows great potential as useful theoretical framework from a planning perspective. Rather than focusing on one stage of life in isolation, it integrates the life experience of individuals "within the structural constraints and cultural dictates of the society in which they live" (Arber and Evandrou, 1993:9). One of the most distinguishing features of life course studies is the recognition of the strategic interdependence of lives and societal change (Elder, 1992; Riley, 1996). In addition, this approach facilitates the differentiation of aging, cohort (*e.g.* birth cohort size) and period effects (*i.e.* historical events) on peoples lives and societal change. Understanding the varying contributions and dynamics of these effects can be very important for planning, especially planning for a specific cohort such as the baby boomers (Dannefer, 1988; Easterlin et al., 1990; Frey, 1986; Foot and Stoffman, 1996; Kendig, 1990a).

Within this perspective, life course dynamics are seen to evolve as multi-dimensional, interdependent trajectories (Elder, 1985) - "long-term patterns of stability and change" (George, 1996:250). Life trajectories (pathways/careers) can be found in all domains of human activity, for example: work and employment, family activity and kin exchanges, health, and residential history (Elder, 1985; O'Rand, 1996). These trajectories are argued to be intertwined throughout

the life course so that, "no trajectory can be fully understood apart from its relation to other trajectories" (Elder 1985:73). Embedded in trajectories are life transitions that "give them distinctive form and meaning" (Elder, 1985:31). Transitions are multi-phased short-term adjustments in status associated with life events (Elder, 1985; George, 1996), such as job changes, marital status changes, or residential moves (Hagestad, 1990). Hence, the life course is viewed as composed of a multi-dimensional and contingent set of pathways and not just a single life cycle with universal application (O'Rand, 1996) as tends to be the case in developmental perspectives (George, 1996). The associated attention given to heterogeneity both within and between cohorts (*e.g.* Dannefer, 1988), is another distinguishing characteristic of this approach (George, 1996).

When one examines the residential situation and housing options available to the elderly from this perspective, they are seen to reflect life course and residential histories in terms of such things as: ties to significant historical and life events, access to tenure, the quality of earlier housing, and mobility within the housing market (Clapham et al., 1993). Research has shown that transitions or changes in status often provide the motivation for moves (Quigley and Weinberg, 1977).

One important advantage of the life course perspective on aging is that, as a bridging theory, it is compatible and has conceptual links with other theoretical perspectives, such as the social psychology of aging (George, 1996) and demographic theories (Uhlenberg, 1996). As such, researchers can benefit from the cross-fertilization of the life course perspective with other approaches (George, 1993).

However, some of the strengths of the life course approach are also its weaknesses. As Marshall (1995a) has pointed out the tensions between the normative and the interpretive, the micro- and the macro-levels has created a "mansion with many rooms", that is, many variants of the life course approach. There also is "a great deal of variability in explicit and implicit definitions of the life course" (Hagestad, 1990:151). It can be argued that after two decades, life

course researchers and theorists are "still struggling to find integration between macro- and microlevel views of lives: ... between patterns of diversity and themes of uniformity" (Hagestad, 1990:152).

As a result, one common criticism concerns a tendency towards "life-course reductionism" which focuses on micro-level individual lives and treats macro-level social structures as context, thus missing the dynamic inter-relationship between changing lives and changing social structures (Riley, 1996). From a planning perspective, this would be equivalent to focusing on how aging is associated with residential mobility at the micro-level without recognizing that our aging population is a macro-level societal change that is challenging both the style and substance of planning. However, this reductionist tendency is not attributable to the life course theoretical perspective *per se*, but rather to a limited application.

Similarly, issues of variability are often not handled well in applications of a life course perspective (Hagestad, 1990). There is a tendency to under-report diversity, by treating cohorts as relatively homogenous in inter-cohort comparisons. In the context of planning for an aging population, not only is it important to anticipate how baby boomers could be different from preceding cohorts, we also need to have an appreciation of how much variation there could be within this large cohort itself (Uhlenberg, 1996).

A third weakness of this perspective is a poor understanding of the mechanisms of change and the meaning of the time spent between changes of state as related to subsequent transitions, such as how it is that duration in a particular residence predicts residential permanence (Elder, 1985; George, 1993). Duration could serve to help individuals acquire skills and resources needed to make the next transition, or it could result in individuals optimizing resources and becoming more practised in the skills required to stay in the current state (Hogan and Astone, 1986) - a paradox that life course theory has been unable to resolve. However, in both instances duration represents a period of skill and resource accumulation. Elder (1985:32) suggested that "the

consequences of the duration of any event depend on what people bring to the situation." This is one instance where complementing the life course perspective with other theories of aging, especially the successful aging models, could improve our understanding. The advantage of using life course analysis as an umbrella framework is that this can be easily done.

3.1.6 Planning Utility of the Models

To summarize, there are a number of different theoretical approaches which have been used to study the relationship between aging and residential mobility which have varying utility from a planning perspective.

Developmental life-cycle perspectives have been very useful in establishing that older movers make different types of moves which are associated with their stage in life, especially their functional age. However, they fail to provide an explanation of the residential mobility outcomes for those who deviate from the "normal" pattern (the majority of elderly).

The equilibrium models can help us to anticipate situations that may lead to a mismatch between the elderly and their housing, however they have a limited capacity to explain the underlying dynamics of the adaptive process or subsequent outcomes.

On the other hand, the decision-making models have examined the dynamics of this process finding elderly residential mobility to be a complex multi-stage process involving triggering mechanisms, plus endogenous and exogenous facilitating or inhibiting factors. However, as process-oriented models, they fail to provide a theoretical explanation of the relationships between specific factors and mobility outcomes.

The successful aging models discussed offer explanations of how past experiences are related to the process of adaptation and residential mobility outcomes. As such, they have some predictive capacity that can be of use to planners. However, as micro-level theories, they give little attention to societal influences and constraints, which are so much a part of the planner's

domain.

A life course perspective shows the greatest potential as a theoretical framework for research into the relationship between aging and residential mobility from a planning perspective, mainly because it can be used to integrate micro- and macro-level considerations, plus normative and interpretive approaches. These characteristics make it compatible with a number of theories of aging. As such, a life course perspective can provide an umbrella framework which embraces many of the salient features of other theoretical perspectives on aging and residential mobility. For example, it explicitly studies life-cycle transitions such as those the developmental approach found to be associated with different types of moves by the elderly. Using this framework, the decision-making models can be seen to focus on the mechanics of residential transition processes, while the equilibrium models can be argued to examine the extent to which different life trajectories are synchronized, such as residential and health trajectories in old age. In addition, the successful aging models can contribute to interpretations of the life-long adaptive process represented in a trajectory, and the cumulative effects of life trajectories on residential mobility.

3.2 Theoretical Framework

On the basis of this review, a balanced application of a life course perspective, informed by compatible theories of aging, has been developed for this research. Importantly, a life course approach can provide a linking theoretical framework for studying both the micro-level relationships between mid-life patterns and residential mobility in later life, and the macro-level issues associated with the implications of these findings for planning for an aging population.

The life course perspective used as a framework for the purpose of this research embodies the following assumptions, paraphrased from Mayer and Tuma (1990:6-7):

- 1) social structure is a dynamic system of inter-related elements of varying duration;
- 2) the life course is an element of social structure involving socially patterned

trajectories:

- 3) life courses evolve in specific historical settings:
- 4) the individual life course emerges in the context of its birth cohort, and in comparison with other birth cohorts;
- 5) the life course is conceptually both a multi-level and a multi-time framework;
- 6) life course and aging are inter-related but independent concepts;
- 7) events in one life domain cannot be understood without reference to other life domains;
- 8) the life course is an endogenous causal system in which no event can be understood in isolation; and
- 9) the timing and order of events are contingent.

In addition:

- 10) people's changing lives and societal change are strategically interdependent (Elder, 1992; Riley, 1996).

At the macro-level of planning for an aging population, the life course approach draws research attention to both how social change influences the aging experiences of individuals in cohorts as they are born and follow each other through society, and how aging and cohort flow can cause societal change (Elder, 1975; Riley, 1982). Riley has suggested that a powerful tool for studying this two-way relationship is cohort analysis, that is the comparison of the life course of successive birth cohorts, recognizing the particular characteristics of each cohort (*e.g.* size) and its unique historical experiences (*e.g.* war). Such a framework emphasizes the importance in planning of distinguishing the impact of the aging of specific birth cohorts, such as the large baby boom cohorts, from a general trend of population aging associated with the increased life expectancy of successive birth cohorts.

The life course theoretical framework which has been developed for the present micro-

level analysis of how mid-life patterns can be related to later residential mobility, hinges on the proposition that, "the life course is structured by interlocking trajectories involving the scheduling of events and the management of resources and demands ... both within and across trajectories" (Elder, 1985:73).

This interdependence or interplay of trajectories can be seen in the emergence of the socially differentiated life course of individuals. Early adulthood is a dynamic period with a high concurrence and overlap of transitions along different trajectories (Elder, 1985), with numerous relatively patterned or normative life events, such as finishing education, entering the labour force, marrying, and becoming a parent (O'Rand, 1990). These early transitions are associated with the establishment of a variety of social roles (*e.g.* marital and occupational) which select individuals into different life pathways. In comparison, mid-life is a stable period of status maintenance with fewer highly scheduled transitions and a high continuity of life course trajectories anchored in earlier life transitions (O'Rand, 1990). However, it is also in this period that a pattern of increasing intracohort diversity begins to emerge as a result of the divergence of earlier trajectories (Dannefer, 1988; Fuchs, 1983). Moreover, this is seen as a cumulative process of differentiation (Dannefer, 1988), often leading to an accumulation of status disadvantage or advantage through the life course (O'Rand, 1996). For example, patterns and consequences of inequality in work, income and health become increasingly evident in late middle age (Fuchs, 1983). At the very least, this increasing heterogeneity can be argued to reflect the individual specialization which occurs as a result of the adaptive process of selective optimization with compensation proposed by Baltes and Baltes (1990). Regardless, there is evidence that it is during mid-life that these patterns of differentiation based on earlier life and cumulative specialization become evident. This suggests that there is some efficiency to be gained by focusing on mid-life patterns for the present research. Moreover, it is these mid-life patterns of external continuity in social roles that the continuity theory of aging has argued the elderly draw upon when adapting to change (Atchley,

1989).

However, the relative stability of mid-life does not mean that there is no change. Rather, in middle and later adulthood, development and change is increasingly less patterned and normative (Campbell *et al.*, 1985). Transitions during mid-life tend to be associated with less predictable or unanticipated life events such as unemployment, the loss of a spouse through divorce or death, and changes in health or disability. There is some evidence that such unscheduled events can have a high impact and a lasting effect on life trajectories, such as the status decline associated with divorce for many women (O'Rand, 1990). Elder (1985:35) has suggested that the extent to which life events become turning points which redirect life trajectories depends on four factors:

- (1) the nature of the event or transition, its severity, duration, and so on;
- (2) the resources, beliefs, and experiences people bring to the situation;
- (3) how the situation or event is defined; and
- (4) resulting lines of adaptation as chosen from available alternatives.

In general, it can be argued that those with a high level of prior stability and accumulated resources are more able to cope effectively with sudden unexpected change than those with few resources for whom, for example, economic hardship leads to further hardship and discord in a number of life trajectories, resulting in a downward spiral of cumulative disadvantage (O'Rand, 1990; 1996).

In combination, a life course theoretical framework would suggest that those with stable mid-life patterns which provide a high resource base, be it economic, social or health resources, will be more able to absorb change in later life with a minimum of disruption, and choose lines of adaptation which provide continuity with the past. Alternatively, it could be expected that the lower the stability or continuity in mid-life, with few periods of lengthy duration in which to build or optimize resources, the more likely there will be discontinuity in later life such as a move.

Using this framework, it can be seen that the large peak in the residential mobility rates

of early adulthood corresponds with a period of numerous life events and transitions, while the decline and levelling off of mobility rates during mid-life reflects the relative stability of this period. In addition, the literature on determinants of the residential mobility of the elderly (*e.g.* Lawton, 1986; Wiseman, 1980) suggests that a number of life trajectories, specifically residential history, family and social relations, socio-economic status, and health trajectories, are intertwined as they influence decision to move either directly in later life, or indirectly through their effect during the life course on earlier residential trajectories. The potential impact of mid-life patterns in each of these trajectories on elderly residential mobility is discussed in turn.

3.2.1 Residential History

As described by Kendig (1990a:133), a life course perspective of residential mobility "examines ways in which individuals over their life courses move through stocks of housing which also are changing". In addition, "the housing experience and range of housing options available to people in later life are shaped by the tenure and quality of their earlier housing" (Arber and Evandrou, 1993:10). Moreover, there is some evidence that "housing trajectories set in middle age ... have a 'momentum' that will carry through to old age" (Kendig, 1990b:296). For example, "irrespective of subsequent individual or market change, few owners wish to shift back to renting, and few tenants buy for the first time late in life" (Kendig, 1990b:291).

It should be mentioned that the terms "residential trajectory", "residential history", and "housing career" are often used interchangeably (*e.g.* Kendig, 1990b). However, the term "career" implies a destination and a progression towards it, as exemplified by Michelson's (1977) deficit compensation model of moving which proposes that each successive move represents a closer approximation of a housing ideal. Using such career models, the elderly tend to be seen as having arrived at their housing goal prior to retirement and subsequent residential mobility is thought to represent a regression or negative status passage in an attempt to minimize losses associated with

aging (Gurney and Means, 1993). However, Everitt and Gfellner (1996) found that the reasons for elderly moves reflected both positive and negative circumstances. A more general residential history approach, as is used here, acknowledges that the meaning of residential environments and mobility can be subject to redefinition at different points in the life course, including old age.

Within a life course framework, the housing and residential mobility literature suggests that there are two main sources of divergence in residential trajectories which become increasingly important with age - previous residential mobility patterns, and housing tenure.

Previous Residential Mobility Patterns

Previous residential transitions, both in terms of frequency and recency are important predictors of mobility in the later years of life (Meyer and Speare, 1985; Morrison, 1971; Van Arsdol *et al.*, 1968). The propensity to move has been argued to be associated with two diverging housing trajectories, those of movers as compared with stayers, which were first observed by Goldstein (1954). Consistent with a life course approach, Morrison (1971:178) found that "this discrimination becomes progressively more refined the longer the span of historical information". It has been suggested that those "who have experienced relocation the most frequently during their working years understand residential and community transition and for them its prospects generate fewer doubts and fears" hence they have the psychic resources to risk a move (Longino, 1992:27). Everitt and Gfellner (1996) found that elderly mover and stayer groups had quite different perceptions of the mobility process, with the movers seeing a move as just another life event, often a good one, while the stayers were more likely to view moves as difficult, somewhat threatening events, involving losses. In addition, the experience gained by those who had moved in the recent past has been argued to make movers "better able to actualize a moving plan or choice" (Van Arsdol *et al.*, 1968:265-266). Duration of residence for this group may represent a period in which to build resources for the next move. However, because of losses due to aging,

it is to be expected that elderly movers would require longer periods to build up these resources. This could explain the relatively low probability of moving for people 65 years of age and over with short durations of residence (up to a year) found by Morrison (1967). For the elderly population: "even short of true disability, a reduction in energy may occur so that the search for a new home, the steps required to market the owned home, the process of packing and moving, and the adaptation to a new domicile, neighborhood, and neighbors [*sic*] may seem too taxing" (Lawton, 1986:141). Under such conditions, duration of residence would be expected to increase with age even among movers. Similarly, the greater costs of moving for homeowners as compared with renters would also lead to longer durations for home owners within the mover subgroup (Quigley and Weinberg, 1977; Speare, 1970). Differences between movers and stayers can still be observed within the home owning subgroup, however they are more pronounced for renters.

On the other hand, stayers are thought to be more "oriented toward continued stability and are more able to realize a plan or choice to stay" and this does not vary appreciably by age within this group (Van Arsdol *et al.*, 1968:266). For stayers, duration of residence may represent an opportunity to optimize resources and become more practised in the skills required to stay. In economic terms, this can be seen as the development of "'location specific capital' in one's community", making it more valuable to stay than to move (Oldakowski and Roseman, 1986:291). In addition, the duration of time in one home is often thought to be associated with an increased probability of becoming socially assimilated into the community, and subsequently with a stability and predictability of social and physical environment which provide a sense of continuity (Golant, 1984; 1986). For this reason, it has been suggested that duration of residence may have more effect on the probability of migration than on local mobility which need not involve the breaking of community ties (Speare, 1970). Regardless, the decline in the probability of moving with increased duration of residence is consistent with the general observation within the life course

perspective, that risk of change decreases with the length of time in a particular state (Hagestad, 1990).

To summarize, Morrison (1971) found that age, residential duration and frequency of past mobility had significant independent contributions to the propensity to move. There is also some evidence that elderly migrants have a residential history of more moves, on average, as compared with local movers or stayers, with stayers having a history with the lowest mean number of moves (Meyer and Speare, 1985). Additional empirical studies of the residential mobility of the elderly have repeatedly found moving frequency (*e.g.* Goldscheider, 1966; Meyer and Speare, 1985; Law and Warnes, 1982) and duration of residence (*e.g.* Bradsher et al., 1992; Henretta, 1986; Longino et al., 1991; Morrison, 1967; Sommers and Rowell, 1992; Speare and Goldscheider, 1987; Speare et al., 1991) to be important factors, and often the strongest predictors of subsequent mobility. These variables are argued to represent a divergence of mover and stayer housing trajectories which Morrison (1971) found to be increasingly apparent with time. Thus, it can be hypothesized that the greater the number of moves during mid-life the greater the risk of moving in general, or migrating in later life. In addition, the longer the duration of residence at the end of mid-life the lower the risk of moving or migrating in later life, and if a move is made, the more likely it will be local.

A second important source of divergence in housing trajectories which cross-cuts moving propensity is housing tenure.

Housing Tenure

Housing tenure represents a major divide in housing trajectories, effectively separating households into two distinct housing markets with associated differences in life chances (Kendig, 1990a). As argued by Kendig, (1990b:303) housing tenure can be "particularly important for housing costs and conditions in old age, life-long wealth accumulation, and the transfer of resources to the next

generation". Specifically, "if the entry costs to home ownership are met in mid-life, savings from the years of peak income are likely to be stored in the home, and this wealth usually increases through appreciation of house prices" (Kendig, 1990b: 290). He also noted that those who own their homes outright usually have carrying costs that are much lower than the costs of renting, resulting in some security of occupancy, and the means to purchase alternative accommodation. However, the lower costs can also trap elderly homeowners in low equity homes such as those in distressed neighbourhoods (Burkhauser, *et al.*, 1995; Lawton, 1986; Moore and Rosenberg, 1994). In addition, the elderly who have not been able to pay off their mortgages may have to give up their homes upon retirement (Moore and Rosenberg, 1994). On the other hand, "public tenants have smaller financial advantages, and private tenants (unless in protected tenancies) face rising market rents and have little security of occupancy" (Kendig, 1990b:290-291).

Kendig (1990b:291) found substantial inequalities in the accumulation of housing assets over the life course in the United States, such that "differences among social strata within the older population were much greater than differences either between the aged and the middle aged or between successive cohorts". He expected that disparities in housing tenure attainment would be even greater in the next century. He suggested that, "the availability of home ownership to cushion the financial adjustments of retirement next century could be restricted further to those having greater resources in mid-life" (Kendig, 1990b:293).

Empirical studies have repeatedly found housing tenure to be a strong predictor of the residential mobility of the elderly (*e.g.* Biggar, 1980; Biggar *et al.*, 1984; Everitt and Gfellner, 1996; Henretta, 1986; Longino *et al.*, 1991; Sommers and Rowell, 1992; Speare and Goldscheider, 1987; Speare *et al.*, 1991). Biggar (1980) found that homeowners were most likely to stay in their homes, and if they did move, they were more likely to migrate than to make local moves. The attainment of home ownership represents an important turning point in housing trajectories, which can greatly influence elderly residential mobility. To paraphrase Meyer and Speare (1985), it can

be hypothesized that home ownership in mid-life has a negative impact on the risk of moving in later life. If they do move, it is to be expected that homeowners will have a greater risk of migration than other tenure groups.

However, as pointed out by Kendig (1990a:141) residential trajectories run parallel to and are interwoven with other life careers such as family and employment, such that the high "interdependency between family situations and financial resources makes it difficult to sort out their independent influences" on housing tenure. The interlocking nature of life trajectories, as related to residential mobility, can be seen in factors that facilitate or inhibit moves, such as ecological housing market variables, and individual access to social and financial resources (Van Arsdol *et al.*, 1968:266). As a result, one cannot study residential trajectories without considering family and social relations, and socio-economic trajectories.

3.2.2 *Family and Social Relations*

The social integration, or "the individual's embeddedness in a web of social relations that give meaning to life" is important to the individual's well being in later life and throughout the life cycle (Marshall, 1995b:7) and is thought to have a negative impact on residential mobility (Lawton, 1986). Kahn (1979:84) has described the associated life trajectory as a convoy of social support in which "each person can be thought as moving through life surrounded by a set of significant other people to whom that person is related by giving or receiving social support". Spouses, children, other kin, and friends have been found to be important sources of expressive and instrumental sociopsychological support for the elderly (Golant, 1984).

Social support has been argued to have a buffering effect on life transitions, especially the less normative ones which predominate mid- and later life, such as job termination, divorce, illness and bereavement (Cobb, 1979). The successful aging literature emphasizes the importance of the formation and nurturing of social convoys to increase one's adaptive reserve capacities in old age

(Baltes and Baltes, 1990). As argued by Rosow (1967:9), "to the extent that older people can preserve their middle age patterns in these areas [social values, social roles, and informal and formal group memberships], then they maintain the basis of their social integration". Atchley (1989) suggested that the continuity of social roles and activities provided by the residential environment is a reason why many elderly resist residential mobility. Hence, it could be generally hypothesized that the greater the continuity of mid-life social patterns the lower the risk of moving in general, or migrating in later life.

More specifically, the life-cycle developmental literature repeatedly stresses the importance of family transitions associated with marriage and children as important triggering events for moves throughout life (*e.g.* Quigley and Weinberg, 1977; Rossi, 1980a; Speare, 1970; Yee and Van Arsdol, 1977). Associated with these transitions are diverging family life course trajectories with different family ties and social support networks (Rosenthal and Gladstone, 1994), which also become increasingly apparent in mid-life. In particular, those changes associated with household formation and dissolution, such as marriage and divorce, are most likely to be associated with residential mobility (Quigley and Weinberg, 1977).

Marital Status

Speare and Goldscheider (1987) found that marital status transitions had a profound short-term effect on residential mobility in the year of the change, regardless of age, education, or the duration of the previous marital status. Those who entered their first marriage, or were separated or divorced were more likely to move than those who remarried, while the widowed were least likely to move. Interestingly, the residential mobility rates of the never married most closely resembled those of the married. However, Speare and Goldscheider also observed that in the long-term, the longer the duration of the current marital status the lower the likelihood of moving, suggesting that the effects of marital status change decrease with time. In addition, when they

controlled for the duration of current marital status, the type of marital status change no longer mattered. However, there is some indication that indirect effects, such as the shift from home ownership to renting associated with divorce, may be longer lasting (Kendig, 1990a). There is also evidence that separation and divorce may lead to locational constraints on residential mobility associated with loss of income and accessibility to children (Stapleton, 1980), favouring local mobility over migration. In terms of social support, Rosow (1967) has suggested widowhood, divorce and separation disrupt group ties and can make the individual more dependent upon the local social environment. Studies have shown that elderly local movers, as compared with stayers and migrants, were least likely to be married (*e.g.* Biggar, 1980; Carter, 1988).

In combination, it seems reasonable to hypothesize that those with a marital status change during mid-life will have a greater risk of moving during later life. Those who experienced marital status disruptions during mid-life may also be expected to be more likely to make local moves in later life. In addition, marital status change during mid-life may have indirect effects on the risk of moving in later life through its effect on residential history during the transition period.

Although Speare and Goldscheider (1987) found that with time the type of marital status change did not matter when age was statistically controlled, they did observe a slight tendency for the widowed, separated and divorced to have higher mobility odds in the long run. Research has suggested that this trend may be more pronounced for older age groups. For those elderly who are married, the spouse is the primary source of expressive and instrumental support (Golant, 1984) and becomes the primary care-giver, providing "the highest level of care over the longest period of time" (Rosenthal and Gladstone, 1994:167). Wiseman and Peterson (1980) found that with declining functional ability, those living with a spouse were less likely to move. Those making assistance seeking moves are less likely to be married (Meyer and Speare, 1985). Similarly, Biggar (1980) found that elderly stayers, as compared with local movers and migrants,

had the highest percentage of married. In empirical analyses, the married elderly repeatedly have been found to be less residentially mobile than the non-married (e.g. Everitt and Gfellner, 1996; Goldscheider, 1966; Meyer and Speare, 1985; Northcott, 1988; Speare, 1970; Wiseman and Peterson, 1980). On the other hand, amenity migration upon retirement typically involves married couples (Cribier, 1982; Litwak and Longino, 1987; Meyer and Speare, 1985; Serow, 1987b; Wiseman and Roseman, 1979). This may, in part, reflect that the social lives of married people are more wide-ranging and less dependent on residential setting than the non-married, as suggested by Rosow (1967). On the basis of these findings, it could be hypothesized that, in addition to marital status change during mid-life, the resulting marital status at the end of the period will influence residential mobility in later life. Specifically, those who are married at the end of mid-life will have a lower risk of moving in later life compared with those who are widowed, separated or divorced. In addition, if a move is made, those who are married at the end of mid-life are more likely to migrate than to make local moves, especially during the amenity migration period immediately following retirement. However, these relationships appear to be further complicated by the role of children and other kin in the convoy of social support.

Children and Other Kin

The relationship between elderly residential mobility and the proximity of children and kin is complex.

One common family life transition during mid-life is the launching of children into adulthood. However, contrary to popular belief, the transition to an "empty nest" is often neither abrupt nor stressful (Atchley, 1983). Rather, the period following the launching of children is often seen as a time of greater freedom, including freedom to be geographically mobile (Deutscher, 1968). In general, the presence of school-aged children in the household tends to restrict residential mobility (Quigley and Weinberg, 1977). Rosenberg and Halseth (1993) noted

that older people moving to amenity residential areas in Canada tended to be "empty nesters". Hence, it could be hypothesized that those whose last child has left home by the end of mid-life have a higher risk of moving in general, or migrating in later life, particularly in the period immediately following retirement. In addition, because the launching of children is a gradual process, it is to be expected that the longer the period since the last child left home, the greater the risk of moving in general, or migrating in later life. This is often a period of divergence in the geographical or temporal distance between children and their older parents (Clark and Wolfe, 1992; Silverstein, 1995). However, it should be noted that proximity to children, family and friends often plays a role in the selection of retirement migration destinations (Law and Warnes, 1982).

With the development of chronic disability, proximity to kin, especially children, is an important motive for support seeking moves (Litwak and Longino, 1987; Moore and Rosenberg, 1994); Silverstein, 1995; Wiseman, 1980; Wiseman and Roseman, 1979), regardless of distance (Meyer and Speare, 1985). In a cross-national comparison of determinants of elderly migration, Serow (1987b:588) found consistent evidence of "a desire to move closer to family and friends, occasioned by the need for physical care or emotional support, or the inability to function independently". Joseph and Hallman (1996) found a surprisingly large number of working caregivers (8%) arranged for their older relative to live closer to them within the six month period of their study. However, proximity to children and kin has also been given as an important reason for staying (Clark and Wolfe, 1992; Lawton, 1986). Law and Warnes (1982:57) found that for couples "where children were seen at least monthly movement was less likely". In a Canadian survey of elderly migration, the importance of being closer to family increased with the distance of the move - those who moved long distances gave the desire to be closer to family as their primary reason for the move (Bergob, 1995).

In general, research has shown that the number (Carter, 1988; Sommers and Rowell,

1992), gender (Speare *et al.*, 1991), and proximity of children (Meyer and Speare, 1985; Wiseman and Peterson, 1980) can be important predictors of residential mobility. On the basis of these findings, it can be hypothesized that those who have children, as evidenced in mid-life, have a greater risk of moving in general, or migrating in later life.

The relationship between the proximity of other family and friends and residential mobility is less clear. Children provide extensive care, although not at the level and duration of spouses, while siblings, friends and neighbours provide even less (Rosenthal and Gladstone, 1994). Although one could conclude that childless couples, and the never-married are disadvantaged in terms of their social resources, Rosenthal and Gladstone (1994) have argued that there is evidence that they are no more socially isolated than couples with children. In the absence of spouses or children they develop different family patterns, in which parents and extended kin play a more central role. They also compensate by forming stronger and more extensive ties with friends. However, the never-married or childless "are less likely to receive family care to any significant degree in later life" (Rosenthal and Gladstone, 1994:167). Wiseman and Peterson (1980) found that the greater the number of local relatives, other than children, the more likely a person with a low ability to maintain independence is to move. They suggested that "the presence of other relatives may stimulate a move insofar as they might encourage a residential relocation in lieu of providing direct and frequent support" (Wiseman and Peterson, 1980:13). On the other hand, extensive interaction with friends and neighbours can create strong local community ties such that the emotional costs of moving become prohibitive (Longino, 1992).

In general, it seems reasonable to expect that those who have frequent interaction with children or kin during mid-life will have a lower risk of moving in later life, and if they do move, they will move at a later developmental stage consistent with an assistance seeking move.

Social Participation

While family relations are important, social participation can also contribute to the social integration and well-being of older people. As pointed out by Wigdor and Marshall (1995:126):

social networks based on shared activity or interests or joining organizations can provide important information, as well as activities and social contacts which contribute to a senior's independence. The utilization of these coping strategies is very dependent on earlier life patterns over the life course.

Moreover, Rosow (1967) found that it was not so much level of activity as change or disruption in patterns that placed the well-being of the elderly at risk. Hence, it can be hypothesized that a greater continuity of social participation during mid-life would also be associated with a lower risk of moving in general, or migrating in later life, and if a move is made, it would be more likely to be local.

In combination, family, friends and social participation, provide the elderly with social resources which make them more able to absorb change in later life with a minimum of disruption, facilitating either moving or staying. On the other hand, Longino (1992) observed that those with few social moorings would have lower emotional costs associated with relocation and may find moving easier. With few local ties, it seems reasonable to hypothesize that social isolates during mid-life will have a greater risk of moving in general or migrating mobility in later life once work ties are broken through retirement. However, the intertwining effects of socio-economic and health trajectories, with their associated resource bases, also have a part to play in the residential mobility of the elderly.

3.2.3 Socio-economic Status

Researchers of social inequality from a life course perspective have argued that "divergent trajectories of accumulation and loss within aging populations provide strong evidence of increasing heterogeneity and inequality with age" (O'Rand, 1996:231). Life course events

influence socio-economic status, access to resources such as housing wealth, and the ability to pay (Arber and Evandrou, 1993). Until relatively recently, little attention has been given to how systems of social stratification affect the quality of life for older people, based on the belief that:

class-based differences in life-style decrease in old age because the exclusion of older people from the labour market results both in a decrease in their economic power, and in power differentials within the elderly population (Evandrou and Victor, 1989:105).

However, O'Rand (1990:140) has argued that mid-life outcomes indicate an increased disparity for those with the same start, reflecting "a continuous conversion of resources from earlier to later life-course phases but with diminishing influence with age of early adulthood status". For many, mid-life represents a period of status maintenance in which accumulated resources from education, occupation, and associated earnings, are converted into assets. As a result:

the accumulation of state pension rights, access to and participation in private and occupational pension schemes, and the availability of housing wealth as a potential source of income in old age act to differentiate people at later stages of the life course (Arber and Evandrou, 1993:25).

This differentiation of the elderly population can also be seen in a socio-economic selectivity in their residential mobility patterns (*e.g.* Biggar, 1980). However, the relationship between socio-economic status and the residential mobility of the elderly is complex (Lawton, 1986), and interwoven with numerous other factors, such as previous mobility patterns, social resources and health (Meyer and Speare, 1985). The literature indicates that each of the common measures of economic status - income, occupation and labour force activity, and education - can make contributions to our understanding of the relationship between mid-life patterns and the residential mobility of the elderly.

Income

Patterns of cumulative advantage or disadvantage with age are particularly evident in studies of income inequality, which have found that "after age 44, income dispersion increases steadily, with

inequalities after age 64 the highest for all ages" (O'Rand, 1996:232). This disparity represents "the continuance and culmination of differentials established during working life" which determine access to the main sources of income during later life, particularly occupational pensions (Victor, 1989:126). Fuchs (1983:170) has suggested that, in general, incomes peak during mid-life then decline, reflecting the "opposing influences of postschool investment in human capital and age-related deterioration in health". Although financial resources may decrease in old age, the income status of older people remains strongly associated with pre-retirement occupational social class, with earlier class differences becoming even more pronounced for elderly women (Evandrou and Victor, 1989). Hence, "one's economic status during old age is primarily a function of one's status and opportunities (access to resources) during earlier phases of life" (Ballantyne and Marshall, 1995:50).

Financial status is often argued to provide a resource base which can serve to constrain or facilitate housing trajectories and associated residential mobility throughout the life course. For example, Kendig (1984:278) found that housing "tenure is determined more by the constraints of limited income and savings than by need". In general, "the capacity to pay for housing depends primarily on levels of income, which vary widely between occupational groups and other social categories at all stages of the life cycle" (Kendig, 1990a:136).

However, the empirical evidence of a relationship between income and the residential mobility throughout the life course has been inconsistent (Quigley and Weinberg, 1977), particularly for the older population. As Wiseman (1980:146) observed, "for some, high income facilitates a move to enjoy recreational amenities, while low incomes constrain many from such a move. Others, however, with very low incomes may relocate due to inflation and rising home maintenance costs." Alternatively, those that are deficient in economic resources may "remain residentially stable until forced to relocate locally in search of assistance" (Wiseman, 1980:143). On the other hand, Goldscheider (1966) found that those in higher economic groupings had lower

residential mobility rates in his urban sample.

Empirical studies have found that those with few financial constraints were more likely to migrate for amenity reasons upon retirement (Meyer and Speare, 1985; Moore and Rosenberg, 1994). In addition, there is some evidence of a socio-economic selectivity in distance moved by the elderly, possibly due to the greater economic resources required to make long-distance relocations (Longino, 1992). Biggar (1980) found that longer distance migrants had significantly higher incomes than local movers in the United States. A similar pattern has been found in Canadian studies which have shown that the tendency to make a local move decreased as income increased, and migration rates across provincial borders increased with income (Northcott, 1988), as did intercity migration (Ledent and Liaw, 1986). However, in France, Cribier (1982) found little evidence of selectivity by social level in elderly migration from Paris to the provinces, which she attributed to the ability of affluent Parisians to take long holidays as a substitute for migration. It is also possible that this lack of agreement with the North American studies could be due to cultural differences in the residential mobility patterns of elderly people.

On the other hand, there are fewer choices for older people on lower fixed incomes who are concerned with the continued affordability of current housing (Moore and Rosenberg, 1994). As mentioned earlier, the imputed income associated with home ownership can greatly reduce mobility of low income elderly (Lawton, 1986), although a move to an area with a lower cost of living could prove to be beneficial (Longino, 1992). Colsher and Wallace (1990) found that rural movers tended to have relatively low levels of income and moved at an older age, which is consistent with a pattern of assistance seeking moves which are predominantly local (Lawton, 1985). In addition, Silverstein (1995) found that those with lower incomes were more likely to reduce the temporal distance from their children, than those of higher income, possibly using social resources to compensate for low levels of economic resources.

However, Biggar (1980) discovered that socio-economic variables failed to distinguish

stayers from all movers, possibly due to the cancelling effect of socio-economic selectivity in the timing and distance of moves made by the elderly. A number of other studies have also found little evidence of a relationship between income and overall mobility in their multi-variate models (Meyer and Speare, 1985; Sommers and Rowell, 1992; Speare *et al.*, 1991). Moreover, Wiseman and Peterson's (1980) analysis of elderly with low levels of independence maintenance, who would be prime candidates for assistance moves, was not able to distinguish movers and nonmovers on the basis of income.

To summarize, it would appear that the relationship between income and the residential mobility of the elderly distinguishes the distance moved (local or longer-distance migration) and, to some extent, the type and associated timing of the move (amenity or assistance). However, because of the cancelling effects of these relationships, it is not reasonable to expect that the overall risk of moving in later life will be associated with mid-life income. Nevertheless, it can be hypothesized that the greater mid-life income advantage of the mover, the greater the distance of a move in later life, and the greater the risk of migration.

However, "the distribution of income amongst older people very largely reflects the current effects of participation in the labour market before retirement" (Victor, 1989:126).

Occupation and Labour Force Activity

Occupation is often argued to be a major contributor to our understanding of social equality, because unlike income or education which tend to experience some inflation over time, occupational rankings remain relatively stable (Longino *et al.*, 1989). Moreover, differential access to occupational pensions are a major source of economic inequality in old age (Ballantyne and Marshall, 1995; Evandrou and Victor, 1989; O'Rand, 1996; Victor, 1989). Hence, an occupationally based social class typology can be "a useful analytical tool with which to deconstruct 'the elderly' population and highlight inequalities in later life, characteristic in earlier

stages of the life cycle " (Evandrou and Victor, 1989:105). Older people from lower social class groups, particularly manual blue collar occupations, were found by Evandrou and Victor (1989) to have lower levels of personal resources (except social support) than higher class groups. They had poorer health and were materially disadvantaged in terms of income from occupational pensions and savings/investments (Arber and Ginn, 1993; Evandrou and Victor, 1989). In sum, although no longer part of the labour force, the elderly can be thought of as occupying post-class positions which are related to their life course class trajectories (Wright, 1978).

There are few empirical studies of the relationship between occupation and the residential mobility of the elderly, possibly because many cross-sectional surveys, particularly censuses, only ask about current status and the majority of the elderly are retired from the labour force. Among those older people still in the labour force, those with blue collar occupations have been found to be more likely to move than those with white collar occupations (Goldscheider, 1966). Given that this small subgroup is not free to migrate for amenity reasons, these findings are consistent with occupational class differences in the residential mobility of the elderly associated with differences in income, housing tenure, and health. Biggar (1980) found that both elderly stayers and local movers were more likely to be in the workforce than migrants. In one of the rare studies of elderly migration which considered pre-retirement occupational class, Cribier (1982) found no evidence of a relationship, although once again, this may be a result of cultural differences between France and North America.

However, Birenbaum (1984) has suggested that residential mobility can represent different status passages for different classes because housing can be a indicator of social status and an important source of self-esteem in later life. He argued that for retired working class elderly, status is associated with the ability to maintain their way of life and "keeping the old house or apartment is a sign of resources rather than a tacit recognition that they cannot afford something better" (Birenbaum, 1984:39). On the other hand, upper and particularly middle class elderly have

the opportunity for continued high status when they move to amenity rich retirement communities. Based on this argument, it could be hypothesized that older people with lower status mid-life occupations would have a lower risk of moving in later life than those with higher status middle or upper class backgrounds. In addition, when those of lower status occupational backgrounds do move, it is expected to be at a later stage when it becomes difficult to maintain their own household. Hence, it can be hypothesized that the risk of moving for those in lower status occupational groups increases with time.

Alternatively, Quigley and Weinberg (1977) have argued that occupation *per se* is a poor predictor of residential mobility, rather it makes more sense to think of occupation as affecting the stability of employment at a particular workplace, which in turn affects residential mobility. Job mobility and participation are important components of cumulative advantage or disadvantage in older life, particularly for women. As pointed out by O'Rand (1996:235) "early and single job employment careers reward pension saving; delayed and highly mobile job careers are penalized". In addition, there is some evidence (*e.g.* Easterlin, 1980), that "the size of cohorts and economic conditions when they enter labour markets can have significant impacts on life-long employment and investment opportunities, which provide the means to buy housing" (Kendig, 1990a:139). Under these conditions, it can be expected that those who had periods of unemployment during the usually stable mid-life period would have fewer economic resources, possibly fewer health (Smith, 1985) and social resources (O'Rand, 1990), and more difficulty with housing affordability upon retirement. Hence, it could be hypothesized that those who experienced unemployment during mid-life would have a greater risk of moving in later life.

In addition, occupation and job mobility during mid-life may have indirect effects on the residential mobility of the elderly through associated mid-life moving patterns.

One final indicator of socio-economic status which the literature has suggested is related to the residential mobility of the elderly is educational attainment.

Education

Quigley and Weinberg (1977) have argued that the effects of income and education on residential mobility throughout the life course are difficult to disentangle. Education is a significant determinant of income variation during mid-life for both men and women in Canada (Ballantyne and Marshall, 1995). There is also evidence that education has direct and indirect effects, through associated occupational and family status, on the assets of elderly men and women, and that the economic well-being of the elderly may be viewed as "a result of lifetime investments in and opportunities for retirement planning" (O'Rand and Landerman, 1984:40). Education is also thought to reflect a willingness to invest human capital to obtain future returns (Fuchs, 1983). Henretta and Campbell (1976) have suggested that in addition to the indirect effect through occupation, education has lagged effects on the well-being of the elderly through better planning. In their longitudinal study of status attainment within an older sample, they found an increasing relative importance of education with age. These findings are consistent with the emphasis placed by Baltes and Baltes (1990:20) on the importance of strengthening reserve capacities, in part through education, for successful aging. They argued that "a larger reserve capacity facilitates the search for and creation of optimizing environments". This would suggest that education can be associated with a greater adaptive capacity amongst the elderly.

The close association between education and income throughout the life course can explain why the empirical evidence of the relationship between education and the residential mobility of the elderly also appears to be inconsistent. Studies of the independent effects of education on overall residential mobility rates have shown that higher educational attainment has a slightly positive or no effect on residential mobility throughout the life course (Quigley and Weinberg, 1977). For the older population, there is also evidence of no difference in the educational attainment of elderly stayers and movers (Biggar, 1980; Lenzer, 1965). However, Biggar (1980) found that although there was no overall association, local movers had the lowest

level of education and migrants had the highest, possibly resulting in a cancelling effect, as was the case for income.

Overall, the empirical evidence of the relationship between education and residential mobility in later life is consistent with that for income, showing a similar pattern of socio-economic selectivity. Those with higher levels of educational attainment are more likely to migrate (Biggar, 1980; Ledent and Liaw, 1986; Meyer and Speare, 1985; Northcott, 1988). Meyer and Speare (1985) found that both amenity and assistance movers were more educated. Out of state assistance movers were more educated than local assistance movers. In addition, there is evidence that, "those who have higher levels of education are more likely than those with less education to diverge from children, as well as to diverge a greater distance" (Silverstein, 1995:42). Moreover, it is interesting that Cribier (1982) found that the rate of out-migration from Paris increased slightly with educational attainment up to the third highest decile of the distribution, suggesting that under some conditions the relationship with migration may be curvilinear, also resulting in a cancelling effect.

On the other hand, those with lower levels of education were found to be more likely to move locally (Biggar, 1980; Northcott, 1988). Similarly, Goldscheider's (1966) finding of an negative relationship between education and residential mobility may simply reflect the preponderance of intra-urban movers in his sample, as could also be the case for Colsher and Wallace's (1990) finding that the oldest old, with low levels of education, were more likely to move in their rural sample.

It should be noted that the extent to which these findings reflected a cohort effect due to the improved educational attainment of more recent generations cannot be determined using cross-sectional data. However, Carter (1988) found evidence of a period effect in the direction of the relationship between education and the local mobility rates of the elderly, but found no evidence of a cohort effect.

In general, the evidence indicates that the relation between education and the residential mobility of older people also is found in the distance of the move. It is difficult to determine to what extent this simply reflects the close association of education with income. However education may have an independent effect if, as suggested by the successful aging literature, the more highly educated have higher reserves or adaptive capacities. Thus, it can be hypothesized that the greater the mid-life educational attainment the greater the distance of a move in later life.

In sum, it can be seen that the effect of socio-economic status on residential mobility in later life is complex due to the inter-relationships of socio-economic indicators and indirect influences through effects on other life course trajectories. For example, income and education may also have an indirect effect through health, in that those with low incomes and education levels have poorer health and higher levels of disability (Ferraro *et al.*, 1997; Maddox and Clark, 1992; Wiseman and Peterson, 1980). One could argue that the effects of income and education cannot be fully understood without consideration of health trajectories.

3.2.4 *Health Trajectories*

As with many other life course trajectories, a divergence in health and functional ability begins to become apparent in mid-life. Younger adults usually have good health. However, because of the accumulated effects of chronic conditions associated with biological factors, and choices made earlier in life (*e.g.* smoking and diet), "not only does the average level of health decrease between 45 and 64, but differences in health among individuals increase, the relationship between health and income become more pronounced, and health differences between men and women get larger" (Fuchs, 1983:161). In addition, there is some indication that occupational status (Victor, 1991) and marital disruption, as evidenced by divorced or widowed marital status during mid-life, are associated with poorer health (Marshall *et al.*, 1995). Moreover, these diverging health trajectories can exhibit downwardly spiralling patterns of cumulative disadvantage, closely associated with

educational attainment and income (Ferraro *et al.*, 1997; Fuchs, 1983; Hirdes and Forbes, 1993; Maddox and Clark, 1992).

Health, in terms of functional ability, plays an important role in the developmental life cycle approach to the study of residential mobility in later life. However, the relationship is not straightforward. While on the one hand, good health can facilitate amenity migration upon retirement, poor health is thought to be the main motivation for support seeking moves in later life (Litwak and Longino, 1987). There is some evidence that elderly who are, "deficient in such resources [economic and health] remain residentially stable until forced to relocate locally in search of assistance (Wiseman, 1980:143). However, Patrick (1980) has suggested that, at any given age, the relationship of health with both the likelihood and the distance of elderly moves may be U-shaped. Coupled with the negative relationship between health and age, he argued that it becomes difficult to analyze the impact of health changes on migration for the elderly population overall. This could, in part, explain some of the contradictory or ambiguous findings concerning this relationship in the literature, especially in cases where age and health are both included in the models (*e.g.* Sommers and Rowell, 1992; Meyer and Speare, 1985; Speare *et al.*, 1991). This is further complicated by the possibility that an assistance seeking move may be motivated by the declining health of a household member other than the subject, such as a spouse (Moore and Rosenberg, 1994). Moreover, as discussed above, social and financial resources can have buffering effects on the relationship between functional disability and residential mobility.

Regardless, there is empirical evidence of a relationship between health and elderly residential mobility, particularly in the older age groups. Retrospective studies of both rural (Everitt and Gfellner, 1996; Colsher and Wallace, 1990) and urban (Wiseman and Peterson, 1980) elderly samples have found that movers (predominantly local) were more likely to report poor health, relatively impaired physical and psychological status, or lower levels of independence maintenance ability than stayers. Analysing a Canadian nation-wide survey, Moore and Rosenberg

(1994:62) found that "the likelihood of having moved in the last five years among the elderly is consistently higher for those who are instrumentally disabled, with the gap becoming even more marked for those over 75". There is also some indication in the literature that in addition to health status *per se*, changing health status, notably declining health, is associated with the likelihood of residential mobility for those over 70 years of age (Longino *et al.*, 1991; Speare *et al.*, 1991).

To summarize, there is evidence that divergence of life course health trajectories becomes noticeable in mid-life, and that differences in health status are associated with residential mobility choices in later life. Hence, it can be hypothesized that those who have poor health during mid-life have a lower risk of moving shortly after retirement, and have a greater risk of moving at a later time. In addition, those with poor health during mid-life are more likely to make a local move in later life than to migrate.

3.3 Summary

In this chapter, a number of different theoretical approaches to the study of the relationship between aging and the residential mobility of the elderly have been discussed: developmental life cycle, equilibrium, decision-making, successful aging and life course models. Each of these approaches has something to contribute to an understanding of elderly residential mobility. However, they differ greatly in their utility from a planning perspective. On the basis of this review, the most useful was deemed to be the life course perspective which has the advantage that it can provide a structure for both the micro-level analysis of how mid-life patterns can be related to later residential mobility choices (first research objective), and the macro-level issues associated with the implications of these findings for planning for an aging population (second research objective). Moreover, as a bridging theory, it provides an umbrella framework which can incorporate many of the salient features of the other models. The remainder of this chapter has

focused on the use of this theoretical perspective to address the first objective of the present research.

From a life course perspective, the residential mobility of the elderly can be seen to be influenced by a number of intertwined life course trajectories which have shaped the experiences and life chances of the elderly throughout their life course, specifically: residential histories, family and social relations, socio-economic status and health trajectories. By mid-life a divergence of these trajectories becomes evident creating an increasingly heterogeneous older population with related differences in residential mobility choices.

Although much of the literature on the residential mobility of older people is based on cross-sectional studies of the elderly, a review of this literature has suggested a number of mid-life variables for each trajectory which could have direct effects on residential mobility in later life, or indirect effects through associations with residential histories throughout mid-life. Because of the great interdependence of these trajectories, it is difficult to discuss one without reference to others or to separate their independent effects. However, there is little in the literature upon which to build hypotheses concerning the possible effects of interactions between mid-life variables within and among trajectories on residential mobility in later life. As a result, these types of relationships have not been taken into consideration in the present research.

Table 3.3 contains a graphic summary of a number of hypotheses that have been developed within this theoretical framework, which link mid-life patterns to the residential mobility choices of the elderly. These have been organized by residential mobility outcomes in later life that are of interest to local planners, specifically: the risk of moving out of the pre-retirement home in later life as compared with aging-in-place; the risk of migrating to a different community as compared to remaining in the local community or service delivery district, either by aging-in-place or making a local move; and if they choose to move out of their pre-retirement home, what mid-life patterns are associated with the risk of making a longer distance migration

Table 3.3 Graphic summary of expected relationships between life course trajectories at mid-life and residential mobility in later life

Trajectory at Mid-life	Risk of Moving	Risk of Migrating	Given a Move. Risk of Migrating
Residential history			
greater moving propensity	↑	↑	-
longer duration of residence	↓	↓	↓
home ownership	↓	-	↑
Family and social relations			
married	↓	-	↑、
marital status change	↑	-	↓
empty nest during mid-life	↑、	↑、	(↑、)
greater time with empty nest	↑	↑	-
existence of children	↑	↑	-
greater interaction with kin	↓、	(↓)	-
greater social continuity	↓	↓	↓
greater social isolation	↑	↑	-
Socio-economic status			
greater income	-	↑	↑
lower status occupation	↓、	(↓)	(↓)
greater unemployment	↑	-	-
higher education	-	↑	↑
Health			
poorer health	↓、	-	↓

↑ higher ↓ lower ↗ increasing with time ↘ decreasing with time () implied

as compared with a local move.

As can be seen in the table, it has been possible to formulate hypotheses for a number of mid-life variables concerning the nature of their association with the risk of moving on the basis of the literature. However, due to the inconclusive and contradictory evidence on the relationships

of income and education with the risk of moving, no hypotheses could be developed for this more general mobility outcome. Briefly, it is expected that the risk of moving in later life increases with moving propensity during mid-life, decreases with the duration of residence, is lower for homeowners, is lower for those who are married at the end of mid-life, is higher for those that have experienced a marital status change during mid-life, is greater just after retirement for those who had an empty nest during mid-life, increases with the length of time with an empty nest, is higher for those with children, decreases with the frequency of interaction with children or kin until a need for assistance at a later time necessitates a move, is lower for those with a greater level of social continuity during mid-life, increases with the level of social isolation, is not expected to have a relationship with income, decreases with occupational status until such a time that a support seeking move becomes necessary for those of lower status, increases with employment instability during mid-life, has no clear relationship with education, and is lower just after retirement for those with poorer health during mid-life, but increases with time.

Since much of the literature on the residential mobility of the elderly deals with migration, a number of hypotheses concerning the relationships between mid-life variables and the risk of migrating have also been put forward in this chapter. However, once again there is insufficient evidence in the literature upon which to base hypotheses for a few variables. In two cases, the literature has implied that a relationship may exist, although there is little empirical evidence on which to base an hypothesis. To summarize, the risk of migration is expected to increase with moving propensity during mid-life, decrease with length of residence, be higher just after retirement for those with an empty nest during mid-life, increase with the length of time since the nest empties, be higher for those with children, possibly be lower for those with greater interaction with children or kin, be lower for those with a greater continuity of social activities during mid-life, increase with the level of social isolation, increase with income, possibly be lower for those with lower occupational status, and increase with level of education.

The literature on factors associated with the distance of a move is sparse, possibly because of the historical lack of research interest in local moves by the elderly. As a result, there are fewer hypotheses in the table concerning the relationship between mid-life variables and the risk of migrating, given a move is made. However, each life-course trajectory is represented. It is expected that the risk of migrating given a move, decreases with length of residence, is higher for home owners, is higher just after retirement for those who are married, is lower for those who had a marital status change during mid-life, may possibly be higher just after retirement for those with an empty nest during mid-life, be lower for those with a greater continuity of social activities during mid-life, increase with income, possibly be lower for those with lower status occupations, increase with the level of education, and be lower for those with poorer health during mid-life.

The next two chapters describe the testing of these hypothesized relationships using a prospective multi-variate analysis of a 30 year panel study of a group of Ontario men, who were approximately 76 years of age in 1990 when the study was completed. Specifically, the methodological considerations and analytical procedures used to test these hypotheses are discussed in Chapter IV, followed by a description and discussion of the results of this analysis in Chapter V.

Once it has been established that mid-life patterns can be associated with residential mobility choices in later life for this group, planners can begin to examine the mid-life patterns of other generations, such as those developing for the baby boomers, and how these could be used to help anticipate the residential mobility of these groups in later life, and the possible associated planning issues within a local context.

In Chapter VI, the life course theoretical perspective is further developed to address the macro-level issues associated with planning for an aging population in Ontario, and the implications of the findings for this micro-level analysis for local planning within this context.

Chapter IV

Methodological Considerations

To understand the dynamics of change requires longitudinal data collected from the same subjects repeatedly over a long period of time (Arber and Evandrou, 1993). Researchers of residential mobility, and life course theoretical perspectives have argued that a general lack of available longitudinal data has delayed the testing of many of their theories.

Traditional cross-sectional analyses, based on "snapshots" in time, have inhibited research of this type. It is difficult to determine whether observed differences are due to aging, the different experiences of age cohorts, or period effects (Riley, 1973; Carter, 1988). Comparisons of cross-sectional and longitudinal analyses of residential mobility and migration have shown clear advantages of a longitudinal approach (Davies and Pickles, 1985b; Clark, 1992).

Longitudinal studies have the advantage that apparent changes with age can not be attributed to a comparison of individuals in different age cohorts with different life experiences. However inherent in this form of research are a number of formidable challenges (Lawton and Herzog, 1989). This chapter will further examine methodological issues associated with longitudinal research, the data used for this dissertation, the measurement of the variables, and the analytical procedures employed.

4.1 Longitudinal Research

A broad definition of "a longitudinal study is one in which events, roles, statuses, levels, and the like can be related to time and ordered in time with respect to each other" (Campbell, 1988:47). This form of research is commonly associated with repeated observations of the same individuals, or panel studies. Longitudinal data can also be created retrospectively, for example by asking subjects in a cross-sectional survey about their residential histories. However, their responses are

subject to faulty recall and re-interpretation in light of changing context and may no longer represent the actual underlying dynamics of the time (Clapham *et al.*, 1993). In addition, the subjects of such studies are those who have survived to the age of the interview, resulting in measurement biases associated with differential mortality within their population cohort (Lebowitz, 1989). Moreover, research of this nature has tended to be backward-looking with little effort to project forward. Unfortunately, one cannot plan retrospectively. Panel studies have the advantage that the information has been collected prospectively, paralleling the type of information that would be available to long-range planners.

There are, however, a number of methodological concerns associated with the collection and analysis of longitudinal data. These can be generally grouped into issues associated with the selection and maintenance of the sample, conditioning effects, instrument decay, and historical effects (Sussman, 1964; Birren, 1968).

The major methodological issue associated with sample selection and attrition is the generalizability of the research findings. Many of the early longitudinal studies were purposive or convenience samples and hence were limited in the degree to which they can represent the population (Lawton and Herzog, 1989). Simple random samples avoid this problem, however they are not easy to obtain due to practical constraints such as cost. Representivity can be forced through quota sampling within specified demographic strata (Thompson and Forbes, 1989). Although this ensures that the distribution of the stratification variables will be representative of the population, it is necessary to check the distribution of other variables against characteristics of the population.

These problems are further confounded by attrition, or loss of subjects through the life of the study. Long-term studies are difficult to maintain because of the level of commitment required from the subjects, the researchers and funding sources (Sharma *et al.*, 1989). Frequently, researchers start with a relatively large sample to ensure that there are sufficiently large numbers

at the end of the study for analysis. This, however, does not address the representivity problem which can result from differential attrition. In combination, bias associated with selection and attrition can make it very difficult to get reliable estimates of population parameters (Thompson and Forbes, 1989). However, most longitudinal analysis is not interested in describing the population so much as the relationships among variables. There is some evidence that the effects of sample selection and attrition are weaker on associations (Goudy, 1976; Norris, 1987).

Conditioning effects refer to possible changes over the length of the study which may be attributable to subjects being interviewed repeatedly. For example, repeated interviewing may lead to: a reduction in bias towards more socially desirable responses as subjects become more comfortable with the interviewing process; a heightened awareness of specific study variables; an improved understanding of how interviews work, such as how to avoid answering questions by responding "no" to filter questions; changes in respondent effort, especially those associated with burden or respondent fatigue, which may lead to less or lower quality information; and the freezing of attitudes (Waterton and Livesley, 1988). The presence of these effects is difficult to determine, and should be kept in mind when measuring change and discussing results.

The term instrument decay is used to describe the accumulated change in measurement of a variable that can result from changes in the wording of questions. Even minor changes in wording each wave could result in a measure at the end of the study that bears little resemblance to that used in the first interview. If one is studying change, care must be taken to ensure that observed differences are not an artifact of question wording.

Finally, longitudinal studies are also sensitive to historical and cultural change. One problem faced by longitudinal researchers is that "the types of problems and methods selected in one decade may be obviated or dismissed in another" (Birren, 1968:550). Even when the wording of the questions remains constant, the meaning of these words could change over time. Moreover, historical setting is important and may influence the relationship between variables. The presence

of period or cultural effects can be checked through systematic replication of the study across time, examination of trends in variables that may be especially reflective of cultural change, and analysis of life-style variables (Kuhlen, 1968).

Although longitudinal studies are becoming more common, they tend to be recent or short-term because of the level of commitment required. Few have followed subjects through their mid-life into old age (Deeg, 1989). The present research uses the one long-term longitudinal panel study in Canada which has sufficient detail for the analysis of the relationship between life course trajectories, as measured at mid-life, and residential mobility in later life - the Ontario Longitudinal Study of Aging (LSA).

4.2 The Data

The Ontario Longitudinal Study of Aging was a Provincial Government initiative that began in 1959 with a stratified quota sample of 2000 employed, 45 year old men (Ontario, 1962). The sample was stratified by the Department of Public Welfare district, type of community (metropolitan, small urban and rural) and to some extent occupation (after 75% of quota was reached). The sampling ratios for the districts varied from five to eight per cent. The subjects were interviewed in person, once a year (except in 1977) until 1978, at which time they were 64 years of age. During this first phase of the study, questions were asked repeatedly about a number of things including changes in living conditions, social activities, marital status, employment, and health. In 1990, the Program of Gerontology at the University of Waterloo did a follow-up telephone survey of the remaining respondents (aged 76) or their survivors. If the subject was incapable of responding, usually due to health problems, the interview was conducted with a proxy. In 1990, 545 subjects, 49 proxies and 276 survivors were interviewed, providing a total of 870 responses.

The sub-sample of the LSA data used for the present analysis was composed of the 1063

respondents who were still in the study in the year of retirement or upon turning age 65, which ever came first. Due to practical considerations, this total excluded nine subjects who retired so early (usually for health reasons) that there was little information available concerning their mid-life patterns.

Since not all of the information collected for the LSA was computerized prior to this analysis, it was also necessary to code supplementary information, especially residential history, from the subjects' paper files, plus the correspondence and tracing files for the study. In addition, other secondary data sources, specifically information from appropriate telephone books and city directories, were used to fill gaps in residential histories in the twelve year period between the first and second phases of the LSA. However, on the basis of the questions asked in the 1990 follow up, plus a lack of alternative sources of information, it was not possible to fill in the gaps in later life for trajectories other than residential history.

Nevertheless, the LSA data are uniquely suited to a prospective study of how life course trajectories during mid-life are associated with residential mobility choices in later life in Ontario. However, common with most longitudinal studies, the nature of the data is such that it is necessary to address the extent to which the data are representative of the population being studied, and the findings of this analysis can be generalized for planning purposes.

Although the original sample was not random, the respondents at the beginning of the study, and in 1978, were found to be reasonably representative of the corresponding sub-group of the population, specifically Ontario males in the labour force, age 45-65 years of age, in the 1961 Canadian Census (Forbes, *et al.*, 1989). The major difference was an under-representation of foreign born in the LSA. In addition, the LSA educational level was somewhat higher and there were fewer single or never married, than for the comparable sub-group in the population. The distributions of home ownership, employment status and number of children at home were similar. In her detailed attrition analysis over the full 32 years of the study, Maxwell (1995)

found that loss due to all causes (including illness, death, refusal, and migration) was more likely to occur among unmarried, low income, urban subjects with a history of poor health, moderate to heavy smoking, and high alcohol consumption. Losses due to migration, those who moved or were untraceable, were found to be more likely among subjects that were not married, had urban residences and were moderate smokers. However, the attrition throughout the survey was comparable to other longitudinal surveys, as were the distributions of a number of variables such as perceived health (Forbes et al., 1989; Thompson and Forbes, 1989). Importantly, associations between variables have been found to be similar over time (Thompson and Forbes, 1989). In sum, the relationships between variables for the LSA data have not been found to be particularly sensitive to attrition, and to be reasonably representative of the comparable sub-group within the population.

On the other hand, as a study of a single gender and birth cohort in a specific period of history, there are a number of concerns with generalizability of the findings of this analysis which will require caution in the interpretation of the results for planning purposes. The original sampling frame was exclusively employed men aged 45 in 1959. This meant that women, especially unmarried women, and possibly chronically unemployed men were not represented in the LSA. This necessarily places some limitations on the generalizability of the findings. However, because of the span of the life course covered in this study, the effects of these omissions may not be as great one might think.

The lack of women in the LSA sample raises concerns because many of the perceived "problems" associated with aging are typically experienced by women in the oldest age categories, who are rapidly growing in numbers due to increased longevity (Gee and McDaniel, 1994; Hess, 1985). However, the LSA ended when the respondents were about age 76 and just entering this older group. The effects of gender-based disparities in life course trajectories on adaptive resources and competencies, and on associated responses to potential residential relocation, become

increasingly evident after this age, once disability becomes a factor (Barer, 1994). Gender-based concerns with the generalizability of findings from the LSA are less an issue if it is recognized that the specific results of the present analysis apply to the younger elderly. Moreover, it can be argued that married women were implicitly included in the present analysis since the majority of the men were married at the end of the mid-life period (92.9%) and most of those alive at the end of the study were still married at age 76 (82.7%). As Moore and Rosenberg (1994) have observed, married couples move together and many of the gender differences in residential mobility in later life can be attributed to the non-married portion of the population. In the present analysis, many of the measures of life course trajectories during mid-life such as residential history, family characteristics and contact, and socio-economic status would be shared by a couple, especially given that only a small percentage of the LSA wives had worked outside the home. Health may be an exception, since residential mobility decisions could be associated with the health of either spouse. There is, however, a conspicuous absence of any representation of non-married women in the present analysis. About 15 per cent of the Canadian population in this birth cohort (29% of the women) belonged to this sub-group in 1976, the census year which roughly corresponded to the end of the mid-life period in the LSA (Northcott, 1988). Studies of cumulative disadvantage over the life course have found that women are among the most economically disadvantaged (O'Rand, 1996), especially once they "must depend more on their own resources as single persons at later ages" (O'Rand and Landerman, 1984:41). The absence of unmarried women, and similarly chronically unemployed men, from the analysis could result in weaker associations with socio-economic variables than the literature would lead one to expect. Since these were relatively small groups in the population being studied, it is not likely that the direction of the associations would have been affected if they had been included. However, the strength of the associations and their relative contributions to the multi-variate model may have been different. As a result, it is important to take the exclusion of these groups, the stage in the

life course, and the gender roles associated with this period in history, into consideration when interpreting the results of this analysis for planning purposes.

Possible historical effects, in general, need careful consideration when dealing with these data because the study focuses on a single birth cohort (Elder, 1975). Each cohort has "its own unique historical background, the numbers and kinds of people involved, and the special sociocultural and environmental events to which these people are exposed", hence this analysis of the LSA data will have a "cohort-centrism", making it difficult to separate the effects of aging *per se* from those associated with the period in history and the unique characteristics of the cohort (Riley, 1973:42). A simple comparison with the literature may not shed much light on this problem, since much of it is based on findings for a small number of adjacent birth cohorts (Carter, 1988; Rossi, 1980b). The separation of aging, cohort, and period effects would require the replication of this analysis using different birth cohorts.

At this point, we need first to demonstrate that mid-life patterns can be associated with moves in later life. As additional longitudinal studies become available in the future, it will be possible to compare the findings of this research with other birth and gender cohorts.

4.3 Measurement of the Variables

The complex nature of the Ontario Longitudinal Study of Aging with numerous relevant questions asked at different intervals (see Table 4.3), allows for a multiplicity of measures of the variables with varying levels of complexity. Where possible this analysis has developed measures of variables that are easily trackable by planners using readily available data sources such as the Census, vital statistics, surveys or municipal assessment roles. Methodological concerns associated with conditioning and instrument decay are addressed in the discussion of the measurement of specific variables for this analysis. One advantage of a secondary analysis of data that were not collected explicitly to answer the research questions of the present study is that conditioning

Table 4.3 Summary of years in which relevant questions were asked in the Ontario Longitudinal Study of Aging

Question	Year in Study																						
	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	78	90			
Mid-life																							
year of birth																						x	
retired status																							x
Residential history																							
address																							
length of residence	x																						
housing tenure	x	x	x		x			x															
Family and social relations																							
marital status																							
marital status change																							
number of children																							
children at home	x																						
residence of children																							
last child left home																							
family contact series																							
social activity change																							
joining propensity																							
Socio-economic status																							
income level	x																						
unemployment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
occupation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
job change	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
education	x																						
Health																							
health ratings	x																						
health change																							

x - asked and coded in the original I.S.A. data

. - asked but not coded in the original I.S.A. data

effects may be reduced. The independent mid-life variables can be grouped into four categories associated with the life trajectories: residential history (*e.g.* number of moves and housing tenure); family and social relations (*e.g.* marital status, and social activities); socio-economic status (*e.g.* employment, occupation and income); and lastly, perceived health throughout mid-life. The measures in each of these groups will be described in turn. In general, the dependent variables are measures of residential mobility after mid-life. But first, it is important to understand the operationalization of mid-life in this analysis.

4.3.1 *Mid-life*

Atchley (1983:12) describes mid-life as "the life stage in which most people first become aware that physical aging has noticeably changed them". Although the chronological age at which this occurs varies by individual, he suggests that it begins at about age 40 and extends to the mid 60's. At age 65, there are major changes in legal rights and obligations, such as mandatory retirement and access to government benefits (McPherson, 1990), that mark the beginning of a new stage in adult social development. The first phase of the Longitudinal Study of Aging focused on mid-life, beginning at approximately age 45 and extending to approximately age 64. However, early retirement (prior to age 65) also represents a major change in social roles that is known to be associated with residential mobility. Hence, for the purpose of this analysis mid-life is operationalized as the period between the beginning of the LSA (approximately age 45) and retirement or age 65, whichever came first.

Because the length of this period varied by individual, a measure of length of mid-life was developed to be used as a control variable throughout the analysis. This measure was calculated as the year the subject turned age 65 or retired, whichever was lower, minus 59 (the year the study began). The calculation of the year the subject turned age 65 was based on the year of birth noted in the first interview in 1959 and coded in the 1990 follow-up interview. The year of retirement

was less straightforward. Throughout the LSA, subjects were asked if there were changes in their employment status. Beginning in 1969, and continuing in 1973 through to 1978 retirement was coded in the data. For most subjects, the year of retirement was defined as the earliest year that retirement or semi-retirement was mentioned. For greater accuracy, the files of subjects who had retired by 1973 were pulled and the year noted. In addition, there were a few subjects who identified themselves as unemployed and never re-entered the workforce, usually for health or disability reasons. For the purpose of this analysis, this group was considered to have retired the first year of unemployment. Although used as a continuous variable in the proportional hazards models, and as the offset in the Poisson regression, this measure was recoded as 10 to 18 years and 19 years and over for descriptive purposes, and for the survival curves.

4.3.2 Mid-life Residential History

As noted earlier, residential history was poorly coded in the original LSA data. To remedy this all subject files were pulled and the year of each move, new address, postal code and community were coded prior to this analysis. The risk of missing a second move in any one year was lower during this phase of the study because so many questions were asked concerning changes in the preceding year that subjects often volunteered the information that there had been more than one move and the addresses sometimes could be found in the study's tracing notes.

Number of Moves

With this information it was possible to count the number of moves that the subject had made during the mid-life period, as a measure of the extent to which each subject had a history of moving. This measure ranged from a low of 0 to a high of 9 in the bi-variate and multi-variate proportional hazards models and the Poisson regression. However, for descriptive purposes, it was occasionally simplified to range from 0 to 3 and over, particularly for the survival curves.

Length of Residence

It was also possible to calculate how long the subjects had lived at the most recent address prior to retirement or turning age 65, using the newly coded information for those who made mid-life moves. In addition, in 1959 the subjects were asked how long they had resided at their current address at the beginning of the study in 1959. For those who were still living in their 1959 residence, the length of residence prior to the study was added to the length of mid-life to obtain the length of residence. This variable was then coded into three groups, those that had lived in their residence prior to retirement/age 65, for 10 or fewer years, those who had lived there for 11 to 25 years and those who had lived there for more than 25 years. These break points were somewhat arbitrarily chosen to distinguish those subjects who had made relatively recent mid-life moves, from those who had moved less recently during their adult life, and those who had lived much of their adult life at the same address.

Housing Tenure

The last mid-life residential history variable of interest in this analysis was housing tenure. Questions concerning housing tenure were asked increasingly less often as the LSA progressed (1959, 1960, 1961, 1963, 1966 and 1970). This was problematic because the housing career literature has suggested that there is a cumulative progression towards home ownership within the population prior to retirement (Kendig, 1990a). Hence, it was desirable to use the most recent information on housing tenure prior to retirement/age 65 in this analysis, which was the 1970 measure recoded to have a value of 1 if the subject owned his home and 0 if not. For those who retired before 1971, a check was made to ascertain whether the 1970 tenure response applied to their most recent residence prior to retirement. However, there was insufficient information in the files to check for housing tenure changes associated with moves after 1970 (18% of the subjects). This may have resulted in a conservative estimate of the number of subjects who owned their

homes just prior to retirement/age 65.

4.3.3 Family and Social Relations

Throughout the years the LSA asked numerous questions concerning the social life of the subjects during mid-life. Using this information it was possible to investigate a number of measures in this analysis.

Marital Status and Marital Status Change

The first family status measure developed for this analysis was marital status just prior to retirement/age 65. Questions concerning the marital status of all subjects were asked infrequently throughout the study. However, each year the subjects were asked if there had been a change in marital status since they were last interviewed, and if so what was their present marital status. Using this update information it was possible to compile the marital status of each subject just prior to retirement/age 65. Occasionally, if the change had occurred just after the last interview, the respondent forgot that they had not mentioned it the year before. As a result some changes were missed. This was a potential problem for all of the LSA change questions. In this case it was possible to compare the annually updated marital status based on the change questions with the direct marital status questions asked periodically, to reduce possible errors. For the purpose of this analysis, the marital status measure was dummied into a series of three dichotomies: married (reference category); single (never married); and widowed, separated or divorced.

A second associated variable was whether there had been a change in marital status during mid-life. A dichotomous measure of this was computed which had a value of 1 if there had been a positive response to any of the mid-life marital status change variables or if the direct marital status questions did not agree throughout this period.

Children and Period of Empty Nest

The next set of social variables of interest was associated with whether the subject had children and when, if ever, the nest had emptied. A few times during the study, the respondents were asked how many children they had (1959, 1963 and 1969). More frequently, they were asked how many children were in the home (see Table 4.4). Twice, in 1963 and in 1969, a question was included which asked whether the last child had left home in the past 5 years. On the basis of this information it was possible to develop two measures, first whether they had children, and second when the nest had emptied prior to 1969. The first measure was a simple dichotomy with a value of one if the subject mentioned having any children in 1959, 1963 or 1969.

The second measure, the period of empty nest was more complex. This was also a dummy variable series, with the first dummy having a value of 1 for those who always had an empty nest, that is, they had no children. The second dummy had a value of 1 if the nest had emptied prior to mid-life (1959), if all children lived outside the home in 1967, there were no children in the home in 1963 and the last child had not left the home in the five years preceding 1963. The third dummy of this series, labelled early mid-life, had a value of 1 if the last child had left the home in the five years prior to 1963. The intermediate mid-life dummy in this series had a value of 1 if the last child left home in the five years preceding 1969. The last dummy and reference category for this series was coded 1 if there still were children in the home after 1969. In a few cases, some children returned to their home at a later time or the respondents remarried and started a second family. The files for these subjects were pulled, and they were classified in the period that the final child/step child left home.

Since these two measures are not independent, it is important to note that both cannot be entered into the same multi-variate model. As a general practice, the more detailed empty nest measure was entered into the model first, and if this proved to be uninformative, the simpler existence of children dichotomy was tried.

Maximum Family Contact

The maximum frequency of contact with family (including children) living outside the home throughout mid-life was also of interest in this analysis as a possible indication of familial support after retirement/age 65 which could influence residential mobility. At three points during the mid-life phase of the study, the respondents were asked a series of questions concerning how often they saw various relatives (1963, 1967 and 1971). Although the questions were worded and coded differently, the information obtained concerning maximum contact was fairly comparable. The major difference was that in 1963 the questions spoke of relatives outside the home in general, while in later years each relationship was specified. In 1967 contact with parents-in-law was omitted, possibly an oversight, which may have led to an underestimation of maximum contact for that year. For each of the three years, the greatest frequency of contact with family outside the home was calculated and classified as: weekly visits (or better) with at least one relative; monthly (or biweekly) visits with at least one relative; and less than monthly. For the purpose of this analysis the maximum family contact during mid-life was then compiled and coded a dummy variable series, with the reference category being monthly contact.

Continuity of Social Activities

Throughout the mid-life phase of the LSA a number of questions were asked concerning the subjects' social and recreational activities. The most common form of question was whether there had been a change during the preceding year, and if so how (coded - yes, joined more; yes, dropped some; and no change). Although the coding of these questions did not facilitate the calculation of the number of social activities in which the subject was involved in each year, it did provide sufficient information to create a measure of the continuity of his social activities over the mid-life. This was done by counting the number of mid-life years with no change, dividing by the number of mid-life years in which the question had been answered, and then multiplying

by 100 to get a measure with a potential range from 0 to 100. This was then trichotomized and coded as a dummy variable series: low, moderate (reference category) and high.

One possible source of error in this measure is that during the first few years these activities were defined in a variety of ways: outside activities, hobbies and group memberships (1961); social activities and group memberships (1962); social activities (1963 and 1964). However, by 1965 the terminology had stabilized to "social-recreational activities", which was used until 1978. Since the early definitions were sometimes more inclusive and sometimes less inclusive, it is difficult to determine what, if any, bias may have resulted. However, the definition was consistent for the majority of the years.

Social Relations Index

In an attempt to examine the combined effect of different social variables, this analysis also used a social relations index based on one developed by Hirdes (1989) for the early mid-life LSA data. This index was calculated as the sum of 1959 marital status (4 points if married, 0 if not), number of children in 1959 (0 points for no children, 1 point for 1 or 2 children, and 2 points for 3 or more children), 1961 memberships in fraternal, service or religious organizations (1 point for each, with 8 or more given a value of 8), and 1963 family contact (4 points for weekly, 2 points for monthly, and 0 points for less than monthly). The resulting index had a potential range from 0 to 18. Hirdes collapsed this index into three groups, the lowest decile representing those with a low level of social relations, a moderate group, and the highest decile representing those with high levels of social activity, making it possible to contrast the most socially isolated with the most active. Because of the distribution of the index in this analysis, the low and high categories were slightly more than a decile, containing 12 per cent and 11 per cent respectively.

4.3.4 *Socio-economic Measures*

Since one of the goals of the LSA project was to evaluate socio-economical changes which accompany aging (Ontario, 1962), there were numerous socio-economic questions throughout the study. However, there was considerable variation in the way the questions were asked and/or coded, particularly income.

Income

Income was one of the more difficult variables to operationalize for this analysis. Because of inflation, questions concerning changes in income were of little utility because it was possible to have an increase in dollar income and a decrease in real income. Although income level questions were asked frequently, there were only 3 years (1969, 1971 and 1973) in which the information was collected and coded as a continuous variable. In the other years income was grouped into categories which varied in number and content. Moreover, income was spoken of in general terms as "your income" with no distinction made between family and personal income. In 1963 a question was included to ask if the wife's income had been included in the response and 12 per cent of those with working wives responded positively. There was no way to assess the extent to which wives' income was included in other survey years. In addition, with the differential attrition in the survey by income group, a simple division of the responses into thirds (low, medium, high) for each year could lead to an apparent decrease in income group for individuals that simply was a result of the loss of participants at the bottom end.

In an attempt to minimize errors associated with these problems, grouped family and non-family income distribution data were obtained from the Survey of Consumer Finances (Canada, 1961; 1963a; 1965; 1970; 1971a; 1973; 1975a; 1980) for the age group (usually 10 year increments) of Canadian men in which the LSA respondents fell in the year surveyed. Since more than 70 per cent of the LSA respondents did not have working wives, the use of family income

was not anticipated to cause major problems. In the early years the income distributions for families with male heads and unattached individuals were combined in the reports (Canada, 1961: 1963a; 1965), hence to ensure comparability, the data in later years were similarly combined. The income distribution for each of these years was then approximately divided into thirds to represent low, moderate and high income groups. The LSA subjects were then classified in one of these three categories for each year. If a LSA income group straddled two of these categories, the subjects were placed in the category that contained the mid-point of the income group. This procedure helped standardize the LSA income distributions by comparing them to the national distribution, reducing comparison problems based on inflation or attrition. However, the grouping of income in both data sources, and of age in the national sample could be a source of error, resulting in the misclassification of some subjects. Given the available information, there was no way to assess the extent of this problem which was further compounded by the use of family income. Hence, caution is required when interpreting the results.

The measure of income used in this analysis summarizes the income trend throughout mid-life, presented as a dummy variable series. A subject was given a value of 1 in the low income dummy if he consistently had low income throughout mid-life. Similarly, if he was consistently moderate (reference category) or high, he was assigned value of 1 in the respective dummy. If the subject changed income categories throughout mid-life he was classified as "variable". If the subject had missing income data at any point during mid-life (2%), the "missing" dummy variable had a value of 1. During the development stage, a number of alternate income measures were attempted to no avail. Fortunately, there were other socio-economic questions available.

Occupation

Questions concerning the subject's occupation were also asked throughout the study, usually in

the form of a job change question. In a few years occupational titles and job descriptions were explicitly requested during mid-life (1959, 1960, 1969 and 1973). However, these were coded in varying ways, into very general categories, such as the thirteen divisions set up in the Occupational Classification Manual for the 1961 Census of Canada (Canada, 1960), which was used for the 1969 and 1973 coding.

The measurement of occupation can be problematic due to the complex division of labour in modern societies (Meltz, 1969; Montigny, 1978). Jobs are usually classified into groups that are as homogeneous as possible in terms of the tasks involved, to facilitate comparisons. However, when the question asks simply what kind of work the person does, such as was the case in the mid-life phase of the LSA, this can lead to confusion between the tasks performed and the industry in which they were performed (Montigny, 1978). To reduce this source of error, it is common to include additional questions concerning the nature of the tasks performed. The absence of these supplementary questions may in part explain the general tendency to classify occupations by industry found in the early LSA coding.

In order to obtain more occupational detail, the 1990 follow-up survey asked subjects, proxies and survivors, "What was your/your husband's (etc.) main occupation, that is the one which you/he had for the longest time? What were your/his main duties?", and interviewers were instructed to probe for as much detail as possible (Social Data Research, 1990). To facilitate a variety of groupings and comparisons, this information was then coded using the 4 digit, detailed occupation codes from the Canadian Classification and Dictionary of Occupations 1971 (Canada, 1971b). For the purpose of this analysis, the files of those subjects who were not contacted in 1990 were pulled and the main occupation was similarly coded using the information provided by the direct occupation questions and the job change questions.

To provide a measure of occupational status for this analysis, the occupations were recoded into a modified version of the occupational prestige scale developed by Pineo, Porter and

McRoberts (1977). The subjects were classified into 12 groups in decreasing order of status: self-employed and employed professionals; upper management; semi-professionals and technicians ; middle management; supervisors; foremen; skilled clerical and service; skilled crafts and trades; farmers; semi-skilled clerical and service; semi-skilled crafts and trades; and unskilled labour, including farm labour. These were entered into the analysis as a dummy variable series with upper management as the reference category. As the analysis progressed these were further compressed into three categories: white collar (reference category); blue collar (foremen, skilled crafts and trades, semi-skilled crafts and trades, and unskilled labour, excluding unskilled clerical and service occupations); and farmers. Farmers were kept in a separate category, because of their ambiguous status and their attachment to a specific location throughout their occupational career.

Unemployment

The employment stability of the subjects during mid-life could also be an important socio-economic indicator. In addition, pre-retirement residential mobility tends to be economically driven, and has been found to be associated with unemployment (Serow, 1987a).

A second socio-economic measure developed for this analysis was the proportion of years that the subject mentioned he had experienced a period of unemployment. This was calculated as the number of years in which unemployment was mentioned, divided by the number of years in which employment questions were answered, and multiplied by 100. The subjects were then divided into three groups, those with no unemployment mentioned, those with a moderate proportion of years with unemployment and those with a relatively high proportion. Once again these were entered into the analysis as a dummy variable series with those with no unemployment forming the reference category.

It should be noted that this could be a conservative measure of unemployment, especially given that only employed men were selected for the sample in 1959. In addition, the respondent

may have forgotten to mention short periods of unemployment, especially short layoffs with a continuing employer. Moreover, as is characteristic of all the change variables in the LSA, if a period of unemployment occurred shortly after the last interview, the respondent may have thought he mentioned it the previous year. However, by summarizing the responses over the entire mid-life one can be reasonably sure that subjects with an ongoing history of unemployment have been coded as such.

Education

The final socio-economic measure developed for this analysis is an estimate of educational attainment. In 1959 the subjects were asked, "What is your education?" and summarized as the number of years attained at the highest level of education obtained. The coding scheme provided for up to 8 years in grade school, 5 years in high school, 4 years in undergraduate university, 4 years in graduate studies and an unspecified number of years of other education. To create a measure of formal educational attainment, the number of years were summed, assuming that at each level the subject had attained the maximum accumulated years of education which preceded that level, or the equivalent. For example, someone with 2 years of university education would be coded as having 13 plus 2 for a total of 15 years of education. Because of the unknown variation of possibilities in the other education category, it was excluded, resulting in an estimate of years of education that may be conservative. This measure was used as a continuous variable in the bi-variate and multivariate proportional hazards analyses and the Poisson regression model. However, this measure was recoded into 0 to 8 years, 9 to 13 years, and 14 or more years for descriptive purposes and for the survival curves.

4.3.5 Perceived Health

Closely associated with the developmental or life cycle approach to elderly residential mobility,

is health status. There were numerous questions asked of the LSA subjects concerning their health. These were self-reported and can best be thought of as the subject's perceived health. For the purpose of this analysis, two measures of perceived health were developed.

Health Rating

Throughout the LSA, the subjects were asked "Is your health, this year, excellent, good, fair, poor, very poor?" (1959, 1967, 1969, 1971, 1973, 1974 and 1975) with only minor changes in wording. In 1962, they were asked to compare their present health with the health rating in 1959, whether it was excellent, good, fair, poor or very poor. In this specific case a reference time was specified, however, one cannot help but wonder what, if any, was the basis of comparison used by respondents in other years - their own health in the past, that of their peers, or that of an older or a younger age group? There is no way to assess this possible source of variability between subjects. However, in all years the majority gave a positive response, answering that their health was good or excellent.

To create a summary measure of perceived health rating throughout mid-life, the data for each of the years were dichotomized into two groups, those with good to excellent health, and those with fair, poor or very poor. These were then compared and a dummy variable series was created composed of: the early poor health group who reported fair, poor or very poor health in the first 5 years of mid-life; the group who reported poor health at a later time in mid-life; and reference category of those who had consistently reported good to excellent health throughout mid-life.

Declining Health

A second measure of perceived health throughout mid-life was developed using the frequent questions which asked if there had been any changes related to health in the past year, and coded

as better, the same, or worse than the year before. For these questions the reference was clear, the respondent's health in the preceding year. However, they share the common problem for the change questions, in that the subjects would be more likely to think of their recent health status and forget about minor changes that occurred just after the previous interview. Once again, an attempt was made to minimize this effect by looking at the trend in the answers over the entire mid-life.

Since elderly residential mobility choices are often thought to be associated with declining health, this measure was calculated as the number of years in which the subject reported that his health was worse, divided by the number of years for which he answered health change questions, and multiplied by 100. The resulting proportion of years of declining health was then trichotomized and coded as three dummy variables: low (reference category), moderate, and high.

4.3.6 Post Mid-life Residential Mobility

Because of the different policy implications of elderly residential mobility choices, it is important for local planners to anticipate whether the elderly will be aging-in-place in their mid-life homes, and if they move, will they remain in the community or service delivery district. Hence, this analysis has focused on whether or not the subjects made that first move, where they moved, and if the factors associated with this move changed with time.

The development of measures concerning the first move upon retirement or turning age 65, was challenging because the post mid-life residential histories were only partially obtained in the 1990 follow-up interview. Specifically, the respondents were asked if their most recent address was the same as the one they had when last interviewed. If not, they were asked how long they had lived at the most recent address. For the living respondents, they were also asked how long they had lived at the previous address. In addition, survivors of deceased subjects were asked how long the subject had lived at the 1978 address. Current mailing addresses were also

noted. On the basis of this information it was possible to construct post mid-life residential histories for the majority of the subjects - those who made less than two moves. However, details concerning the first move were absent if the subject made more than one move. As mentioned earlier, these gaps in the residential histories were supplemented by information obtained from correspondence files regarding post study meetings between 1978 and 1982, old telephone books (specific addresses) and city directories (residences before death and addresses). On the basis of this information, it was possible to determine the approximate year of the first move and the address.

One limitation of an annual snap shot such as is provided by a telephone book, is that the subject may have made more than one move in a year and information concerning the first move is lost. However, since the elderly are less frequent movers than other age groups, this is not likely to be an important source of error. Moreover, the risk of this error was minimized by seeking information from both telephone books and city directories which were published independently and often at different times of the year. These secondary sources of information were also useful in checking faulty recall on the part of the subjects, their proxies or survivors. In some cases where the years of residency provided did not add up and there appeared to be a gap in the residential histories, it was found that the respondents had underestimated the length of residency.

Time to Move

In keeping with the form of outcome variable required by the analytical procedures used for this analysis (see section 4.4), the first measure of post mid-life residential mobility developed was the years from retirement/age 65 to the first move, with moves made in the same year as retirement or becoming age 65 given a value of 1. With this measure it was possible to focus on whether a move was made regardless of location, plus changes with time.

Time to Migration

To address whether a subject left the local service community, a migration measure was also developed consisting of the years to a first move which crossed a regional municipality/county border. Although different service providers can have different district boundaries, this border was chosen as an approximation of service delivery sheds in Ontario (Joseph and Cloutier, 1991). For this measure, subjects whose first move did not cross this boundary were treated as the same as those who had not made a move, which is consistent with how service planners tend to view local moves.

4.4 Analytical Procedures

Longitudinal panel studies also present complex data management and analysis challenges (Lawton and Herzog, 1989). Research has shown that there are advantages in flexibility, time and cost (Fox and Irelan, 1989) to organizing longitudinal data in small well documented working files, as is the case with the LSA. However, when there are more than 30 data files, as was the case for this analysis, easy file manipulation becomes important. The ease with which large numbers of files can be merged, was one of the reasons that the Statistical Analysis System (SAS) was used in this analysis. SAS also had the advantage that it offered a large range of statistical procedures that would be appropriate for this analysis.

The complexity of longitudinal data, with the possibility of numerous measures over time has led to a sometimes overwhelming data richness and difficult data analysis issues (Lawton and Herzog, 1989). Particular challenges centre around how to make allowance for both cross-sectional and temporal effects in statistical modelling, and how to handle attrition or "censoring" - the loss of further information at the point when subjects leave the study (Uncles, 1988). Survival analysis offers an appropriate analytical approach which has been used in this analysis.

Evolving from early work on mortality tables, survival analysis has come to have a wide

range of applications (Teachman, 1983). In general, it is used to describe and analyze the distribution of events occurring to individuals, such as mortality or moving, over time. For example, survival analysis is frequently used in medical research to test the effects of different treatments on mortality, where the event of interest is the time to death after treatment. In this way it is possible to assess whether the treatment affects mortality. For the present analysis, the variable of interest is the time to the first move upon retirement or turning age 65, and we are interested in how various mid-life factors affect whether the subjects make this first move. Survival in this case is aging-in-place.

A simple description of the distribution of survival time (T), or how long the subjects age-in-place, is called the survival function, which is defined as the probability that an individual ages-in-place longer than a specific time (t), expressed mathematically as:

$$\begin{aligned} S(t) &= P(T > t) \\ &= 1 - F(t) \end{aligned}$$

where $F(t)$, the cumulative distribution function, is the probability that an individual moved before time t . In practice, an estimate of the survival function would be the proportion of individuals aging-in-place to time t , for each of the years after retirement or turning age 65 (Lee, 1980).

One advantage of the use of survival analysis for a longitudinal study of residential mobility, is how it deals with attrition (Hirdes and Brown, 1994). This is a major strength of the Kaplan-Meier survival estimates which are used in a graphical form for descriptive purposes in this analysis and the Cox proportional hazards models which are used for the multi-variate analyses.

4.4.1 Kaplan-Meier Survival Curves

Frequently all subjects do not experience the event of interest, a move, before the end of the study or before they leave the study for some reason such as death. However, they could have moved

a week later or have been killed in an accident on the way to sign a new lease. Kaplan and Meier (1958) used an estimate of the survival function in which one does not need to make assumptions concerning whether or not the subjects would have moved if they had remained in the study or lived longer, or to delete them from the analysis as individuals with incomplete histories. Rather, the information on the individual can be used in the analysis up to the point where he leaves the study and is "censored" from the analysis. Hence, in practice, the estimate of the survival function for a particular year in this study would be one minus the proportion of remaining subjects who made a first move before that year. In this way, all of the information available at any one point in time can be used. For the purpose of this study, a subject was censored in the year he died or was last contacted.

One of the assumptions underlying survival analysis is that subjects are censored from the analysis for reasons that are independent of the event. Under this assumption, censored attrition in the LSA should not be due to a move. In the first phase of the LSA, subjects who dropped out of the study due to a move were clearly identified, and as a result were coded as moved in the residential histories. This allowed them to be included in the residential mobility models, and in the migration models provided that sufficient information was known regarding their destination. Unfortunately, a small number of respondents could not be traced for the follow-up survey, who could have moved or died. There was no way to determine which applied. It should be noted that censoring these cases has introduced a possible bias in the results of this analysis to those who moved at an early event time. However, the alternative of excluding them from the analysis would only increase this bias (Hirdes and Brown, 1994). One way to check for a possible bias is to run the models with these individuals temporarily reclassified as a move (Afifi and Clark, 1990). If the models are similar, then there is little reason for concern. If not, little is known about how to handle this problem, so censoring them in the model remains the best use of the available information.

When the Kaplan-Meier survival estimates are presented graphically for each year, the result is a distinctive step shaped survival curve which is a useful way to summarize survival data (Matthews and Farewell, 1988), and to illustrate differences between treatment groups, or groups with different mid-life patterns, as done in this analysis. Examples of how these can be interpreted can be found in the discussion of the results of this analysis in Chapter V.

However survival curves have only a limited application in this analysis. Although survival curves can form a basis for statistical comparisons at the bi-variate level (Lee, 1980: Matthews and Farewell, 1988), more sophisticated techniques are required for complex multi-variate survival analysis, such as the Cox proportional hazards models used in this analysis.

4.4.2 *Cox Proportional Hazards Models*

Proportional hazards models have the advantage that they are able to exploit the potential of the complex data structures associated with longitudinal research, while taking attrition into account (Hirdes and Brown, 1994). In addition, proportional hazards models are particularly suited to analyses of binary event data, such as moving/not moving. Moreover, they provide results that can be interpreted in terms of the relative risk of moving given specific mid-life patterns, while adjusting for the effect of possible confounding factors.

Proportional hazard modelling is a log-linear regression procedure based on a second mathematically equivalent way to describe the distribution of survival time (T), which is known as the hazard function, $h(t)$ or the conditional failure (moving) rate. This is "defined as the probability of failure [moving] during a very small time interval, assuming that the individual has survived [aged-in-place] to the beginning of the interval" (Lee, 1980:12). This can be expressed as:

$$h(t) = \lim_{\Delta t \rightarrow 0} \frac{p \{ \text{an individual aging-in-place to } t, \text{ moving in the interval } (t, t+\Delta) \}}{\Delta t}$$

In practice, the hazard function for this study could be estimated as the proportion of individuals moving per year in a time interval (e.g year 2 to year 3), given that they have aged-in-place to the beginning of the interval (*i.e.* year 2). It can also be interpreted as the instantaneous probability of moving at a specific time.

When explanatory variables are introduced into the model, the hazard function could depend on time and the independent variables. As explained by Afifi and Clark (1990:358-359), the Cox model expresses the associated hazard function as the product of two parts: one that depends on time only, called the baseline hazard, $h_0(t)$; and one that depends on the explanatory variables (X_j), the regression part of the model. Mathematically, represented by them as:

$$h(t,X) = h_0(t) \exp(\beta_1 X_1 + \beta_2 X_2 + \dots)$$

It is easier to understand the regression portion of the model, if one looks at the example where there is one explanatory variable β_1 such as home ownership with the value of 1 if the pre-retirement home was owned or 0 if not. The hazard function for the home owner would be:

$$h(t,owned) = h_0(t) \exp(\beta_1)$$

while the hazard function for the non-owner or other group would be:

$$h(t,other) = h_0(t) \exp(0) = h_0(t)$$

If one wished to obtain the ratio of the hazard function of the owner to the non-owner, this would be:

$$h(t,owned)/h(t,other) = \exp(\beta_1)$$

a constant which does not vary with time. "In other words, the hazard function for group 1 [owners] is proportional to the hazard function for group 2 [non owners]" (Afifi and Clark, 1990:359), hence the name "proportional hazards regression model". In a multi-variate model, the $\exp(\beta_1)$ using the above example would be an estimate of the relative risk of moving for homeowners as compared with the other tenure group when controlling for all other explanatory variables (Hirdes and Brown, 1994). This is estimated by maximizing a partial likelihood

function. Proportional hazards models are considered to be semi-parametric, since it is not necessary to make any assumptions concerning the form of the baseline hazard, to obtain estimates of the relative risk of moving.

The advantages of using proportional hazards models for analyses such as this one are that the: moving rate can be modelled directly; attrition is accommodated; relative risks can be estimated without specifying the baseline hazard; and explanatory variables that change over the study period can be treated as time-dependent covariates and updated as necessary (Hirde and Brown, 1994). One disadvantage, is that by ignoring the baseline hazard it is not possible to estimate the magnitude of the hazard experienced by each group, and both may be very small. However, the general magnitude of the hazards involved can be seen at the bi-variate level in the Kaplan-Meier survival estimates.

A major assumption of the proportional hazard model is that the estimate of the relative risk is constant over time. This assumption can be tested for each explanatory variable by entering the interaction of this variable with time into the model as a time-dependent covariate (Hirde and Brown, 1994). A statistically significant interaction term would indicate that the explanatory variable has a stronger association with the outcome variable, such as moving, at an earlier or later stage. The nature of this change can be examined graphically by plotting the combined direct and interaction effects against time. This can be a particularly useful part of the analysis if you have a theoretical reason to believe that the factors that are associated with an elderly move may change over time as suggested by the developmental model of Litwak and Longino (1987). For the purposes of this study, the interaction with time was entered as a time-dependent covariate in the form of the product of the variable and the natural logarithm of time.

As mentioned above, the actual calculations in this survivor analysis were done using SAS, specifically the LIFETEST (for Kaplan-Meier survival curves) and the PHREG (for the proportional hazards models) procedures. Using these procedures, each of the hypothesized

relationships has been tested, first at a bi-variate level for the purpose of comparison with the literature which is largely bi-variate, then in the multi-variate models to examine how, in combination, these measures of life course trajectories at mid-life contribute to each of the residential mobility outcomes. However, because the outcome measures are not mutually exclusive, mid-life variables have been entered into all of the models even when there was not a specific hypothesis to test. For ease of interpretation, the multi-variate proportional hazards models have been narrowed using a backwards elimination of measures that did not obtain a marginal statistical significance level of .1. This elimination was done by hand because of the large number of dummy variable series used in the analysis. It is these final models that are discussed in the next chapter.

Finally, as the multi-variate proportionate hazards model of the first move upon reaching retirement/age 65 was developed, it became apparent at a very early stage that one variable, the number of moves, could be acting as surrogate measure for a number of associated changes during mid-life, such as marital status changes. To examine the possible indirect effect of other mid-life variables on moving through their association with the number of moves, the number of moves was also modelled using a Poisson regression.

4.4.3 Log-linear Poisson Regression

The number of moves during mid-life is counted data with a Poisson-like distribution of non-negative integers with an effective upper limit of infinity. As such it violates the assumptions that the dependent variable is continuous, and the errors will be normally distributed, which are required for simple linear models using least squares estimation procedures. A more appropriate regression model for this kind of variable is a log-linear Poisson regression. In this model, the number of moves is modeled as a function of an intercept plus the effects of the explanatory variables with the length of mid-life (L) used as an "offset" (McCullagh and Nelder, 1983), which

can be expressed as:

$$\text{expected number of moves} = \ln L \exp (\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots)$$

This was computed as maximum-likelihood estimates using the SAS NLIN procedure, using the macro provided in the example in the manual (SAS Institute, 1990:1168-1170). A backwards elimination of measures which did not obtain a marginal significance level of .1 was also done in this case, resulting in the final model presented in the next chapter.

In combination, these analytical procedures yielded some interesting findings concerning the relationships between mid-life patterns, as measured here, and the residential mobility of elderly men in the Ontario Longitudinal Study of Aging which are discussed in the following chapter.

Chapter V

Mid-Life Patterns and the Residential Mobility of Elderly Men

The connection between life course trajectories and the residential mobility choices of the elderly is usually studied retrospectively, or through short-term panel studies with the focus on precipitating events or life course transitions associated with aging, such as recent widowhood (e.g. Bradsher *et al.*, 1992). Little attention has been given to the underlying life course trajectories in which these transitions are situated. In Canada, the study of the residential mobility of the elderly has been further limited by the data available and, in particular, Statistics Canada's tendency to only note whether a move has been made in the last five years (Northcott, 1988). Few researchers have been able to take a longer view of life course trajectories as they relate to residential mobility choices in later life, especially in Canada. This makes the results of the present longitudinal study of the relationship between characteristics of life course trajectories during mid-life and post-retirement residential mobility particularly interesting, especially when compared with the available literature. This chapter contains the results of this analysis, beginning with a profile of the LSA subjects describing their mid-life patterns and their residential mobility choices in later life, followed by a detailed description and discussion of the findings for each life course trajectory, and concluding with a summary of the combined effects of the trajectories on each of the dependent residential mobility variables of interest to planners, including some discussion of the limitations of these findings.

5.1 Participant Profile

Before discussing the main findings of this analysis of how mid-life patterns can be associated with the relative risk of various residential mobility outcomes in later life, it is useful to get a basic understanding of the distribution of mid-life characteristics among the subjects, their

residential mobility choices in later life, and how typical these patterns are. Although, the LSA sample is reasonably representative of its cohort, some of the differences can have a bearing on the interpretation of the results, especially if a sub-sample with specific characteristics is small.

Mid-life Characteristics⁴

The mid-life residential histories of the LSA subjects in this analysis are much what one would expect for a panel sample of men in their cohort. The majority (55.7%) made no moves during mid-life, while an additional 24.7 per cent made only one move. The maximum number of moves made by a subject during mid-life was 9 over a period of 10 years. For the 10 year period from 1962 to 1971, 33.6 per cent (21.3% for 1966 to 1971) of the respondents made at least one move as compared with 44.5 per cent (27.8% for 1966 to 1971) of the corresponding age group of Ontario male household heads in the 1971 census (Canada, 1975b). It is to be expected that a panel sample that has been traceable for twenty years would provide a somewhat conservative estimate of the mobility rate of the general population. At the end of their mid-life period, 26.8 per cent of the subjects had lived in their homes for 10 years or less, while 35.6 per cent had lived in their home for 26 or more years, some for their entire lives (approximately 4%).

At the beginning of the study in 1959, 83.9 per cent of the LSA subjects owned their homes as compared with 80.3 per cent of Ontario male household heads aged 45 to 54 in the 1961 census (Canada, 1963b). By 1970, approximately 89 per cent of the subjects owned their homes - a somewhat larger proportion than the 79 per cent reported for Ontario male household heads age 55 to 64 in the 1971 census (Canada, 1975b). Overall, the LSA subjects had relatively stable mid-life residential histories when compared with the general population.

With regard to family and social relations characteristics, about 13.5 per cent of the

⁴ for frequency distributions of the mid-life characteristics of the respondents see Table C 1.1 in Appendix C

subjects experienced at least one change in marital status during the mid-life period. By the end of mid-life a small number (1.8%) had never married, the bulk of the group (92.3%) were married and the remainder (5.4%) were widowed separated or divorced. The latter were grouped together for the analysis because of small numbers and their similarity in moving behaviour. As mentioned earlier, a comparison with 1961 census data has shown that the LSA under-sampled the never married group (Hirdes, 1989), and slightly over-represented the married.

Approximately 9 per cent of the subjects had no children, and a further 2 per cent had no children living with them at the beginning of the study. As the mid-life period of the study advanced the last child left home for increasing numbers of the subjects. However, the majority (62.8%) still had children in their home in the late mid-life period.

Many of the subjects had frequent contact with kin, including children, who lived outside of their home. A large proportion of the subjects (83.6%) had daily or weekly contact with at least one relative at some point during mid-life. Only a small number (5.6%) had less than monthly contact with relatives throughout mid-life. When questioned about changes in their social activities, most had changes over the years: only 16.5 per cent consistently reported no change in their social activities. The movers in later life had slightly lower scores on the social relations index, such that the "lowest decile", as defined by the cut off for the total sample, contained 14.5 per cent of the mover sub-group.

Turning to the socio-economic characteristics of the subjects, mid-life income patterns were difficult to operationalize for this analysis. At the beginning of the study in 1959, 32.1 per cent of subjects were in the low income category which was comparable to 32.3 per cent of the Canadian non-farm population of men age 40 to 49 (Canada, 1961), however the moderate income group was over-represented in the LSA (46.6% as compared with 33.7%), and the higher income group was under-represented (21.4% versus 33.9%). However, it should also be noted that within the low income category, only 0.3 per cent of the LSA subjects had incomes of less than \$1000

as compared with 5.6 per cent of Ontario male wage earners age 45 to 54 in the 1961 census (Forbes *et al.*, 1989) or 2.2 per cent of non-farm Canadian men age 40-49 in 1959 (Canada, 1961). As the study progressed, a large majority (78.3%) of the subjects changed income groups during mid-life, while 8.1 per cent remained consistently in the low income group, 3.2 per cent in the moderate group, and 8.6 per cent in the high income category. Within the group with variable incomes there was a wide range of change patterns, too numerous for meaningful analysis with this sample size. For example, comparing only this sub-group's income at the beginning of the study with that at the end of mid-life, 3.0 per cent of them had dropped from the high to the low income category, 19.5 per cent had dropped one income category (high to moderate, or moderate to low), 49.3 per cent had returned to their original income group after a variety of interim changes, 25.1 per cent had increased by one income category, and 3.1 per cent had shifted from the low to the high income group. This great variability in income over the years is consistent with the American Panel Study of Income Dynamics (Duncan and Morgan, 1985: 70-71) which found that:

the economic environment that most people face is not stable but volatile. It results in large numbers of workers or families being occasionally poor, on welfare, or in certain sectors of the labour market, but it also produces fairly small numbers who are persistently in those states.

Unfortunately, similar Canadian longitudinal data are not readily available for comparison.

The main occupations of the LSA subjects ran the full spectrum of the Pineo, Porter and McRoberts (1977) occupational prestige scale. The most common occupations were those in skilled (20.8%) and semi-skilled (11.8%) crafts and trades. In addition: 8.9 per cent had professional occupations; 7.9 per cent were in upper management; 3.8 per cent had semi-professional or technical occupations; 7.1 per cent were in middle management; 6.0 per cent were supervisors; 6.6 per cent were foremen; 2.7 per cent had skilled and 7.1 per cent had semi-skilled clerical, sales and service occupations; and 9.6 per cent had unskilled occupations. Overall, 45.2

per cent had white collar occupations, 47.1 per cent had blue collar occupations (including farm labourers) and 7.7 per cent were farmers. Comparing the 1959 occupations of the LSA subjects with 1961 census data for Ontario men aged 45 to 49, Forbes and his associates (1989:55) found that the census "classifications, managerial, professional & technical, clerical, and craftsmen, production & processworkers are over-represented ... while sales, transport & communications and labourers are under-represented". However, they found the broader categories of white collar and blue collar to be comparable and reasonably representative.

The majority (66.2%) of the subjects mentioned no periods of unemployment during their mid-life, 22.1 per cent were classified in the moderate group, usually having only one or two years with incidents of unemployment, and 11.7 per cent had a relatively high proportion of mid-life years in which they experienced some unemployment. A small number retired from the labour force so early in the study, usually for health reasons (7 out of 9), that they were deleted from this analysis due to a lack of information on mid-life patterns. An additional quarter (24.8%) retired after age 54 and before age 64.

In 1959, the educational attainment of the LSA subjects used in this analysis was relatively high. Whereas, 36.0 per cent of the subjects had less than 9 years of education, 46.9 per cent of Ontario men age 45-54 in the labour force in the 1961 census data had attained this level of education (Forbes *et al.*, 1989).

The majority of the participants had described their health as fair to very poor at some point during mid-life. In the first 5 years of mid-life, 20.6 per cent of the subjects had rated their health in this relatively poor group. A further 34.1 per cent rated their health as poor in later mid-life, and 45.2 per cent had consistently rated their health as good to excellent over the mid-life period. Looking at fluctuations in health during mid-life, the respondents were more likely to experience declines at some point during mid-life than improvements, as one would expect (Fuchs, 1983). Whereas, 41.5 per cent of the subjects had no years in which they reported improved

health, only 1.6 per cent had no years with a health decline. Although the majority reported no change in health each year, only 0.2 per cent had no changes in health over the mid-life period.

Residential Mobility in Later Life

After retirement or turning age 65 whichever came first, 343 (32.3%) of the subjects moved before they were lost to follow-up or died. Since it was not possible to determine whether those who could not be traced (5.7%) had moved or were deceased, this is probably a conservative estimate of the number who moved which could be as high as 38 per cent. Although the majority had aged-in-place during the post-retirement period of the study, a few made as many as 6 moves (0.6%) which was equivalent to a rate of 0.3 to 0.4 moves per year. At the end of the study the respondents (about age 76) were just entering the age range in which the percentage with activity limitations increases rapidly for Canadian men (Desjardins, 1993), hence it would be reasonable to expect an associated exponential increase in the number who would have made support seeking moves over the next few years (Rogers, 1988). As a result, this study is likely to be a conservative estimate of the proportion of elderly men in Ontario who eventually move away from their pre-retirement homes.

Of those who moved, almost half of them did so in the first three years (26.2% in the first year, 15.7% in the second, and 7.9% in the third). This is consistent with the small peak in the migration rates of men around retirement age which is frequently found in the Canadian literature (e.g. Liaw and Nagnur, 1985; Moore and Rosenberg, 1994; Northcott, 1988).

In total, 325 of the movers had sufficient information about their moving destination to determine whether they had migrated across a county or regional municipality border, and 100 (31.8%) of them had done this. It is difficult to find suitable population figures for comparison due to a lack of Canadian longitudinal data (Moore and Rosenberg, 1994). However, these findings are similar to those of Canadian cross-sectional surveys which have found that most

moves made by elderly men are relatively local. For example, approximately 55 per cent of Ontario elderly male movers between 1976 and 1981 made a move within the same municipality, and about 87 per cent made moves within the same province (Northcott, 1988), as compared with the 68.2 per cent of LSA movers who made a move within the same county or regional municipality during the post-retirement period of the study.

The post-retirement/age 65 out-migration and in-migration patterns of these LSA migrants can be seen in Figures 5.1.1 and 5.1.2 which map location quotients (LQ's) measuring the extent to which each county or regional municipality was above or below the province as a whole. The out-migration location quotients were calculated by dividing the proportion of LSA residents in the county before retirement/age 65 who subsequently left the county by the proportion of LSA subjects who migrated across a county border anywhere in Ontario. The in-migration location quotients were calculated in a similar fashion based on the proportion of new LSA residents in the county as compared with the original number of pre-retirement/age 65 respondents in the county. The general patterns which can be seen on these maps are much like those found in other Ontario studies. For example, the above average out-migration by the LSA subjects from Metropolitan Toronto (LQ 2.1) and the District of Cochrane (LQ 3.5) and their below average in-migration (LQ's of 0.3 for Toronto; 0 for Cochrane) are consistent with the net flows out of these areas during the late '70s and early '80s found by Rosenberg and his associates (1989), and with the relatively large out-migration of men around retirement age in Toronto between 1971 and 1976 observed by Liaw and Nagnur (1985). However, the remainder of northern Ontario had little in-migration, as one would expect, but relatively low out-migration, which may simply reflect the relative stability of the LSA sample throughout the years of the study. Rosenberg and his associates (1989) also found that the main migration gains were made in counties at the fringe of Metropolitan Toronto and high amenity counties such as Muskoka and Haliburton. A similar pattern can be seen in Figure 5.1.2 with Muskoka having an in-migration location quotient of 3.8.

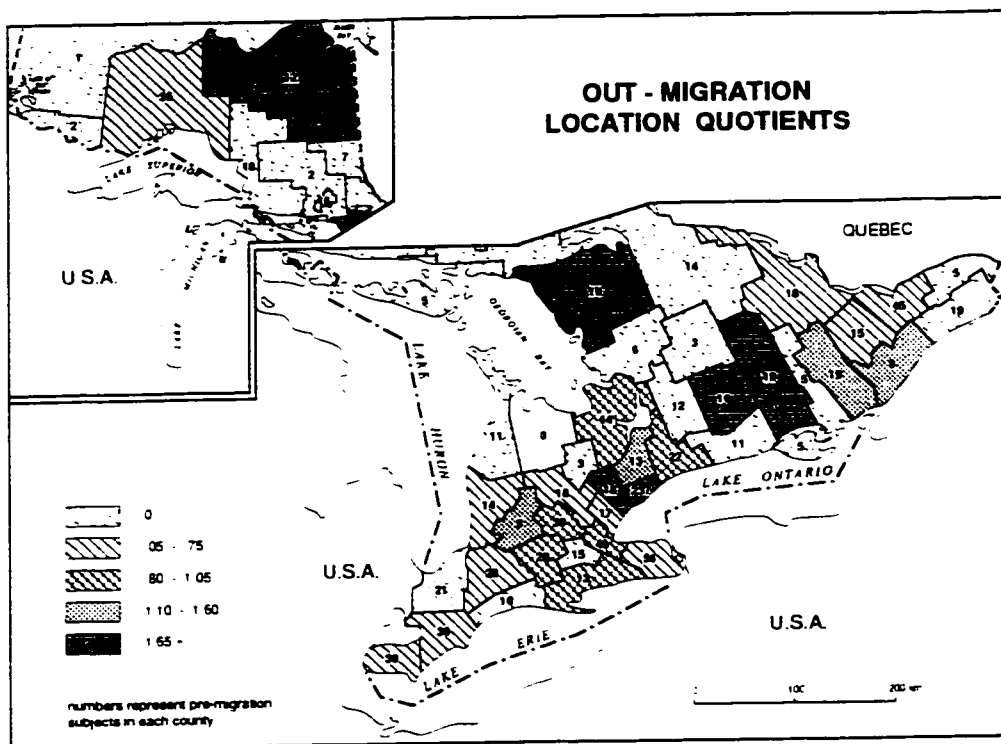


Figure 5.1.1 Out-migration location quotients for LSA subjects after retirement/age 65

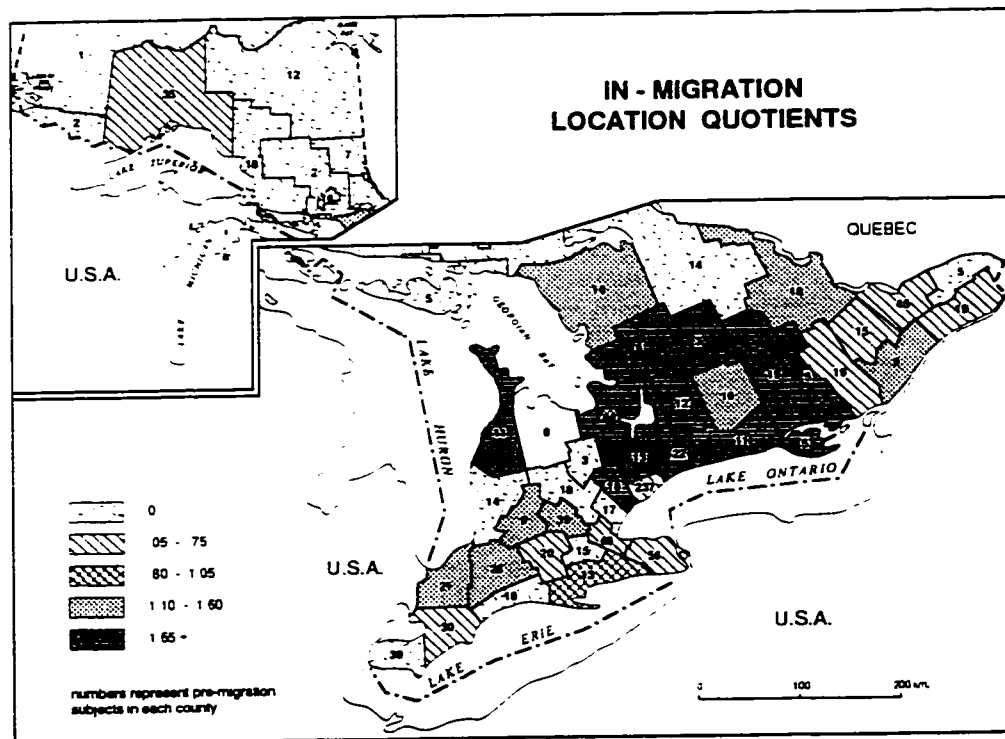


Figure 5.1.2 In-migration location quotients for LSA subjects after retirement/age 65

albeit a small sample size (6).

Summary:

In general, the mid-life characteristics of the LSA subjects used in this analysis are reasonably representative of their cohort. To summarize, the participants had relatively stable mid-life residential histories in that they were a little less likely to move and had somewhat higher home ownership rates than the general population. To some extent, they over-represent the married group while under-representing the single, never married in the general population. Most of them had children, and many had at least one child still at home in late mid-life. They also had frequent contact with kin at some point over the mid-life period. Many experienced changes in social activities during mid-life. The majority had varying incomes, moving between income groups in a variety of ways throughout mid-life. Using the more general occupation categories of white collar and blue collar, they were fairly representative of the general population at the beginning of the study. The majority mentioned no incidents of unemployment throughout mid-life and about a quarter of them retired early. Finally, their health showed signs of decline during mid-life, as one would expect.

To the extent that comparisons are possible with the limited data available, the post-retirement residential mobility patterns of the LSA subjects were typical of elderly Ontario men. About a third of them moved, and about a third of the movers migrated out of their county or regional municipality.

Importantly, although the LSA sample has not been found to be fully representative of their cohort, there was a complete range of responses for each variable, even when some categories are under- or over-represented. As a result, the associations between variables should be reasonably representative (Goudy, 1976; Norris, 1987), provided that the sub-sample sizes remain large enough for analysis. In only a few instances sub-sample sizes for under-represented

categories have been a problem, as can be seen in the discussion of the associations described in the next section.

5.2 Mid-life Trajectories and Residential Mobility in Later Life

In this section, the results of the analysis for each of the life course trajectories are described and discussed in turn. Many of the findings are what the literature would lead one to expect. Although the results of the final multi-variate proportional hazards models ($p < .10$) are of prime interest because the confounding effects of the other variables are controlled, so much of the literature has been based on bi-variate analyses that it has been necessary to examine both the bi-variate and multi-variate results for the purpose of comparison. However, to facilitate the readability of this section, the bi-variate results have been described in the text while the detailed bi-variate tables and associated figures have been placed in Appendix C, numbered sequentially to correspond to the subsection in which they are discussed. For example, the bi-variate tables and figures associated with section 5.2.1 are found in the C 2.1 series in the appendix.

5.2.1 Residential History

Residential mobility choices in later life represent the continuation of life-long housing trajectories and, as such, it is reasonable to expect that they would have a strong association with earlier residential histories, both through previous mobility patterns which distinguish movers from stayers, as measured by moving propensity and length of residence, and through housing tenure.

Number of Mid-life Moves

The number of moves made during mid-life by the LSA subjects was found to have a strong positive association with the relative risk of moving after retirement/age 65 both in the bi-variate model ($p < .001$) and the multi-variate model in Table 5.2.1.1 ($p < .01$), and this relationship did not

Table 5.2.1.1 Multi-variate proportional hazards model for time to a residential move after retirement/age 65 by mid-life number of moves, length of residence, housing tenure, marital status, children, maximum family contact, continuity of social activity, social relations index, occupation, education, health rating, years with declining health, and length of pre-retirement mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Number of mid-life moves	.158**	.049	1.17	1.06 - 1.29
Years of residence				
0-10	.313†	.187	1.37	0.95 - 1.97
11-25	.281†	.150	1.33	0.99 - 1.78
26+ (ref)			1.00	
Housing tenure				
owner	-.725***	.163	0.48	0.35 - 0.67
other (ref)			1.00	
Marital status				
single	-1.228	1.003	0.29	0.04 - 2.09
(single x time)	.437	.596	1.55	0.48 - 4.98
married (ref)			1.00	
widowed, separated or divorced	-.471	.388	0.63	0.29 - 1.34
(widowed etc. x time)	.461†	.242	1.59	0.99 - 2.55
Children				
some	.500*	.242	1.65	1.03 - 2.65
none (ref)			1.00	
Maximum family contact				
< monthly	-.190	.422	0.83	0.36 - 1.89
(< monthly x time)	-.608†	.348	0.54	0.28 - 1.08
monthly (ref)			1.00	
weekly	-.483*	.251	0.62	0.38 - 1.01
(weekly x time)	.070	.173	1.07	0.76 - 1.51
Continuity of social activity				
low	.341*	.148	1.41	1.05 - 1.88
moderate (ref)			1.00	
high	.123	.157	1.13	0.83 - 1.54

(continued)

Table 5.2.1.1 (continued)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Social relations index				
lowest decile	.454**	.171	1.57	1.13 - 2.20
moderate (ref)			1.00	
highest decile	.028	.192	1.03	0.71 - 1.50
Occupation				
white collar (ref)			1.00	
blue collar	-.268*	.128	0.77	0.60 - 0.99
farm	.228	.203	1.26	0.84 - 1.87
Years of education				
	-.046*	.022	0.96	0.91 - 1.00
Health rating				
good (ref)			1.00	
later poor	.132	.130	1.14	0.88 - 1.47
early poor	.361*	.151	1.43	1.07 - 1.93
Years with declining health				
low (ref)			1.00	
moderate	-.436†	.246	0.65	0.40 - 1.05
(moderate x time)	.251	.174	1.29	0.91 - 1.81
high	-.679**	.253	0.51	0.31 - 0.83
(high x time)	.428**	.173	1.53	1.09 - 2.15
Length of mid-life				
(length x time)	-.097**	.036	0.91	0.85 - 0.98
	.056*	.027	1.06	1.00 - 1.12

† p<.10; * p<.05; ** p<.01; *** p<.001

change significantly during the time period that the subjects were followed ($p>.10$). In the multi-variate model the risk of making a move in later life increased with each additional mid-life move such that a subject who made five moves during mid-life is more than twice as likely to move in later life than a subject who made no moves during mid-life. The majority of the subjects were followed at least 12 years after retirement or turning age 65, and the bi-variate survival curves

show that the estimated probability of having not moved at least once during this period is considerably lower for those who made three or more moves during mid-life ($p=.40$) than for those who made no moves during mid-life ($p=.75$).

The moving propensity during mid-life also has a strong positive association with the relative risk of migrating across a county or regional municipality border in later life ($p<.001$). The association found in both the bi-variate and multi-variate models is basically the same, with the only difference being a slightly wider confidence interval in the multi-variate model due to a somewhat larger standard error (Table 5.2.1.2). As can be seen in the bi-variate survival curves, the estimated probability of retaining a local residence for 12 years after retirement/age 65 is .91 for those who made no mid-life moves as compared with .76 for LSA subjects who made 3 or more moves during the mid-life period.

However, the number of moves made during mid-life fails to distinguish between local movers and migrants, given a move is made, both in the bi-variate model and the multi-variate model in Table 5.2.1.3 ($p>.10$).

In sum, consistent with the literature (Goldscheider, 1966; Meyer and Speare, 1985; Morrison, 1971; Law and Warnes, 1982), it would appear that movers continued to be movers. However, the distance of their move in later life is not related in a simple way to the number of moves made in the past for the LSA subjects. Possibly further information on the distance of the mid-life moves would have been helpful, albeit difficult to operationalize, and conceptually different from a simple propensity measure.

Length of Residence

The length of residence in the pre-retirement home, has a strong negative relationship with the relative risk of moving in later life in the bi-variate analysis, particularly shortly after retirement/age 65. However, as one would expect, the longer the subject remained in his home

Table 5.2.1.2 Multi-variate proportional hazards model for time to a residential migration after retirement/age 65 by mid-life number of moves, maximum family contact, continuity of social activity, social relations index, income, unemployment, years with declining health, and length of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Number of mid-life moves	.250***	.074	1.28	1.11 - 1.49
Maximum family contact				
< monthly	-.350	.520	0.71	0.25 - 1.95
monthly (ref)			1.00	
weekly	-.655†	.346	0.52	0.26 - 1.02
Continuity of social activity				
low	.869†	.509	2.38	0.88 - 6.47
(low x time)	-.649†	.352	0.52	0.26 - 1.04
moderate (ref)			1.00	
high	.297	.575	1.35	0.44 - 4.15
(high x time)	-.301	.363	0.74	0.36 - 1.51
Social relations index				
lowest decile	.654*	.340	1.92	0.99 - 3.74
moderate (ref)			1.00	
highest decile	-1.811†	1.019	0.16	0.02 - 1.21
Income				
low	-1.723*	.723	0.18	0.04 - 0.74
moderate (ref)			1.00	
high	-.527	.545	0.59	0.20 - 1.72
variable	-1.257**	.440	0.29	0.12 - 0.67
missing	-2.118†	1.109	0.12	0.01 - 1.06
Unemployment				
none (ref)			1.00	
moderate	.785**	.277	2.19	1.27 - 3.77
high	.053	.489	1.05	0.40 - 2.75
Years with declining health				
low (ref)			1.00	
moderate	-.649†	.345	0.52	0.27 - 1.03
high	-.798*	.358	0.45	0.22 - 0.91
Length of mid-life				
(length x time)	-.189**	.068	0.83	0.72 - 0.95
	.152**	.056	1.16	1.04 - 1.30

† p<.10; * p<.05; ** p<.01; *** p<.001

Table 5.2.1.3 Multi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by mid-life length of residence, marital status change, period of empty nest, maximum family contact, social relations index, income, occupation, unemployment, education, health rating, years with declining health, and length of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of residence				
0-10	.624*	.297	1.87	1.04 - 3.34
11-25	.374	.287	1.45	0.83 - 2.55
26+			1.00	
Marital status change				
some	-.736*	.377	0.48	0.23 - 1.00
none (ref)			1.00	
Period of empty nest				
always empty (no children)	.621	.484	1.86	0.72 - 4.80
prior to mid-life	-.439	.756	0.64	0.15 - 2.84
early mid-life	.334	.448	1.40	0.58 - 3.36
intermediate mid-life	.561*	.265	1.75	1.04 - 2.95
late mid-life, if at all			1.00	
Maximum family contact				
< monthly	-1.377	1.051	0.25	0.03 - 1.98
(< monthly x time)	2.476**	.895	11.89	2.06 - 68.69
monthly (ref)			1.00	
weekly	-.578	.402	0.56	0.26 - 1.23
(weekly x time)	.155	.313	1.17	0.63 - 2.16
Social relations index				
"lowest decile"	-.107	.511	0.90	0.33 - 2.45
("lowest decile" x time)	.663	.412	1.94	0.87 - 4.35
moderate			1.00	
highest decile	.637	.498	1.89	0.71 - 5.02
(highest decile x time)	-2.397†	1.257	0.09	0.01 - 1.07
Income				
low	-2.077*	.856	0.13	0.02 - 0.67
moderate (ref)			1.00	
high	-.380	.581	0.68	0.22 - 2.14
variable	-.519	.459	0.60	0.24 - 1.46
missing	-.393	.926	0.68	0.11 - 4.14

(continued)

Table 5.2.1.3 (continued)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Occupation				
white collar (ref)			1.00	
blue collar	-.263	.360	0.77	0.38 - 1.56
(blue collar x time)	.456†	.269	1.58	0.93 - 2.67
farm	-2.045	1.520	0.13	0.01 - 2.55
(farm x time)	.969	.824	2.64	0.52 - 13.25
Unemployment				
none (ref)			1.00	
moderate	.475†	.252	1.61	0.98 - 2.64
high	-.176	.462	0.84	0.34 - 2.08
Years of education				
(years of education x time)	.031	.065	1.03	0.91 - 1.17
	-.094†	.053	0.91	0.82 - 1.01
Health rating				
good (ref)			1.00	
later poor	.002	.377	1.00	0.48 - 2.10
(later poor x time)	-.330	.282	0.72	0.41 - 1.25
early poor	.324	.420	1.38	0.61 - 3.15
(early poor x time)	-.655*	.333	0.52	0.27 - 1.00
Years with declining health				
low (ref)			1.00	
moderate	-.777**	.313	0.46	0.25 - 0.85
high	-1.213***	.353	0.30	0.15 - 0.59
Length of mid-life				
	.012	.053	1.01	0.91 - 1.12

† p<.10; * p<.05; ** p<.01; *** p<.001

after retirement/age 65 the less difference the prior length of residence made. As can be seen in Table 5.2.1.1, the direction of the relationship persisted in the multi-variate model, however it only obtained a marginal level of statistical significance (p<.10). Hence it would appear that when other variables dealing with residential history, family and social relations, social economic status,

and health are taken into account in the moving model, the unique contribution of the length of residence is not very important.

The findings with regard to the relationship between length of residence at the end of mid-life and migration out of the county or regional municipality in later life are much the same. Once again there is a negative relationship at the bi-variate level, however the time interaction indicates that the magnitude of the relationship declines rapidly and significantly with time, particularly for those with a relatively short length of residence at the end of mid-life. In the multi-variate model of a residential migration (Table 5.2.1.2) the length of residence does not obtain even marginal statistical significance ($p > .10$).

Given these results, it is particularly interesting that the length of residence has been found to be related to the distance of a move, given a move is made. In the bi-variate model for the sub-group of movers, it would appear that shortly after retirement or obtaining age 65 whichever came first, those with relatively short durations of residence (0 to 10 years) are more likely to have migrated out of the county than to have made a local move. The findings for the multi-variate model (Table 5.2.1.3) are similar, although the time interaction no longer obtained even marginal statistical significance ($p > .10$). Compared with those who had lived in their mid-life home for 26 or more years, those who had moved into these homes during their mid-life and had relatively short lengths of residence (0 to 10 years), are almost twice (risk ratio of 1.87) as likely to migrate if they moved.

On the basis of these findings, it would appear that the length of residence has only a marginally significant independent effect on the relative risk of moving and no unique effect on the relative risk of migrating out of the county once other residential history, family and social, socio-economic and health variable are taken into account. This is somewhat at odds with Morrison's (1971) finding that age, residential duration, and moving propensity each had independent effects. Possibly this difference can be attributed to the potentially confounding

effects of the other variables being statistically controlled in the present analysis, but not in Morrison's. On the other hand, this could be due to the close relationship between the number of moves made during mid-life and the associated length of residence at the end of mid-life. The results of a multi-variate Poisson regression model of the number of mid-life moves (Table 5.2.1.4) indicate that length of residence prior to mid-life is negatively associated with the number of mid-life moves ($p < .001$). Hence, length of residence, particularly that of long duration may be having an indirect effect on the relative risk of moving or migration in later life through its association with the number of mid-life moves. Alternatively the number of moves may act as a surrogate for length of residence.

However, the findings are consistent with the hypothesis that if a move is made it is more likely to be local. It would appear that with increased length of residence the LSA individual may have become more attached to the local community. In any case, he is less likely to leave it upon moving. Since a number of social and socio-economic variables have statistically significant independent effects in the multi-variate model, it is possible, by default, that the external continuity provided by the local environment underlies this association, as argued by Atchley (1989). However, the data do not provide sufficient information with which to test this hypothesis.

Housing Tenure

The findings with regard to housing tenure are similarly interesting. In both the bi-variate and multi-variate models homeowners are significantly less likely to move ($p < .001$), and this did not change with time. The risk ratio in the multi-variate model (Table 5.2.1.1) indicates that the LSA subjects who did not own their homes are more than twice as likely to move in later life than homeowners: 12 years after retirement/age 65, the estimated probability of homeowners having not moved is .69 as compared with .37 for non-owners in the bi-variate survival curves.

Table 5.2.1.4 Multi-variate Poisson regression model for number of mid-life moves by length of residence prior to mid-life, mid-life housing tenure, marital status change, marital status, period of empty nest, maximum family contact, social relations index, income, occupation, and education, and off-set by length of mid-life

Mid-life Variable	Parameter Estimate	Asymptotic Standard Error	Risk Ratio	95% Confidence Limits
Prior length of residence	-.028***	.004	0.97	0.96 - 0.98
Housing tenure				
owner	-1.192***	.079	0.30	0.26 - 0.35
other (ref)			1.00	
Marital status change				
some	.310**	.100	1.36	1.12 - 1.66
none (ref)			1.00	
Marital status				
single	.406†	.246	1.50	0.93 - 2.43
married (ref)			1.00	
widowed, separated, or divorced	-.120	.155	0.89	0.65 - 1.20
Period of empty nest				
always empty (no children)	.145	.136	1.16	0.89 - 1.51
prior to mid-life	.436**	.160	1.55	1.13 - 2.12
early mid-life	.059	.154	1.06	0.78 - 1.43
intermediate mid-life	.069	.087	1.07	0.90 - 1.27
late mid-life, if at all (ref)			1.00	
Maximum family contact				
< monthly	-.377*	.169	0.69	0.49 - 0.96
monthly (ref)			1.00	
weekly	-.342***	.100	0.71	0.58 - 0.86
Social relations index				
lowest decile	-.199†	.118	0.82	0.65 - 1.03
moderate (ref)			1.00	
highest decile	.184	.116	1.20	0.96 - 1.51
Income				
low	-.072	.253	0.93	0.57 - 1.53
moderate (ref)			1.00	
high	.448†	.246	1.56	0.97 - 2.53
variable	.208	.214	1.23	0.81 - 1.87
missing	.314	.294	1.37	0.77 - 2.44

(continued)

Table 5.2.1.4 (continued)

Mid-life Variable	Parameter Estimate	Asymptotic Standard Error	Risk Ratio	95% Confidence Limits
Occupation			1.00	
white collar (ref)				
blue collar	-.330***	.079	0.72	0.62 - 0.84
farm	-.010	.170	0.99	0.71 - 1.38
Years of education	-.047***	.014	0.95	0.93 - 0.98
Intercept	-1.244***	.295	0.29	0.16 - 0.51

† p<.10; * p<.05; ** p<.01; *** p<.001

However, housing tenure has a weaker relationship in the bi-variate model of a residential migration after retirement/age 65 and is not evident in the multi-variate model (Table 5.2.1.2), having not reached even a marginal statistical significance level ($p > .10$). The survival curves indicate only a small difference in the estimated probability that owners ($p = .90$) as compared with others ($p = .85$) had not migrated 12 years after retirement/age 65.

Similarly, housing tenure is not associated with the relative risk of migration, given a move has been made, either in the bi-variate or multi-variate models ($p > .10$).

Homeowners are more likely to stay in their homes than others, as indicated in the literature (e.g. Biggar, 1980; Longino, *et al.*, 1991; Meyer and Speare, 1985). However, little association has been found between home ownership and the relative risk of migrating out of the county in the multi-variate models. For the sub-group of movers, no relationship has been found with the relative risk of migration in both the bi-variate and the multi-variate models. One can only speculate that the lack of agreement at the bi-variate level with Biggar's (1980) findings that owners were more likely to migrate than make local moves is due to the difference in the

definition of local. In her analysis local mobility was at the intra-state level while the present analysis defines inter-county moves as migrations. So few LSA subjects (8) migrated out of the province after retirement/age 65 that it is not possible to examine this possibility. On the other hand, the Poisson regression model for number of mid-life moves (Table 5.2.1.4), indicates a strong negative association between home ownership and the number of mid-life moves ($p < .001$). To some extent, the number of mid-life moves, may act as a surrogate for home ownership in the multi-variate migration model.

Summary

In sum, the mid-life residential history variables have been found to be associated with the residential mobility choices of the elderly LSA men in later life. Both the propensity to move and duration of residence are associated with the relative risk of moving, although the association with length of residence only reaches a marginal level of significance ($p < .10$) in the multi-variate model. Of these two measures which characterize movers and stayers, only the number of moves is associated with the relative risk of migrating out of the local community in the multi-variate analysis, although there is some evidence that the length of residence may have an indirect effect through its association with the number of moves made in mid-life. For the sub-sample of movers, only the length of residence distinguishes between a migration and a local move.

Home ownership has a strong negative relationship with the relative risk of moving, however there is little evidence of a direct relationship between home ownership and the relative risk of migrating out of the county, even among the movers. Other variables associated with housing tenure, such as the number of mid-life moves may be acting together as a surrogate measure for housing tenure. As suggested by Kendig (1990a) the interplay of the various life course trajectories, especially family and socio-economic factors can make it difficult to sort out the independent effects of housing trajectories, especially those associated with housing tenure.

5.2.2 *Family and Social Relations*

The literature repeatedly emphasizes the importance of social integration to the well-being of the elderly, and as motivation for moving or staying. Each of the measures of family and social relations developed for this analysis has some association with the residential mobility choices of the elderly LSA subjects, although not always what had been expected. In this section, the findings for each of these mid-life variable measures - marital status change and resulting marital status, period of empty nest or the existence of children, maximum family contact, continuity of social activity over mid-life, and the summary social relations index - are discussed in turn.

Marital Status

Marital status change at some point during mid-life only has a positive relationship with the relative risk of moving in later life in the bi-variate analysis. It is not a significant ($p > .10$) contributor to the multi-variate model (Table 5.2.1.1). The survival curves indicate that the estimated probability of not having moved 12 years after retirement/age 65 is .55 for those with some marital status change during mid-life as compared with .67 for those with no change. However, marital change during mid-life does have a strong positive association with the number of mid-life moves in the Poisson regression model (Table 5.2.1.4), as one would expect given the formation and dissolution of households associated with marital status changes (Rossi, 1980a). Hence, marital status change may have an indirect relationship with the relative risk of moving in later life through its association with the number of moves during mid-life.

Similarly, marital status change during mid-life has not been found to have an independent association with the relative risk of migration in later life in either the bi-variate or the multi-variate models, although it could have an indirect effect through the number of mid-life moves in the multi-variate model (Table 5.2.1.3).

On the other hand, within the sub-group of movers, there is a negative relationship

between marital status change and the relative risk of migration, which only reaches a marginal significance level ($p < .10$) in the bi-variate model but is stronger in magnitude and statistical significance ($p < .05$) when other variables are taken into consideration in the multi-variate model (Table 5.2.1.3). The risk ratio in the multi-variate model indicates that compared with LSA subjects who had no marital status changes during mid-life, those with a change are twice as likely to remain in the local community, if they made a move.

On the basis of this evidence, mid-life marital status change is not associated with the relative risk of moving during later life. These findings are consistent with Speare and Goldscheider's (1987) findings which suggested that the direct effects of marital status change on residential mobility decrease with time, although the indirect effects may persist. However, the present analysis found that marital status change is related to the distance of the move, given a move is made. This supports Stapleton's (1980) argument that marital status change may lead to locational restraints on residential mobility resulting in a greater relative risk of local mobility, particularly in instances of marriage dissolution.

Alternatively, these findings suggest that it may be the resulting marital status at the end of mid-life that is the more important factor. In the present analysis, marital status only has a marginally significant ($p < .10$) association with the relative risk of moving in later life in the bi-variate model, with those who were widowed, separated or divorced being more likely to move after retirement/age 65. In the multi-variate model (Table 5.2.1.1) this relationship only obtained marginal significance in a time dependent form. That is shortly after retirement or turning age 65, there is little difference between the marital status groups in their relative risk of moving. With time those who were widowed, separated or divorced at the end of mid-life are increasingly more likely to move when other variables are taken into consideration, as can be seen in Figure 5.2.2.1. On the other hand, the single, never married group who also are not significantly different from the married group at the beginning of the retirement period ($p < .10$), if anything,

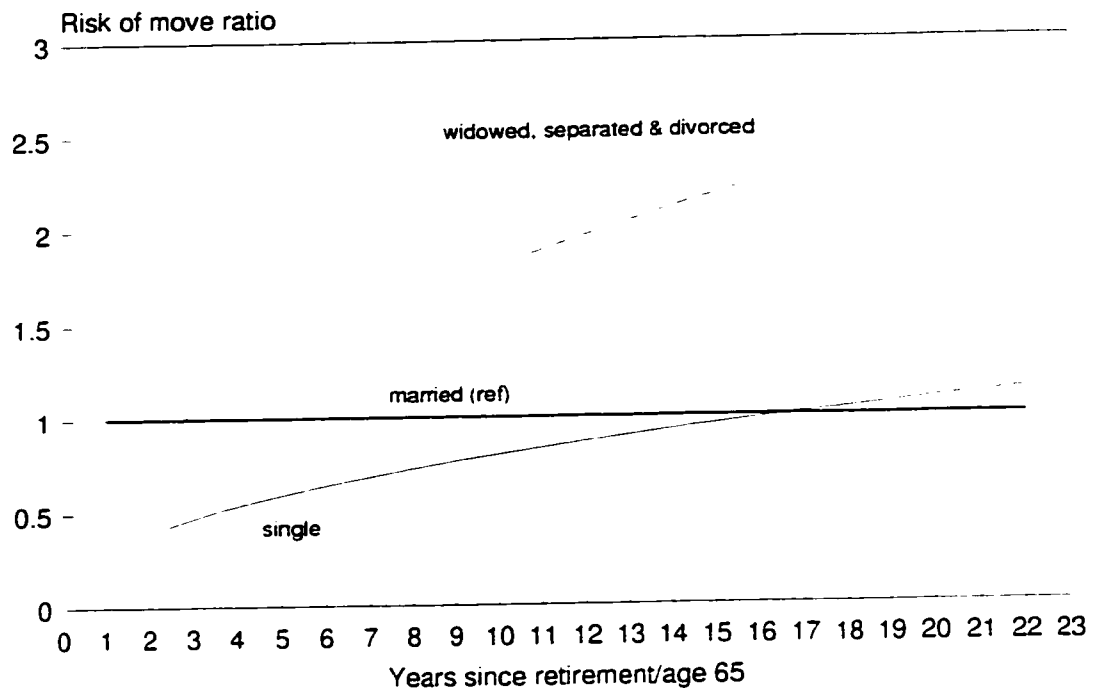


Figure 5.2.2.1 Adjusted risk of move ratios after retirement age 65 by marital status at the end of mid-life and by years since retirement/age 65

became more similar with time. For this marital status group, in particular, there is some indication of a marginally significant ($p < .10$) indirect effect through its positive association with the number of moves during mid-life relative to the married reference group.

Marital status at the end of mid-life has not been found to be related to whether the subjects migrated out of the local community either at the bi-variate or multi-variate level, and there is no evidence of a time interaction.

Examining those who had made a move, the widowed, separated and divorced are marginally ($p < .10$) more likely to make a local move than the other status groups in the bi-variate model, but this is not the case in the multi-variate model without the time interaction, and

the sample sizes of the non-married groups are too small to test for a time interaction. Because of the small sample sizes, one hesitates to make too much of the bi-variate results. This is one example where the under-sampling of an LSA sub-group has limited the analysis. The combined non-married are not significantly ($p > .10$) different from the married, which is not surprising given the two non-married groups are so different in moving behaviour. However, it is in this model (Table 5.2.1.3) that marital status change obtained statistical significance ($p < .05$), possibly incorporating some of the expected effects of resulting marital status.

In sum, marital status at the end of mid-life is not associated with the relative risk of moving or migrating in later life at the .05 level of statistical significance, although there is some indication that those who were widowed, separated or divorced are increasingly more likely to move with time after retirement ($p < .10$). Since marital status change is often argued to be a precipitating event in later life which leads to residential mobility (*e.g.* Bradsher *et al.*, 1992), these findings are not surprising. However, what is interesting is that a time interaction has been found for the group that was widowed, separated or divorced at the end of mid-life but not for the single group. Throughout later life the single, never married group were similar to the married, much as was the case in Speare and Goldscheider's study (1987). Although both of the non-married groups had no spouse to provide primary care, it is the widowed, separated or divorced group who are increasingly more likely to move with time in later life, even when the existence of children is taken into consideration in the multi-variate model. This suggests that this sub-group may be increasingly vulnerable during later life regardless of the time at which they entered this status, especially when one considers that at the end of the study the LSA subjects were approximately 76 years old and just entering the age range in which large increases in disability are common in the Canadian male population (Desjardins, 1993). If the study had continued, the nature of this interaction suggests that the relationships between mid-life marital status and later life residential mobility choices could have been stronger with time.

Children

The results for measures of the existence of children and the period in which they left the nest as they relate to residential mobility choices in later life are mixed. In the bi-variate model, those subjects whose children left home prior to the mid-life period are more likely to move than those with children still in the home in late mid-life, and the relative risk increased greatly with time. The survival curves showed that the estimated probability of not moving declined rapidly after 6 years for this sub-group. Similar results were found in a preliminary multi-variate model. However, these results are based on a small sub-group of 22 men who are somewhat unusual. Of this group 5 were separated at the beginning of mid-life, another 3 or so appeared to have divorced and remarried, and the remainder married young enough to have adult children. There is a strong positive association between this group and number of mid-life moves, as can be seen in Table 5.2.1.4. The members of this small group had relatively short durations of residence at the end of mid-life, such that 59.1 per cent had lived in their residence for 10 years or less as compared with 26.8 per cent of the LSA sample overall. They were also much less likely to own their homes (59% as compared with 89%). In addition, almost half of them (45.5%) experienced marital status changes during mid-life as compared with 14 per cent of the LSA subjects in general. Although they were more likely to have white collar occupations, this sub-group is also more likely to have a relatively high proportion of years with incidents of unemployment. Finally, they had somewhat higher levels of education. Overall, this sub-group was less stable over the mid-life period as compared with the other LSA respondents. Because of this pattern and the small sample size it is difficult to decide whether these findings can be interpreted to truly reflect the effects of a very early empty nest or some other underlying variable. It seems more likely to be the latter.

In view of this ambiguity, a different approach was used to examine the relationship between children and relative risk of moving after retirement/age 65. When the empty nest

measure was entered into the preliminary multi-variate model, there also was a statistically significant association for those without children. This group were less likely to move than those who still had children in their home at the end of mid-life. Based on this finding, a recoded measure noting the existence of children was entered into the multi-variate model. Although there appears to be no relationship at the bi-variate level, those with children are more likely to move than those without children when other variables are taken into consideration, as can be seen in Table 5.2.1.1, and this does not change with time. There are only minor differences between this multi-variate model and the preliminary model with the full empty nest dummy variable series, and the major findings remain the same. Hence, to avoid confusion only the model with children/no children is reported here (Table 5.2.1.1).

Neither measure proved to be significant ($p > .10$) at the bi-variate or multi-variate level for the models examining the relative risk of migrating out of the local county or regional municipality as compared with staying in the same home or making a local move.

For the sub-group of movers, once again there is no evidence of a relationship with the distance of the move for either variable in the bi-variate models. However, in the multi-variate model (Table 5.2.1.3), those whose children left home in the intermediate mid-life are more likely to migrate (with a risk ratio of 1.75) than those who still had children in their home in later mid-life, given a move is made.

On the basis of the preliminary evidence, it would appear that the period of empty nest is related to the relative risk of moving in later life. However, given the small sample size and unusual characteristics of those whose children left home prior to the mid-life period, their greater relative risk of moving is difficult to interpret. Further study using data with a larger sample size would be helpful. Moreover, because of a lack of questions in the later mid-life interviews, it is not possible to ascertain whether the nest had emptied just before retirement or turning age 65. Based on the measure that could be developed for this analysis, it does not appear that the recency

of the empty nest is related to whether a move is made in later life by this group of men. However, there is some evidence that those with relatively recent empty nests are more likely to migrate, if a move is made. This lends some support to Rosenberg and Halseth's (1993) finding that elderly amenity migrants in Ontario tend to be "empty nesters".

However, in the present analysis, the finding that those who have children are more likely to make a first move in later life when other variables are taken into account is more easily interpreted. In this instance, the existence of children is positively related to the relative risk of moving in later life. That no relationship has been found between the existence of children and the distance of the move is not surprising. One of the main reasons frequently given by the elderly for moving is to be closer to children, regardless of distance (Meyer and Speare, 1985). Although a Canadian study found that the motivation to live closer to children increases with distance (Bergob, 1995), there are also examples of moves of relatively short distance to be nearer to kin, usually children (Joseph and Hallman, 1996). However, regardless of the existence of children, the frequency of contact with them and other kin is also important.

Family Contact

Looking at the maximum contact with kin during mid-life, those who saw kin on a weekly basis at some point during mid-life are less likely to move in later life than those who saw kin monthly, in both the bi-variate and multi-variate (Table 5.2.1.1) models, and this relationship did not change with time. However, there also is some evidence ($p < .10$) that those who saw their kin less than monthly throughout mid-life are less likely to move - a pattern which became more pronounced with time as can be seen in Figure 5.2.2.2. Throughout the later life period of the study, the estimated probability of not having moved is consistently higher for those with a weekly maximum family contact, as can be seen in the survival curves. For example, 12 years after retirement/age 65 the estimated probability of having not moved is .67 for those with a weekly

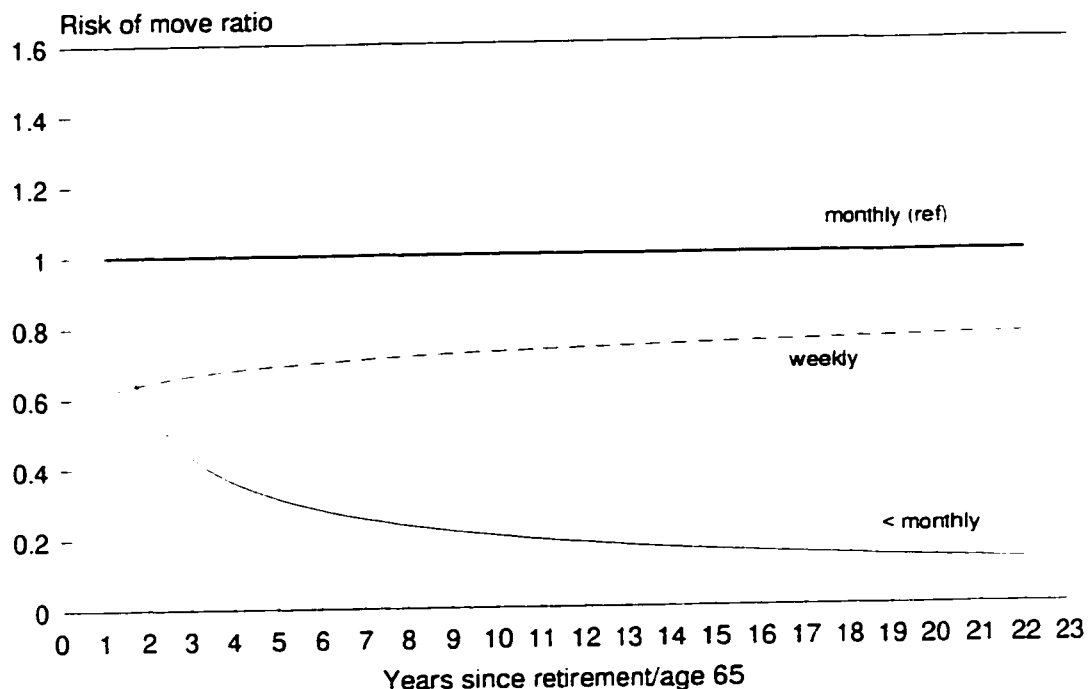


Figure 5.2.2.2 Adjusted risk of move ratios after retirement/age 65 by maximum family contact and by years since retirement/age 65

maximum contact as compared with .51 for those with monthly contact. There is also evidence that there may be an indirect relationship between the frequency of family contact and the relative risk of moving in later life, through its strong association with the number of moves during mid-life. It would appear that both those with relatively frequent and with relatively infrequent contact with family during mid-life are less likely to move in mid-life and in later life, than those with moderate contact.

The association between maximum family contact during mid-life and the relative risk of migration in later life is less pronounced. In the bi-variate model, those who had weekly contact are less likely to migrate than are those with monthly contact ($p < .01$), and this relationship does

not vary significantly with time ($p > .10$). Although, the risk ratio indicates that those with monthly contact are more than twice as likely to migrate when compared with those with weekly contact, the survival curves indicate the estimated probabilities of retaining a local residence are still quite high for the two groups. For example, 12 years after retirement/age 65 the estimated probability of having retained a local residence is .80 for those with monthly contact as compared with .90 for those with at least weekly contact at some point during mid-life. The findings are similar in the multi-variate model, except the association only obtained a marginal level of statistical significance ($p < .10$).

On the other hand, the frequency of family contact is associated in a somewhat different way with the relative risk of migration, given a move is made. At the bi-variate level those with less than monthly contact with family are more likely to migrate than those with monthly contact and this difference increased considerably with time. The multi-variate analysis shows similar associations (Table 5.2.1.3). However, the extreme magnitude of the interaction with time which can be seen in Figure 5.2.2.3, once again suggests that the sample size of movers with less than monthly contact with kin is too small (15) for meaningful analysis, and caution should be used in the interpretation of these results for movers.

In sum, this analysis indicates that those who have frequent contact with kin over the mid-life period are less likely to move in later life. However, the evidence of a relationship between mid-life family contact and the relative risk of migrating out of the local area is marginal ($p < .10$). Moreover, although statistical significance ($p < .05$) is reached in the model for the mover subgroup, the small sample size makes one reluctant to accept the magnitude of the observed association, which could change considerably even with a small increase in sample size. In general, it would appear that if a move is made, those with little family contact during mid-life are increasingly more likely to migrate with time after retirement or turning age 65.

The findings regarding those who see kin at least weekly are consistent with what the

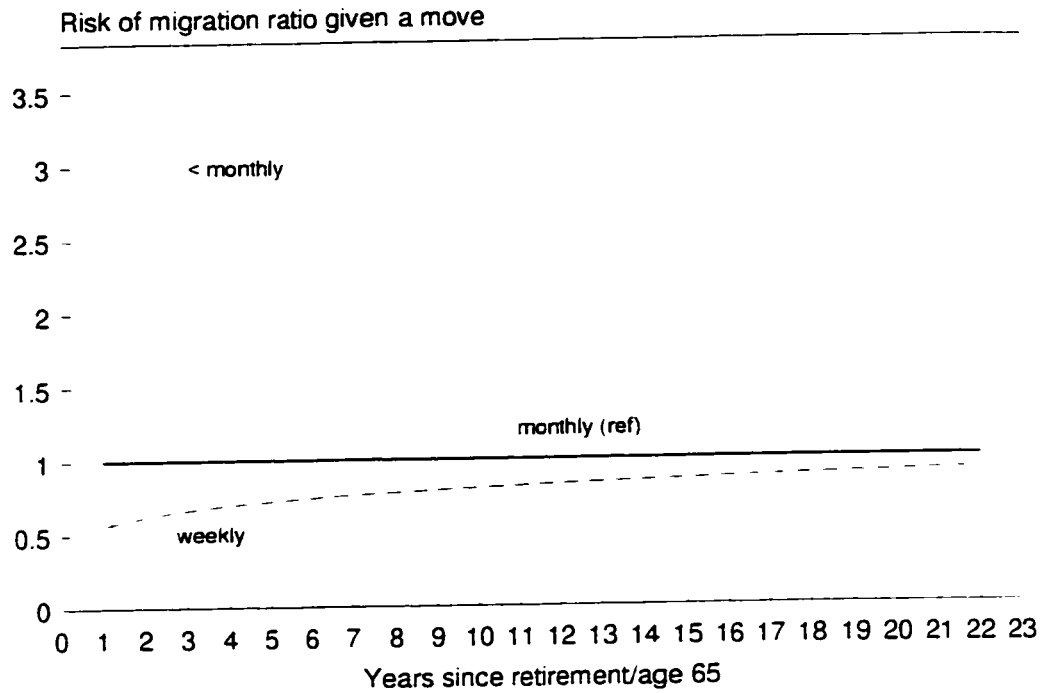


Figure 5.2.2.3 Adjusted risk of migration ratios after retirement/age 65 given a move by maximum family contact and by years since retirement/age 65

literature would lead one to expect, especially if one assumes that such frequent contact with kin indicates that they live in close proximity. The subjects in the present analysis who had frequent contact with kin during mid-life made fewer moves during mid-life and are less likely to move in later life. This lends support to other research that found that an important reason the elderly often give for staying in their home is proximity to children and kin (Clark and Wolfe, 1992; Law and Warnes, 1982; Lawton, 1986). On the other hand, those who had monthly contact are more likely to move than those with either more or less contact. One possible explanation of this finding is that monthly contact indicates that interaction with kin is of some importance to the individual but factors such as distance or busy schedules may have inhibited more frequent face-

to-face interaction. Under these conditions, it would not be surprising to find that with declining functional ability the elderly would be motivated to move closer to the kin with whom they interact and seek social support (Serow, 1987b). Alternatively, those who have less frequent contact with kin, may not have a strong kinship network upon which to draw support, and have compensated through social interaction with other members of the local community (Rosenthal and Gladstone, 1994). Individuals relying on friendship networks for support may be reluctant to move in later life, but as functional ability declines and their similarly aging friends are increasingly less able to provide the needed level of support, the ties to the local community may weaken leading to an increased relative risk of migrating if a move is made (Litwak and Longino, 1987), which may explain the pattern observed for the LSA respondents with little family contact. The possible alternative explanation that this group are social isolates with few local ties has been taken into consideration in the multi-variate model with the inclusion of measures of social participation and overall social relations.

Social Participation

An important component of the social integration of individuals and their ability to maintain independence in later life is their social participation throughout life (Wigdor and Marshall, 1995). In the present analysis, the evidence of an association between the continuity of social activity in mid-life and the relative risk of moving residence or of migrating out of the county is weak in the bi-variate models ($p < .10$). However, in the multi-variate model for a residential move (Table 5.2.1.1), those respondents with a low continuity of social activity during mid-life - those who had a relatively large proportion of mid-life years with changes in social activities - are more likely to move than those with a moderate level ($p < .05$), and this did not change with time. However, the survival curves indicate that the estimated probability of not having moved 12 years after retirement/age 65 is quite similar for those with low ($p = .61$) and moderate ($p = .67$) levels of

continuity. In addition, a statistically significant association has not been found between the continuity of social activity and the number of moves made during mid-life ($p > .10$).

In the multi-variate model for a residential migration out of the county or regional municipality in later life (Table 5.2.1.2), there is some evidence ($p < .10$) that those with low levels of continuity of social activity are more likely to migrate just after retirement or turning age 65, but this relative risk decreases rapidly with time (see Figure 5.2.2.4).

There is no evidence that the continuity of social activities during mid-life is related to the distance of the move given a move is made, either at the bi-variate or the multi-variate level.

These findings are quite interesting. When other variables are taken into consideration, it would appear that the LSA subjects with changes in social activity for a relatively large proportion of years in mid-life are somewhat more likely to move in later life than the moderate group. Those with relatively little change in social activities throughout mid-life are not significantly different from the moderate group. Rosow (1967) has argued that disruptions in social activity put the well-being of the elderly at risk. An earlier pattern of disrupted social activities could greatly restrict the range of coping strategies used by the elderly (Wigdor and Marshall, 1995). The findings of the present analysis lend some support to the argument that disruptions in social activity may result in fewer social adaptive resources, leading to a greater relative risk of moving as a coping strategy. However, it is interesting that this does not appear to influence the distance of the move. There is some indication that those with a low level of continuity in mid-life social activities are more likely to migrate out of the local community just after retirement, which is consistent with Longino's (1992) observation that a lack of strong local community ties makes it more likely that the recently retired will relocate.

Social Relations

One of the problems of dealing with each social variable individually is that it is difficult to

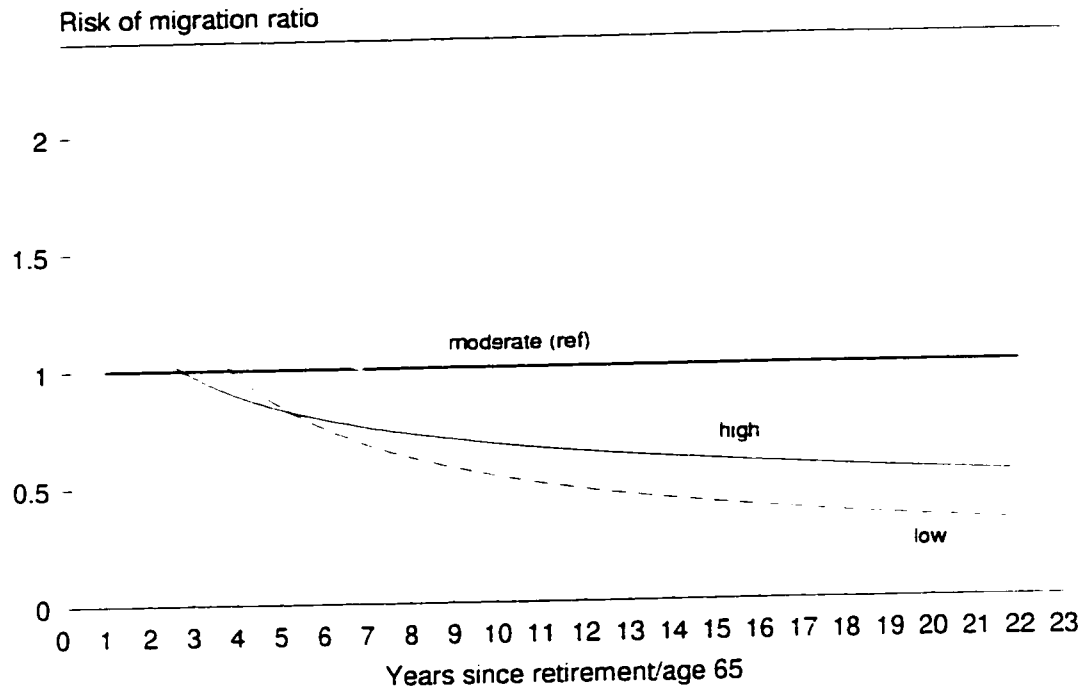


Figure 5.2.2.4 Adjusted risk of migration ratios after retirement/age 65 by continuity of social activity during mid-life and by years since retirement/age 65

determine if subjects that are disadvantaged in terms of support from children, for example, compensate through other sources of social support as suggested by Rosenthal and Gladstone (1994). This type of compensation could explain the curvilinear nature of the relationship between the frequency of family contact during mid-life and residential mobility. For this reason, it is useful to have a summary measure of combined sources of social support as provided by the social relations index in the present analysis. Using this index which jointly considers marital status, number of children, family contact and social participation in early mid-life, it can be seen that a low value in the social relations index is associated with a greater relative risk of moving in later life in both the bi-variate and multi-variate (Table 5.2.1.1) models. There is no indication

that this relationship changed significantly with time ($p > .10$). The survival curves indicate that 12 years after retirement/age 65 the estimated probability of not having made a move is .54 for those in the lowest decile of this index as compared with .67 for the large moderate group and for the highest decile. On the other hand, the Poisson regression gives some indication that a low level of social relations is associated with a smaller number of moves during mid-life, albeit of marginal statistical significance ($p < .10$). It would seem that the association between the level of social relations and the relative risk of moving reverses upon retirement, possibly because of the loss of work-related ties.

The findings regarding the relationship between the social relations index score and the relative risk of migration in later life are interesting. Although there is not a significant association in the simple bi-variate analysis ($p > .10$), the addition of time interaction terms led to the discovery that those with high social relations scores are increasingly less likely to migrate with time in later life ($p < .10$). On the other hand, in the multi-variate model (Table 5.2.1.2), a relatively low score on the social relations index is associated with a greater relative risk of a residential migration in later life. The lowest decile of the respondents are almost twice (a risk ratio of 1.92) as likely to migrate out of the county or regional municipality compared with the moderate group, when other variables are taken into consideration. There is also some evidence that a relatively high social relations score is associated with a decreased relative risk of a residential migration in the multi-variate model ($p < .10$). However, when other variables are taken into consideration, there is no indication of a change over time for the high decile.

On the other hand, there is some indication of a marginally significant ($p < .10$) time effect in the association between social relations and migration, in both the bi-variate and the multi-variate (Table 5.2.1.3) analyses, given a move is made. Those LSA respondents in the highest decile are increasingly less likely to migrate if they move, as time went by in later life (Figure 5.2.2.5), when other variables are taken into consideration. However, once again, the numbers

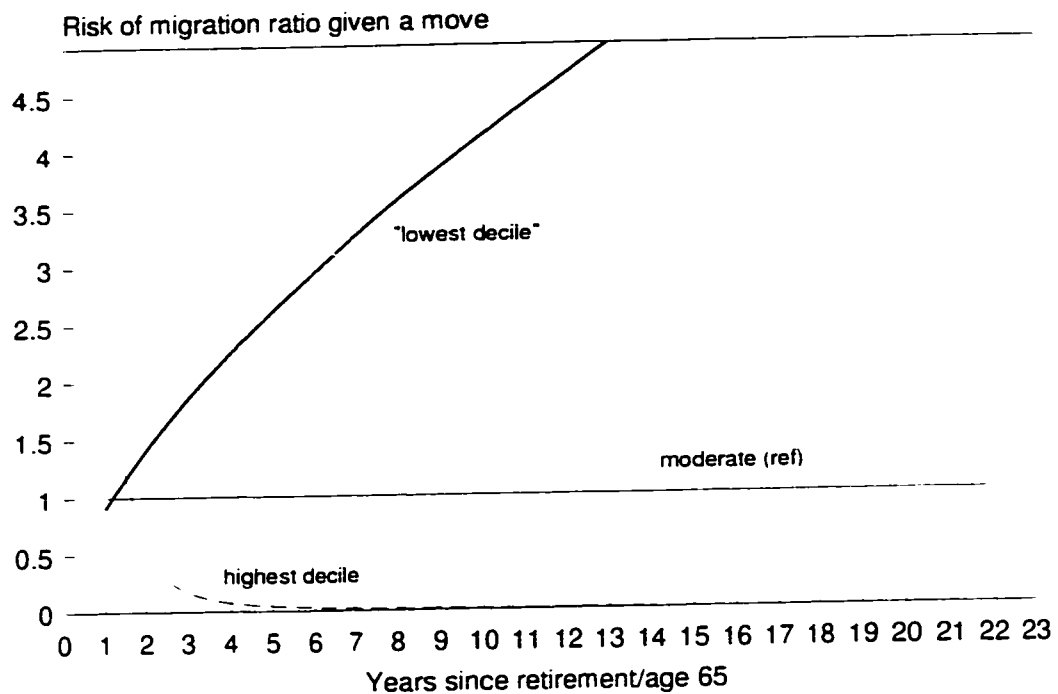


Figure 5.2.2.5 Adjusted risk of migration ratios after retirement/age 65 given a move by social relations index in early mid-life and by years since retirement/age 65

are quite small in the extreme groups (47 and 33), which to some extent explains the large magnitude of the time interaction, and the large standard error for the high group.

In sum, those who were relatively socially isolated, the 10 per cent of the LSA subjects at the lower end of the social relations scale, made fewer moves in mid-life but are more likely to move, and more likely to migrate after retirement/age 65 than are those with higher scores on the social relations index. This also lends some support to Longino's (1992) argument that those with few social ties may find it easier to move in later life, because there would be lower emotional costs associated with relocation.

Summary

In sum, this analysis provides evidence that family and social relations life course trajectories are interwoven with residential trajectories through their association with residential mobility in mid- and later life. In general, those who were more socially integrated within the local community during mid-life as indicated by frequent contact with kin, moderate to high continuity of social activity, and were not relatively socially isolated are less likely to move or to migrate in later life. On the other hand, other things being equal, those with children are more likely to move. There is also some indication that those who were widowed, separated or divorced at the end of mid-life are increasingly more likely to move with time in later life, although this only reaches a marginal level of statistical significance. If the LSA subjects did move in later life, those who experienced marital status disruptions during mid-life are less likely to leave the local community, while those whose children left home relatively recently are more likely to leave.

5.2.3 Socio-economic Status

Socio-economic life course trajectories have been found to diverge with age (O'Rand, 1996) and as such result in considerable variation in the extent to which the elderly experience financial constraints or pressures which can affect residential mobility (Meyer and Speare, 1985). Past studies have found a socio-economic selectivity in the residential mobility patterns of the elderly (e.g. Biggar, 1980). Each of the measures of socio-economic status used in the present analysis - income, occupation and labour force activity, and education - has something to contribute to an understanding of the relationship between mid-life patterns and the residential mobility of elderly men, and are discussed in turn.

Income

Financial constraints or pressures are frequently argued to result in a socio-economic selectivity

in the residential mobility patterns of the elderly (*e.g.* Biggar, 1980; Longino, 1992; Meyer and Speare, 1985). In the present analysis there is little evidence of a relationship between mid-life income and the relative risk of moving in later life in either the bi-variate or the multi-variate (Table 5.2.1.1) models ($p > .10$). However, there is some evidence of a positive association between income and the number of moves during mid-life (Table 5.2.1.4), possibly resulting in an indirect effect on residential mobility in later life through an association with mid-life housing trajectories. The multi-variate Poisson regression model indicates that those who are consistently in the high income group throughout mid-life make more mid-life moves than those with moderate incomes ($p < .10$).

The results for the migration models are more interesting. In the bi-variate analysis, those with consistently low incomes are less likely to migrate than those with moderate incomes, and this did not change significantly with time ($p > .10$). The survival curves indicate that 12 years after retirement or turning age 65, the estimated probability that those with consistently low mid-life incomes had not migrated is .94 as compared with .83 for those with moderate incomes throughout mid-life. Although they differed, both groups had a fairly high estimated probability of remaining in the same community. Once other variables are taken into consideration in the multi-variate model (Table 5.2.1.2), those with consistently low incomes and those with variable incomes during mid-life are significantly less likely to migrate than those with moderate incomes ($p < .05$ and $p < .01$ respectively). Those with missing income data have a similar but marginally significant ($p < .10$) association with the relative risk of migrating, albeit with a small sample size (20) and a large standard error (1.109). In the multi-variate model, those with consistently moderate incomes are over 5 times more likely to migrate when compared with those with low incomes, and about 3 times more likely to migrate compared with those with variable incomes.

Similar results are found for the sub-group of movers in later life, in that those with consistently low incomes during mid-life are much less likely to migrate than those with moderate

mid-life incomes, in both the bi-variate and the multi-variate models ($p < .05$). However, the sample sizes for both the low income (32) and the moderate group (12) are quite small.

Because of the small sample sizes of some of the income categories, one hesitates to make too much of these findings. However, other mid-life income measures developed in the preliminary stages of this analysis did not perform any better in the models, and most showed no statistically significant associations with residential mobility in later life whatsoever.

The results of the present analysis indicate that mid-life income does not distinguish between movers in later life and those who age-in-place, except possibly through its association with mid-life housing trajectories. This is generally what the literature leads one to expect, especially if there is a cancelling effect, as suggested by Wiseman (1980), due to high incomes facilitating moves for some, while affordability problems pressure others with low incomes to move.

There is, however, some evidence that mid-life income is related to the distance of the move as suggested in the literature. For the mover sub-group, it would appear that the LSA subjects with consistently low incomes during mid-life, hence fewer economic resources to draw upon when moving in later life, are less likely to move across county borders than are those with moderate mid-life incomes. These findings are compatible with the socio-selectivity of migration patterns for older people described in other empirical studies both in the United States (Biggar, 1980; Meyer and Speare, 1985) and Canada (Ledent and Liaw, 1986; Northcott, 1988; Moore and Rosenberg, 1994) which generally found that the probability of migration and the distance of the move increases with income. However, in the present analysis there is no significant difference between moderate and high income groups, possibly because the distances of the moves are not large.

It is also interesting that when other variables are taken into consideration in the migration model (Table 5.2.1.2), subjects with variable mid-life incomes are also less likely to migrate

across county borders. One possible explanation for this finding is that those with less predictable incomes during mid-life may have found it difficult to accumulate economic resources/wealth upon which they could draw in later life. Also a history of variable income may have made them less confident of the stability of economic resources in general, and more cautious or conservative when making financial decisions such as those associated with a long distance move. There is insufficient data in the LSA to further examine these possible explanations.

An alternative approach to the analysis of the effects of socio-economic trajectories on residential mobility in later life would be to examine mid-life occupation and labour force activity since they largely determine access to, and the accumulation of economic resources for later life, such as pensions and housing wealth (Arber and Evandrou, 1993; O'Rand, 1996).

Occupation

Early in the bi-variate analysis of the relationship between occupation and residential mobility in later life, it became apparent that occupational prestige level as measured using the scale developed by Pineo, Porter and McRoberts (1977) was not related in a linear fashion with the relative risk of various residential mobility choices in later life. However, an examination of the bi-variate proportional hazards model for a residential move using the detailed occupational classification showed an interesting pattern. The subjects that had traditional blue collar occupations - foremen, skilled crafts and trades, and semi-skilled crafts and trades - are significantly less likely to move in later life than are those in the reference upper management group. Moreover, the higher the occupational prestige within this blue collar sub-group, the greater the difference from the upper management group and the less likely they are to move. This finding suggested that an analysis using more traditional class categories of white collar, blue collar and farmers would be more appropriate, in addition to being more representative of the general population of Ontario men.

In both the bi-variate and multi-variate (Table 5.2.1.1) models those whose main occupation during working life was blue collar are less likely to move in later life (a risk ratio of .77) when compared with those with white collar occupations ($p < .05$), and this relationship does not change with time after retirement or turning age 65 ($p > .10$). Whereas the estimated probability of not having moved 12 years later is .66 for those with white collar occupations, it is .71 for blue collar workers, as can be seen in the survival curves. Consistent with this pattern is the finding that those with blue collar occupations made fewer moves during mid-life (Table 5.2.1.4).

A relationship between occupation and the relative risk of migrating out of the county or regional municipality is less apparent. In the bi-variate analysis, there is some evidence that farmers are less likely to migrate shortly after retirement or turning age 65 but are increasingly more likely to migrate with time ($p < .10$). Blue collar workers are similarly less likely to migrate shortly after retirement/age 65 but became more like the white collar group with time. However, these relationships do not achieve a marginal level of statistical significance ($p > .10$) once the effects of other variables are taken into consideration in the multi-variate model (Table 5.2.1.2).

There is slightly stronger evidence that occupation is associated with the relative risk of migrating in later life if a move is made. The bi-variate findings for the mover sub-group are quite similar to those for the general migration model. However, in this case blue collar workers are similar to the white collar group in their relative risk of migrating shortly after retirement but are increasingly more likely to migrate with time, if they made a move. As can be seen in Table 5.2.1.3, it is only this latter relationship that has obtained a marginal level of statistical significance ($p < .10$) in the multi-variate model. When other variables are taken into consideration, there is still some evidence of an interaction with time for those with blue collar occupations prior to retirement (Figure 5.2.3.1). Although the farmer group have a similar pattern, this association did not reach a marginal level of statistical significance ($p > .10$), possibly because of the small

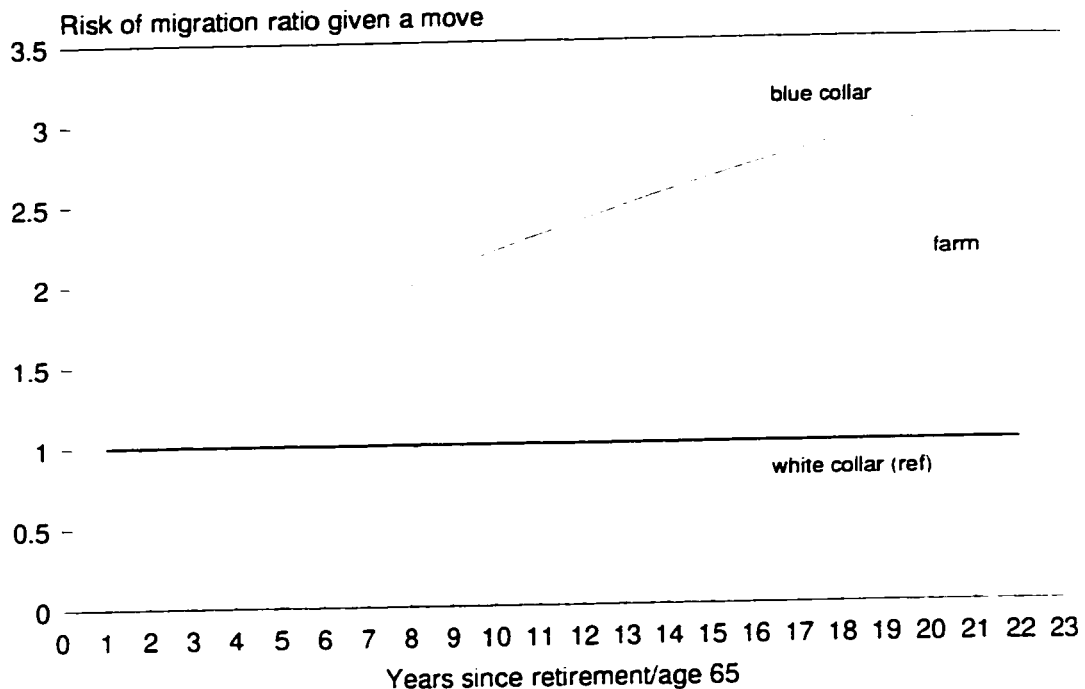


Figure 5.2.3.1 Adjusted risk of migration ratios after retirement/age 65 given a move by main occupation and by years since retirement/age 65

number of subjects in this mover sub-group (34).

In sum, blue collar LSA workers are less likely to move in both mid- and later life than are those with white collar occupations. This is consistent with Evandro and Victor's (1989) finding that those with blue collar occupations would have lower levels of resources, which could make moving difficult. However, a similar result would also be expected using Birenbaum's (1984) argument that aging-in-place helps working class elderly maintain their social status.

On the other hand, when other variables are taken into consideration in the multi-variate models, there is only marginal statistical evidence ($p < .10$) of an association between occupational class and the relative risk of migration in later life, even if a move is made. Possibly, if the

sample size had been larger or if the subjects had been followed for a few more years after entering the period when Canadian men begin to have large increases in disability, the increasing relative risk of blue collar workers and farmers to migrate with time after retirement would have obtained statistical significance. Nevertheless, this pattern is what one would expect if those with working class backgrounds found it necessary to draw upon their social resources by moving closer to kin when they could no longer maintain their own household.

Alternatively, it could be the stability of employment associated with different occupations rather than the occupation *per se* that is an important determinant of residential mobility in later life.

Labour Force Activity

The measure of the extent to which LSA subjects experienced periods of unemployment during mid-life yielded some interesting results. In the bi-variate analysis those with only one or two incidents of unemployment during mid-life, the moderate group, are more likely to move than either the group with no incidents or the group with a relatively high proportion of years with incidents of unemployment. However, once other variables are taken into consideration this variable does not make a statistically significant ($p > .10$) contribution in the multi-variate model (Table 5.2.1.1). There also is little evidence of an association between unemployment frequency and the number of mid-life moves in the multi-variate Poisson regression (Table 5.2.1.4).

However, there is strong evidence that the frequency of unemployment during mid-life is associated with the relative risk of migrating after retirement/age 65 in both the bi-variate and the multi-variate (Table 5.2.1.2) models. Those with moderate unemployment histories are the group that are most likely to migrate ($p < .01$) and the analysis indicates that this relationship does not change with time after retirement ($p > .10$). Moreover, when other variables are taken into consideration in the multi-variate model this association becomes stronger. Those with moderate

histories of unemployment are more than twice as likely to migrate out of the local community than either the group with no incidents of unemployment or those with relatively large numbers of incidents.

On the other hand, this pattern is evident but had a much weaker association for the mover sub-group, and only reaches a marginal level of statistical significance ($p < .10$) in the multivariate model (Table 5.2.1.3).

In sum, there is little evidence that unemployment is associated with the relative risk of moving after mid-life. Although a relationship is observable in the bi-variate analysis, it disappears when other factors are taken into consideration. There is, however, evidence that mid-life unemployment is associated with the relative risk of migrating out of the county or regional municipality. On the other hand, there is only a marginally significant relationship between mid-life unemployment history and the distance of the move. What is interesting is that the curvilinear pattern observed was not expected, but in hind thought is not surprising. The literature suggests that those with a greater mid-life employment instability would have fewer economic resources and possibly fewer health (Smith, 1985) and social resources due to associated stress and uncertainty (O'Rand, 1990), possibly resulting in affordability pressures to move in later life. It is also possible that this group was already in relatively low cost accommodation and simply did not have the resources to make moves in later life. On the other hand, the moderate group may have been those who had the resources to make a move to more affordable accommodation outside the county or regional municipality. However, these possible explanations cannot be examined using the LSA data due to the lack of information concerning economic conditions in the post-retirement period around the time of the move.

An additional indicator of labour force activity during mid-life would be the length of mid-life. This measure was developed as a statistical control for the variable length of mid-life in the analysis, however it is also a measure of early retirement. Although an independent effect

was not expected. in both the bi-variate and multi-variate (Table 5.2.1.1) models there is a statistically significant ($p < .05$) interaction with time in the association between length of mid-life (time of retirement) and the relative risk of moving in later life. As can be seen in Figure 5.2.3.2. the longer the mid-life (the later the time of retirement) the less likely the subjects are to move immediately following retirement and the more likely they are to move at a later time. This pattern is even more pronounced for the relative risk of migration (Table 5.2.1.2; Figure 5.2.3.3). However, for the sub-group of movers, it does not appear to distinguish ($p > .10$) between those who moved locally and those who moved across county borders in later life (Table 5.2.1.3).

It is interesting that although a small peak in residential mobility rates around retirement age has frequently been found (Rogers and Wilkins, 1987), few researchers studying the residential mobility of the elderly have explicitly examined the age at retirement, possibly because this information was not readily available. A number have included age in their analyses (e.g. Biggar, 1980; Clark and Davies, 1990; Henretta, 1986; Longino, 1980; Meyer and Speare, 1985; Sommers and Rowell, 1992) which may have acted as a surrogate measure for this information. One study by Heaton and his associates (1980) examined standardized migration rates by employment status for men age 45 to 64 and those 65 years of age and over. They observed that those in the younger age group who were retired were more likely to migrate out of metropolitan centres to amenity rich non-metropolitan areas during a five year period than were retirees in the older group. However, they pointed out that there was no way to know if the onset of retirement had occurred within the five year period. Many of the older age group could have retired years, if not decades, earlier. As a result these findings may have been describing an age effect.

The present finding of a reversing pattern in which early retirees are more likely to move or migrate shortly after retirement but are increasingly less likely to move or migrate with time after retirement/age 65 when compared with those who retired at an older age, could be explained using the a developmental model of migration such as Litwak and Longino's (1987). Since health

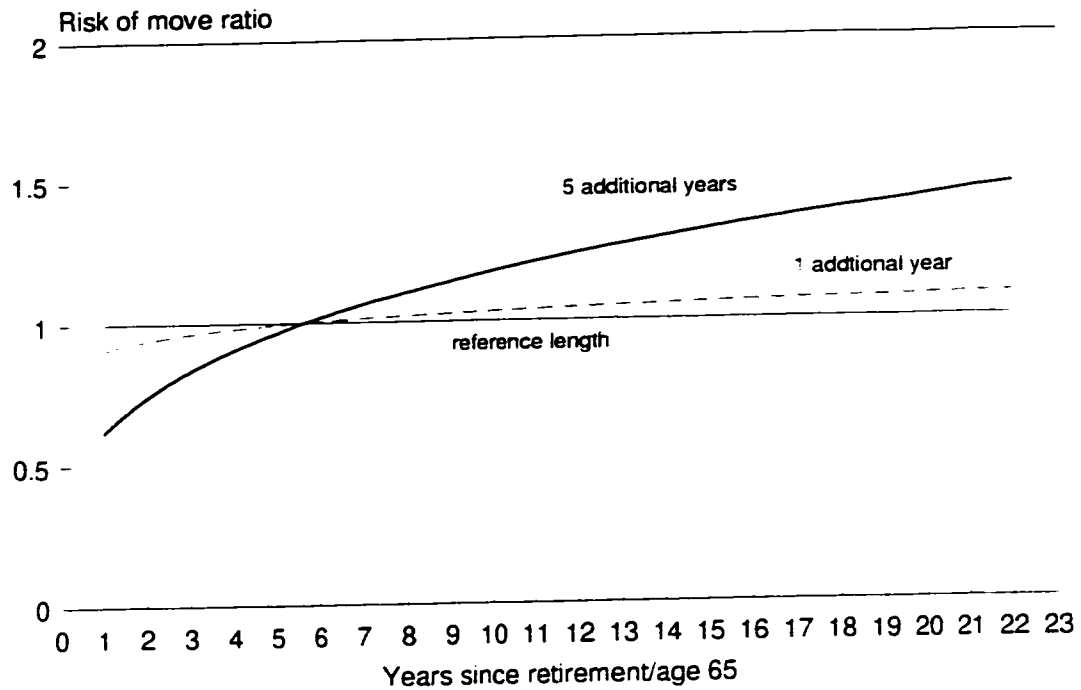


Figure 5.2.3.2 Adjusted risk of move ratios after retirement/age 65 by length of mid-life and by years since retirement/age 65

has not been found to be associated with age at retirement (Elder and Pavalko, 1993), it is reasonable to assume that subjects making an early retirement would probably have the economic resources to retire, and subsequently both the economic and health resources to facilitate an amenity move. Similarly, one would expect that there would be a longer period after retirement before an age related decline in health would lead to the need for an assistance move. Alternatively, those who had remained in the work force longer may have done so because they could not afford to leave, particularly before the common mandatory retirement age of 65. By the time they retired, they would have been older and may have had fewer health or economic resources with which to make an amenity move. Moreover, on the average, there would be a

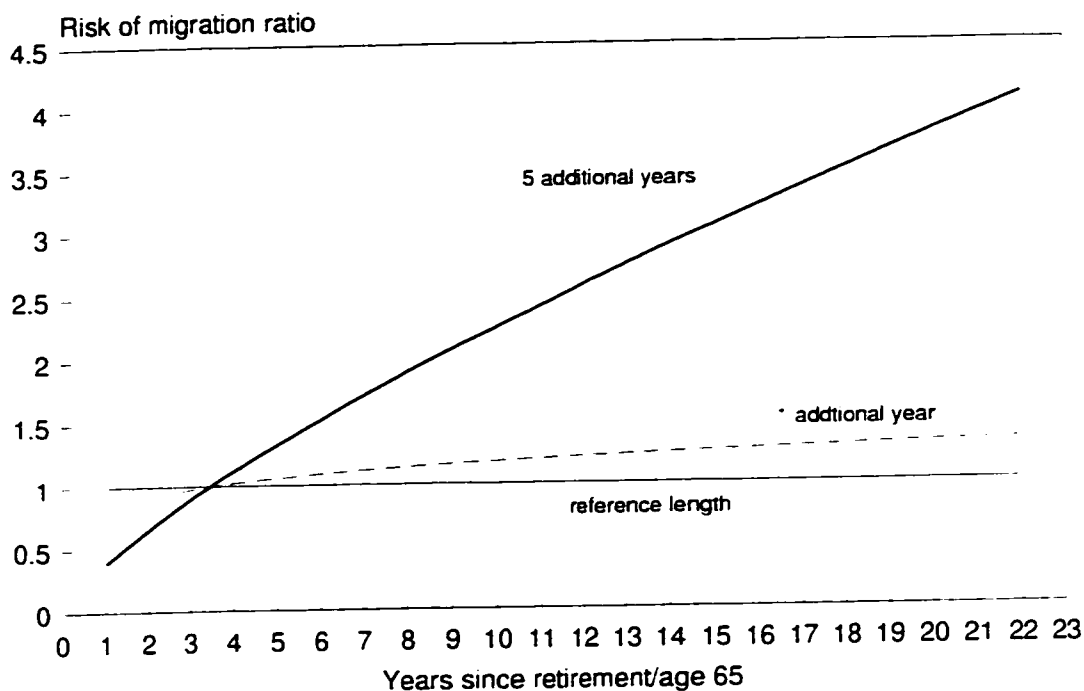


Figure 5.2.3.3 Adjusted risk of migration ratios after retirement/age 65 by length of mid-life and by years since retirement/age 65

shorter period of time after retirement before disability set in and they began to make support seeking moves. Explained in this way, this unexpected finding in the present analysis can be seen to be consistent with the associations between the other measures of mid-life socio-economic status and the residential mobility of LSA men in later life.

Education

The findings concerning the relationships between education and the residential mobility choices of elderly LSA men are not what was expected. In both the bi-variate and multi-variate (Table 5.2.1.1) analyses, educational attainment has a negative association with the relative risk of

moving in later life. The bi-variate survival curves indicate that while those LSA subjects with less than 9 years of education have a estimated probability of .63 of not having made a move 12 years after retirement, those with some high school (9 to 13 years) had a estimated probability of .66, and those with post secondary education of some form had a estimated probability of .72. In sum, higher levels of education are associated with a greater relative risk of aging-in-place. Similarly, the higher their educational attainment the fewer moves they made during mid-life (Table 5.2.1.4), which is in the opposite direction to the relationship found for income.

On the other hand, although there is some indication of a time effect ($p < .10$) in the bi-variate analysis, a statistically significant relationship is not found ($p > .10$) in the multi-variate model (Table 5.2.1.2) between educational attainment and the relative risk of migration across county border as opposed to remaining in the community either through aging-in-place or a local move. The marginally significant ($p < .10$) time interaction in the bi-variate model suggests that, if anything, those with higher levels of education are increasingly less likely to migrate with time after retirement/age 65.

For those who made a move in later life, this pattern is more pronounced and obtains a marginal level of statistical significance ($p < .10$) in both the bi-variate and the multi-variate (Table 5.2.1.3) models. The higher the educational attainment, the increasingly more likely a move is to be local as time passes after retirement/age 65 (Figure 5.2.3.4).

In sum, there is evidence that the higher the educational attainment of LSA subjects the more likely they are to age-in-place, and this relationship does not change during the post-retirement period of the study. This finding is contrary to the expectation that education would have a slightly positive or no effect on residential mobility in later life (Biggar, 1980; Lenzer, 1965; Quigley and Weinberg, 1977), and in particular, Northcott's (1988) Canadian study which found that university-educated older men were the most mobile group as compared with those with less education. In addition, the present analysis shows little evidence that educational

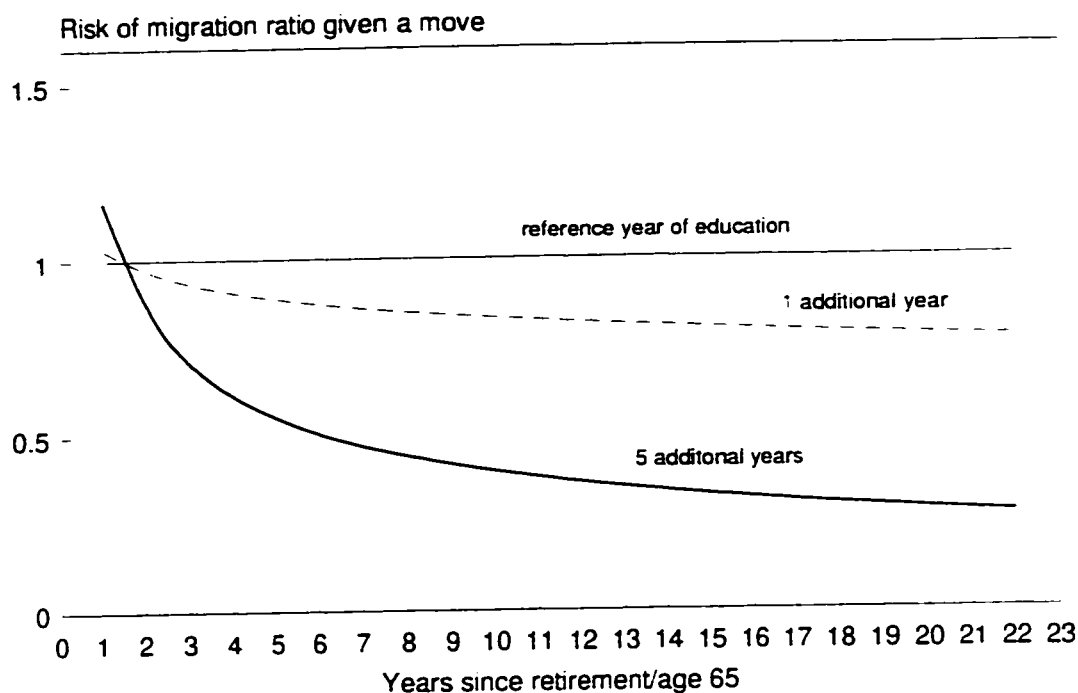


Figure 5.2.3.4 Adjusted risk of migration ratios after retirement/age 65 given a move by years of education and by years since retirement/age 65

attainment is associated with the relative risk of migrating out of the local community as opposed to aging-in-place or moving locally, which also was not expected. Moreover, for the LSA subjects who made a post-retirement/age 65 move, there is some evidence that a higher level of educational attainment is associated with an increasing relative risk of making a local first move with the passage of time after retirement. On the other hand, Northcott (1988) found that older Canadian men with less than 9 years of education were the most likely group to move locally.

There are a number of possible explanations why the results of present analysis differ from those in the majority of the literature. The first is related to possible differences between the LSA subjects and the general population due to attrition throughout the study, and to the

distance of the moves. Although Maxwell (1995) found no evidence of a relationship between education and the loss of LSA subjects due to a move, the end result was a sample with a history of fewer and shorter distance moves. As mentioned in the subject profile, the LSA sample used for this analysis was generally more residentially stable over the mid-life period than were the comparable population of Ontario men. Moreover, the present analysis also found that the higher the educational attainment, the lower the number of moves over the mid-life period (Table 5.2.1.4). It is possible that during this time, LSA subjects with higher levels of education were able to better optimize resources and become more practised in the skills required to stay, than were those in less educated groups. More highly educated men with a mid-life residential history of long distance, inter-provincial moves would not be in the LSA sample because migrants out of Ontario were dropped from the study, and no new subjects were added. In combination, this could result in LSA respondents with higher educations that were less mobile in later life than the comparable group in the general population.

A second related explanation, is associated with the differences in the distances of the moves being studied. Much of the literature considers intra-provincial/state moves, which predominate the LSA sample's moving behaviour, to be local. If for example, one excludes the inter-state movers from Biggar's (1980) analysis, the educational attainment of stayers is higher than that of movers, as is the case in the present analysis. It is possible that differences in education, in terms of adaptive capacity, may become increasingly important with the distance of the move.

A third possibility is that the time interaction found in this analysis for the mover subgroup (Figure 5.2.3.4) could explain the lack of association between education and migration found in other studies, especially since much of the early work involved bi-variate analyses and the time interaction found in the present analysis is stronger in the bi-variate model. Moreover, the tendency for the highly educated to migrate shortly after retirement suggested by this

interaction may have been more pronounced if there had been respondents with a history of inter-provincial migration during mid-life. If this time interaction was present but not recognized in other studies, the net result could be that the positive association between education and the relative risk of migrating shortly after retirement would be cancelled by the increasing relative risk for those with a higher level of education to make a local move or age-in-place as time goes by, much like the reversing association between migration and health with age (Patrick, 1980). However, since many of the early studies (i.e. Biggar, 1980; Lenzer, 1965) were bi-variate analyses, there is no way to re-examine their findings to check for a possible interaction between the effects of age and education on the residential mobility of the elderly.

Alternately, this time interaction suggests that if other analyses focused on a group of elderly shortly after retirement, or compared the characteristics of migrants to amenity retirement communities with those of the general population (e.g. Haas and Serow, 1993), or the non-migrant population in these communities (e.g. Rosenberg and Halseth, 1993), they would find that the highly educated would be more likely to migrate than those with less education.

A more likely explanation of why the present analysis of a sample of Ontario residents has different results, is related to the migration patterns of elderly people in Canada, and the health care system. Ontario, and particularly southern Ontario where the majority of LSA respondents resided at the time of retirement, is a major receiver of older inter-provincial migrants (Northcott, 1988; Desjardins, 1993). Elderly residents of southern Ontario already live in one of the most desirable regions of Canada, and those wishing to move to amenity rich locations with warmer climates tend to be looking south to the American "sun belt" states. However, the different health care system in the United States discourages permanent migration by older Canadians. In their study of anglophone Canadian seasonal migrants to Florida, Tucker and his associates (1988) found that these "snowbirds" came largely from Ontario, had middle to upper-middle class backgrounds with above average levels of education and incomes, reported few health

problems, and had a very low utilization of both health and social services while in the United States. In general, they viewed "the health behavior [*sic*] of these seasonal migrants as strategic ... intentional and oriented to contingencies" (Marshall *et al.*, 1989:163). Their higher education could facilitate this strategic and optimizing approach, as well as the more complex decision process associated with seasonal migration as compared with permanent migration (Hogan and Steinnes, 1994). Although seasonal migration may be a precursor for permanent migration among American "snowbirds", few older Canadians migrate permanently to the United States (Marshall *et al.*, 1989; McHugh, 1990). The LSA respondents appear to have a similar pattern to that of the Parisians studied by Cribier (1982), who found that the more highly educated who lived in desirable districts of Paris and could afford to take long holidays in amenity seaside locations, were less likely to make a permanent migration than were the less affluent and less educated. Using this alternative explanation, the time interaction could be interpreted as an increasing relative risk of making a local assistance move once health declines and seasonal migration becomes too risky. Unfortunately, the LSA respondents were not queried on seasonal migration patterns, so it is not possible to further examine this alternative explanation.

Regardless, the association between education and residential mobility is not consistent with what one would expect on the basis of the findings for other socio-economic variables. Although level of income is usually closely associated with educational attainment, the higher the education, the less likely the LSA respondents are to move and they are increasingly less likely to make a first move across county boundaries with time after retirement when the effects of income are taken into consideration. The notion that education contributes something to an understanding of migration of older Canadians beyond that associated with socio-economic status is somewhat supported by Stone's (1969) discovery that an economic model was a better explanation of migration for Canadian men over the age of 35 with an elementary education than for those with a secondary education. A number of the possible explanations suggest that the

present findings are consistent with the successful aging models which associate education with a greater adaptive capacity, however further research is required to examine how this is related to the residential mobility patterns of the older Ontario population.

Summary

In sum, each of the mid-life measures of socio-economic trajectories used in this analysis have something to contribute to an understanding of the residential mobility patterns of the LSA sample, although not always in the expected direction. Income has a positive association with the number of moves made during mid-life and the distance of moves made in later life, showing the economic selectivity the literature would lead one to expect. Those with blue collar occupations made fewer moves during mid-life and consistent with this pattern are less likely to move after retirement/age 65. However, if they do move, they are somewhat more likely to migrate out of the local community with time after retirement. Those with a moderate history of unemployment during mid-life are more likely to migrate out of the local community than are those with stable employment histories. The results for the measure of educational attainment are the only ones that are not consistent with this overall pattern. In this case the group that can be thought of as more advantaged, those with higher levels of education, are least likely to move. Rather than being more likely to migrate, as suggested by the literature, there is some evidence that the more highly educated LSA respondents are increasingly more likely to move locally with time, if a move is made. There are a number of possible explanations for this observation which cannot be further examined at this time due to a lack of data, however they seem to suggest that education has an independent effect on the residential mobility choices of elderly Ontario men apart from its association with economic status. In addition, many of the possible explanations for this finding, and changes in the relationships of the other socio-economic measures as the retirees grow older draw attention to associated changes in health with age.

5.2.4 Health Trajectories

It would appear that health trajectories are of great importance to the interpretation of the present findings for each of the other trajectories. For this reason it is not surprising that the two measures of mid-life health trajectories used in this analysis have significant relationships with the residential mobility in the later life of the LSA respondents.

Health Rating

Using self-reported health ratings as a measure of health trajectories during mid-life, there is evidence that those who reported poor health early in mid-life are more likely to move in later life than those with consistently good health ratings throughout mid-life, in both the bi-variate ($p < .01$) and the multi-variate models ($p < .05$), and this does not vary with time ($p > .10$). The Kaplan-Meier survival curves indicate that 12 years after retirement or age 65 whichever comes first, those with poor health early in mid-life have a estimated probability of .58 of not having moved, as compared with a estimated probability of .66 for those with poor health later in mid-life, and .69 for those with consistently good health during mid-life. As can be seen in Table 5.2.1.1, those with early poor health are half again as likely (a risk ratio of 1.43) to move in later life as are those with good health, once other variables are taken into consideration.

There is little evidence in either the bi-variate or the multi-variate (Table 5.2.1.2) analyses that self-reported health rating during mid-life distinguishes between those who migrate across county borders and those who remain in the local community through aging-in-place or making a local move ($p > .10$).

However, there is some indication that if they do move, the estimated probability of migrating changes over time. Although no relationship ($p > .10$) can be found in the bi-variate model, a statistically significant time interaction has been found ($p < .05$) in the multi-variate model (Table 5.2.1.3). For the sub-group of movers, there are no significant differences ($p > .10$) by

health rating shortly after retirement/age 65, however as can be seen in Figure 5.2.4.1, with time those reporting poor health early in mid-life are increasingly more likely to make a local move as compared with those with consistently good health during mid-life. By twelve years after retirement/age 65 movers with early poor health are in excess of 3 times more likely to make a local move than are those movers who had good health during mid-life.

In sum, those reporting poor health early in mid-life are more likely to move in later life, and with time this move is increasingly more likely to be local. These findings are consistent with developmental theories (e.g. Litwak and Longino, 1987) which would suggest that a group with a trajectory of early poor health would need to make a support seeking move earlier than others, but would increasingly have fewer health resources with which to make a long distance move. They also probably lacked compensating economic resources due to the close association between poor health and cumulative economic disadvantage (Ferraro *et al.*, 1997; Fuchs, 1983; Hirdes and Forbes, 1993; Maddox and Clark, 1992). However, inherent in this interpretation of the effect of an early onset of poor health is an assumption that the rate at which health declines is similar for the different groups. The use of proportion of years with declining health - an indication of the rate of decline during mid-life - as a second measure of health trajectories in this analysis, to some extent, acts as a statistical control supporting this assumption.

Declining Health

The proportion of years with declining health can also be thought of as a measure of the stability of health during the mid-life period for the LSA respondents. As such, it conceptually also has an independent contribution to make to this analysis of the association of health trajectories during mid-life with the residential mobility choices of LSA respondents in later life.

In both the bi-variate and the multi-variate analyses, the proportion of mid-life years with declining health has a strong association with the relative risk of moving which changed direction

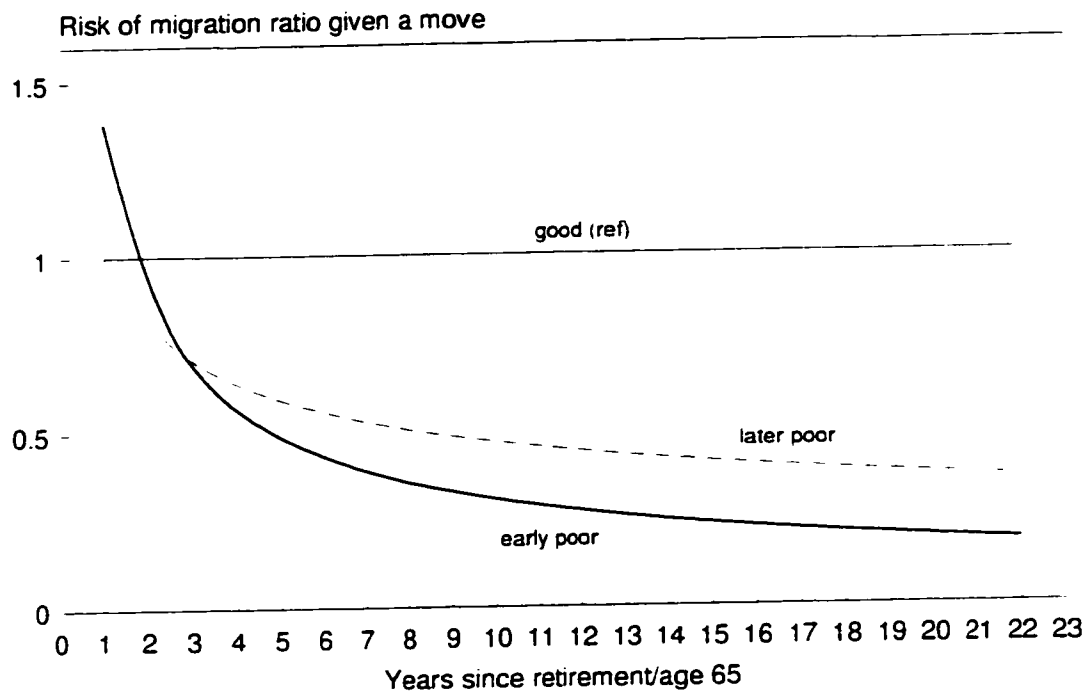


Figure 5.2.4.1 Adjusted risk of migration ratios after retirement age 65 given a move by perceived health rating throughout mid-life and by years since retirement age 65

with time ($p < .01$). As can be seen in Table 5.2.1.1, those with a high proportion of years with declining health are half as likely (a risk ratio of .51) to move shortly after retirement as are those with a low proportion, when the period of onset of poor health is controlled along with the effects of other variables in the multi-variate model. However, with time this group with a history of unstable health are increasingly more likely to move (Figure 5.2.4.2).

A similar pattern can be found in the bi-variate analysis of the relative risk of migration out of the local community. However, the survival curves indicate that the LSA respondents with a low proportion of mid-life with declining health continued to have a lower estimated probability of remaining in the local community throughout the study regardless, and there is little evidence

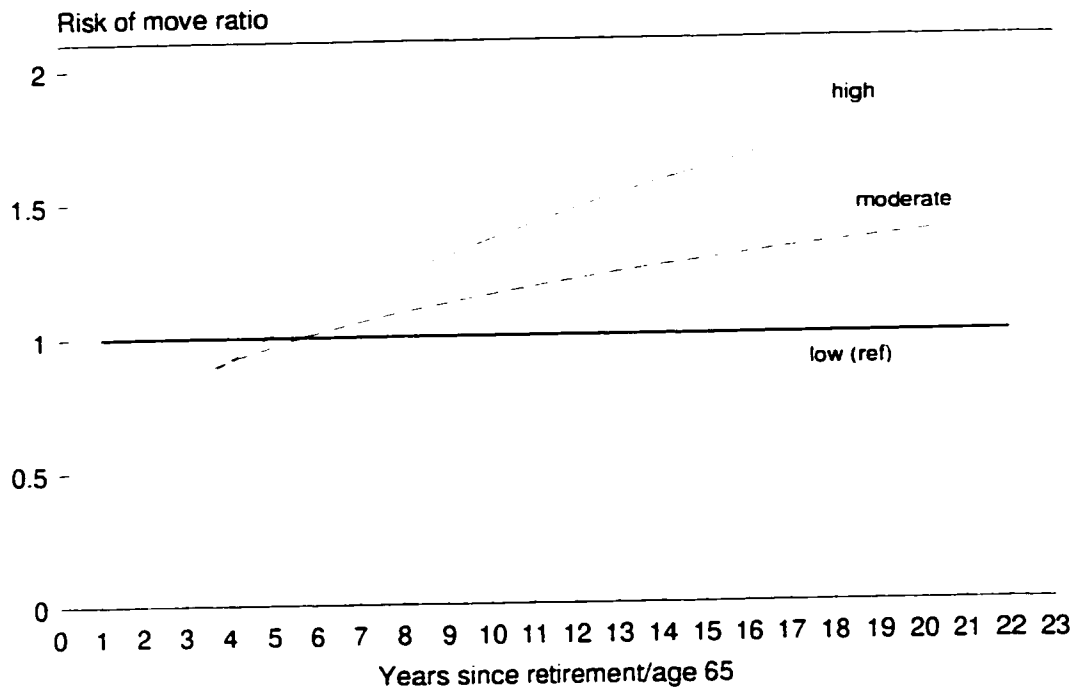


Figure 5.2.4.2 Adjusted risk of move ratios after retirement/age 65 by proportion of mid-life years with declining health and by years since retirement/age 65

of a change with time in the multi-variate model (Table 5.2.1.2), once the other variables are taken into consideration ($p > .10$). In general, those with a low proportion of years with declining health are twice as likely to migrate out of the community as compared with those having a moderate or relatively high proportion of mid-life years with declining health.

For the sub-group of LSA respondents who made a move after retirement/age 65, both the bi-variate and the multi-variate (Table 5.2.1.3) models indicate that a move is more likely to be local with an increase in the proportion of mid-life years with poorer health ($p < .01$) and this relationship does not change significantly with time ($p < .10$). The risk ratios in the multi-variate model indicate that compared with those who have a low proportion of mid-life years with a

decline in health, those with a moderate proportion are more than twice as likely to make a local move, and those with a high proportion are 3 times more likely to move within the county or regional municipality, if a move is made.

In sum, those with a high proportion of mid-life years with a decline in health are less likely to move shortly after retirement or turning age 65, whichever comes first, they are less likely to migrate out of the local community in general, and if they make a move it is considerably more likely to be within the local community. As for the other health trajectory measure used in this analysis, these findings are consistent with the developmental theories of elderly migration (*e.g.* Litwak and Longino, 1987) and the U-shaped nature of the relationship between health and moving in later life suggested by Patrick (1980). The advantage of a survival analysis is that, with the inclusion of a time interaction, there is no cancelling effect and one is able to examine the effects of this reversing trend over time within the same model.

Of particular interest, is how these two measures of mid-life health trajectories work together in the multi-variate models. Both have independent associations with the relative risk of moving in later life in the expected direction (Table 5.2.1.1). However, while those with an early onset of poor health are more likely to move in general, those with a high proportion of mid-life years with declining health are less likely to move shortly after retirement. In addition, the absence of a relationship between time of onset of poor health and the relative risk of migration in later life in Table 5.2.1.2, suggests that it is not the level of health at the time of retirement so much as its stability that plays the greater role in the decision to make a longer distance amenity move. If a move is made (Table 5.2.1.3), those with early poor health do not differ significantly in the distance of the move shortly after retirement from those with consistently good mid-life health - they are equally likely to migrate out of the local community. However, those with a history of mid-life declines in health are consistently more likely to make a local move when they do move, whether the move is shortly after retirement or much later. A possible

explanation of this pattern is that those with less stable mid-life health histories are more conservative in their mobility choices in later life because of an inability to predict future health, or an anticipation of a rapid decline, which makes them less willing or able to cope with the added stress of a move, especially one of any distance, until the need for assistance makes a move unavoidable. On the other hand, those with more stable health, even if it is poor, may be better able to assess the relative costs and benefits of an earlier move.

5.3 Summary

In sum, it can be seen that each of the life course trajectories examined in this longitudinal analysis of a birth cohort of Ontario men, has something to contribute to an understanding of how mid-life patterns can be related to post-retirement residential mobility choices which are of interest to planners. The multi-variate models give some indication of how these intertwined trajectories have influenced the residential mobility of this group of elderly men.

To reiterate, the multi-variate moving model in Table 5.2.1.1 indicates that the relative risk of moving, as opposed to aging-in-place, is higher with the number of moves made, lower with the length of residence, lower for homeowners, increases with the passage of time for those who are widowed, is higher for those who have children, lower for those who had at least weekly contact with kin at some point during mid-life, higher for those with a low continuity of social activity and those with a low score on the social relations index, lower for those whose main occupation was blue collar, higher in the period shortly after retirement for those who retired early, lower with increasing levels of educational attainment, higher for those with an early onset of poor health, and lower just after retirement/age 65 for those with a high proportion of mid-life years with a decline in health but increasingly higher for this group with the passage of time after retirement. Only a few of the hypothesized relationships fail to have some support in the multi-variate model ($p > .10$), specifically those connected with marital status change, the period of empty

nest and unemployment. However, there is some evidence that mid-life marital status change and the period of empty nest may have an indirect effect on the risk of moving in later life through their association with mid-life moving propensity. A number of expected time effects have not been found, possibly because the LSA subjects had not aged sufficiently during the period of the study. In two instances, relationships were found where they had not been expected. Although consistent with the other models, an inverse relationship between level of education and the risk of moving was not expected and requires further research. In general, those who had relatively stable mid-life housing patterns, homeowners with fewer moves and relatively long durations of residence, and who were more socially integrated, as indicated by frequent contact with kin, a moderate to high continuity of mid-life social activity and a relatively high social relations score, are more likely to age-in-place. For LSA respondents with these characteristics, remaining in their home could well be a continuation of a stable and supportive mid-life environment based on a relatively high level of social resources upon which they could draw when adapting to change, much as suggested by the successful aging models, and particularly Atchley's (1989) continuity theory of aging. These findings are also compatible with a life course theoretical perspective.

The multi-variate migration model in Table 5.2.1.2 indicates that the relative risk of moving out of the local community increases with the number of mid-life moves, to some extent is lower for LSA respondents with frequent contact with kin, higher just after retirement age 65 for those with a low continuity of mid-life social activity, higher for those with a low score on the social relations index, but lower for those with low or variable mid-life incomes, higher for those with a moderate history of incidents of unemployment, higher shortly after an early retirement, and considerably lower for those with a large proportion of mid-life years with a decline in health. Most of these are as predicted on the basis of the literature, with a few notable exceptions, particularly education. In addition, the expected relationships between period of empty nest or the existence of children do not reach a marginal level of statistical significance ($p > .10$)

in the multi-variate model. However, there is some indication of a possible indirect effect in the expected direction for the period of empty nest through its association with the propensity to move during mid-life. There also is some evidence that marital status at the end of mid-life and marital status change during mid-life may have an unexpected indirect effect on the risk of migration. Overall, those with a less stable residential history as measured by the number of mid-life moves, a low continuity of mid-life social activities and a low score on the social relations index are more likely to migrate. For LSA respondents with these characteristics, it would be difficult to argue that remaining in the community is a source of external continuity upon which to draw in later life. However, a migration in later life could be consistent with their life course trajectories during mid-life, and the decision to migrate would largely represent a process involving the optimization of resources. The lower relative risk of migrating associated with low or variable mid-life incomes and a high proportion of years with declining health suggests that a low level in these resources acts to constrain residential mobility in later life.

For those who make a move, the multi-variate model (Table 5.2.1.3) indicates that the relative risk of migrating, as opposed to making a local move, is higher for those with a shorter length of residence, lower for those who have experienced at least one change in marital status during mid-life, somewhat higher for those whose last child left home during the middle of mid-life, increasingly higher with time after retirement/age 65 for those with little family contact, increasingly lower with the passage of time for those with high scores on the social relations index, lower for those with consistently low incomes during mid-life, increasingly higher for blue collar workers with the passing of time after retirement/age 65, somewhat higher for those with a moderate history of unemployment, increasingly lower as time passes after retirement/age 65 for those with a higher educational attainment, and for those with early poor health, and lower for those with higher proportions of mid-life years with declining health. A smaller proportion of the expected relationships obtained a marginal level of statistical significance ($p < .10$) in this multi-

variate model. On the other hand, a greater proportion of variables have an unpredicted relationship with the risk of migration, given a move. However, the results for occupation and education, in particular, are the inverse of what was expected and require further investigation. Although the numbers of movers can be small in some sub-groups and associated results should be interpreted with caution, it would appear that if they are to move, those with shorter durations of residence, who are relatively recent "empty nesters" and have had little family contact during mid-life, move greater distances than those who may possibly be geographically constrained by a mid-life marital status change, a low level of financial resources and unpredictable or declining health resources.

The remarkable overall finding of this research is that although this is an analysis of a single birth cohort of elderly Ontario men using mid-life measures of life course trajectories, many of the associations found in the three models are what the literature based on studies of elderly people of both genders would lead one to expect, with the noted exception of education.

Although these findings are compatible with a life course perspective on aging, further research involving a comparable study with a larger sample size, including both men and women from different birth cohorts, over a longer period of time in later life and a larger geographical area, with more information on income, period of empty nest, seasonal migration, and post-retirement characteristics around the time of moves, and introducing interaction terms into the models, would be useful both in the evaluation of the relative merits of alternative explanations, and the extent to which the present findings can be generalized to other birth and gender cohorts.

In the absence of similar longitudinal studies on which to base a comparison, one must speculate upon the utility the findings of the present analysis for planning. However, in combination, these models provide evidence that mid-life patterns can be associated with residential mobility choices in later life and this finding in itself has important implications for planning for an aging population, as is discussed in the following chapter.

Chapter VI

Planning for an Aging Population

Canada is currently in a "period of rapid change, increasing turbulence, and considerable uncertainty", which presents major challenges for those involved in planning for the future (Seasons, 1991:31). In general, there is growing evidence of a destandardization of the life course in the domains of family, work and age structures in most Western countries, which "carries with it a high amount of tension and conflict, and is likely to do so for some time" (Kohli, 1986:296).

From a life course perspective, such social change is argued to be a result of aging and cohort succession (Riley, 1973) that is, the flow of birth cohorts as each generation replaces its parents in societal roles (Waring, 1975). The aging process is rarely the same for successive cohorts, for "each cohort facing a given transition does so in a unique historical context and deals with the problems of this transition in its own way", leaving its mark on the transitions faced by later cohorts (Foner and Kertzer, 1979:132). Hence, there is a "dynamic interplay between people growing older and society undergoing change" (Riley, 1982:11). Before one can begin to plan in this context, one requires an appreciation of these underlying dynamics and what planners are dealing with when they speak of planning for an aging population in Ontario. Once this is understood, the specific contributions to planning for an aging population in Ontario to be made by the present research can be placed in context.

The chapter primarily addresses the second research objective - to examine how the knowledge that mid-life patterns are related to residential mobility in later life can contribute to the development of a new style of planning for an aging population. To accomplish this, population aging and related societal trends, the challenges of planning in such a turbulent environment, and the contributions to be made to planning for an aging population by the present research, are discussed in greater detail.

6.1 Population Aging and Related Societal Trends

Demographic aging in Canada can be attributed to a combination of three distinct factors: increasing longevity, declining fertility and, to some extent, immigration (McDaniel, 1986). An understanding of the distinct and combined effects of these three factors is important for planning purposes.

6.1.1 Demographic Trends

Declining mortality rates mean that more people live to experience a full range of life course events, have a reasonable expectation of passing through a range of age-related roles (Gee, 1987), and have the potential for more prolonged relationships and structurally complex social networks with others who also live longer (Light, 1988). For example, couples can expect more years of married life, especially in the "empty nest" stage (Gee, 1987). Moreover, older "empty nesters" may be aging-in-place for longer periods, affecting overall housing stock turnover and increasing the length of a neighbourhood's "life cycle" (Paris, 1995) in a relatively depopulated state - a consequence of increasing longevity that has become an important planning issue in suburban Toronto (Municipality of Metropolitan Toronto, 1996).

However, increased longevity is not expected by all members of Canadian society equally. For example, both life and health expectancy (years of disability free life) increase with income (Wilkins and Adams, 1983). As noted by Dannefer (1988), some of the changes in the characteristics of the older population that have been attributed to aging may be due to the differential mortality between men and women, leading to an apparent increase in female characteristics with age. Attitudes and behaviours of individuals may not have changed with age, rather the proportion of the population who exhibit particular characteristics have increased due to differential mortality, creating the appearance of changes associated with aging or historical events. For this reason, it is important that planners are aware of the changing composition of the

older population if they are to avoid basing decisions on what Riley (1973) has come to term, a "compositional fallacy".

All else being equal, increases in life expectancy result in a gradual aging of the population, allowing for a measured response by society (Cornman and Kingson, 1996). In itself, longevity makes a relatively small contribution to the demographic aging of Canada's population and associated societal changes (McDaniel, 1986). However, coupled with declining fertility, it has resulted in more complex and vertical extended family structures. For example, "middle-aged Canadian couples sometimes have as many as two sets of parents and perhaps even grandparents ... [and the] emotional, social and financial demands of such families can be enormous" (McDaniel, 1986:87), and there are fewer siblings and children to share the burden. With the decreasing number of children, increasing incidence of childlessness, and growing number of reconfigured families due to divorce, remarriage, and single parenthood, family structures and support networks promise to be more complex and possibly less readily available to the elderly of the future (Silverstone, 1996). This is but one example of how declining fertility has accelerated the aging of Canada's population and its associated impact on society (McDaniel, 1986).

Before one can begin to further examine the profound effect of fertility rates on the present aging of Canada's population and associated trends, one needs a greater understanding of the concept of "cohort flow" and its relationship to social change, specifically the impact of what Waring (1975) has termed "disordered" cohort flow.

Often the movement of successive generations through age-graded sequences of roles is uneventful, that is, "a mutually accommodative situation obtains between the people in the cohort and the roles available to the age stratum" (Waring, 1975:238). Social change is gradual, reflecting the effects of historical context on the life course transitions of successive generations (Foner and Kertzer, 1979). On the other hand, "when the fit between the cohort and the role

system is poor. ... the customary orderly flow of cohorts becomes disordered" (Waring, 1975:238).

There are three mechanisms by which a cohort can become a misfit, that have been suggested by Waring (1975:239):

- (a) demographic processes which govern the cohort's absolute size throughout the life course.
- (b) substantial alteration in the composition and life course experiences of the cohort in relation to prior cohorts.
- (c) social changes or policies which shrink or expand the opportunities in the age-graded role structure.

Alone or in combination these mechanisms can lead to an imbalance of people and traditionally appropriate roles.

Shifts in mortality, fertility, and migration can greatly affect the relative size of successive generations, and associated cohort flow. Of particular importance in the Canadian context, "baby booms, resulting from high period fertility, for example, may create cohorts too big to be fully absorbed by the existing role systems at every stage of the life course" (Waring, 1975:239). If, as in the case in Canada, the high fertility was a temporary reversal of a three hundred year trend of declining fertility in Western societies (McDaniel, 1986), the result is a large generation sandwiched between two smaller ones, which may "create critical problems of slack and strain in role systems as they successively receive and relinquish these cohorts" (Waring, 1975:240). There is much debate as to whether the present trend of declining fertility will reverse once again, further destabilizing the role structures. Fertility and birth rates are very difficult to predict. Demographers had not anticipated the post World War II baby boom (Mankiw and Weil, 1988). McDaniel (1986) does not think a reversal in the declining fertility rate in Canada is likely in the near future. On the other hand, Easterlin (1980) has argued that a cyclical pattern of increasing and decreasing fertility is developing in North America. Alternatively, Foot and Stoffman (1996) have argued that the "baby boom echo" of the 1980s has occurred in a period with a declining fertility rate simply because of the sheer numbers of baby boomers of childbearing ages, resulting in a high birth rate (number of births per 1000 population). Regardless, there is little doubt that

the post War baby boom has greatly accelerated the aging of Canada's population (Bergob, 1995; McDaniel, 1986; Foot and Stoffman, 1996).

The high level of post World War II immigration during the '50s, the largest net migration to Canada in 40 years, further added to the baby boom in the Canadian population, as most immigrants were of childbearing age (McDaniel, 1986; Foot and Stoffman, 1996). Moreover, they have since contributed to the aging of the population by also sponsoring the immigration of their elderly parents (Foot and Stoffman, 1996). In Canada, the combined effects of a temporary reversal of a declining fertility rate and high levels of post War immigration have resulted in "the largest generation the Western world has ever experienced" (McDaniel, 1986:61-62), and hence a considerable stress on societal role systems and resources. However, it is important for planners to remember that, "many of the questions prompted by the aging of the baby boom cohorts regarding potentials, responsibilities and needs of older persons would have arisen without the demographic bulge, but with somewhat less urgency", through the combined effects of increasing longevity and declining fertility (Cornman and Kingson, 1996:21).

In sum, demographic factors resulting in rapid population aging have greatly contributed to the present disorderliness of cohort flow in Canada. Moreover, this stress on the age-graded roles systems has been exacerbated by factors associated with the other mechanisms suggested by Waring (1975). In particular, after decades of hardship during the Great Depression and World War II, the post War economic boom served to change the life course experiences of both the baby boomers and their parents as compared with preceding generations at the same stages of life, creating, at the very least, differences in role expectations (McDonald and Chen, 1994; Pampel and Peters, 1995). In addition, rapid technological change (Keyfitz, 1984; Robey and Russell, 1984) and the development of a "global economy" are resulting in changes which have served to shrink or expand age-graded role structures (Krain, 1995; Rossi, 1980b). For example, the current downsizing and flattening of corporate structures to enhance global competitiveness has changed

work-related role opportunities (Cornman and Kingson, 1996; Foot and Stoffman, 1996). The net effect is a Canadian society under considerable strain.

6.1.2 Societal Adaptation and Related Trends

Waring (1975) has suggested that the problems created by disordered cohort flow can be addressed by either temporary or more lasting social change. There are two basic remedial approaches commonly taken: the addition or subtraction of roles; or the manipulation of the rate of flow. The intent of the first approach "is not change, only improved accommodation" within the existing system (Waring, 1975:244d). However, if only through the "wake effects" created by a diversion of societal resources commonly used elsewhere, this more temporary approach can result in change. On the other hand, altering the rate of flow, such as changing the age criteria for roles, modifies the life course patterning for more than just the cohort causing the disorder, often resulting in more lasting change.

The rate of flow can be altered either by accelerating the flow, such as occurred with the onset of early retirement, or by decelerating the flow, for example by requiring more years of education before entry into the labour force. As a response to an over-large cohort, such as represented by the Canadian baby boomers, acceleration "can create or exacerbate problems of strain in the role systems receiving the accelerated cohorts" (Waring, 1975:247). On the other hand, with deceleration, "the age boundaries of the role systems most capable of coping with excess cohort size are expanded. And movement in the next age stratum is delayed" (Waring, 1975:248). Deceleration also has the advantage that it can somewhat delay the strain and provide time to expand or alter social institutions and facilities to enable the absorption of the cohort - time to plan. However, regardless of the approach used, disordered cohort flow can be an agent of social change by introducing change in age-graded institutions, or by altering life course patterning (Waring, 1975:251).

Looking more specifically at the adaptations of the over-large baby boom cohorts using this life course perspective, one can begin to see a number of associated societal trends which should be taken into consideration as we plan for an aging population in Canada. Firstly, what has come to be known as the "Easterlin" effect postulates that cohort size relative to the parental generation, "represents the key determinant of both income potential and expected standard of living" (Pampel and Peters, 1995:165), based on the argument that members of large cohorts compete in family, education and the labour market, resulting in cumulative disadvantage over the life course relative to the preceding cohort (Easterlin, 1980). The same can be said for their position in housing markets (Krain, 1995; Mankiw and Weil, 1988; Moore and Rosenberg, 1993).

In particular, labour markets cannot easily absorb large numbers of new workers, resulting in "high job competition, low wages, slow promotion, and low income potential" for the boomers (Pampel and Peters, 1995:166). Moreover, "the normative age grading arrangements may be undermined not only for the affected cohorts and role systems, but also for other age strata as well" (Waring, 1975:238). For example, early retirement of pre-boomers to accommodate more baby boomers in the labour force, has created a "third age" - a disability free period after retirement (Laslett, 1989). It has also created an expectation of early retirement for about half of the boomers (McDonald and Chen, 1994), which could make them "less likely than any generation before them to remain settled in one place" (Gnaedinger and McFarlane, 1991:3). However, it can also be argued that this may not be a realizable expectation, for:

as Canada's workforce continues to grow more slowly and as the workforce itself ages, the contribution of older workers to the Canadian economy is likely to become more critical. Instead of retiring early, older workers may be called upon to remain in the labour force, or attempts may be made to entice the early retired to return to the labour force. (McDonald and Chen, 1994:113)

Coupled with rapid technological change in the workplace, which to some extent has been delayed in Canada by the large supply of labour (Foot and Stoffman, 1996; Keyfitz, 1984), there may be a breaking up of, "the education-work-retirement lockstep" (Kohli, 1986:294). It seems

increasingly more likely that there will be education and work throughout life, multiple careers, and retirement based on assessment of worker fitness, resulting in the loss of the "third age" (Krain, 1995). Associated with the trend to multiple careers is a shift to more individualized pension systems that are less protected from market failures and will probably increase "inequality in pension and retirement wealth saving" (O'Rand, 1996:235).

Moreover, many of the present elderly were able to finance their early retirement on the proceeds of the sale of their homes in a sellers market, since a large number of boomers were competing to buy relatively few houses (Krain, 1995). The baby boomers will have much more difficulty liquidating their housing equity investments, since it will be a buyers market, with relatively large numbers of dwellings on the market and few buyers. Now that most of the boomers have obtained homes, housing prices are dropping, and are anticipated to drop further in the future (Mankiw and Weil, 1988). This may be contributing to the dropping residential mobility rates in Canada, as boomers find it increasingly difficult to trade up in the housing market (Foot and Stoffman, 1996). However, "levels of income, cost of living, and prices and availability of housing vary substantially between metropolitan areas at any time" (Pitkin, 1990), and the impact may be somewhat buffered in Ontario by the anticipated increase in housing demand created by the "baby boom echo" which is proportionately larger than for the nation as a whole, but still considerably smaller than the boomer generation (Foot and Stoffman, 1996). There are also indications that the boomers in Ontario are handling their blocked residential mobility and associated crowding in "starter homes" by investing in vacation property with retirement in mind (Foot and Stoffman, 1996; Rosenberg and Halseth, 1993), suggesting that the probability of migration to amenity cottage districts upon retirement may be increasing for the boomers.

In addition, Easterlin and his associates (1990) have argued that the lower relative income of the baby boomer generation, as compared with their parents, has been compensated by more

women entering the labour force, delayed marriage and childbearing, and a lower fertility rate than would be expected for a smaller cohort.

Female labour force participation rose dramatically in Ontario in a very short period of time, from 25.9 per cent in 1975 to 55.2 per cent in 1981 (City of Etobicoke, 1988c). Easterlin believes that this trend will reverse for the "baby bust" generation following the boomers, who as a comparably small cohort, will have a competitive advantage in the labour force. However, other researchers think it may represent a more lasting change in the sexual division of labour, especially since a single, albeit higher, baby bust income is not likely to match a dual boomer income (Pampel and Peters, 1995). In addition, it has been argued that for many women the "expectation of relatively continuous employment adds a degree of certainty to their sense of the future and may therefore reduce anxiety and stress as they become middle aged" (Rossi, 1980b:31). However, with more wives in the labour force, the difficulties associated with coordinating dual careers may also be a contributing factor to the trend of declining age-specific residential mobility rates since the 1970s (Moore and Rosenberg, 1994; Rogerson, 1987; Rossi, 1980b).

Although Easterlin and his associates (1990) emphasized perceived affordability issues, delayed marriage and childbearing has also had some interesting impacts on family formation, in that:

a growing proportion of the younger birth cohorts realize this process in alternative forms, or only partially, or not at all; and thus that there is a growing proportion of household configurations and sequences that depart from the normative pattern that was the point of convergence of historical development until recently. (Kohli, 1986:294)

It has also resulted in an increase in the never married proportion of the population (Robey and Russell, 1984), particularly for men of the later boomer cohorts who have a shortage of eligible younger "baby bust" women to marry. Alternatively, those who have married older women have created the impression of a change in marriage mate preferences which may simply be due to

demographics (McDaniel, 1986). Moreover, because of unrealized family formation, more boomers are living at home with their parents (Dannefer, 1988), or other non-traditional household configurations than past generations. In addition, with delayed family formation, this:

oversized cohort was also prone to remain in the central city longer than previous generations, further inflating their numbers. When these city residents reached their late 20s they moved from renting to buying homes in the city, initially causing many to conclude erroneously that there was a 'back to the city' movement by former suburbanites. (Myers, 1990:292)

In sum, the delayed and altered family formation of the boomers has led to a considerable diversification of household configurations and living arrangements in Canadian society.

In general, the trends associated with population aging, and particularly the absorption of the over-large baby boomer cohorts, have resulted in an increasingly diverse Canadian population. This great diversity is not only across generations due to the different life chances described by Easterlin (1980) and the "wake effects" the boomers have had on the life course experiences and expectations of other cohorts (Waring, 1975), but also within the baby boom cohorts as they have struggled to find meaningful social roles in a crowded social structure. Although it is possible to identify some general trends associated with the absorption of the boomers into Canadian society, a number of researchers have emphasized the importance of not thinking of the boomers as a single homogeneous generation (*e.g.* Cornman and Kingson, 1996; Dannefer, 1988; Foot and Stoffman, 1996; Light, 1988). Importantly, there is considerable difference in the life chances and experiences of those who were born early in the boom as compared with those born at the tail end, commonly known as "generation X", who have borne the brunt of the economic disadvantage, blocked careers, and delayed family formation (Foot and Stoffman, 1996). Care must be taken not to develop policy on the basis of characteristics of the relatively well off early boomers, without consideration of the impact on the more disadvantaged later half. Moreover, there is growing evidence a bifurcation of American (Silverstone, 1996) and Canadian (Municipality of Metropolitan Toronto, 1996) society along socio-economic lines, which could result in the

development of an elderly underclass. "for hidden in the ranks of the senior boomers are many poorly educated, unskilled people, a significant number of them minority group members, whose travails in today's labor [*sic*] market will make them highly vulnerable to economic peril in later life" (Silverstone, 1996:30), having little access to private or corporate pensions, and making smaller contributions to public pension schemes. In addition, many of the sources of diversity for American boomers described by Light (1988) would apply equally to their Canadian counter-parts, such as: "gender, race, education, income, ... married versus unmarried, working versus non working, and geographic region. Other areas might include family upbringing, ethnicity, immigrant status and religion." (Cornman and Kingson, 1996:21). In Canada, these latter sources of diversity have been further exacerbated by the large post War immigration with its changing racial and ethnic composition (McDaniel, 1986; Rostum and Thonney, 1991). Moreover, there is every reason to believe that as the boomers age and their life course trajectories diverge, they will become even more heterogeneous. As Silverstone (1996:27) has pointed out, "one feature of late life that promises to endure is that of diversity. In ethnic origin, language, health, family relations, intelligence, life style, educational background, and socioeconomic status, it is difficult to pinpoint an average older person", and will become increasingly more so for the boomers. Planners will need to give "careful attention to the various needs represented by this increasing diversity" (Cornman and Kingson, 1996:18), for example, the need for cultural sensitivity in the delivery of services, or the need for a greater range of housing and care options (Howe *et al.*, 1994).

Furthermore, the poor matching of people with age-related roles and the inability of society to fully absorb large cohorts into the existing role systems can result in an increasing tolerance for deviance from traditional roles (Waring, 1975). Hence, not only is there increasing diversity as a result of the baby boomers, but also increasing tolerance for diversity and less social pressure for unrealizable conformity (Cornman and Kingson, 1996; Dannefer, 1988; Easterlin,

1980; Price, 1984; Waring, 1975). In addition, it has been argued that social crowding in boomer's families of origin and the education system made individual distinction more difficult to obtain, resulting in a generation which places a high value on individualism (Light, 1988), self-help, and greater control over their personal environments (Silverstone, 1996). Although Easterlin (1980) believes these value shifts may reverse once conformity is more easily obtained in the smaller cohorts following the boomers, there is much debate about which are temporary changes and which may be more lasting due to "wake effects" through changes in the socialization and resulting expectations of subsequent cohorts, and the influence of historical context (Pampel and Peters, 1995).

In general, Kiesler (1981:69) has made a fairly convincing argument that, "large demographic, economic, and social trends often bring about significant changes in individual behavior [*sic*]" and consequently the current trends will lead to changes in attitudes concerning ideologies of age, work, and kinship interaction and associated behaviour. A simple practical example would be that, upon seeing a growing number of advertisements for seniors housing as the population ages, mid-life couples may be more likely to buy homes with future use during retirement in mind (Kiesler, 1981).

On the other hand, Foot and Stoffman (1996) have argued that a large proportion of the apparent societal value and behavioural shifts and reversals in the past two decades are simply due to the aging of the boomers. Since the boomers represent about a third of Canada's population, it is understandable that the values and behaviour of the boomers associated with age or a particular stage in their life course would appear to be those of society as a whole. The gist of their argument is that many age-related values and behaviours have not changed, just appear to have. For example, with the delayed family formation of the boomers it appeared that there was a waning of family values, however once the boomers started to marry and have children, it appeared that there was a resurgence of family values (Foot and Stoffman, 1996). This is a classic

example of the type of interpretation error that can result from a failure to take the "proportional representation" of cohorts and their stage in the life cycle ("generational fallacy") into account in cross-sectional comparisons over time (Riley, 1973). It serves to reinforce the importance of recognizing the relative contributions of aging, cohort, and period effects when examining and planning for societal stability and change (Riley, 1973).

6.1.3 Summary

A life course theoretical perspective which examines cohort flow as each generation replaces its parents in age-graded roles can provide some interesting insights into the impacts of population aging and associated trends. In particular, demographic factors associated with increasing longevity, fluctuations in fertility, and immigration, have contributed to a disorderly cohort flow in Canadian society which is further exacerbated by the external pressures of technological change and an increasingly "global economy". This has caused a great strain on work, family and other age-related role structures, evidence of a destandardization of these structures, and an associated increase in social diversity. This change (real or perceived) coupled with a growing diversity, has contributed to an increasingly ill-structured, turbulent and uncertain environment for planning for an aging population in Ontario. On the other hand, "one of the most salient policy implications of demographic aging is that it seldom sneaks up on us. ... [it] occurs in long, generational patterns. Time and the potential to plan is on our side when we are referring to demographic aging" (McDaniel, 1994:128). However, the challenges presented to planners by the turbulence and uncertainty associated with population aging and related trends should not be underestimated.

6.2 Planning in this Turbulent Environment

In general, the growing turbulence characteristic of Canadian society is being experienced by a large number of individuals, in a variety of disciplines, and a range of organizations. It is

manifested in:

- accelerating rates of change;
- increasing scale of perturbations or shifts in conditions;
- increasing unpredictability of events;
- a continuing sense of crisis;
- frequent confrontation with problems that are of a level of complexity that makes them inaccessible to normal intervention strategies; and
- a tendency for increasing amounts of time to be spent on responding to the unintended effects of previous actions. (Morley, 1986:5)

However, the result of the associated "confusion of thought, direction, and values is to transfer the pervasive turbulence and uncertainty of the era directly into the planner's domain" (Morley, 1986:11).

The notion of turbulent environments traces its origin to an ecological, systems theory of social organizations. There are two critical ideas associated with this perspective which contribute to an understanding of the planning challenges presented by turbulent environments: the interdependence of parts of the system; and the social system's ability to modify itself (Lawrence and Lorsch, 1969:9-10).

A turbulent environment, or "field", as described by Emery (1973:52) is one, "in which there are dynamic processes arising from the field itself which create significant variances for the component systems. ... dynamic properties that arise not simply from the interaction of the systems". In this type of environment, there is a high interdependence among component sub-systems, each of which tends to be incomplete - an "open system" - influenced by external environmental factors, such that "it is difficult to see how individual systems can, by their own efforts, successfully adapt" (Emery, 1973:53). In other words, "the current turbulent setting is marked by frequent major 'disturbances' and their associated uncertainties that operate throughout the global (or contextual) environment, rather than being limited to more specific (and controllable) internal or interactional (inter-organizational) environments" (Morley, 1986:9). In such an environment, existing social institutions are challenged and their associated auto-regulating

processes begin to break down (Emery, 1973).

6.2.1 Counter-productive Responses

Within this ecosystem framework, adaptation is a term which "refers to the responses available for dealing with emergent environmental circumstances" (Emery, 1973:6). Often adaptation takes a passive reactive form. The initial response to an increasingly turbulent environment, other than the inaction associated with denial or "attempts to hold the line in the belief that 'normality' will return" (Morley, 1986:11), is to seek ways to reduce the turbulence to the point where it can be dealt with in a passive reactive fashion. Emery (1973:58) has argued that, "any generally effective way of doing so implies *segregation (dis-integration)* of the social field so that men have to cope with only a part or an aspect of that field [author's emphasis]". In particular, the depth, the means-end, and transverse dimensions of system integration provide opportunities for this type of response. For example, Emery suggested that "superficiality" is a response which denies the deeper roots of a problem. A second disintegrative response, related to the "means-end" dimension of system integration, would be "segmentation", a process whereby sub-system goals become goals in themselves, pursued independently, and poorly integrated - basically Lindblom's (1959) disjoint incrementalism. Finally, associated with what Emery termed the transverse dimension, is "dissociation" - a denial of the relevance of or need to co-ordinate with others in order to adapt. Moreover, the characteristics of these three types of reactive responses are such that, in combination:

- (a) they are mutually facilitating defences, not mutually exclusive;
- (b) they all tend to fragment the spatial and temporal connectedness of the larger social fields and focus further adaptive efforts on the localized here and now;
- (c) they all tend to sap the energies that are available to and can be mobilized by the larger systems and otherwise to reduce their adaptiveness. (Emery, 1973:66)

Examples of such counter-productive adaptive responses can be seen in the barriers to planning for an aging population discussed by Marshall (1994), specifically: demographic determinism,

economic reductionism, a focus on health care and disease, and ageism.

Demographic determinism, looks at the way "age structure determines social structure" (McDaniel, 1986:25). It is focused not so much on the relationships between the demographic determinants of population aging, as on their consequences to society. The underlying assumption is that social change is simply due to shifts in age structure. This assumption forms the basis of most of the arguments made by Foot and Stoffman (1996). One problem with demographic determinism is that it can be used as a "possible justification for inaction for policy-makers" (McDaniel, 1986:26), who argue that "this too shall pass". Alternatively, it can be used to draw attention away from other important inter-related trends. For example, demographic aging is often blamed for rising health care costs which can be argued to more accurately reflect changes in the quality of service provided (Marshall, 1994). In addition, it is not unusual for those who use this approach to fail, "to recognize that changes can occur over time in populations with similar age profiles ... as they lump all people of certain ages together and then assume similarities in lifestyle, health status, economic status and even length of life" (McDaniel, 1986:26). In sum, the demographic determinist approach to planning for an aging population tends to be a one of accommodation without altering the role system, which is very difficult when dealing with as large a demographic bulge as represented by the boomers. The shifts in resources required to accomplish this cause strain throughout the system, further increasing the turbulence and uncertainty.

Economic reductionism can be seen in the "tendency to reduce all policy issues to those of costs: cost escalation, cost savings, cost effectiveness. It seems that economics are always the bottom line", again drawing attention away from the more complex problems associated with population aging (Marshall, 1994:236). The same can be said for the tendency to focus on the health care system and pathology. Moreover, such focuses frequently take the form of an alarmist or crisis approach which "tends to ignore or de-emphasize the capacity of human societies to

transform themselves to meet new challenges" and commonly reflects an underlying prejudice against older people - ageism (McDaniel, 1986:26). This failure to recognize the underlying complexity can lead to superficiality in planning, that is, to use an appropriate analogy, "treating the symptoms and not the disease", or worse yet "blaming the victim".

Ageism results in a tendency to see aging policy issues as problems of the aged and not of the society (Marshall, 1994). As for the other reductionist tendencies observed by Marshall, it is essentially a denial of the depth and inter-connectedness of trends and issues associated with population aging. If nothing else, the research which has been done using a life course perspective, "should convince us that, in order to understand the situation of older people, they must be viewed in the context of their entire life course" (Marshall, 1994:238). For example, the problems associated with the greying of the suburbs are not due to a sudden influx of old people, but rather to the aging of people who have been there for decades and the land use practices that created an adult population of relatively homogenous age.

With growing turbulence, the effectiveness of such reductionist approaches comes into question as the number of problems which continue to defy traditional rational problem-solving techniques used by planners increase. Eventually, problems come to be recognized as complex, ill-structured, or "wicked", with all of the characteristics described by Rittel and Webber (1973). To summarize, such a problem: can not be definitively formulated; is always part of another problem; for which it is not possible to test a solution; it is not possible to enumerate a set of potential solutions; and the choice of definition determines the nature of the solutions (Friedmann, 1987).

Although the fragmented, inefficient and ineffective nature of the current long-term care system in Ontario (Ontario, 1993), for example, could benefit from some form of rationalization, traditional rational comprehensive planning techniques are inappropriate for such "wicked" problems (Friedmann, 1987). The rational planning model assumes:

that objectives can be identified and articulated, that the outcomes of alternative strategies can be identified and articulated, that the outcomes of alternative strategies can be projected and their expected utilities assessed by some goal-related objective criteria, and that the respective probability of occurrences of relevant conditions can be predicted on the basis of available information (Alexander, 1986:19).

None of these assumptions is met when attempting to deal with a complex problem. Rational comprehensive planning assumes a steady state and a closed system such, "that implementation can be carried out with resources completely under one's own control" (Trist, 1973:203). Similarly, Lindblom's (1959) disjoint incrementalism is based on assumptions associated with a closed system, specifically functioning auto-regulating mechanisms (Trist, 1973). In general, "forms of adaptation, both personal and organizational, developed to meet simpler types of environment no longer suffice to meet the higher levels of complexity now coming into existence" (Trist, 1973:122).

6.2.2 *Building Adaptive Capacity*

Systems theory suggests that "where a system can perceive, learn and choose, it is able to determine its future to a degree that is not possible for a system which relies on passively adapting" (Emery, 1973:8). Hence, it is argued that adaptation to a turbulent environment hinges on society's ability to modify itself and its environment (Emery, 1973; Lawrence and Lorsch, 1969). To accomplish this:

planning needs to be in a context of expected social developments for several decades ahead; ... [it] should be more than projection or forecasting; it should be premised on those properties of men and their institutions that enable them to actively adapt to their environments to make choices; ... [and] should actively seek to extend the choices men can make, not dictate them. (Emery, 1973:9-10)

The challenge becomes one of building adaptive capacity - to develop planning processes and organizational structures which facilitate consideration of complex inter-related issues and ultimately system transformation.

With increasing turbulence the environment itself "moves"; problems can no longer be

defined in specific sectoral or spacial dimensions: they can only be framed in relation to the wide range of interests, communities, jurisdictions, and organizations affected by them. In Ontario, sectorial barriers at both the provincial and local levels of government have made it difficult for local planners to take an integrated approach to addressing issues associated with aging, particularly those linking community services and housing (Marshall, 1994). Typical of complex problems, the recent reallocation of local long-term care planning responsibilities to District Health Councils under a single provincial ministry (Ontario, 1994), has helped to integrate health and social service planning, but as in Simcoe County for example, only widened the gap between these services and housing, which remains under municipal jurisdiction and a different provincial ministry.

The result of attempts to reframe these types of problems, "is the emergence of interconnected 'systems of problems'" (Morley, 1986:9). However, once a "meta-problem" is perceived, society also can begin, "to perceive that courses of action to relieve it are inter-related ... [and that] effective solutions to meta-problems depend on collaboration. Coercion cannot be effectively exercised across the number of inter-faces involved", and a new mode of adaptation is necessary (Trist, 1973:123).

As the auto-regulative processes break down in these complex open systems, Trist has argued that active intervention is required in the form of "adaptive planning - the working out with all concerned of plans subject to continuous and progressive modification which are what have to be made when what has to be done cannot be decided on the basis of previous experience" (1973:124).

This is basically a social learning planning model, which is also known by a number of other names such as: an "action-learning approach", (Morley, 1986), "transactive planning" (Friedmann, 1976), "organizational learning" or "reflective planning" (Argyris and Schön, 1978; Schön and Rein, 1994). The basic premise of this planning theory is that, "knowledge ... emerges

from an ongoing dialectical process in which the main emphasis is on new practical undertakings: existing understanding ... is enriched with lessons drawn from experience, and the 'new' understanding is then applied in the continuing process of action and change" (Friedmann, 1987:81). This process usually involves the collaboration of small temporary action groups that are organized around specific tasks and participate in a cumulative process of mutual learning through which objectives emerge as part of the ongoing action (Friedmann, 1987). Argyris and Schön (1978) have suggested that this can involve either single- or double-loop learning. Whereas, "the former involves a simple change in the tactics or strategy of action to solve a given problem: the latter requires an adjustment of the norms governing the action process and, specifically, a change in the actor's theory of reality, values, and beliefs" (Friedmann, 1987:185). However, a significant redirection of objectives, such as that required to transform social systems in turbulent environments, "may involve a long painful process of 'double-loop' planning" (Friedmann, 1987:187), not just with regard to organizational structures but the planning process itself.

This makes the planner's role in identifying and demonstrating the implications of a turbulent environment difficult since, "it means confronting and undermining strongly held societal belief systems" (Morley, 1986:10). Although planners have some experience with reconciling differing objectives through compromise, "in handling organizational inter-dependencies, where purposes are many, and priorities and conflicts less easily reconcilable, we remain, by comparison, novices" (Trist, 1973:123).

This is particularly evident when attempting to address meta-problems. As Schön (1980:53) has observed, people frequently:

disagree about solutions because they have different and conflicting frames for setting the problems. The conflicting frames differ in the salient purposes and values they set for attention ... [but] we are apt to find both that we do not wish to disregard any one of the purposes and values that are at stake in the conflict and that we cannot make these purposes and values commensurable with one another for the sake of priority setting or

trade-off analysis.

As a result, planners are faced with dilemmas that "are not susceptible to problem solving, in the instrumentalist sense. They require, not the adjustment of means to established ends, but the accommodation of incommensurable and intractably conflicting ends" (Schön, 1980:54). Once again it is easy to resort to inaction through "relativism" or through a reliance on self-regulating processes such as competition in the market place.

For example, Anderson and her associates (1984:57) have suggested that the continuing inability to implement housing options for seniors is associated with a number of value conflicts which need to be addressed:

1. Housing Design or Political Action
2. Cost Control versus Service Expansion
3. Family Support or Burden
4. Choice or Congruence
5. Coordination or Coercion: The Implementation Process
6. Coordination or Coercion: The Target Community

These sources of conflict would also apply to other issues associated with planning for the elderly such as the implementation of a continuum of care. Hodge (1990) has argued that planners need to find ways around such dilemmas if they are to meet the needs of seniors. To accomplish this, he has suggested that planners will have, "to open up the planning process: to share power with citizen participants; to take a stand on moral questions" (Hodge, 1991a:13). In general, "it seems inevitable that Canadians over the next few years will be called upon to make difficult choices on how to deal with the impending demographic pressures". (Rostum and Thonney, 1991:30). However, it is important that planning be seen not so much in terms of the achievement of targets but as a process of social learning (Trist, 1973).

Emery (1973:68) has argued that the emergence of values is a common response to a turbulent environment, for if people:

understand the laws governing their environment, they can modify the conditions producing their subsequent environments and hence radically change the definition of 'an

adaptive response'... Briefly, this is the emergence of values which have an over-riding significance for members of the field. Values have always arisen as the human response to persisting areas of relevant uncertainty.

However, new values take time to emerge. Emery (1973:5) suggests that planners need "a foresight of twenty to thirty years, but not a detailed forecast of this whole period".

In addition, Trist (1973:154) has suggested that there are a number of ecological strategies which can be employed to facilitate this adaptive process, such as: anticipating crises, using comprehensive measures, requiring participation, confronting conflict, having a long planning horizon, generalizing central control, enlarging local government units, encouraging innovative administration, and coordinating services.

In a turbulent planning environment, it is difficult to handle the complexity of inter-related sub-systems beyond the local level (Trist, 1973). Moreover, issues associated with the residential mobility of the elderly are particularly sensitive to local context. The examples of local planning for the elderly in Ontario, discussed earlier in this document, have indicated that there is considerable contextual variation within the local level, and the current local planning system is sufficiently fragmented, to warrant the initiation of a social learning process among all concerned parties. If nothing else, there is a critical need for the collection and sharing of information at the local/neighbourhood level that such a process would initiate. However, there also is a need to share information between local communities, since potential receiving communities will not be able to plan on the basis of their resident population alone, but will need information from other communities concerning the characteristics and intentions of potential migrants (Bryant and El-Attar, 1984). This would suggest that there also is a role for province-wide research into planning for an aging population.

To facilitate a social learning process and build adaptive capacity at a local level, Trist (1973) has suggested that the dependency on centralized bureaucracies should be reduced by generalizing central control and enlarging local government units, since a "greater local autonomy

is assumed to encourage system flexibility at the micro level and thereby contribute to a process of community social learning" (Morley *et al.*, 1980:15). The role of the Ontario government would then become one of facilitating the local planning process and coordinating the exchange of information between local communities.

Moreover, the organizational environment is also important. With the great variation in local context and increasing level of uncertainty in the planning environment, there also needs to be less reliance on rules and regulations, particularly those externally imposed on the local level by the Province, but within local planning bodies as well. It is argued in turbulent and uncertain environments, the organizational:

unit will thrive which relies not on rules but on a more complex and flatter communication network which serves to stimulate new ideas. Such a unit would be oriented to a longer time as it works at solving the problem of defining and continually redefining the terms of its environmental transactions. (Lawrence and Lorsch, 1969:27)

Within these rough guidelines, the exact form of the local organizational unit should be locally generated as it would depend on local context.

In general, "the type of planning now required must be able to give direction and to set standards ... while at the same time being flexible and always remaining incomplete" (Trist, 1973:204). In a turbulent environment, it is to be expected that, "new knowledge, different economic scenarios, emerging public values, and policy changes will create an actual future different from the future of current projections" (Cornman and Kingson, 1996:24). Emery (1973) has argued the accurate and detailed projections of the future are not possible in complex and rapidly changing turbulent environments. What is required is a constant monitoring of the environment, to ensure an early awareness of emergent change. As pointed out by Clark and Moore, 1982:46), "while we may not be able to predict where change will occur, we can say much more once we identify where change has been initiated". For example, Morgan (1979:173) has argued that "we desperately need regular, repeated surveys to monitor changes in people's plans

and provisions for retirement". to provide for adequate lead time to monitor changes and the effects of interventions. As Emery (1973:5) has pointed out, planning, "decisions must be made with regard to current resources but there is no suggestion in this model of preempting later decisions - rather the opposite, that later decision-makers should be at least as well placed, as far as one can foresee, to make the choices they will wish to make".

6.2.3 *Summary*

To briefly summarize, the present turbulent environment has arisen, "from the increased interdependence of the parts and the unpredictable connections which arise between them as a result of the accelerating but uneven change rate" (Trist, 1973:122). However, passive responses to this environment have proven to be counter-productive, as have the more traditional ways of planning. Yet the need for a response has resulted in planners having to face the dilemma of, "how can planning be carried out under conditions of accelerating change and rising uncertainty?" (Trist, 1973:203). The challenge has become how to build the adaptive capacity required to facilitate a more active response to the turbulent environment. This can be done through the development of a social learning planning model and an organizational environment which supports it. However, in doing this it is important to maintain a long planning horizon using the foresight that can be gained from a careful analysis of system characteristics and trends. It is in this context that the present research can make its greatest contribution to planning for an aging population in Ontario.

6.3 **Contributions of the Present Research**

The research conducted for this dissertation can contribute to planning for an aging population in Ontario in a variety of ways largely associated with the utility of a life course perspective for understanding aging and social change.

To plan in a turbulent environment, it is first necessary to identify the components and dimensions of the system and the characteristic generating functions of the system for "insofar as a system generates its successive phases, it will exhibit some temporal series of behaviour which, if quantified, could be represented by a mathematical series" (Emery, 1973:17). Emery has expressed a concern that too often trends are examined without relating them to the behaviour of the total system.

One advantage of the life course perspective used in the present research is that it provides a framework for the analysis of system trends. The recognition of the strategic interdependence of individual lives and social change that characterizes a life course perspective on aging, can form the basis of a powerful planning tool - cohort analysis.

6.3.1 Cohort Analysis as a Planning Tool

The review of the literature on cohort flow analysis, conducted earlier in this chapter, has shown that it is possible to gain some interesting insights into the impact of population aging on Canadian society, associated societal trends, and how these, in combination, have contributed to the current turbulent planning environment in Canada.

Such comparisons of the life course experiences of sequential birth cohorts, can also be used to facilitate the "early identification of emerging processes" that Emery (1973:24) has asserted is important for the prediction of future states with a time horizon of thirty years. If as Emery (1973:24) has argued, many of the "processes that will be critical in the future are already in existence in the present" and their emergent phases have some regularities, cohort analysis has much to offer. Through cohort comparisons, it may be possible to identify such processes in departures from past life course patterns which could have important ramifications for later stages in the life course, such as changes in access to pension plans associated with increasing job mobility (O'Rand, 1996). Hence, "cohort analysis is ... a powerful tool, not only for indexing past

social change, but also in alerting one to forthcoming change" (Riley, 1979:119). It can be used to help "pinpoint what aspects of life are apt to be different for future cohorts" (Rossi, 1980b:28). Although there is an interest in identifying stable effects over time on the local mobility of the elderly for example, it may be more important to be able to identify "factors that differentially affect such behavior [*sic*] depending on cohort membership", since it is the differences that continue to challenge planners (Carter, 1988:417). Moreover, cohort comparisons, "can be used to anticipate and assess some of the possible consequences of social interventions" (Riley, 1979:119). For example, consequences of intervention may be seen in changes in the sequencing and timing of life course transitions which can be anticipated to change cumulative advantage or disadvantage over the life course.

In general, the advantage to be gained by researchers and planners who use a life course perspective to structure their inquiries is that, "in looking ahead, they can make use of what has already happened -- what is already knowable -- about the cohorts alive today" (Riley, 1979:118). For example, Mankiw and Weil (1988) have observed that housing demand reaches its peak for each cohort during the period of household and family formation between the ages of 20 and 30. Although fertility and birth rates are difficult to predict, one can still estimate housing demand over 20 years or so (a generation) based on those already born, assuming that the age structure of demand is constant over time.

The major contribution the present research can make to planning for an aging population is that it has demonstrated that mid-life patterns can be associated with residential mobility choices in later life - that prospective information concerning life course patterns can contribute to the development of the foresight of twenty to thirty years that Emery (1973) has argued is so important for adaptation in turbulent environments.

6.3.2 *Regarding the Role of the Specific Findings*

The contributions of the specific findings concerning the relationships between the variables require careful consideration, especially since they apply to a specific birth and gender cohort over a limited portion of later life. As such, the specific findings have little to add to our understanding of the residential mobility choices of people over 76 years of age, particularly elderly women adjusting to the death of their spouses, associated changes in economic resources (*i.e.* pension loss), and increasing levels of personal disability. Because of their greater longevity, it is more likely that women will be living alone when they reach a level of disability requiring assistance, leading to a need to make different residential mobility decisions than men of comparable levels of disability who have spouses to care for them. This could result in different relationships between mid-life variables and residential mobility in later life for women.

In addition, using information concerning a single cohort, it is difficult to know whether changes over time are due to aging or the historical period, and whether the findings are unique to the cohort (Riley, 1973). However, it is possible to compare the LSA patterns with those of other cohorts to see if there is reason to believe the relationships would be different.

Many of the relationships found in the present research, with the noted exception of those for education, supported the hypotheses developed from the literature. This suggests that the findings may have some generalizability beyond the LSA cohort. On the other hand, the literature on the residential mobility of the elderly is relatively recent and as such has only studied a few adjacent cohorts of elderly (Carter, 1988; Rossi, 1980b), whose members have shared many life experiences with the LSA sample. Hence, it is not surprising that the relationships would be similar. An important question for planners is whether there is reason to believe that these relationships can be used to anticipate the behaviour of the baby boomers (Robey and Russell, 1984)?

One way to assess possible changes in the relationships between variables is to compare

the life courses of the baby boomers to date with those of the LSA cohort. The literature indicates that the boomers may be very different from preceding birth cohorts (Marcil-Gratton and Legare, 1987; Silverstone, 1996). Any differences should be examined to see if there is reason to believe that they could influence the relationships between mid-life patterns and residential mobility in later life. However, when making such comparisons it is important to examine whether apparent differences are due to: compositional differences between the cohorts, such as shifts in the distribution of key variables; historical influences, such as economic booms or depressions; or changes in relationships between variables (Campbell *et al.*, 1985). If, for example, differences between cohorts are associated with differential survival then the relationships may still hold. On the other hand, if there is reason to believe that the differences may influence the relationships between mid-life variables and residential mobility in later life then planners must be very careful how they use the specific findings from this analysis. The quick comparison of the LSA cohort and the baby boomer cohorts conducted below suggests that this may be the case.

Comparing the composition of the LSA cohort with that of the boomer cohorts, it can be seen that there are some similarities in their composition, but also a number of differences which may influence the relationships between the variables. Both the LSA cohort and the boomers were relatively large cohorts followed by smaller ones (Foot and Stoffman, 1996). On the other hand, the boomers represented a much larger demographic bulge relative to the size of preceding and following cohorts, so the strain on the role system is greater than was the case for the LSA cohort. Nonetheless, the LSA subjects were born at the tail end of their over-large cohort and, as such, may have had similar experiences to those presently being experienced by 'generation X'. Both cohorts can be characterized by relatively low fertility, plus delayed marriage and childbearing (Gee, 1987; Ravanera, Rajuloe and Burch, 1994). However, with declines in mortality, a much greater proportion of the boomers will survive to old age than was the case for the LSA cohort. Whereas, today's elderly represent a small poorly valued minority in the

population (Silverstone, 1996), the boomers will continue to be a large minority after retirement. As Waring (1975) has noted a large decrease in mortality can make even small birth cohorts relatively large at older ages as compared with past cohorts, and the boomers even more so. In addition, due to changing immigration policies and patterns, boomers also have a greater racial and ethnic diversity than characterized preceding cohorts, including the LSA (McDaniel, 1986; Rostum and Thonney, 1991). Moreover, this ethnic mix will change with aging due to the differential mortality of the minority groups (Silverstone, 1996). There also are widely different prospects with respect to financial and health status (Cornman and Kingson, 1996). Such compositional differences may create an appearance of change when compared with preceding cohorts, and with age within the boomer cohorts, even if the relationships between the variables found in the present analysis remain similar. However, there is also reason to believe that increased contact with this large minority as it ages, will change people's attitudes and behaviours towards aging and the elderly (Kiesler, 1981), as could the increased cultural diversity (Cornman and Kingson, 1996).

Historical effects on the distributions and possibly the relationships between the variables may be of greater concern. The LSA cohort and the boomers both were raised during periods of relative affluence, the 1920s and the 1960s. Both reached maturity during an economic downturn (Foot and Stoffman, 1996). They also were born in periods of relatively high immigration (McDaniel, 1986). However, after years of hardship the LSA cohort experienced the economic boom of the '60s during their mid-life, and there is little indication that the boomers will have a comparable experience. This could contribute to a considerable change in the distributions of mid-life patterns exhibited by the boomers as compared with the LSA respondents. For example, while many of the LSA respondents made moves during the prosperous '60s, there are indications of a general decline in residential mobility rates in recent decades (Moore and Rosenberg, 1993). In addition, accelerating technological change and the associated development of a global economy

have resulted in a declining likelihood of realizing a single career path (Cornman and Kingson, 1996), hence a lower employment stability for the middle-aged boomers than experienced by the LSA cohort during the mid-life period. With a greater likelihood of multiple career paths, boomers will also experience an associated individualization of employment contracts and pension plans (access and type), retirement saving schemes that will be more sensitive to market failures, and greater economic inequality in later life (O'Rand, 1996) possibly leading to a greater dependence on public pension schemes such as the Canada Pension Plan. In combination, these historical differences created a mid-life filled with optimism for the LSA respondents during the '60s, as compared with one of uncertainty for the boomers in the '90s.

Importantly, combined compositional and historical factors have created a turbulent environment requiring new forms of adaptation for the boomers. At the very least, the adaptive strategies of the boomers have resulted in changes in the range and distributions of mid-life socio-economic and family relations variables which the present analysis found to be related to residential mobility in later life. For example, as a result of competition in the labour force, "the baby-boom generation is much better educated than previous generations ... the generations are defined by their educational differences. And differences in education imply long-lasting changes in consumer behavior [*sic*], income, political judgement, and work experience" (Robey and Russell, 1984:21). Moreover, "along with higher education levels there are increased expectations for quality of life and an increased desire to remain independent as long as possible" (National Advisory Council on Aging, 1994:7). Greater educational attainment may also have resulted in a greater adaptive competence, hence a greater range of options for the boomers (Baltes and Baltes, 1990). However, it is important to remember that although the boomers are better educated in general, there is still a wide variation within the generation (Cornman and Kingson, 1996). Regardless, until more is known about why the expected relationships between education and residential mobility in later life were the reverse in this analysis of the LSA subjects, one

hesitates to assert that these relationships will not change for the more educated boomers.

The assessment of the applicability of the present research findings for the boomer cohorts may be even more problematic once changing sex roles and the associated diversification of life course sequences and family structures are taken into consideration (Ravanera, Rajuloe and Burch, 1994). Although it has been possible to argue that the LSA wives shared many of the mid-life patterns and residential mobility outcomes in later life with their husbands, such that the omission of women from the sample may not have changed the general results for the period just following the retirement when the LSA cohort were young elderly, this may not be the case for the boomers. The life course of the LSA cohort reflected, "a time when roles were more clearly defined and served as guideposts on life's road" (National Advisory Council on Aging, 1993:2): when there were "stricter sexual mores and taboos on divorce, [and] constrained female roles" (Silverstone, 1996:28), which remained much the same into retirement. In the boomer cohorts, "young women have twice the college experience that older women have ... [and] women's participation in the labor [*sic*] force is the other key difference that members of the baby boom will carry with them throughout life" (Robey and Russell, 1984:21). The life course experiences of boomer women will be much more diverse than those of the women in the LSA cohort, as will associated adaptive resources in later life.

This will also influence the life course experiences of boomer men, and possibly the relationships between mid-life variables and residential mobility in later life. For example, income variability during mid-life may be even higher and more difficult to analyze for dual income households. Also the lower residential mobility rates for the boomers, due in part to difficulties in coordinating dual careers (Moore and Rosenberg, 1994; Rogerson, 1987; Rossi, 1980b), could make it more difficult to distinguish between blocked movers and stayers during mid-life. In any event, with the expanded role of women, an analysis of the relationships between boomer mid-life socio-economic status and later residential mobility would be much more complex than for the

LSA subjects.

The diversification of life course sequences and family structures will have similar confounding effects. For example, a large number of boomers will experience a stage in the life course preceding marriage which was almost unheard of for the LSA cohort - cohabitation. In addition, with fewer children and longer lives, the boomers may experience an earlier and a longer empty nest period (Gee, 1987; Ravanera, Rajuloe and Burch, 1994). Moreover, with greater ease of divorce, a greater proportion of boomers will experience marital status changes during mid-life than was the case for the LSA cohort (Robey and Russell, 1984). Coupled with increasing numbers of never married, this will result in a greater proportion of boomers in the non-married categories at the end of mid-life (Robey and Russell, 1984). In addition, there will be a larger proportion with no children or whose children live elsewhere during mid-life, which will influence both the period of empty nest and the frequency of contact with family living outside the home. Since the distribution of many of these variables was such that the sample size for some categories was too small for a full analysis of relationships with residential mobility in later life for the LSA subjects, particularly for the sub-group of movers, it is entirely possible that new relationships may appear in an analysis of the boomers.

In sum, although most of the specific findings of the present analysis are supported by the literature which is based on recent elderly groups, and there are some similarities between the LSA subjects and the baby boom cohorts, there are also a number of differences particularly with regard to educational attainment, work, changing sex roles, and family structures, which could influence the relationships between mid-life characteristics and residential mobility in later life. Hence, it could be a mistake to simply assume that the relationships between mid-life patterns and residential mobility in later life for the boomers will be the same as those for the LSA subjects, or for that matter, the current elderly. Rather than estimating future needs of the elderly by projecting forward the needs of the current elderly, a better approach would be to examine the

boomers life course patterns to date and project them forward, comparing them with the patterns of the present elderly.

6.3.3 Implications for Local Planners

The best use for the specific findings of the present research concerning the relationships between life course variables at mid-life and residential mobility in later life, would be as a point of departure in a long-term "adaptive planning" process to facilitate the integration of the elderly, particularly elderly baby boomers, into society. As above, the diverse life course experiences of the boomers could be contrasted with those of the LSA cohort to provide a framework for initial discussions within this process. Because of the growing level of complexity in the current turbulent planning environment and the sensitivity to local context, this planning should take place at a local level.

Local planners can facilitate this process by creating a supportive organizational environment. To help improve the adaptive capacity of the local community, the current fragmented and uncoordinated planning environment needs to be modified to place a greater emphasis on flexibility, a flatter communication network with more citizen participation, and less reliance on rules and regulations (Hodge, 1991; Lawrence and Lorsch, 1969; Seasons, 1991; Trist, 1973). Coordinating bodies such as the Toronto's Mayor's Committee on Aging should be encouraged. However, the exact form of the organizational arrangement should be locally generated, as it would depend on local context. The biggest challenge will be finding ways to integrate the planning functions of municipalities with those of the long-term care committee of the local District Health Council.

To aid local planners, Howe and her associates (1994:57) have developed a list of the types of questions that should be asked when making a "long-range community assessment responding to the needs of older adults", which emphasizes the importance of taking into

consideration the community's demographics, housing characteristics, physical mobility and accessibility, economic development issues, services for the elderly, citizen participation in decision making, and political support for the planning process.

In addition to their participation in the social learning process, local planners can also help this process move along by monitoring demographic, physical and social profiles of local neighbourhoods on an ongoing basis. For example, it would be useful to know where different birth cohorts, such as the baby boomers, are concentrating geographically in the community. This information can be compiled from census data employing measures such as the index of dissimilarity used by Hodge and his associates (1994), or the location quotients used by Rosenberg and his associates (1989). A comparison of location quotients over time, such as was done for the profile of Metropolitan Toronto in Chapter II (Table 2.2.3.2), can be a good indicator of places where birth cohorts, are or are not concentrating. The greying of age-homogenous neighbourhoods as they mature should not be a surprise. With the boomers entering mid-life, a period characterized by a low level of residential mobility, many are already residing in the neighbourhoods where they could choose to age-in-place. Not only are high concentrations of concern to local planners: low concentrations may be equally of interest, especially in view of the challenges faced in the provision of community services to geographically dispersed clients. Surveys of local residents would also provide much needed information which could be of use in this planning process, particularly with regard to characteristics that are poorly covered by the census such as: residential history, family and social relations, health, and future mobility intentions. In combination, the resulting neighbourhood profiles could be used to identify potential "hot spots" (those with extreme characteristics), which may require special attention.

Additional background data from province-wide studies of the characteristics and mobility intentions of potential migrants would also be of help, since receiving communities would find it difficult to plan on the basis of their residents alone. It is important that provisions be made

for the sharing of information collected at a local level among local planning bodies and with those in other communities.

At the same time, participants in the adaptive planning process can begin to evaluate the extent to which each neighbourhood is physically and socially supportive of its aging population. A variety of measures have been developed to aid this process ranging from simple checklists, focused on physical features which are supportive of older people (e.g. Hodge *et al.*, 1992; National Advisory Council on Aging, 1992), to more sophisticated measures such as the Geographical Information Systems tool developed by Raaijmakers (1993) to identify residentially friendly zones for seniors in Amsterdam. However, it is at this point that value differences in the framing of local problems associated with aging start to become apparent. A simple example would be the relative importance given to sidewalks in providing a supportive environment for the elderly, which could vary considerably depending on such things as traffic, climatic conditions, or the location of destinations. However, an important byproduct of these deliberations could be the development of local criteria and a process by which the social sustainability of a neighbourhood can be evaluated, possibly before it is constructed as part of the subdivision or site planning process.

Policy alternatives come into play in the assessment of the suitability of neighbourhoods for an aging population as participants begin to identify barriers to the integration of the elderly into the community, possible strategies to address them (Raaijmakers, 1993), and associated interventions which may be required. An advantage of beginning an adaptive planning process with baby boomers in their mid-life is that longer-term policy options such as community development initiatives to enhance the capacity of a neighbourhood to provide social support, are still viable alternatives. However, it is important to remember that with the rapid change, addition of new knowledge, and emerging values inherent in a turbulent environment, this planning process will be in a constant state of flux and always incomplete (Comman and Kingson,

1996; Trist, 1973).

Although a long planning horizon seems impossible in a time of great uncertainty, this may be an opportune time to initiate such a social learning process. As the boomers attempt to deal with the aging of their parents and possibly grandparents, they are becoming increasingly aware of associated planning issues, and are forming opinions on how these issues should be addressed. At the same time, their life course trajectories are well developed by mid-life and have begun to diverge sufficiently to facilitate comparisons with those of their parents and the LSA cohort. Moreover, "studying the earlier life experiences of currently existing cohorts can set the stage for more realistic scenarios of their possible future lives" (Riley, 1979:119). In addition, the experiences gained from difficulties absorbing the boomers at earlier stages in the life course (*e.g.* the education system or housing market), have demonstrated a need for a longer time horizon in planning not only for the absorption of elderly boomers but also for a readjustment for the small baby bust cohort that follows (Foot and Stoffman, 1996).

6.4 Summary

To summarize, demographic aging exacerbated by rapid technological change and a growing global economy, has created a considerable strain on age-related roles in Canadian society. In particular, the adaptations required to absorb the over-large baby boom cohorts have resulted in a number of associated societal trends. Although some of these trends may be temporary, many of the shifts in age and sex roles related to work, life course sequencing and family structures are thought to represent lasting social change. This has served to greatly increase the diversity of Canada's population.

The overall result has been the development of a turbulent planning environment characterized by rapid change and a high degree of uncertainty. Moreover, the greying of the population has greatly increased the number of ill-structured and complex problems which

challenge traditional rational planning approaches. It has been argued that a social learning planning model is required to address this growing number of complex "meta-problems", and that organizational environments need to change to facilitate this form of adaptation. Within this framework, planning can be viewed as a purposeful, ongoing collaborative process of adaptation.

In this context, the present research can contribute to planning for an aging population in Ontario at a variety of levels. To begin, it has demonstrated the usefulness of a life course perspective for the analysis of societal trends associated with population aging in Canada. It introduces a powerful planning tool - cohort analysis, which can also be used to identify emergent change. The major contribution of this research has been to confirm that mid-life patterns can be associated with residential mobility choices in later life, in a way that can be of use to planners. However, in the absence of further research to test the generalizability of the findings of this analysis of the single LSA birth and gender cohort, the best use of the information concerning the specific relationships between variables would be as a starting point to help initiate dialogue in an adaptive social planning process at a local level in Ontario which includes all concerned parties. Local planners can facilitate the development of this process by creating a supportive organizational environment and monitoring local/neighbourhood demographic, physical and social characteristics on an ongoing basis.

Chapter VII

Summary and Conclusions

Population aging in Canada, accelerated by the aging of the over-large baby boom cohorts and exacerbated by rapid technological change and the development of a global economy, has resulted in a period of turbulence and uncertainty, which challenges both the substance and style of local planning in Ontario for the next few decades. Although there are numerous ways to integrate an increasingly large proportion of elderly into local communities, many are contingent upon whether older people will decide to age-in-place, make a local move, or migrate out of the area. A review of the literature has shown that there are very different policy implications associated with these choices, which are particularly sensitive to local context. A greater understanding of how life course experiences are related to residential mobility in later life could help local planners anticipate possible impacts of decisions on present and future elderly. Hence, the research objective of this dissertation has been two fold: to establish how life course (especially mid-life) patterns are related to residential mobility in later life; and to examine how this knowledge can contribute to the development of a new style of planning for an aging population.

After considering a number of different theoretical approaches, the life course theory of aging was selected as a theoretical framework to structure this enquiry. From a planning perspective, it has the advantage that not only can it be used to study the micro-level relationships between mid-life patterns and residential mobility in later life for individuals, but also the macro-level issues associated with the implications of these findings for planning for an aging population.

From a life course perspective, it can be argued that a number of inter-related life course trajectories, specifically residential history, social and family relations, socio-economic status, and health, influence the decision to move in later life, either directly or indirectly through their effect on earlier residential trajectories. On the basis of a review of the literature on the residential

mobility of the elderly, several hypotheses were put forward concerning the relationships between these trajectories and three residential mobility outcomes of interest to planners - aging-in-place as opposed to a move, remaining in the community either through aging-in-place or making a local move as compared with migration out of the community, or if a move is made, whether it is a local one or a longer distance migration.

These hypotheses were tested using measures of the trajectories developed from data on a sample of 1063 men studied over a period of 30 years - the Ontario Longitudinal Study of Aging. Survival analysis procedures, specifically Kaplan-Meier survival curves and Cox proportional hazards models were used.

The findings from these analysis were much what was expected on the basis of the literature. To summarize, the estimated relative risk of moving as opposed to aging-in-place was higher with the number of moves made during mid-life, lower with the length of residence, lower for homeowners, increases with the passage of time for those who are widowed, higher for those who have children, lower for those who had at least weekly contact with kin at some point during mid-life, higher for those with a low continuity of social activity and those with a low score on the social relations index, lower for those with blue collar occupations, higher in the period shortly after retirement for those who retired early, lower with increasing levels of education, higher for those with an early onset of poor health, and lower just after retirement for those with a high proportion of mid-life years with a decline in health. In general, those who had relatively stable mid-life housing patterns, homeowners with fewer moves and relatively long durations of residence, and who were more socially integrated, as indicated by frequent contact with kin, a moderate to high continuity of mid-life social activity and a relatively high social relations score, are more likely to age-in-place.

The estimated relative risk of moving out of the local community increases with the number of mid-life moves, to some extent is lower for LSA respondents with frequent contact

with kin. higher just after retirement/age 65 for those with a low continuity of mid-life social activity, higher for those with a low score on the social relations index, but lower for those with low or variable mid-life incomes, higher for those with a moderate history of incidents of unemployment, higher shortly after an early retirement, and considerably lower for those with a large proportion of mid-life years with a decline in health. As one would expect, those with a less stable residential history as measured by the number of mid-life moves, a low continuity of mid-life social activities and a low score on the social relations index are more likely to migrate.

For those who make a move, the estimated relative risk of migrating, as opposed to making a local move, is higher for those with a shorter length of residence, lower for those who have experienced at least one change in marital status during mid-life, somewhat higher for those whose last child left home during the middle of mid-life, increasingly higher with time after retirement/age 65 for those with little family contact, increasingly lower with the passage of time for those with high scores on the social relations index, lower for those with consistently low incomes during mid-life, increasingly higher for blue collar workers with the passing of time after retirement/age 65, somewhat higher for those with a moderate history of unemployment, increasingly lower as time passes after retirement/age 65 for those with a higher educational attainment, and for those with early poor health, and lower for those with higher proportions of mid-life years with declining health. However, the numbers of movers can be small in some sub-groups and associated results should be interpreted with caution. It would appear that if they are to move, those with shorter durations of residence, who are relatively recent "empty nesters" and have had little family contact during mid-life, move greater distances than those who may possibly be geographically constrained by a mid-life marital status change, a low level of financial resources and unpredictable or declining health resources.

The remarkable overall finding was that, although this was an analysis of a single birth cohort of Ontario men using mid-life measures of life course trajectories, many of the associations

found in the three models were what the literature based on studies of elderly people of both genders would lead one to expect, with the exception of associations with education which were in the opposite direction to that predicted from the literature.

This research has implications for planning for an aging population for Ontario at a variety of levels. To begin, a life course theoretical perspective, can provide some interesting insights concerning societal trends associated with population aging. The recognition of the strategic interdependence of people's lives and social change can be developed into a powerful planning tool - cohort analysis. Using this process which compares the life course experiences of sequential birth cohorts or generations, it is also possible to identify emergent change. The currently turbulent planning environment characterized by increasing complexity, rapid change and uncertainty, has greatly increased the need to plan with a long horizon. Although it is difficult to predict change in such an environment, its early identification can be very helpful as it is the changes and not the stable elements, that continue to challenge planners. Moreover, this same technique can be used to monitor the impact of intervention, through comparisons of the sequencing and timing of life course transitions.

The main contribution of this research is that it has demonstrated that prospective information concerning the life course patterns can be used to develop a foresight of twenty to thirty years, and in this case, that mid-life patterns can be associated with residential mobility in later life. That is, planners can use what they know about mid-life patterns to anticipate the future.

However, because of the difficulty of generalizing from findings based on a single birth cohort, one hesitates to assume that the specific findings concerning the relationships between the variables will apply to the baby boomers, for example, who have had very different life course experiences which may be associated with lasting social change. In the absence of collaborative evidence from similar studies using other birth and gender cohorts, it would appear that the best

use of the specific findings would be to provide a basis for comparison to initiate dialogue in a new style of local planning based on a social learning model.

In conclusion, the research conducted for this dissertation has produced a number of recommendations with regard to future directions for research and implications for local planning for an aging population in Ontario.

With regard to research, more needs to be known about the unexpected relationship between education and residential mobility in later life in Ontario. If the relationship is attributable to the seasonal migration of Canadian "snowbirds", then changes in the health care systems of either the United States or Ontario to make them more similar, could have a profound unanticipated impact on the migration patterns of the elderly in Ontario.

In addition, further research is required into the relationships between mid-life patterns and residential mobility in later life, especially with other birth and gender cohorts and over a longer span of the life course. Given the greater longevity of women and their changing role in our society, it becomes increasingly important to know how these changes will affect their adaptation in later life, including their residential mobility patterns as they adjust to widowhood and increasing disability.. Province wide studies of these relationships continue to be important, especially for potential receiving communities who cannot plan on the basis of their resident population alone.

Moreover, although the first move after retirement is of critical interest to planners, it would also be helpful to know more about how life course trajectories are related to subsequent moves, especially for those who move to retirement communities designed for the younger, more active elderly. At present, little is known about the long-term impacts of these developments. In the future, aging-in-place in retirement communities may be a major issue for local planners.

Turning to implications for local planning for an aging population in Ontario, the a review of the literature on planning in turbulent environments suggests that the highly fragmented and

uncoordinated planning environment which has evolved in Ontario, with responsibilities distributed across levels of government and within different sectors of the same level of government, is not an organizational environment that facilitates adaptation. Sectorial barriers at both the provincial and local levels of government have made it difficult for local planners to take an integrated approach to addressing issues associated with aging, particularly those linking community services and housing (Marshall, 1994). To address the growing complexity of issues associated with population aging in Ontario, a more active social learning planning model involving all concerned parties is required. Because of the growing level of complexity and sensitivity to local context this planning should be at a local level. The organizational environment under which this occurs should be one that places an emphasis on flexibility, using a more complex and flatter communication network with less reliance on rules and regulations. Given the importance of local context in aging issues, the organizational structure should also be locally generated. The role of the Province should be that of a facilitator of this process and coordinator of the exchange of information between local communities.

Until further research has been conducted to test the generalizability of the specific findings of the current analysis of the LSA cohort, the best use of these findings would be as a basis of comparison to initiate dialogue in this adaptive social learning process.

Local planners can help this process move along through the development and monitoring of local demographic, physical and social profiles on an ongoing basis.

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Appendix A

Visioning Study Methodology

As part of his dissertation research Shipley (1997) surveyed Ontario municipalities concerning their use of visioning in planning practice. The planning offices of each of the fifteen Regional Municipalities in Ontario, plus major municipalities with populations over 50,000 which were not part of a regional municipality were targeted for this study. A letter was sent to each planning office in 1996, asking whether they or the planning offices in their constituent municipalities (where applicable) had undertaken visioning exercises. A total of 106 municipalities were included in this survey, containing over 75 per cent of the population of Ontario. In response to his letter and subsequent telephone follow-ups, 40 municipalities indicated that they had been involved in visioning, usually as part of the development of strategic or official plans. They also provided information concerning who had conducted the work, the processes used, and copies of associated municipal documentation. A total of 36 of the municipalities (9 upper-tier and 27 lower-tier) participating in Shipley's study supplied sufficient documentation to be of use in the present analysis of the extent to which they identified planning issues associated with an aging population in their visions of the future. A list of the specific municipalities can be found on the next page. However, since this information was not collected for the purpose of the present research, only aggregated results have been reported, and no reference has been made to specific municipalities in the text.

Municipalities Used for the Analysis of Visions of the Future

City of Barrie	City of Port Colburne
City of Burlington	City of St. Catharines
City of Cambridge	City of Sault Ste. Marie
Borough of East York	City of Stoney Creek
Town of Flamborough	Regional Municipality of Sudbury
Township of Goulbourn	City of Thorold
Regional Municipality of Haldiman-Norfolk	Municipality of Metropolitan Toronto
Regional Municipality of Halton	City of Vaughan
City of Hamilton	Regional Municipality of Waterloo
Regional Municipality of Hamilton-Wentworth	City of Welland
Township of King	City of Windsor
City of Kingston	Township of Woolwich
Township of Lake-of-Bays	Regional Municipality of York
City of London	
Town of Markham	
Town of Milton	
City of Mississauga	
City of North Bay	
City of Ottawa	
Regional Municipality of Ottawa-Carleton	
Regional Municipality of Peel	
Town of Pickering	

Appendix B

Requests for Information

To conduct a more indepth examination of planning for an aging population within a specific geographical area using the documents of various local planning bodies, two upper-tier municipalities with very different characteristics were selected to provide a basis for comparison, the Municipality of Metropolitan Toronto and Simcoe County. A letter was sent to the director/commisioner of the planning departments of these municipalities, their constituent municipalities, the two District Health Councils, and the Metropolitan Toronto Social Planning Council. An example of this letter can be found on the next page. There were minor variations in the wording of the second paragraph of the letter for each planning body with respect to local population aging characteristics and the possibly relevant planning documents. The letter was followed-up by a telephone call and occassionally a remailing of the letter. Response to this request for information was excellent. In total, both of the upper-tier municipalities, 22 of the 24 lower-tier municipalities, and the two District Health Councils sent information. In addition, the planner of one sparsely populated rural municipality indicated on the telephone that nothing would be sent since their documentation, particularly the Official Plan, did not address issues associated with aging. As one would expect, there was considerable variation in the quantity and type of information sent, ranging from brief letters to two inches of documents. Nonetheless, this is what the planning body deemed relevant. In a few instances, it was more cost-effective to obtain the material from local sources such as the university library.

Example of the Letter Sent to Local Planning Bodies

Dear (Director of Planning) :

Re: Research on Planning for an Aging Population in Ontario.

I am currently a Ph.D. student in the School of Urban and Regional Planning at the University of Waterloo. My research is concerned with different ways that we can plan for our aging population, particularly the aging of the "baby boomers". The planning literature suggests that issues associated with aging impact on local municipalities in the following planning areas: transportation, housing, community and social services, land use, urban design, plus community and economic development.

I understand that your area is known for its retirement communities and your rapidly greying population. I would greatly appreciate knowing how you have responded to this challenge. How have you explicitly or implicitly included aging issues in your strategic or official plan? Possibly you have background reports, such as housing updates, that address these issues. Some communities, for example, have developed special policies or zoning by-laws for retirement communities. Could you please send me copies of any reports or documents that address issues associated with planning for seniors in your municipality. If you have not explicitly addressed these issues, I would still appreciate receiving a copy of your official plan which I will examine for policies that are implicitly supportive of an aging population.

I will be contacting you by phone sometime in the next few weeks to follow up on this request for information. If you would like to contact me before that time, I can be reached at (telephone number).

Thank you in advance for your help. When my research is completed this fall, I will be happy to share my findings with you.

Sincerely,

Lynda Hayward M.A.

Appendix C
Supplementary Tables and Figures

Table C 1.1 Mid-life characteristics of the respondents

Mid-life Variable	Percentage ⁵ (n)	
Number of mid-life moves		
0	55.7	(592)
1	24.7	(263)
2	10.1	(107)
3+	9.5	(101)
Years of residence		
0-10	26.8	(285)
11-25	37.6	(400)
26+	35.6	(378)
Housing tenure		
owner	88.9	(945)
other	11.1	(118)
Marital status change		
some	13.5	(144)
none	86.5	(919)
Marital status		
single	1.8	(19)
married	92.9	(987)
widowed, separated, or divorced	5.4	(57)
Period of empty nest		
always empty (no children)	8.8	(94)
prior to mid-life	2.1	(22)
early mid-life	5.7	(61)
intermediate mid-life	20.5	(218)
late mid-life, if at all	62.8	(668)
Children		
some	91.2	(969)
none	8.8	(94)

⁵ Percentages may not add up to 100 due to rounding

Table C 1.1 (continued)

Mid-life Variable	Percentage (n)	
Maximum family contact		
< monthly	5.6	(59)
monthly	10.8	(115)
weekly	83.6	(889)
Continuity of social activity		
low	39.3	(418)
moderate	22.6	(240)
high	38.1	(405)
Social relations index		
lowest decile	11.9	(127)
moderate	77.2	(821)
highest decile	10.5	(112)
missing	0.3	(3)
Income		
low	8.1	(86)
moderate	3.2	(34)
high	8.6	(91)
variable	78.6	(832)
missing	1.9	(20)
Detailed Occupation		
professionals	8.9	(95)
upper management	7.9	(84)
semi-professionals & technicians	3.8	(40)
middle management	7.1	(76)
supervisors	6.0	(64)
foremen	6.6	(70)
skilled clerical, sales & service	2.7	(29)
skilled crafts & trades	20.8	(221)
farmers	7.7	(82)
semi-skilled clerical, sales, & service	7.1	(75)
semi-skilled crafts & trades	11.8	(125)
unskilled	9.6	(102)
Occupation		
white collar	45.2	(480)
blue collar	47.1	(501)
farm	7.7	(82)

Table C 1.1 (continued)

Mid-life Variable	Percentage (n)	
Unemployment		
none	66.2	(704)
moderate	22.1	(235)
high	11.7	(124)
Years of education		
0-8	36.0	(383)
9-13	53.2	(566)
14+	10.5	(112)
missing	0.2	(2)
Health rating		
good	45.2	(481)
later poor	34.1	(363)
early poor	20.6	(219)
Years with declining health		
low	20.5	(218)
moderate	42.1	(447)
high	37.4	(398)
Length of mid-life		
10-18	24.5	(260)
19+	75.5	(803)

Table C 2.1.1 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by mid-life number of moves

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Number of mid-life moves	.269***	.033	1.31	1.23 - 1.40

† p<.10; * p<.05; ** p<.01; *** p<.001

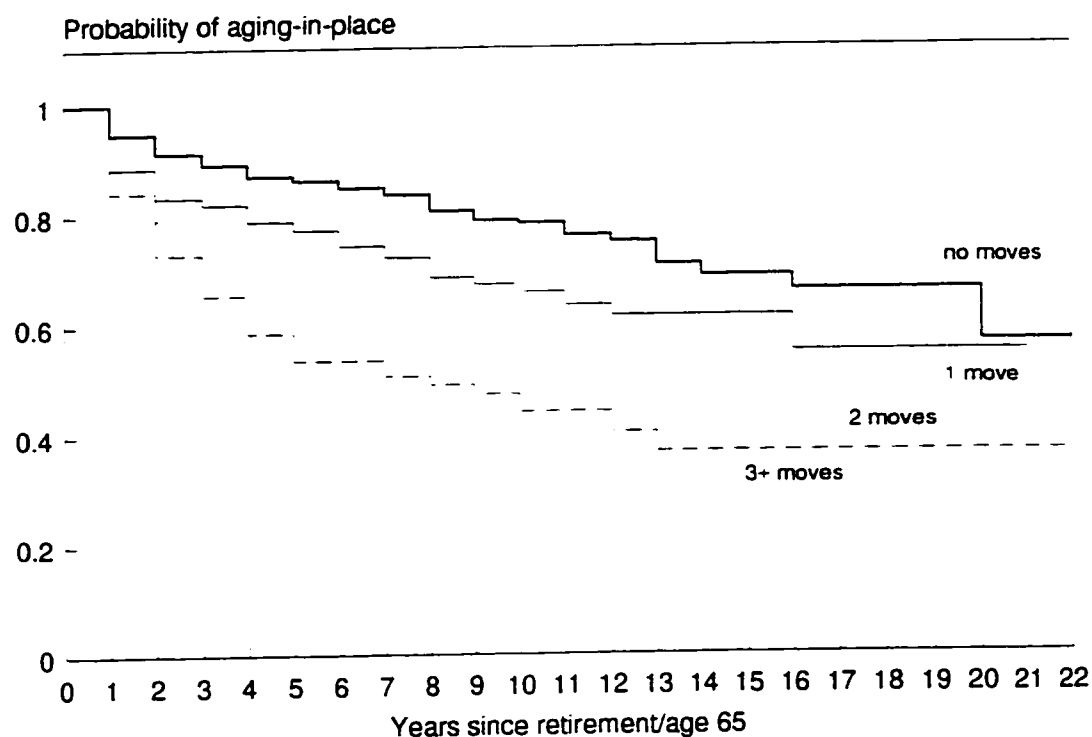


Figure C 2.1.1 Estimated survival curves for aging-in-place after retirement/age 65 by number of mid-life moves

Table C 2.1.2 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by mid-life number of moves

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Number of mid-life moves	.250***	.060	1.28	1.14 - 1.44

+ p<.10: * p<.05: ** p<.01: *** p<.001

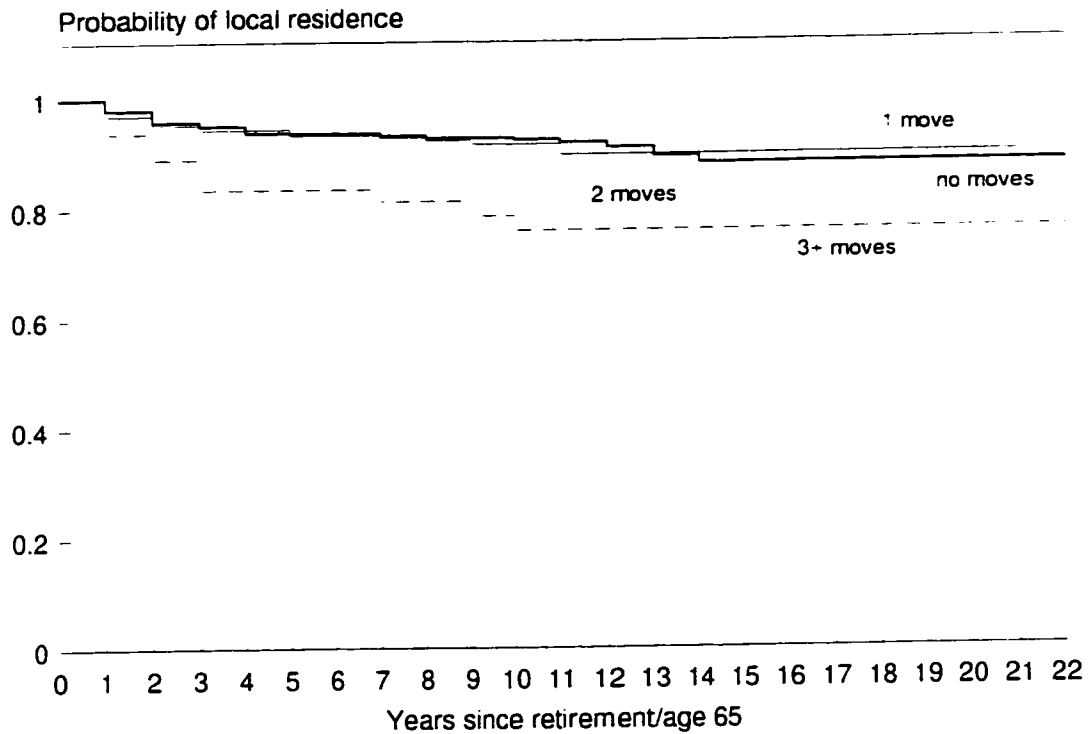


Figure C 2.1.2 Estimated survival curves for local residence after retirement/age 65 by mid-life number of moves

Table C 2.1.3 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by mid-life number of moves

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Number of mid-life moves	.069	.062	1.07	0.95 - 1.21

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.1.4 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by length of residence at end of mid-life (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of residence				
0-10	.844***	.139	2.33	1.77 - 3.05
11-25	.363**	.139	1.44	1.09 - 1.89
26+ (ref)			1.00	
Years of residence				
0-10	1.307***	.247	3.70	2.28 - 6.00
(0-10 x time)	-.372*	.158	0.69	0.51 - 0.94
11-25	.705**	.254	2.03	1.23 - 3.33
(11-25 x time)	-.257†	.156	0.77	0.57 - 1.05
26+ (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

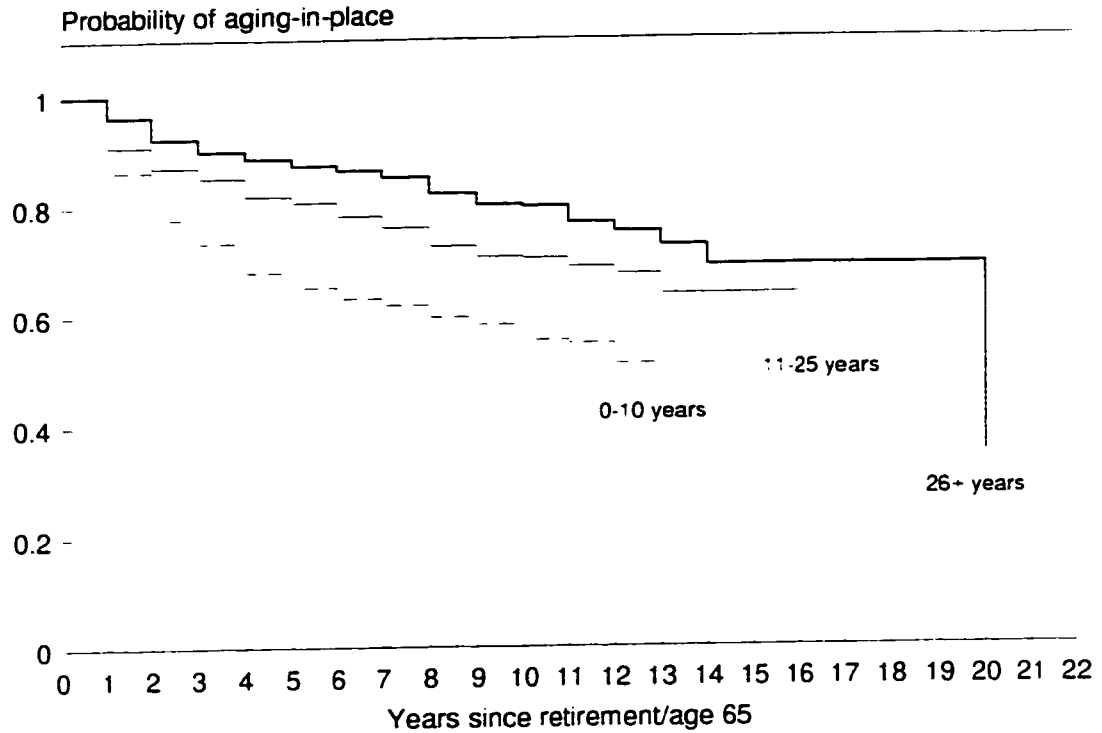


Figure C 2.1.4.1 Estimated survival curves for aging-in-place after retirement/age 65 by length of residence at end of mid-life

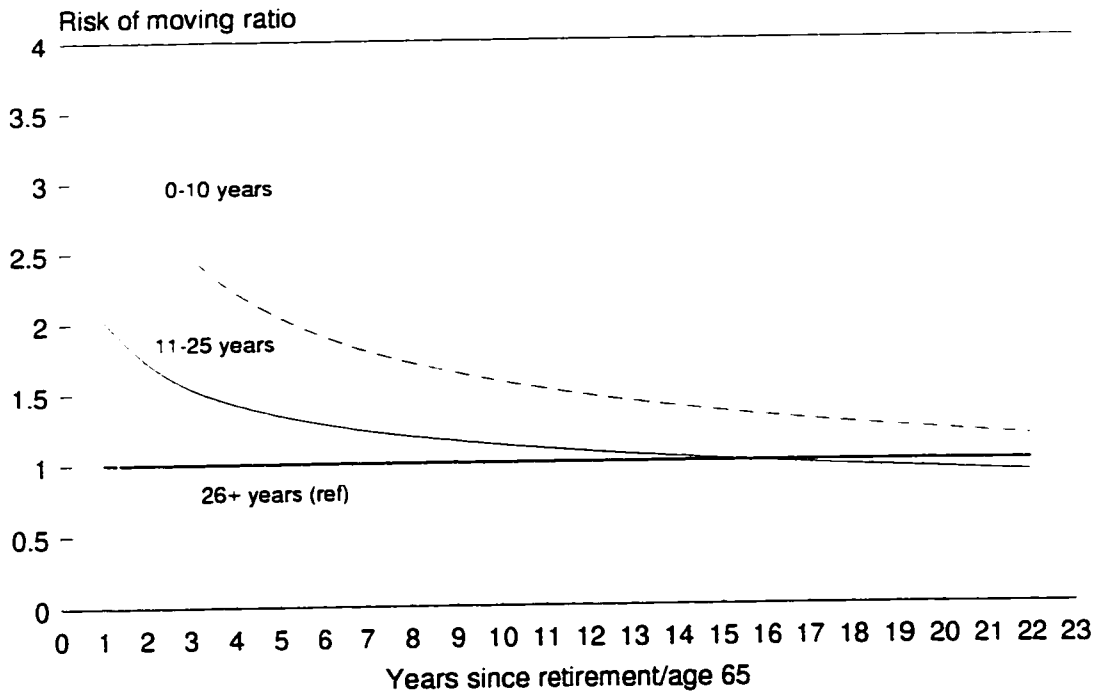


Figure C 2.1.4.2 Risk of move ratios after retirement/age 65 by length of residence at end of mid-life and by years since retirement/age 65

Table C 2.1.5 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by length of residence at end of mid-life (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of residence				
0-10	.817**	.265	2.26	1.35 - 3.81
11-25	.518*	.257	1.68	1.01 - 2.78
26+ (ref)			1.00	
Years of residence				
0-10	1.667***	.450	5.30	2.19 - 12.79
(0-10 x time)	-.828**	.329	0.44	0.23 - 0.83
11-25	1.072*	.451	2.92	1.21 - 7.07
(11-25 x time)	-.458	.294	0.63	0.36 - 1.13
26+ (ref)			1.00	

+ p<.10; * p<.05; ** p<.01; *** p<.001

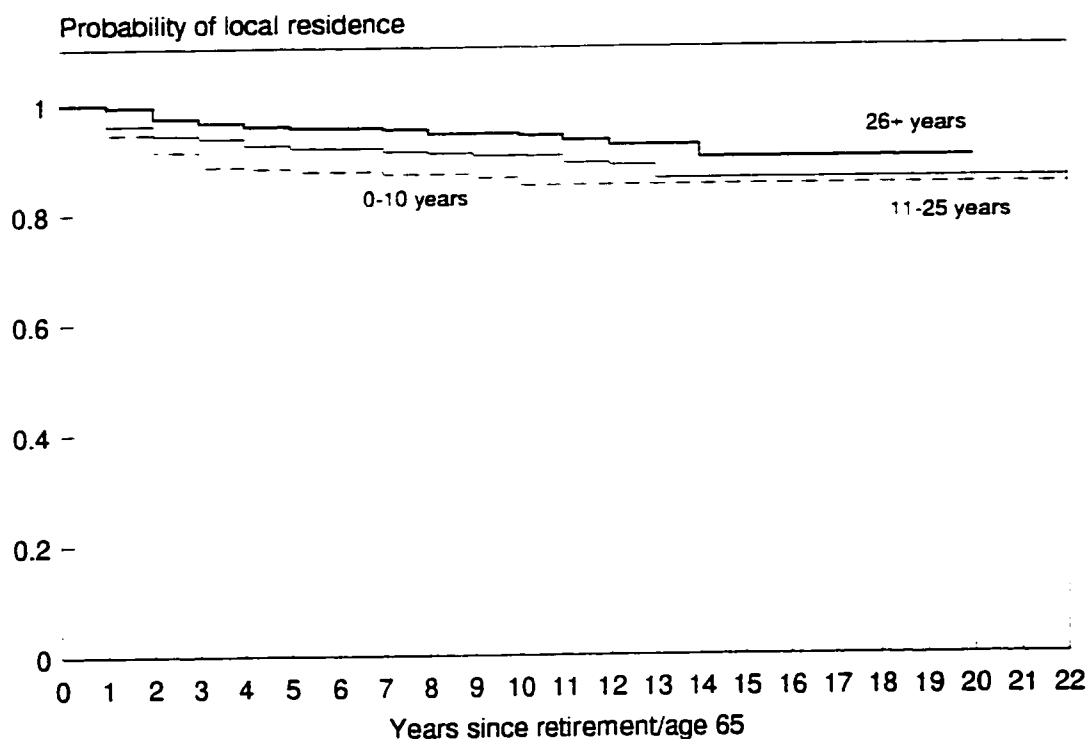


Figure C 2.1.5.1 Estimated survival curves for local residence after retirement/age by length of residence at end of mid-life

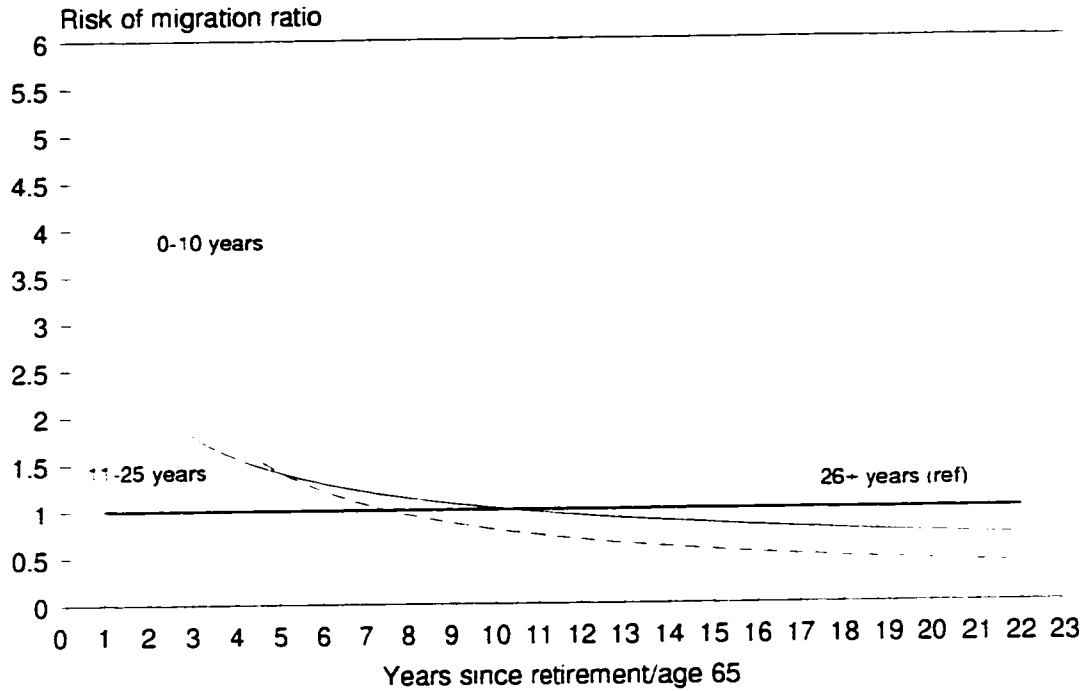


Figure C 2.1.5.2 Risk of migration ratios after retirement/age by length of residence at end of mid-life and by years since retirement/age 65

Table C 2.1.6 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by length of residence at end of mid-life (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of residence				
0-10	.347	.268	1.42	0.84 - 2.39
11-25	.327	.258	1.39	0.84 - 2.30
26+ (ref)			1.00	
Years of residence				
0-10	.966*	.449	2.63	1.09 - 6.34
(0-10 x time)	-.606†	.333	0.55	0.28 - 1.05
11-25	.732†	.449	2.08	0.86 - 5.01
(11-15 x time)	-.321	.292	0.73	0.41 - 1.29
26+ (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

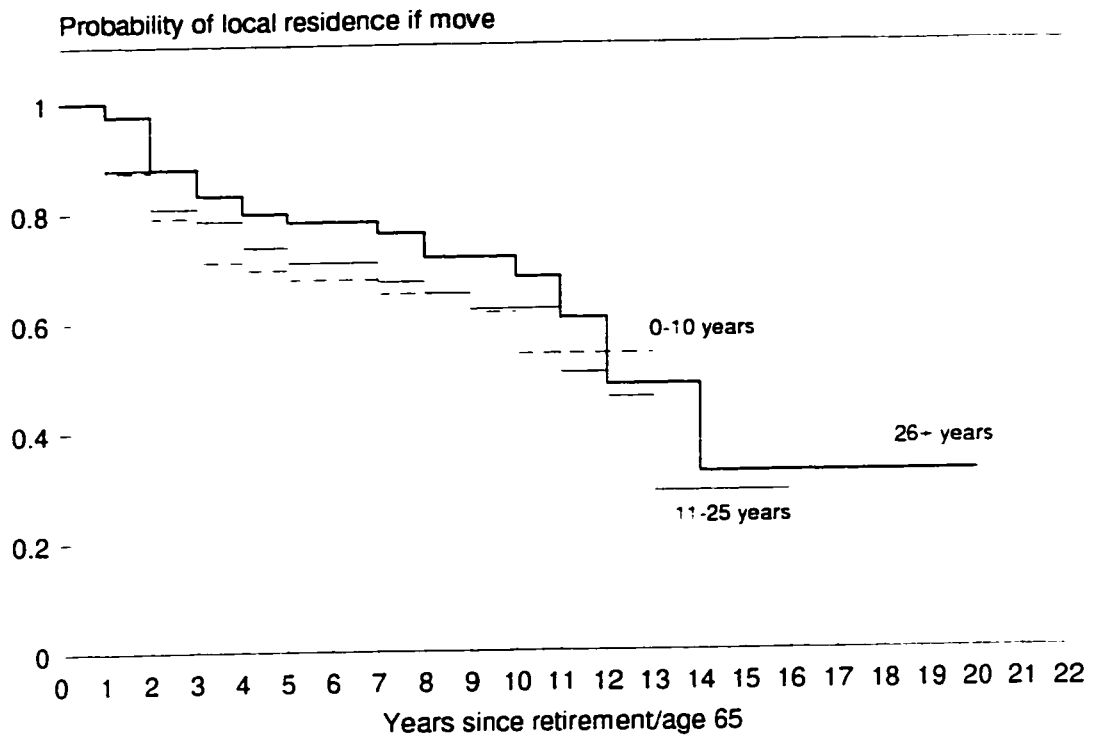


Figure C 2.1.6.1 Estimated survival curves for local residence after retirement/age 65 given a move by length of residence at end of mid-life

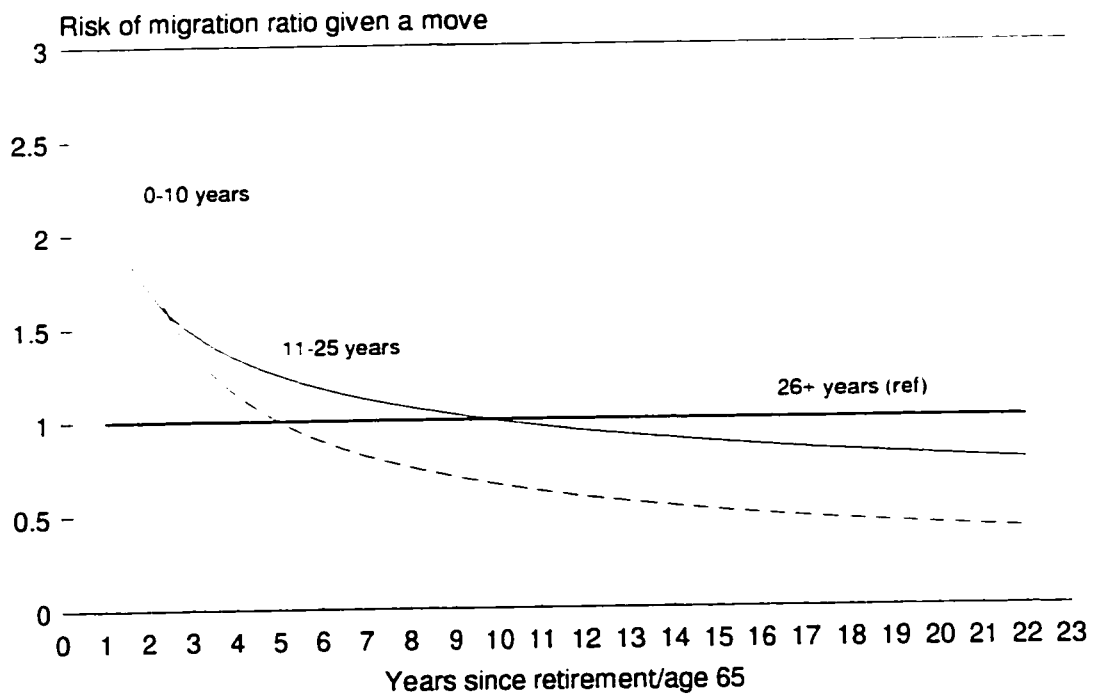


Figure C 2.1.6.2 Risk of migration ratios after retirement/age 65 given a move by length of residence at end of mid-life and by years since retirement/age 65

Table C 2.1.7 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by mid-life housing tenure

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Housing tenure owner	-.988***	.140	0.37	0.28 - 0.49
other (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

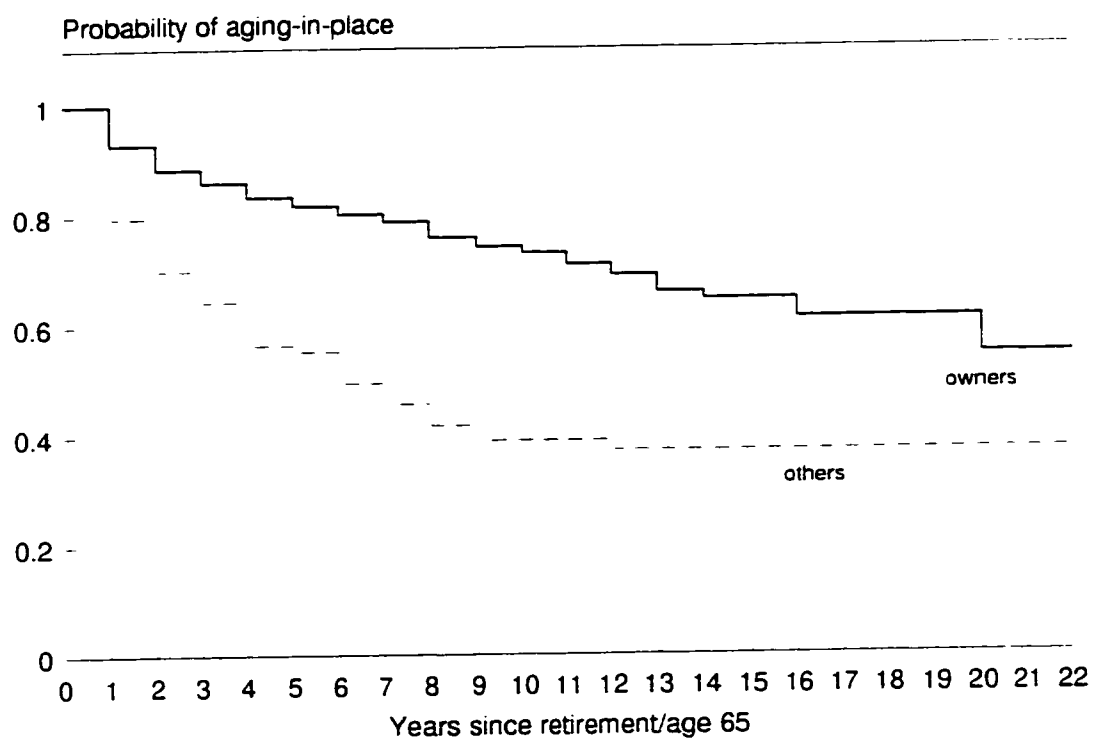


Figure C 2.1.7 Estimated survival curves for aging-in-place after retirement/age 65 by mid-life housing tenure

Table C 2.1.8 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by mid-life housing tenure

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Housing tenure				
owner	-.583*	.290	0.56	0.32 - 0.99
other (ref)			1.00	

+ p<.10: * p<.05: ** p<.01: *** p<.001

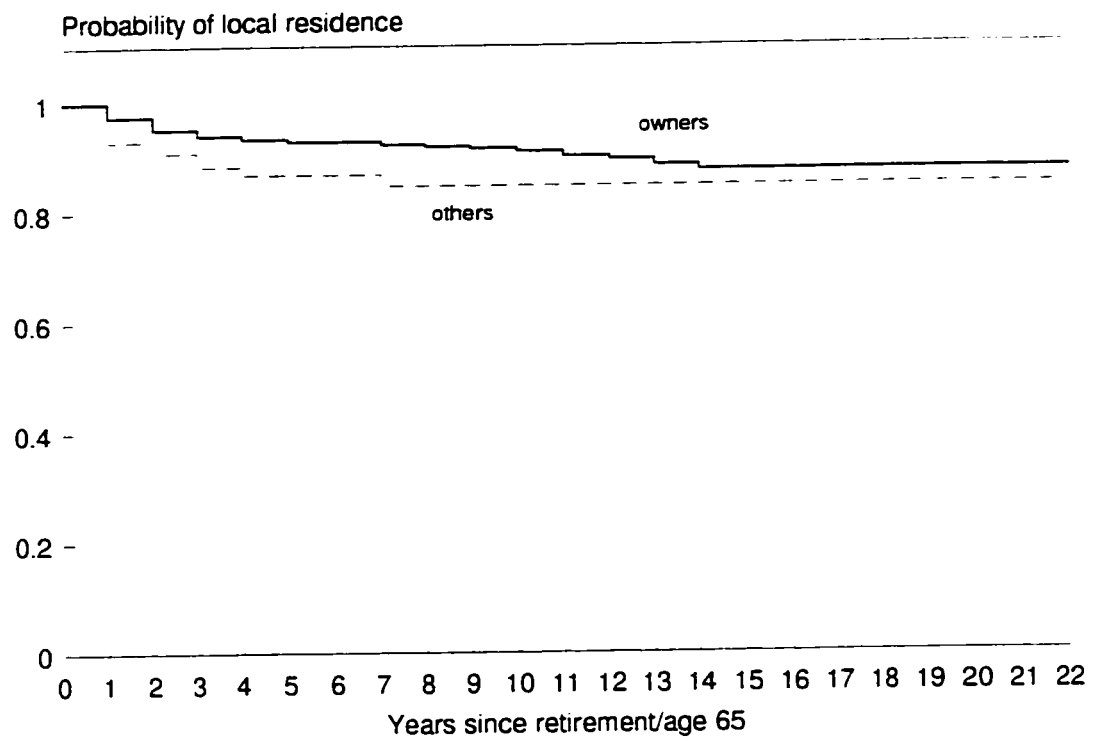


Figure C 2.1.8 Estimated survival curves for local residence after retirement/age 65 by mid-life housing tenure

Table C 2.1.9 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by mid-life housing tenure

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Housing tenure				
owner	-.095	.293	0.91	0.51 - 1.61
other (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.1 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by marital status change during mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status change				
some	.332*	.145	1.39	1.05 - 1.85
none (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

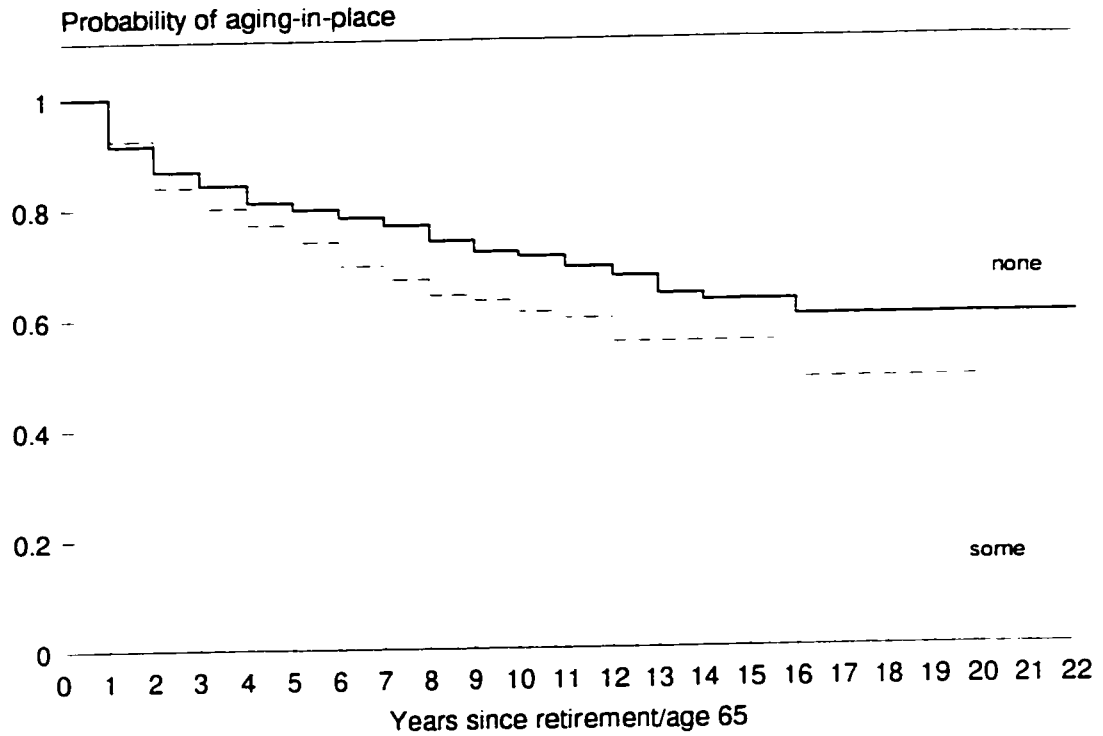


Figure C 2.2.1 Estimated survival curves for aging-in-place after retirement/age 65 by marital status change during mid-life

Table C 2.2.2 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by marital status change during mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status change				
some	-0.265	.333	0.77	0.40 - 1.48
none (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.3 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by marital status change during mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status change				
some	-.596⁺	.334	0.55	0.29 - 1.06
none (ref)			1.00	

⁺ p<.10: * p<.05: ** p<.01: *** p<.001

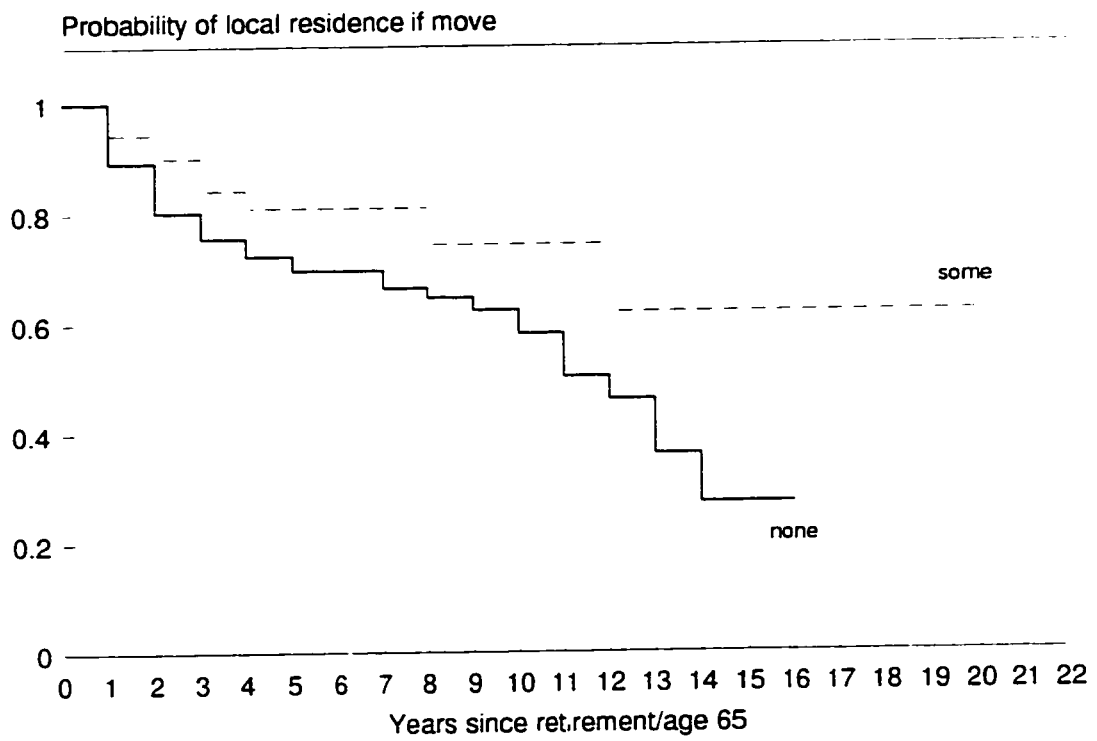


Figure C 2.2.3 Estimated survival curves for local residence after retirement/age 65 given a move by marital status change during mid-life

Table C 2.2.4 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by marital status at the end of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status				
single	-.443	.503	0.64	0.24 - 1.72
married (ref)			1.00	
widowed, separated, or divorced	.375 [†]	.212	1.43	0.96 - 2.20

† p<.10; * p<.05; ** p<.01; *** p<.001

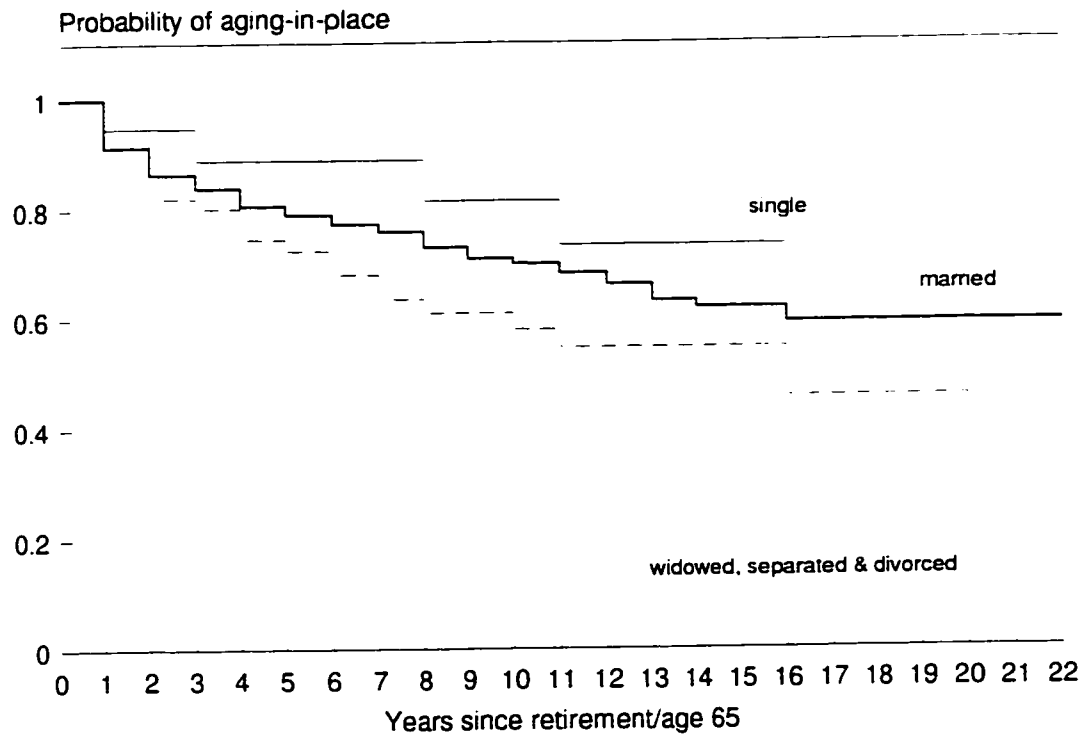


Figure C 2.2.4 Estimated survival curves for aging-in-place after retirement/age 65 by marital status at the end of mid-life

Table C 2.2.5 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by marital status at the end of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status				
single	-.660	1.005	0.52	0.07 - 3.71
married (ref)			1.00	
widowed, separated, or divorced	-.927	.714	0.40	0.10 - 1.61

+ p<.10: * p<.05: ** p<.01: *** p<.001

Table C 2.2.6 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by marital status at the end of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Marital status				
single	-.352	1.006	0.70	0.10 - 5.05
married (ref)			1.00	
widowed, separated, or divorced	-1.369+	.716	0.40	0.10 - 1.61

+ p<.10: * p<.05: ** p<.01: *** p<.001

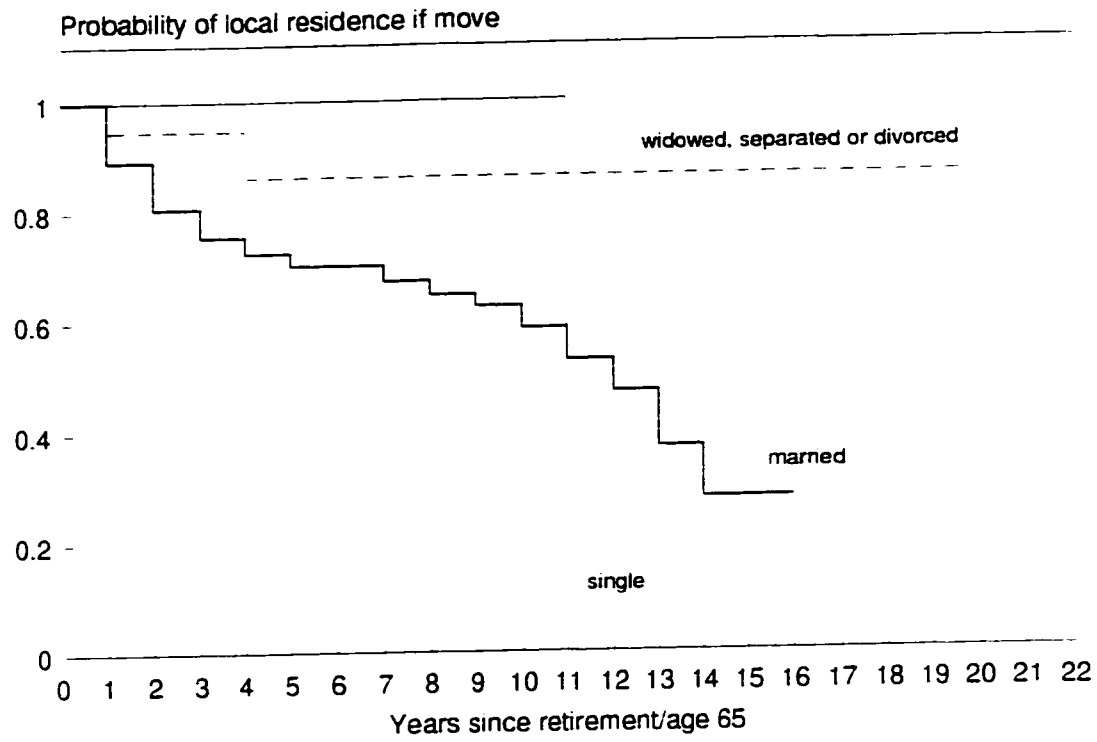


Figure C 2.2.6 Estimated survival curves for local residence after retirement age 65 given a move by marital status at the end of mid-life

Table C 2.2.7 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by period of empty nest (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Period of empty nest				
always empty (no children)	-.256	.216	0.77	0.51 - 1.18
prior to mid-life	.809**	.298	2.25	1.25 - 4.03
early mid-life	.158	.229	1.17	0.75 - 1.83
intermediate mid-life	.214	.132	1.24	0.96 - 1.61
late mid-life, if at all (ref)			1.00	
Period of empty nest				
always empty (no children)	-.355	.378	0.70	0.33 - 1.47
(always x time)	.075	.234	1.08	0.68 - 1.71
prior to mid-life	-.458	.692	0.63	0.16 - 2.46
(prior x time)	1.004*	.401	2.73	1.24 - 5.99
early mid-life	.041	.387	1.04	0.49 - 2.22
(early x time)	.096	.251	1.10	0.67 - 1.80
intermediate mid-life	.392+	.208	1.48	0.98 - 2.22
(intermediate x time)	-.159	.146	0.85	0.64 - 1.14
late mid-life, if at all (ref)			1.00	

+ p<.10; * p<.05; ** p<.01; *** p<.001

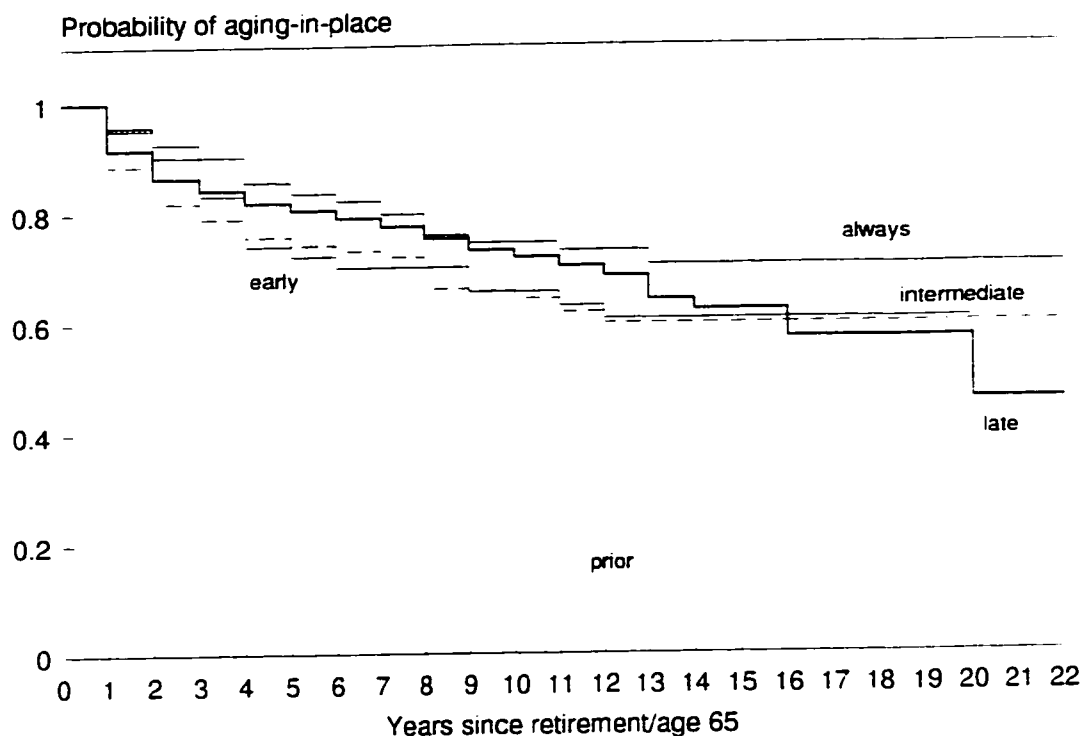


Figure C 2.2.7.1 Estimated survival curves for aging-in-place after retirement/age 65 by period of empty nest

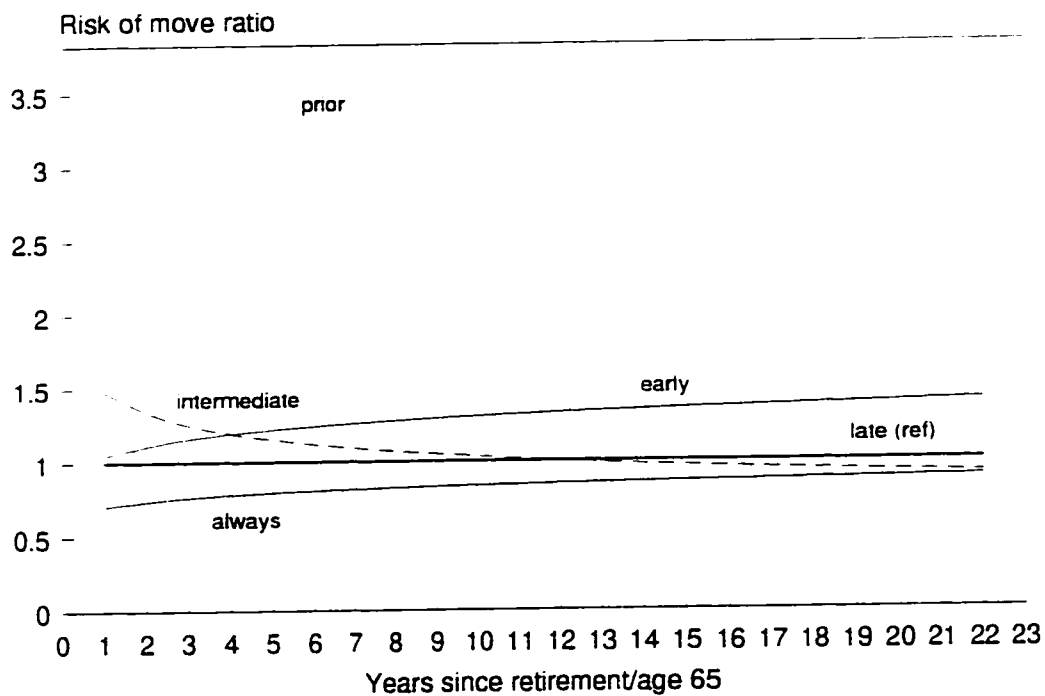


Figure C 2.2.7.2 Risk of move ratios after retirement/age 65 by period of empty nest and by years since retirement/age 65

Table C 2.2.8 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by period of empty nest

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Period of empty nest				
always empty (no children)	-.213	.400	0.81	0.37 - 1.77
prior to mid-life	.229	.720	1.26	0.31 - 5.15
early mid-life	.147	.429	1.16	0.50 - 2.68
intermediate mid-life	.343	.235	1.41	0.89 - 2.24
late mid-life, if at all (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.9 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by period of empty nest

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Period of empty nest				
always empty (no children)	.106	.401	1.11	0.51 - 2.44
prior to mid-life	-.594	.720	0.55	0.14 - 2.26
early mid-life	.145	.431	1.16	0.50 - 2.69
intermediate mid-life	.340	.239	1.41	0.88 - 2.24
late mid-life, if at all (ref)			1.00	

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.10 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by children

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Children some none (ref)	.337	.212	1.40 1.00	0.93 - 2.12

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.11 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by children

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Children some none (ref)	.312	.392	1.37 1.00	0.63 - 2.95

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.12 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by children

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Children some none (ref)	-.028	.393	0.97 1.00	0.45 - 2.10

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.13 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by maximum family contact (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Maximum family contact				
< monthly	-.680*	.295	0.51	0.29 - 0.90
monthly (ref)			1.00	
weekly	-.488**	.154	0.61	0.45 - 0.83
Maximum family contact				
< monthly	-.104	.410	0.90	0.40 - 2.01
(< monthly x time)	-.589†	.345	0.56	0.28 - 1.09
monthly (ref)			1.00	
weekly	-.549*	.245	0.58	0.36 - 0.93
(weekly x time)	.052	.171	1.05	0.75 - 1.47

† p<.10: * p<.05: ** p<.01: *** p<.001

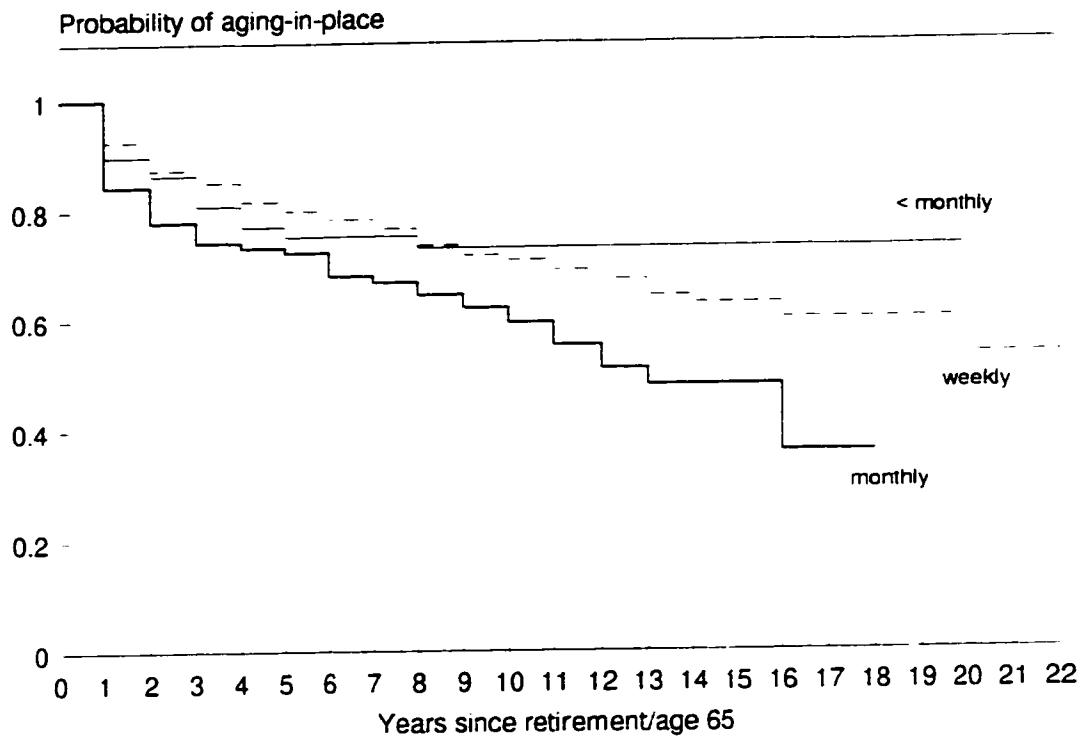


Figure C 2.2.13.1 Estimated survival curves for aging-in-place after retirement age 65 by maximum family contact

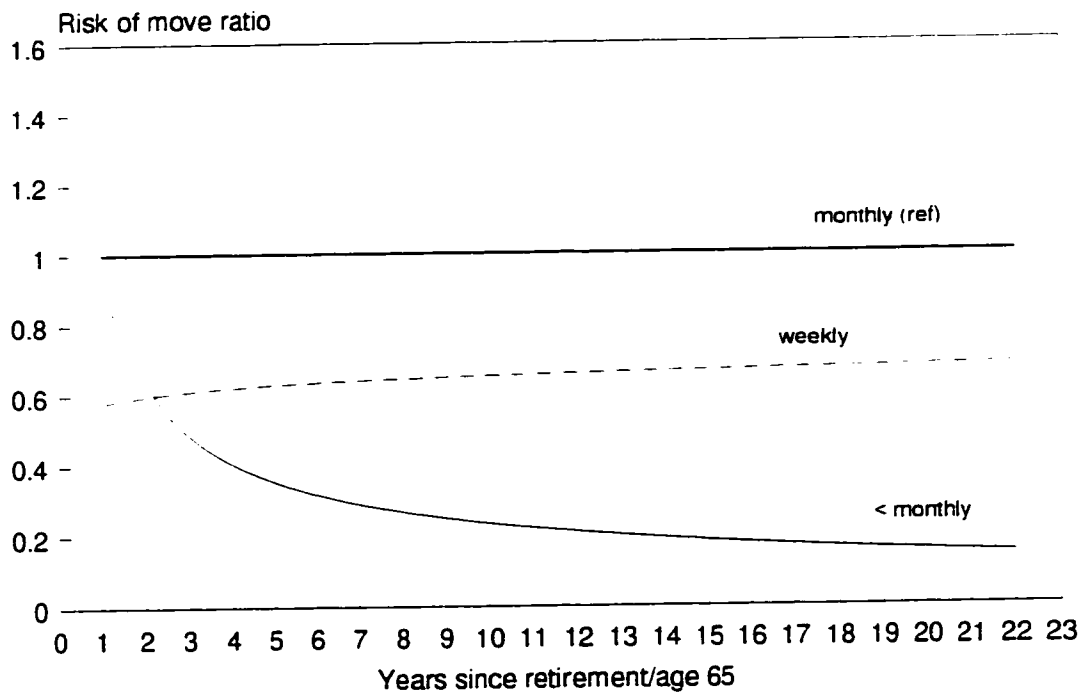


Figure C 2.2.13.2 Risk of move ratios after retirement/age 65 by maximum family contact and by years since retirement/age 65

Table C 2.2.14 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by maximum family contact

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Maximum family contact				
< monthly	-.332	.422	0.72	0.31 - 1.64
monthly (ref)			1.00	
weekly	-.832**	.258	0.44	0.26 - 0.72

+ p<.10: * p<.05: ** p<.01: *** p<.001

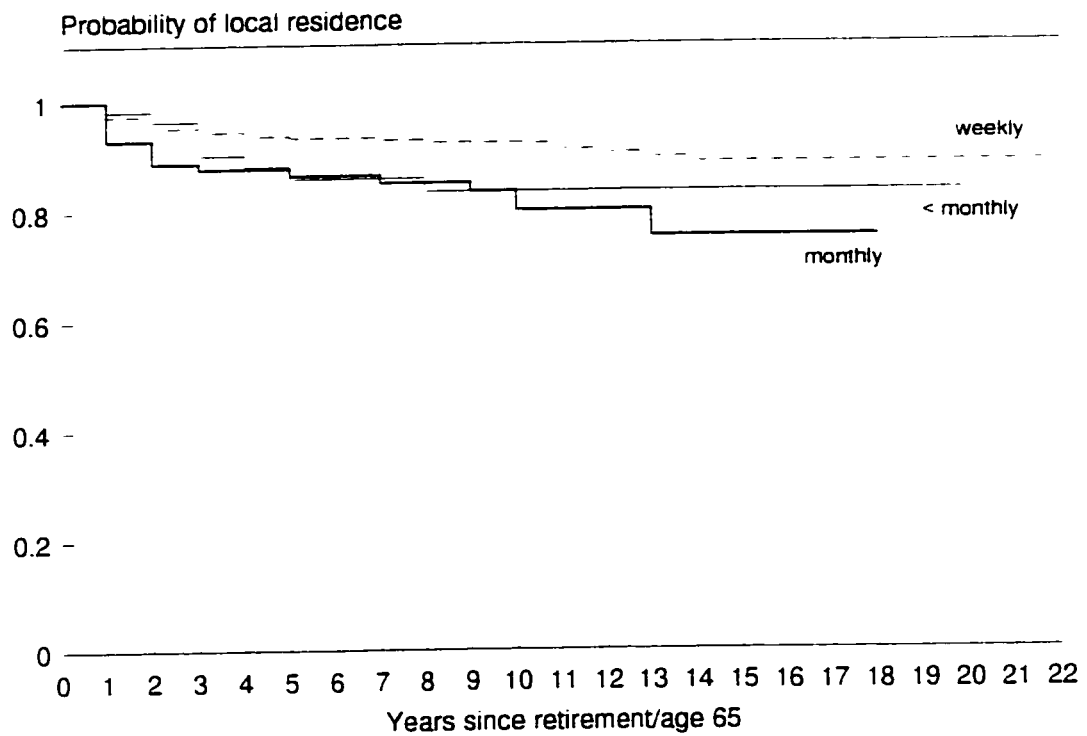


Figure C 2.2.14 Estimated survival curves for a local residence after retirement/age 65 by maximum family contact

Table C 2.2.15 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by maximum family contact (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Maximum family contact				
< monthly	.710 [†]	.427	2.04	0.88 - 4.70
monthly (ref)			1.00	
weekly	-.400	.258	0.67	0.40 - 1.11
Maximum family contact				
< monthly	-.896	.825	0.41	0.08 - 2.06
(< monthly x time)	1.987^{**}	.659	7.29	2.00 - 26.52
monthly (ref)			1.00	
weekly	-.555	.366	0.57	0.28 - 1.18
(weekly x time)	.167	.286	1.18	0.68 - 2.07

† p<.10; * p<.05; ** p<.01; *** p<.001

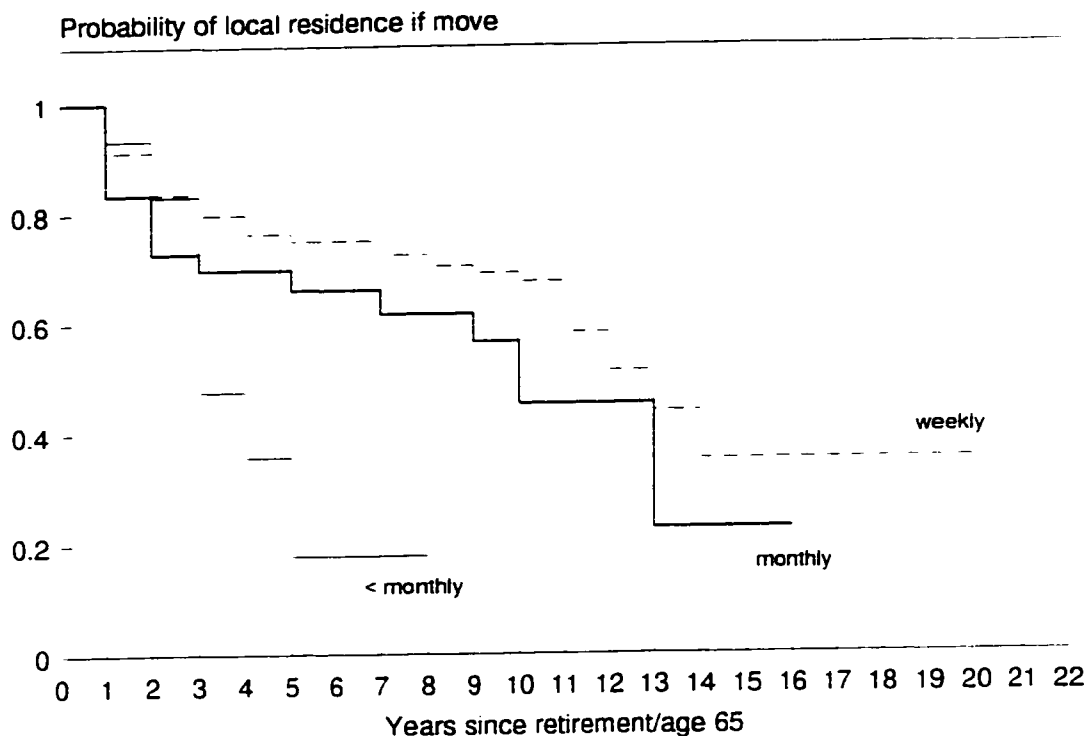


Figure C 2.2.15.1 Estimated survival curves for local residence after retirement/age 65 given a move by maximum family contact

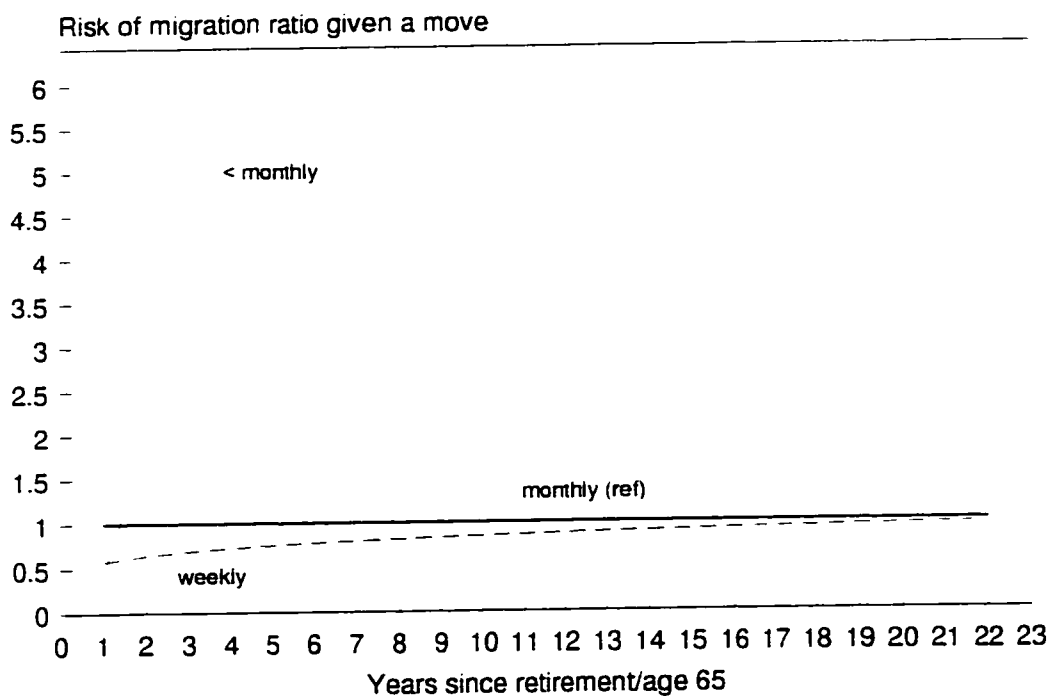


Figure C 2.2.15.2 Risk of migration ratios after retirement/age 65 given a move by maximum family contact and by years since retirement/age 65

Table C 2.2.16 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by continuity of social activity during mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Continuity of social activity				
low	.267 [†]	.144	1.31	0.98 - 1.73
moderate (ref)			1.00	
high	-.009	.151	0.99	0.74 - 1.33

[†] p<.10; * p<.05; ** p<.01; *** p<.001

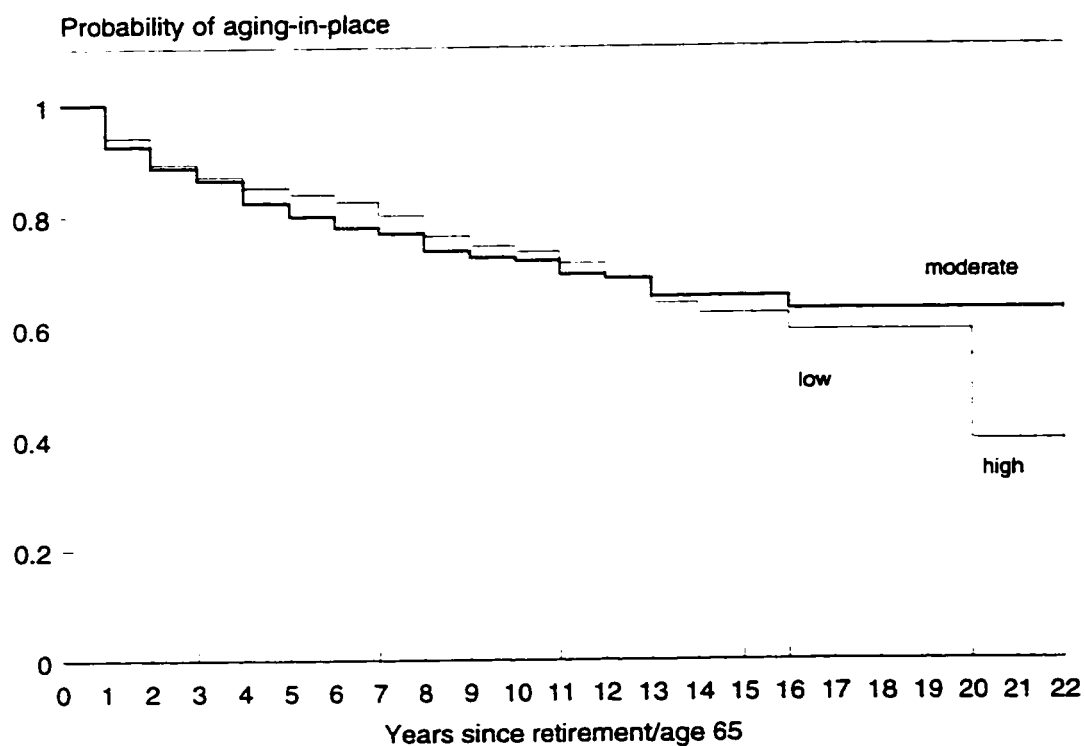


Figure C 2.2.16 Estimated survival curves for aging-in-place after retirement/age 65 by continuity of social activity during mid-life

Table C 2.2.17 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by continuity of social activity during mid-life (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Continuity of social activity				
low	.254	.258	1.29	0.78 - 2.14
moderate (ref)			1.00	
high	-.242	.281	0.79	0.45 - 1.36
Continuity of social activity				
low	.724+	.401	2.06	0.94 - 4.53
(low x time)	-.495+	.300	0.61	0.34 - 1.10
moderate (ref)			1.00	
high	-.341	.464	0.71	0.29 - 1.77
(high x time)	.081	.313	1.08	0.59 - 2.00

+ p<.10: * p<.05: ** p<.01: *** p<.001

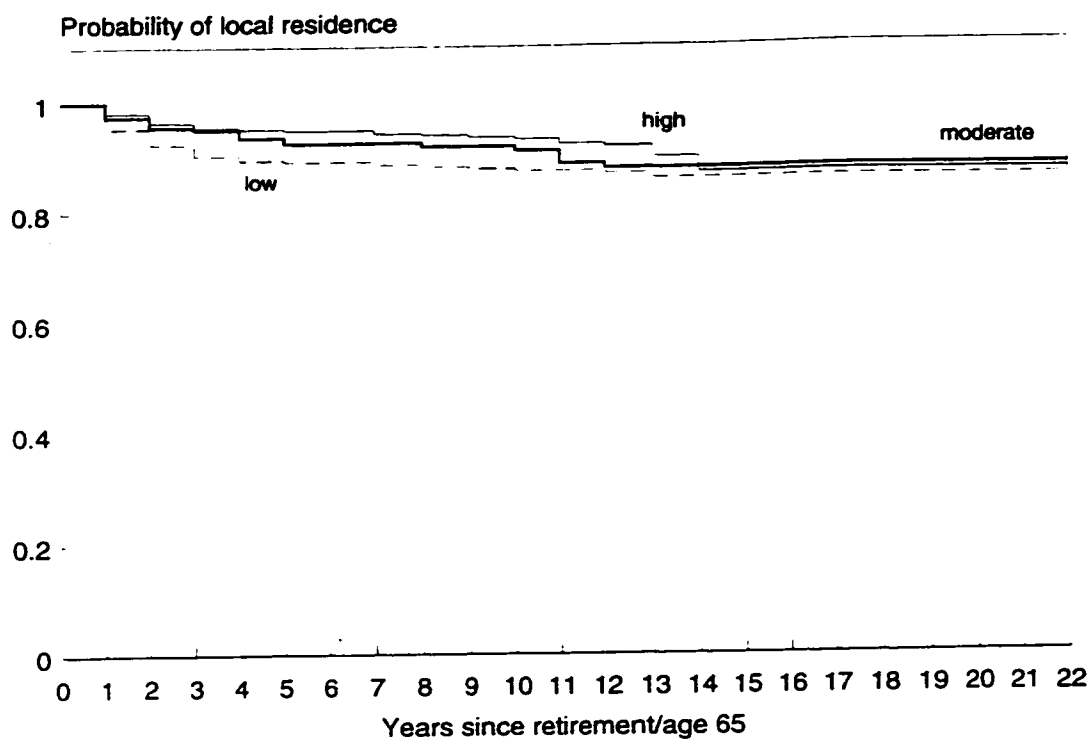


Figure C 2.2.17.1 Estimated survival curves for local residence after retirement/age 65 by continuity of social activity during mid-life

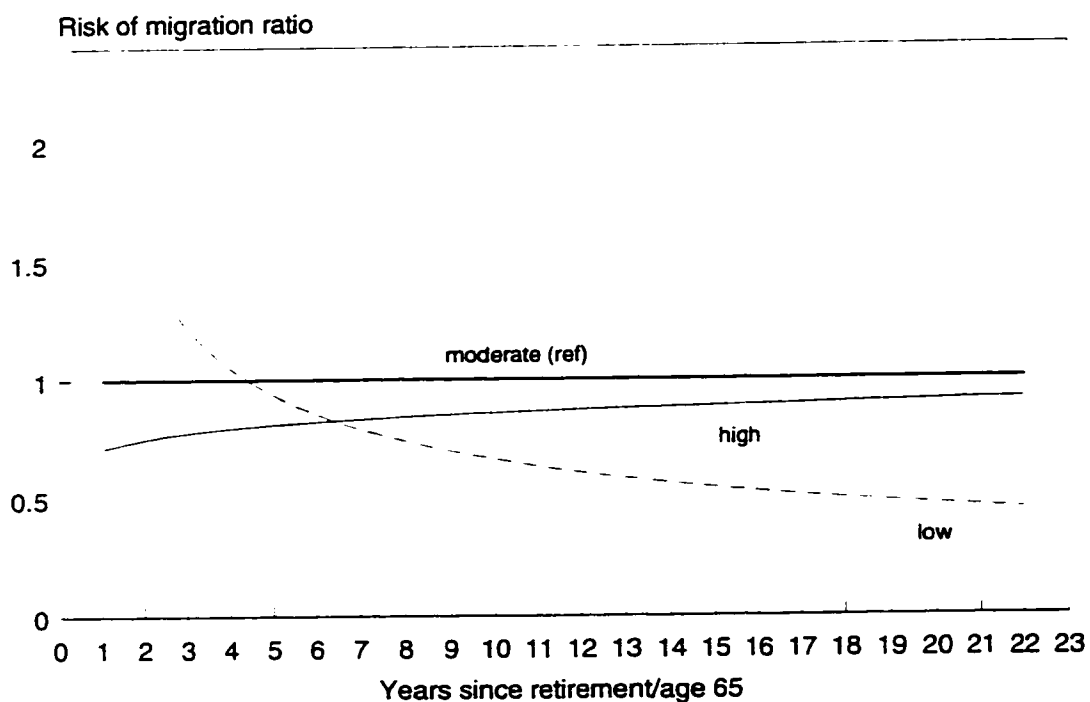


Figure C 2.2.17.2 Risk of migration ratios after retirement/age 65 by continuity of social activity during mid-life and by years since retirement/age 65

Table C 2.2.18 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by continuity of social activity during mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Continuity of social activity				
low	.055	.258	1.06	0.64 - 1.75
moderate (ref)			1.00	
high	-.419	.282	0.66	0.38 - 1.14

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.2.19 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by social relations index in early mid-life (with and without missing category)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Social relations index				
lowest decile	.401**	.154	1.49	1.11 - 2.02
moderate (ref)			1.00	
highest decile	-.005	.183	1.00	0.70 - 1.42
missing	-.313	1.005	0.73	0.10 - 5.24
Social relations index				
lowest decile	.402**	.154	1.50	1.11 - 2.02
moderate			1.00	
highest decile	-.004	.183	1.00	0.70 - 1.43

† p<.10; * p<.05; ** p<.01; *** p<.001

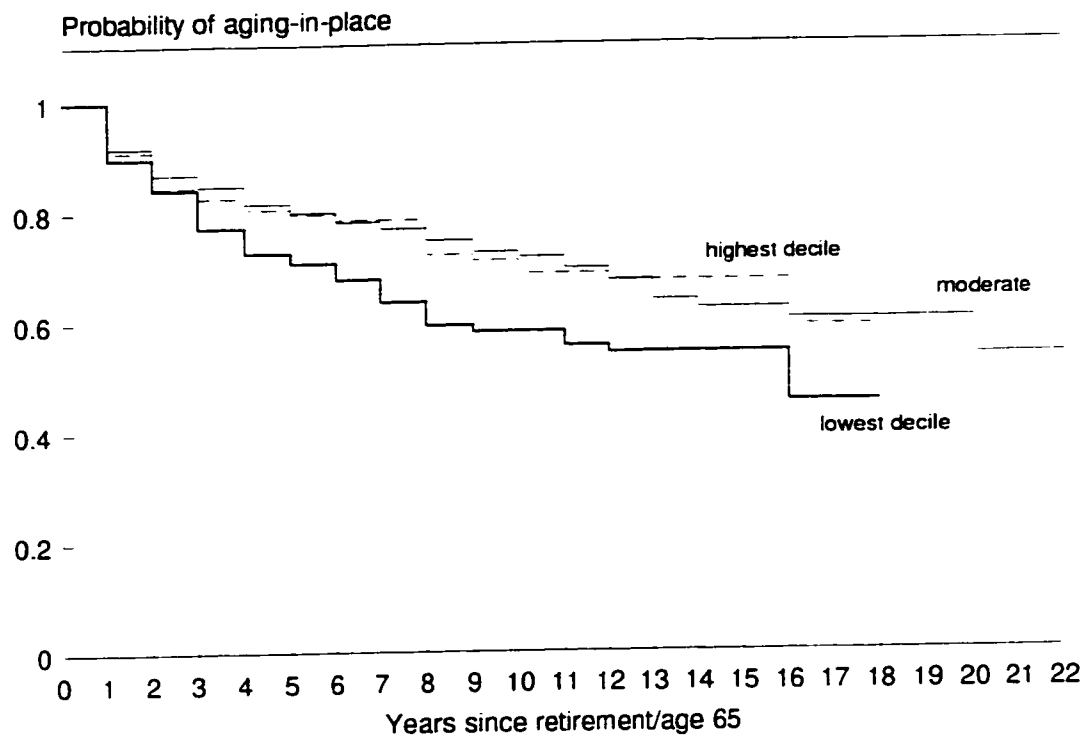


Figure C 2.2.19 Estimated survival curves for aging-in-place after retirement/age 65 by social relations index in early mid-life

Table C 2.2.20 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by social relations index in early mid-life (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Social relations index				
lowest decile	.412	.275	1.51	0.88 - 2.59
moderate (ref)			1.00	
highest decile	-.546	.424	.58	0.25 - 1.33
Social relations index				
lowest decile	.240	.430	1.27	0.55 - 2.95
(lowest decile x time)	.177	.313	1.19	0.65 - 2.21
moderate (ref)			1.00	
highest decile	.514	.481	1.67	0.65 - 4.29
(highest decile x time)	-2.531†	1.369	0.08	0.01 - 1.16

† p<.10; * p<.05; ** p<.01; *** p<.001

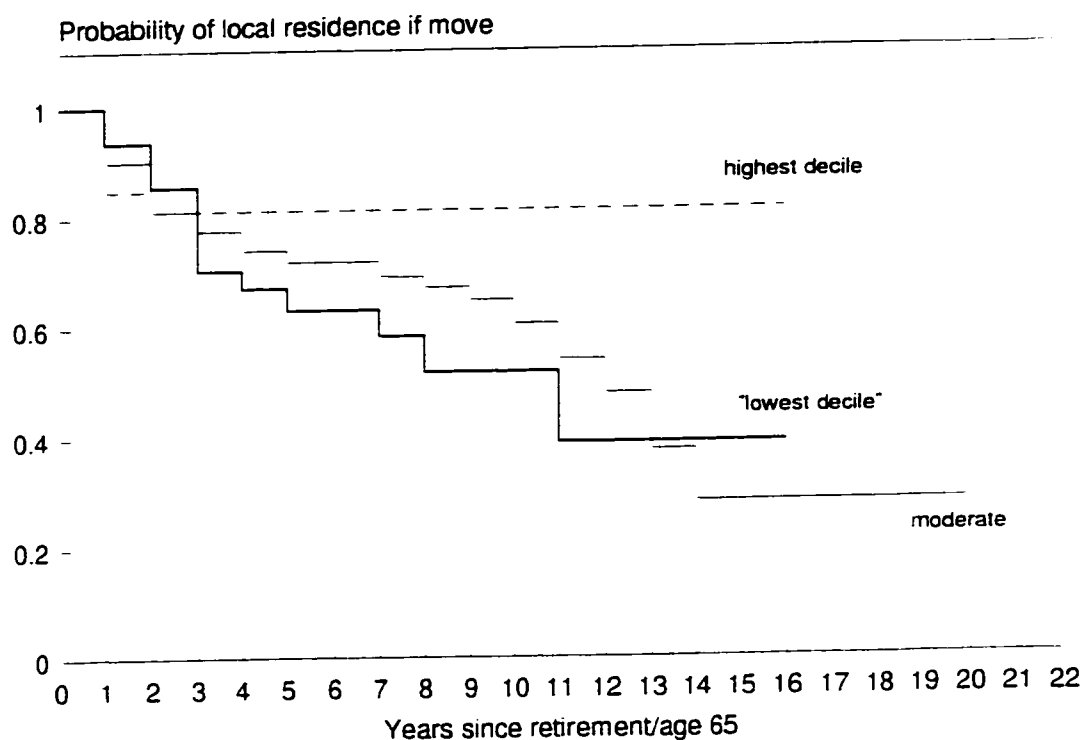


Figure C 2.2.20.1 Estimated survival curves for local residence after retirement/age 65 by social relations index in early mid-life

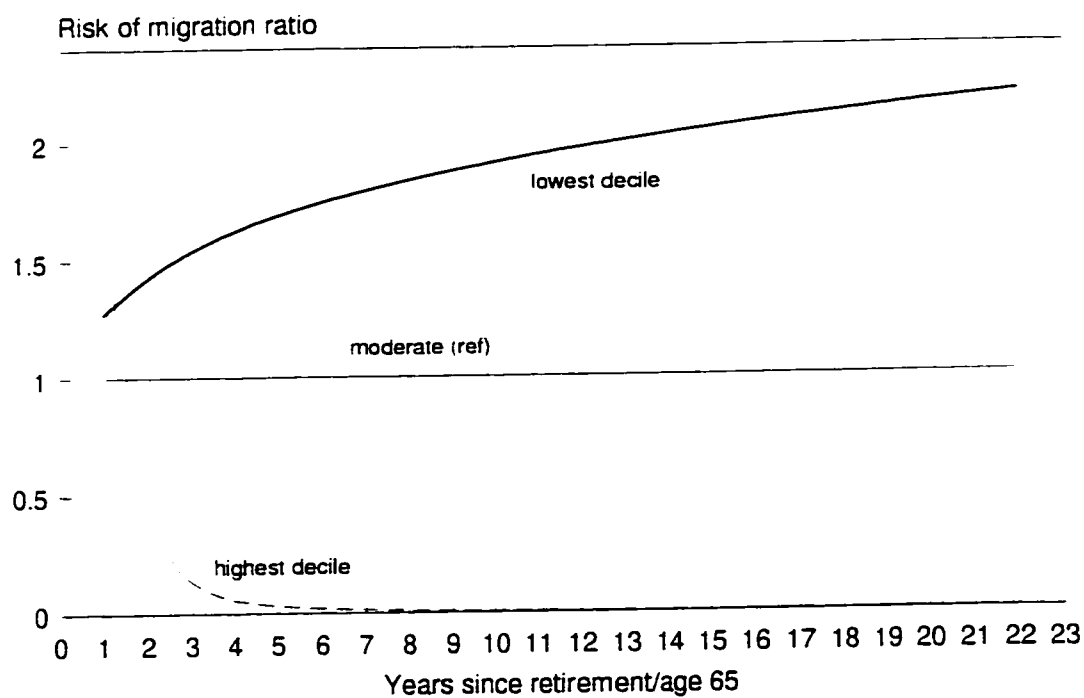


Figure C 2.2.20.2 Risk of migration ratios after retirement/age 65 by social relations index in early mid-life and by years since retirement/age 65

Table C 2.2.21 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by social relations index in early mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Social relations index				
"lowest decile"	.192	.276	1.21	0.71 - 2.08
moderate (ref)			1.00	
highest decile	-.430	.424	0.65	0.28 - 1.49
Social relations index (time interaction)				
"lowest decile" ("lowest decile" x time)	-.083	.438	0.92	0.39 - 2.17
moderate (ref)	.286	.324	1.33	0.71 - 2.51
highest decile (highest decile x time)	.515	.481	1.67	0.65 - 4.30
	-2.456[†]	1.381	0.09	0.01 - 1.28

† p<.10; * p<.05; ** p<.01; *** p<.001

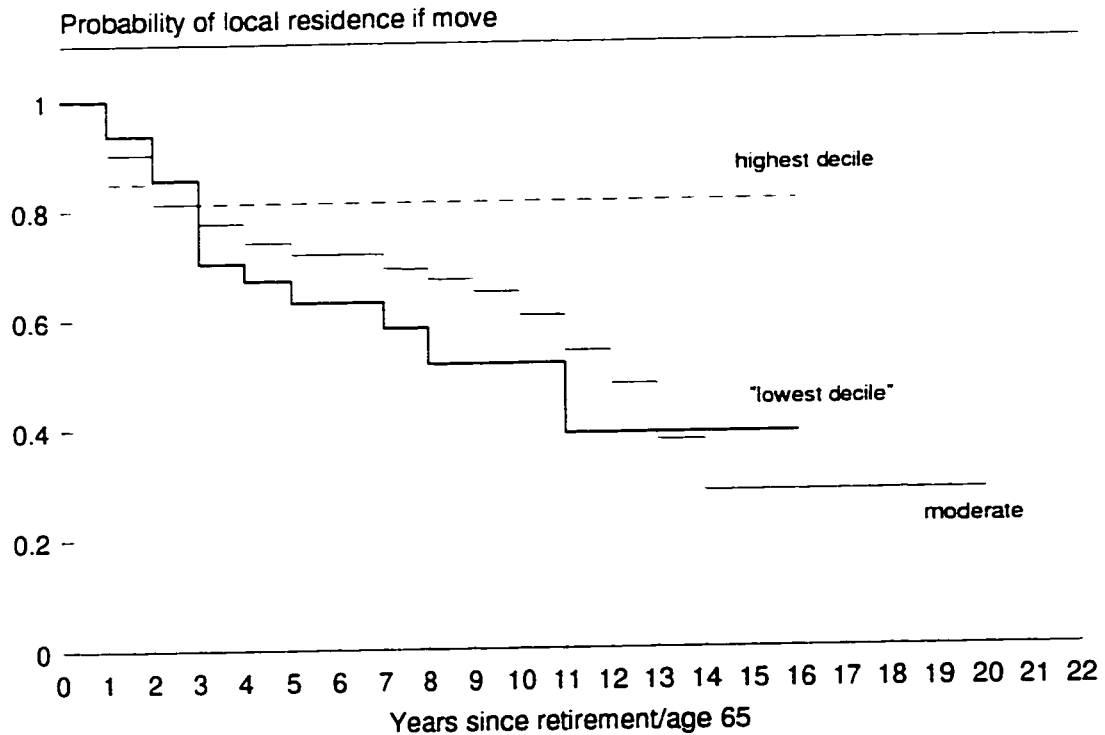


Figure C 2.2.21.1 Estimated survival curves for local residence after retirement/age 65 given a move by social relations index in early mid-life

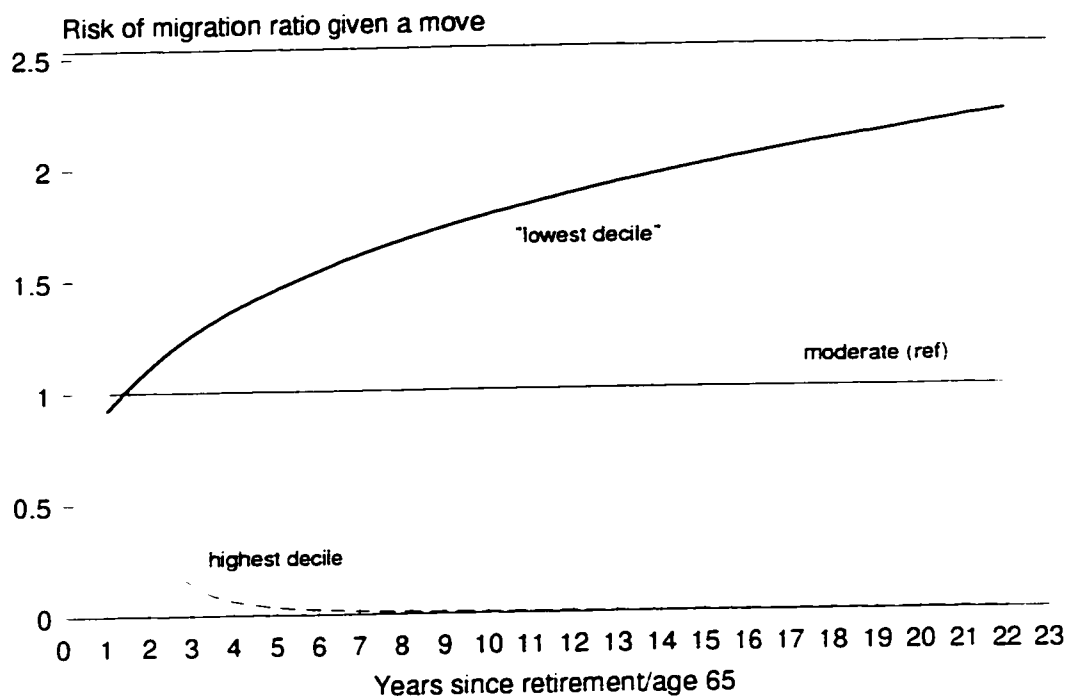


Figure C 2.2.21.2 Risk of migration ratios after retirement/age 65 given a move by social relations index in early mid-life and by years since retirement/age 65

Table C 2.3.1 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by income level throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Income				
low	.216	.337	1.24	0.64 - 2.40
moderate (ref)			1.00	
high	.171	.337	2.29	0.61 - 1.19
variable	-.008	.295	0.99	0.56 - 1.77
missing	-.246	.532	0.78	0.28 - 2.22

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.3.2 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by income level throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Income				
low	-1.508*	.707	0.22	0.06 - 0.89
moderate (ref)			1.00	
high	-.239	.508	0.79	0.29 - 2.13
variable	-.525	.424	0.59	0.26 - 1.36
missing	-.489	.817	0.61	0.12 - 3.04

† p<.10; * p<.05; ** p<.01; *** p<.001

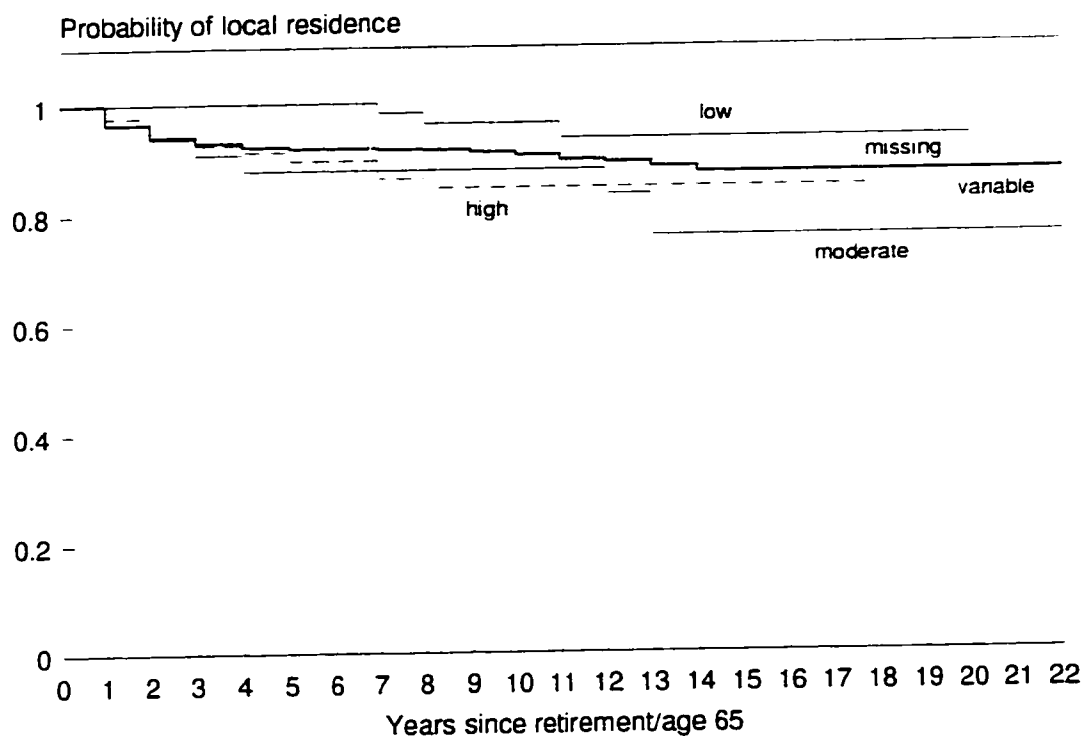


Figure C 2.3.2 Estimated survival curves for local residence after retirement/age 65 by income level throughout mid-life

Table C 2.3.3 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by income level throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Income				
low	-1.493*	.709	0.23	0.06 - 0.90
moderate (ref)			1.00	
high	.006	.509	1.01	0.37 - 2.73
variable	-.256	.424	0.78	0.34 - 1.78
missing	.307	.820	1.36	0.27 - 6.78

† p<.10: * p<.05: ** p<.01: *** p<.001

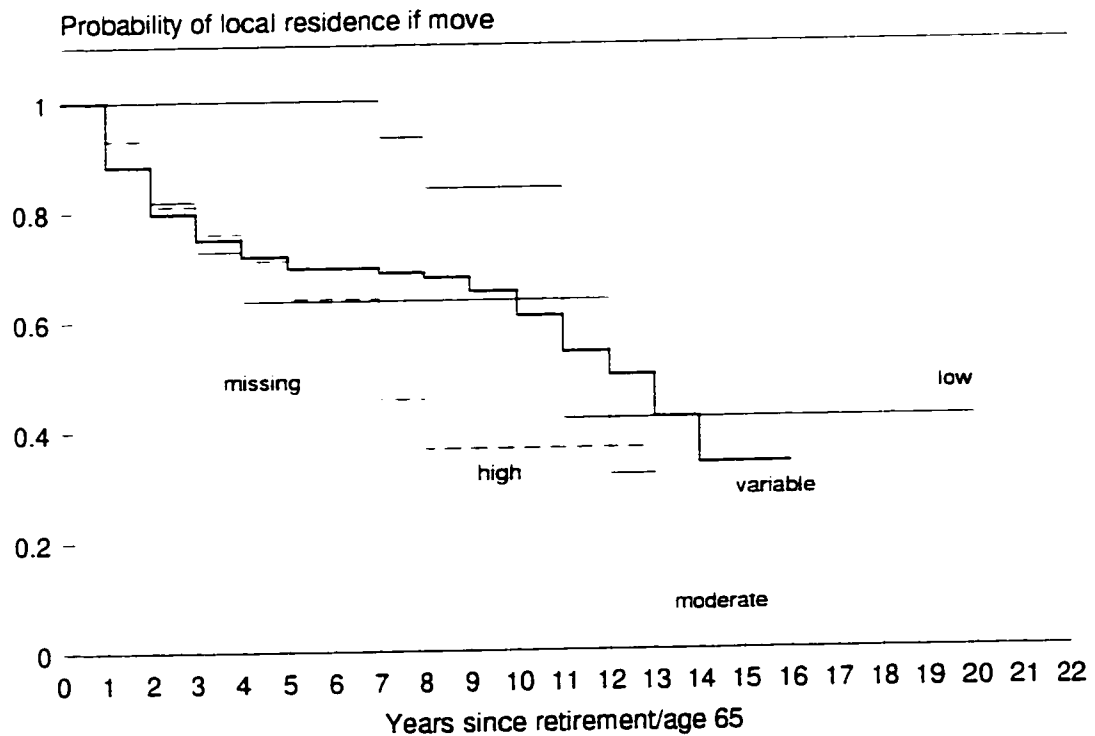


Figure C 2.3.3 Estimated survival curves for local residence after retirement/age 65 given a move by income level throughout mid-life

Table C 2.3.4 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by main occupation

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Detailed Occupation				
professionals upper management (ref)	-.376	.258	0.69 1.00	0.41 - 1.14
semi-professionals & technicians	-.219	.318	0.80	0.43 - 1.50
middle management	-.222	.267	0.80	0.48 - 1.35
supervisors	-.106	.270	0.90	0.53 - 1.53
foremen	-.814**	.318	0.44	0.24 - 0.83
skilled clerical, sales & service	-.102	.347	0.90	0.46 - 1.78
skilled crafts & trades	-.412*	.214	0.66	0.44 - 1.01
farmers	.028	.241	1.03	0.64 - 1.65
semi-skilled clerical, sales, & service	-.146	.258	0.86	0.52 - 1.43
semi-skilled crafts & trades	-.385+	.238	0.68	0.43 - 1.08
unskilled	-.074	.239	0.93	0.58 - 1.48
Occupation				
white collar (ref)			1.00	
blue collar	-.246*	.114	0.78	0.63 - 0.98
farm	.185	.186	1.20	0.84 - 1.73

† p<.10: * p<.05: ** p<.01: *** p<.001

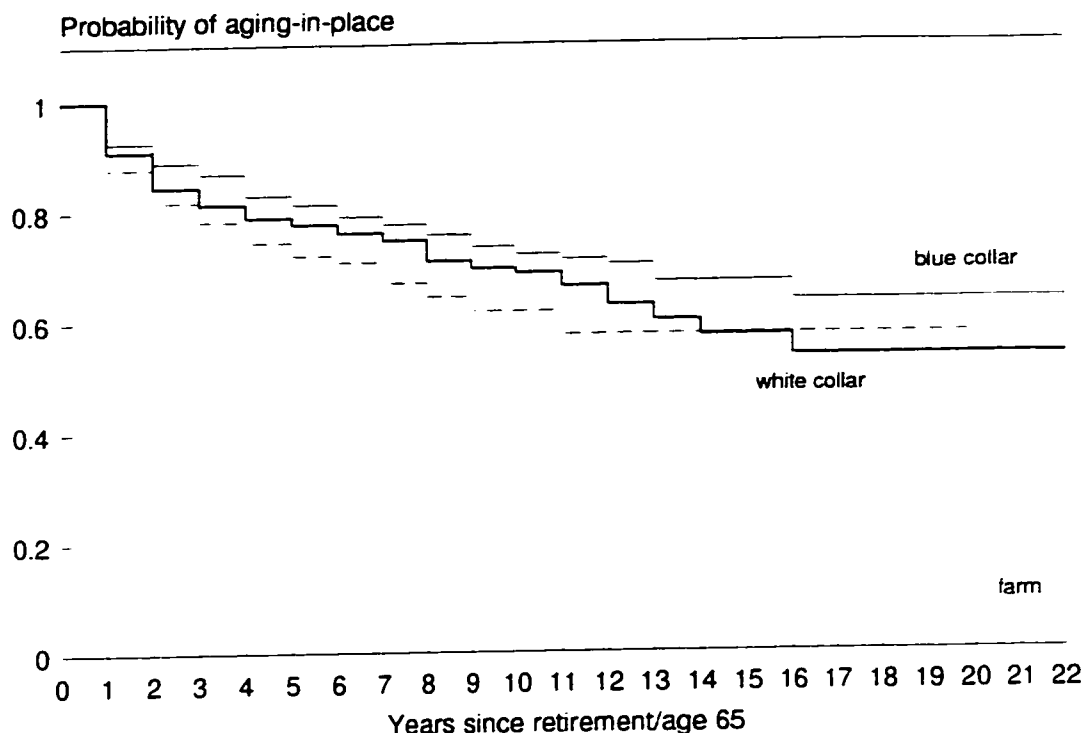


Figure C 2.3.4 Estimated survival curves for aging-in-place after retirement age 65 by main occupation

Table C 2.3.5 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by main occupation (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Occupation				
white collar (ref)			1.00	
blue collar	-.223	.204	0.80	0.54 - 1.19
farm	-1.104†	.594	0.33	0.10 - 1.06
Occupation				
white collar (ref)			1.00	
blue collar	-.518†	.308	0.60	0.33 - 1.09
(blue collar x time)	.307	.236	1.36	0.86 - 2.16
farm	-2.894†	1.528	0.06	0.00 - 1.11
(farm x time)	1.320†	.786	3.74	0.80 - 17.48

† p<.10; * p<.05; ** p<.01; *** p<.001

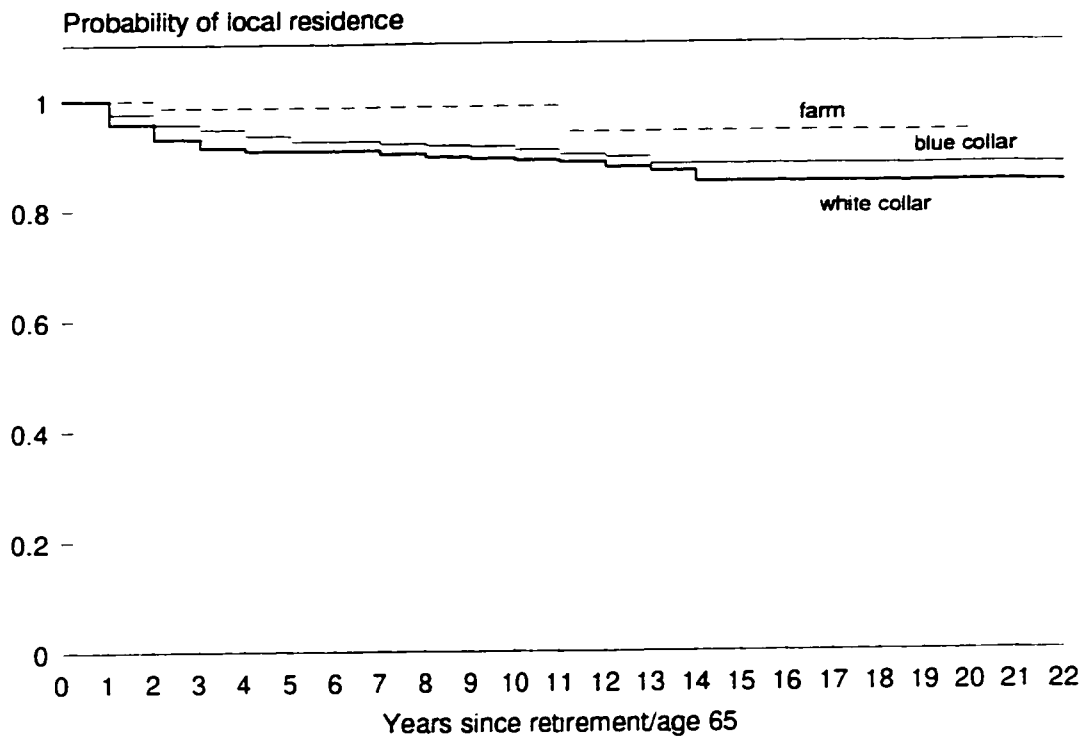


Figure C 2.3.5.1 Survival curved for local residence after retirement/age 65 by main occupation

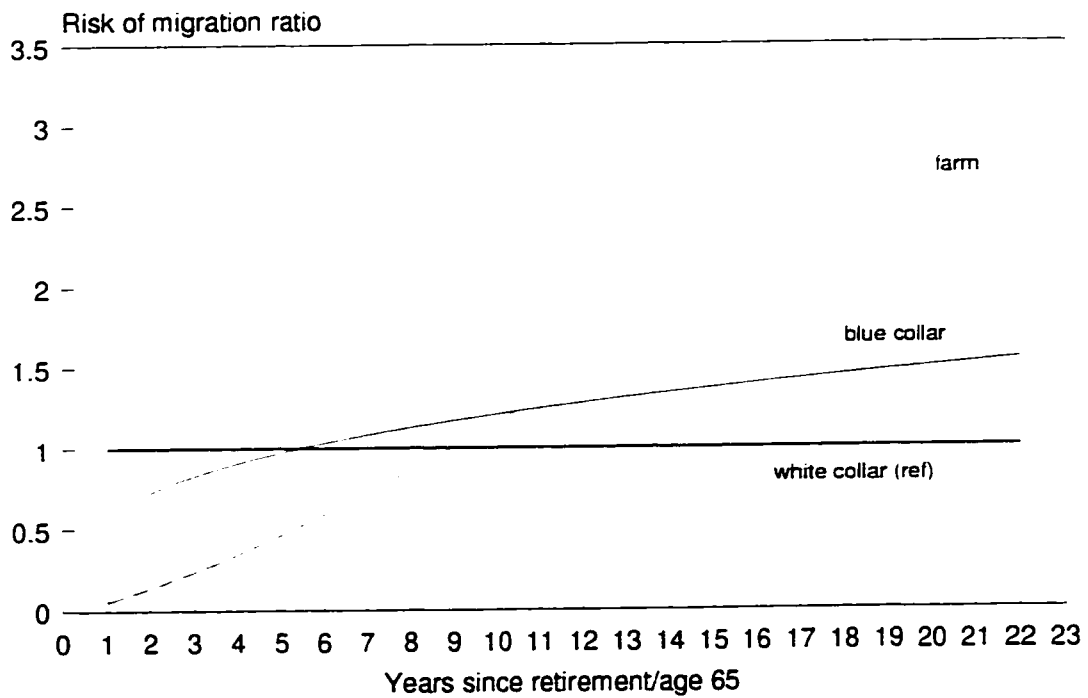


Figure C 2.3.5.2 Risk of migration ratios after retirement/age 65 by main occupation and by years since retirement/age 65

Table C 2.3.6 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by main occupation (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Occupation				
white collar (ref)			1.00	
blue collar	.068	.205	1.07	0.72 - 1.60
farm	-1.235*	.594	0.29	0.09 - 0.93
Occupation				
white collar (ref)			1.00	
blue collar	-.370	.310	0.69	0.38 - 1.27
(blue collar x time)	.451+	.237	1.57	0.99 - 2.50
farm	-3.204*	1.534	0.04	0.00 - 0.82
(farm x time)	1.495+	.792	4.46	0.95 - 21.05

† p<.10; * p<.05; ** p<.01; *** p<.001

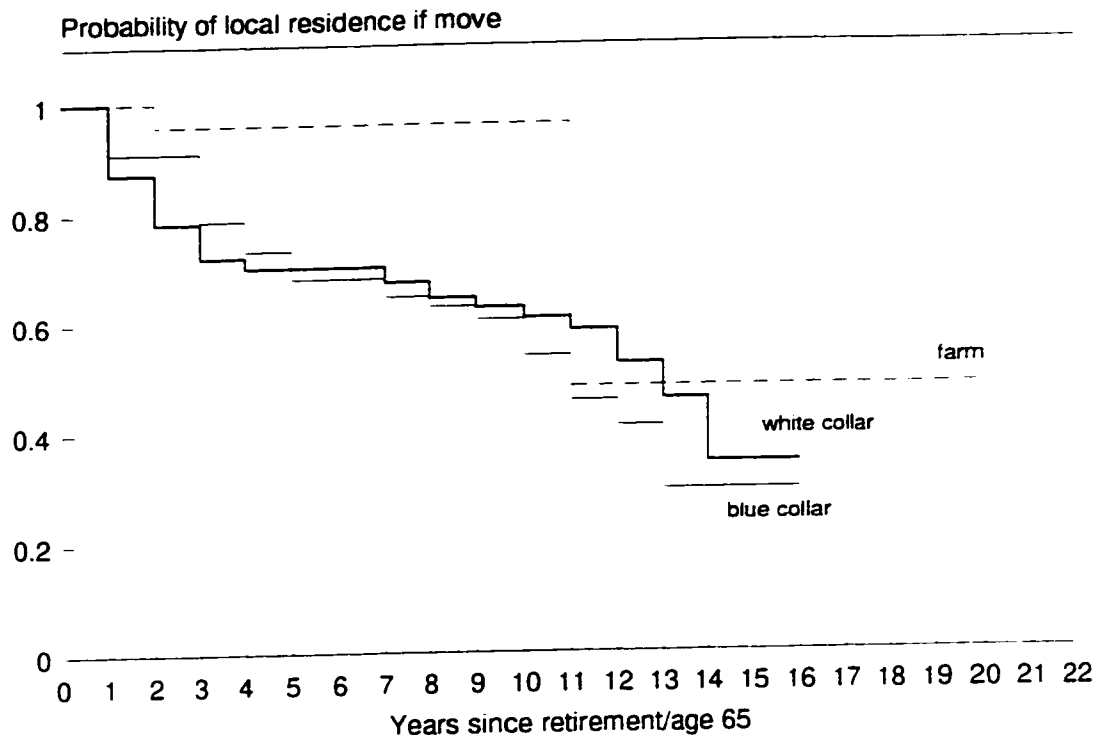


Figure C 2.3.6.1 Estimated survival curves for local residence after retirement age 65 given a move by main occupation

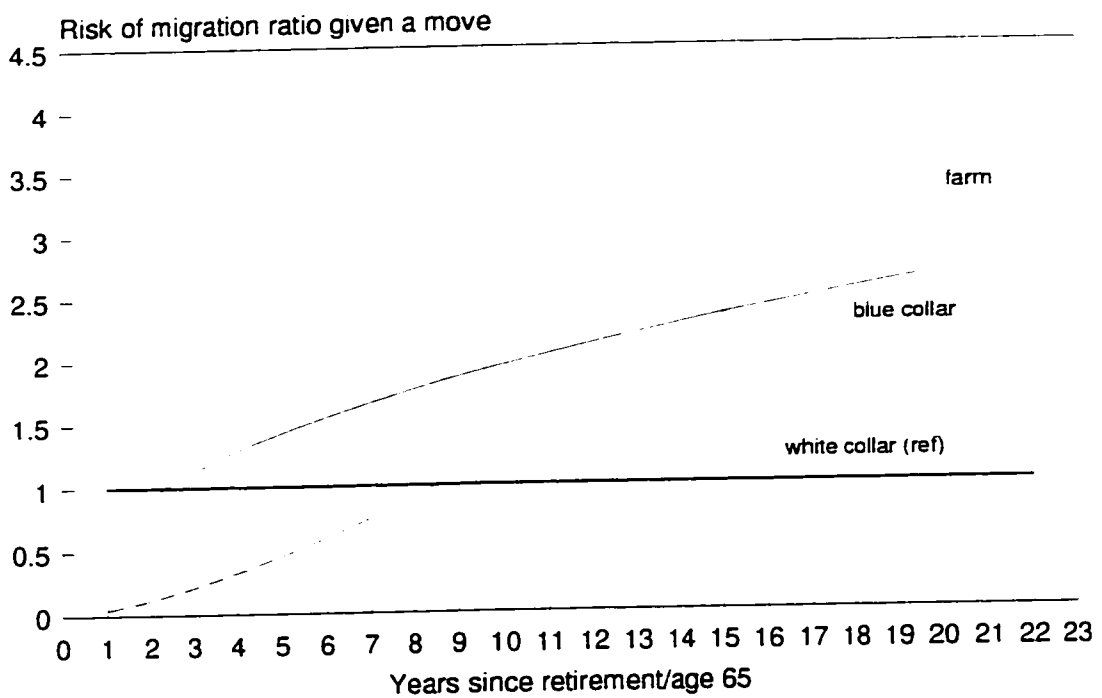


Figure C 2.3.6.2 Risk of migration ratios after retirement/age 65 given a move by main occupation and by years since retirement/age 65

Table C 2.3.7 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by unemployment throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Unemployment				
none (ref)			1.00	
moderate	.305**	.125	1.36	1.06 - 1.73
high	-.059	.182	0.94	0.66 - 1.35

† p<.10; * p<.05; ** p<.01; *** p<.001

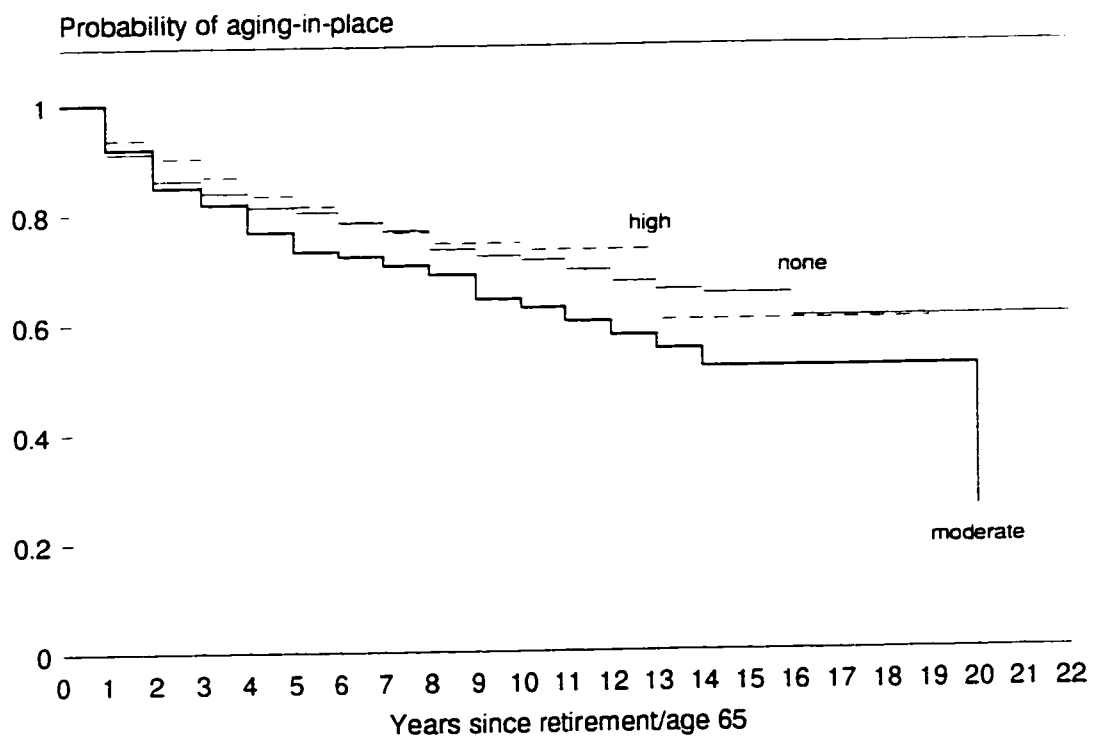


Figure C 2.3.7 Estimated survival curves for aging-in-place after retirement/age 65 by unemployment throughout mid-life

Table C 2.3.8 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by unemployment throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Unemployment			1.00	
none (ref)				
moderate	.527*	.218	1.69	1.10 - 2.60
high	-.403	.399	0.67	0.31 - 1.46

† p<.10: * p<.05: ** p<.01: *** p<.001

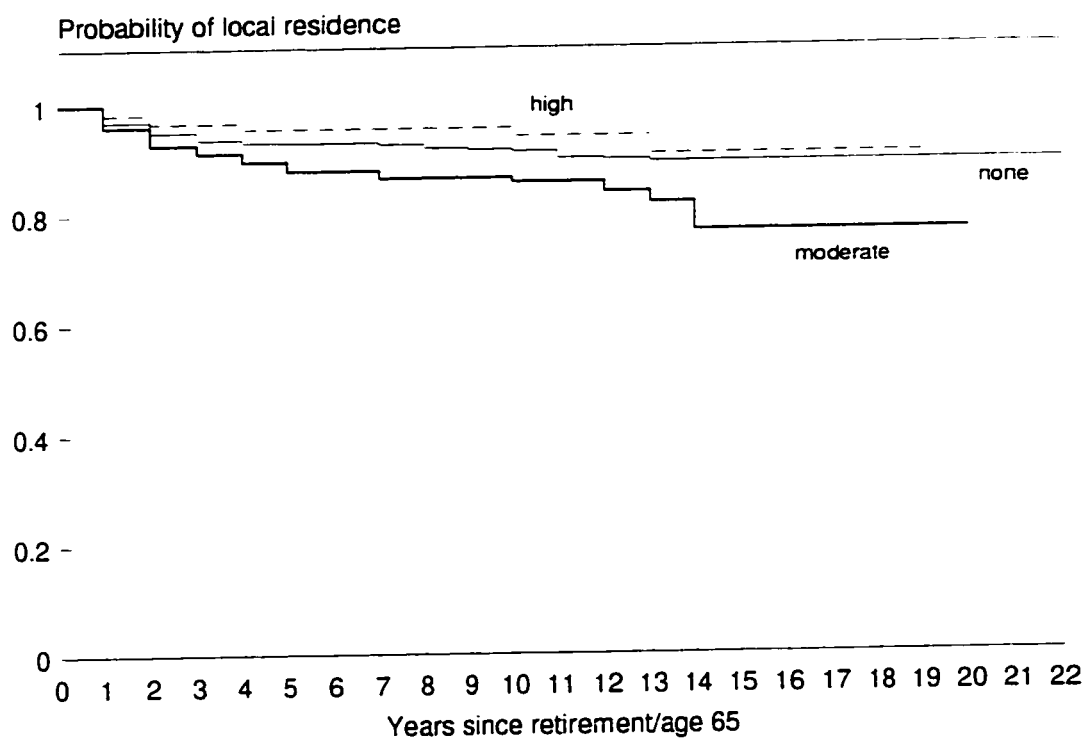


Figure C 2.3.8 Estimated survival curves for local residence after retirement/age 65 by unemployment throughout mid-life

Table C 2.3.9 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by unemployment throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Unemployment				
none (ref)			1.00	
moderate	.229	.218	1.26	0.82 - 1.93
high	-.410	.401	0.66	0.30 - 1.46

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.3.10 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by length of mid-life (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Length of mid-life	-.041*	.021	0.96	0.92 - 1.00
Length of mid-life (length x time)	-.127*** .081***	.032 .024	0.88 1.09	0.83 - 0.94 1.03 - 1.14

† p<.10; * p<.05; ** p<.01; *** p<.001

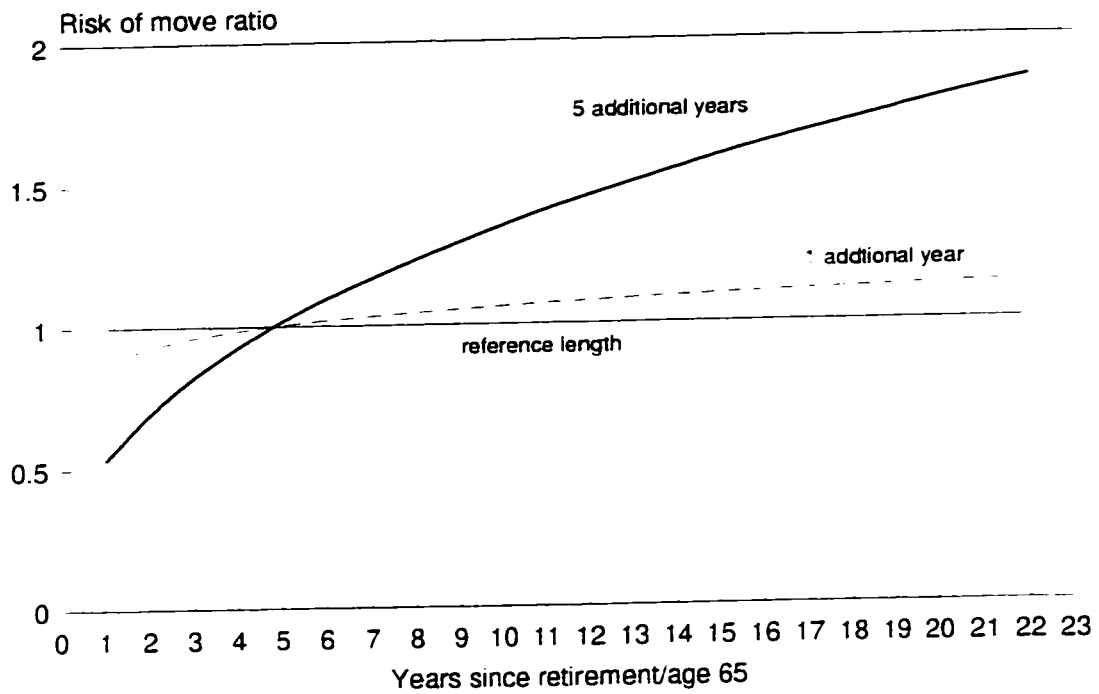


Figure C 2.3.10 Risk of move ratios after retirement/age 65 by length of mid-life and by years since retirement/age 65

Table C 2.3.11 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by length of mid-life (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Length of mid-life	-.106**	.036	0.90	0.84 - 0.97
Length of mid-life (length x time)	-.179*** .085*	.050 .044	0.84 1.09	0.76 - 0.92 1.00 - 1.19

† p<.10; * p<.05; ** p<.01; *** p<.001

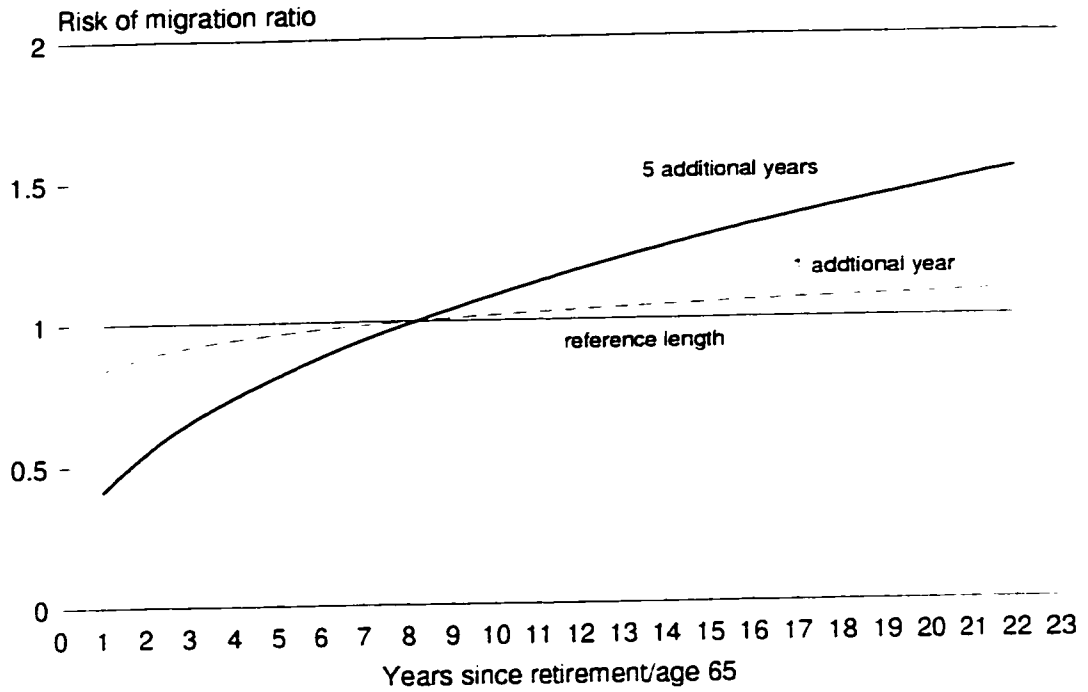


Figure C 2.3.11 Risk of migration ratios after retirement/age 65 by length of mid-life and by years since retirement/age 65

Table C 2.3.12 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by length of mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Length of mid-life	-.086*	.036	0.92	0.86 - 0.99

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.3.13 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by years of education

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of education	-0.031 [†]	.018	0.97	0.94 - 1.01

† p<.10; * p<.05; ** p<.01; *** p<.001

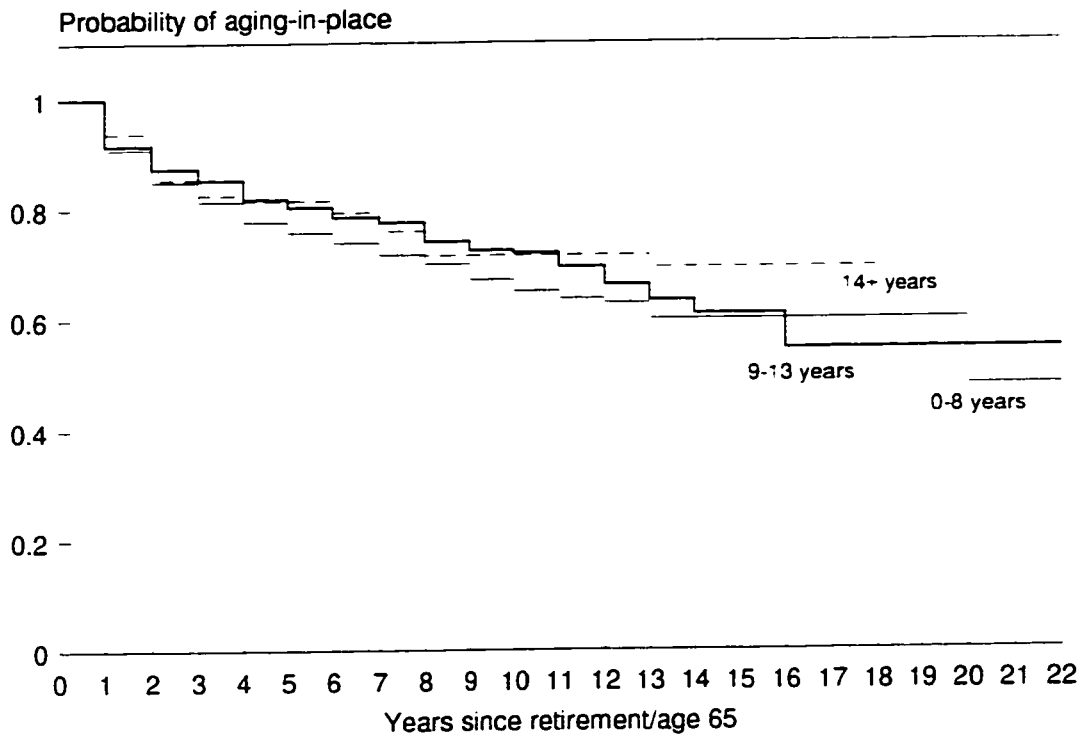


Figure C 2.3.13 Estimated survival curves for aging-in-place after retirement/age 65 by years of education

Table C 2.3.14 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by years of education (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of education	-0.018	.034	0.98	0.92 - 1.05
Years of education (years of education x time)	.044 -0.068 ⁺	.048 .039	1.05 0.94	0.95 - 1.15 0.87 - 1.01

+ p<.10; * p<.05; ** p<.01; *** p<.001

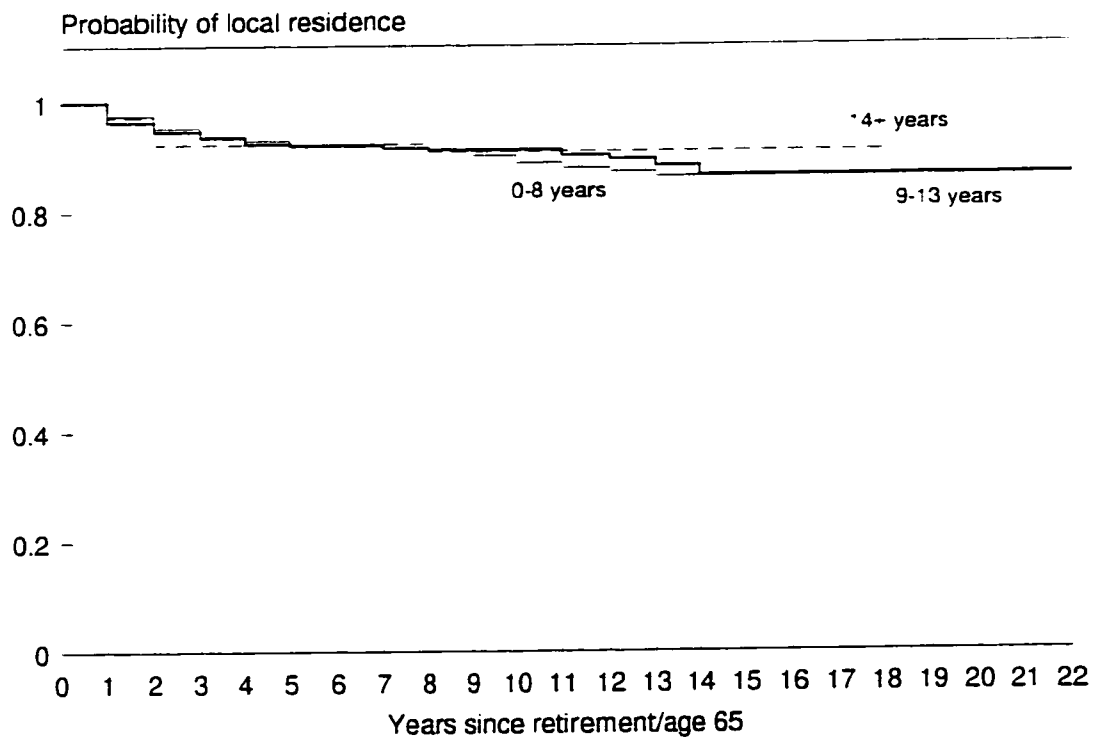


Figure C 2.1.14.1 Estimated survival curves for local residence after retirement/age 65 by years of education

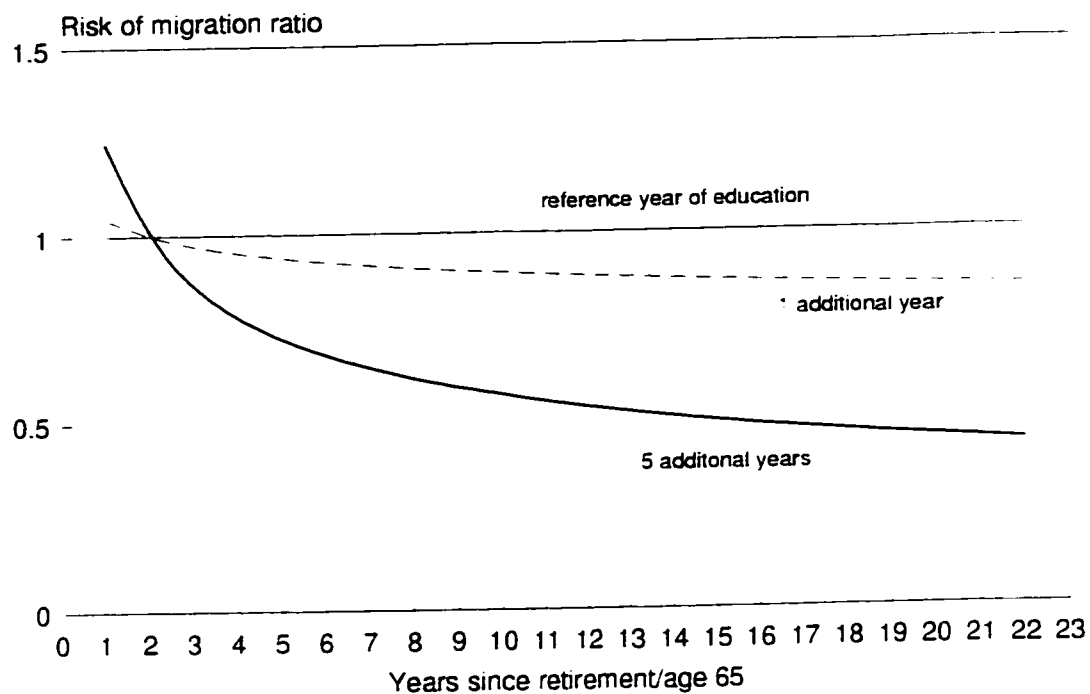


Figure C 2.1.14.2 Risk of migration ratios after retirement/age 65 by years of education

Table C 2.3.15 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by years of education

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years of education	.018	.035	1.02	0.95 - 1.09
Years of education (years of education x time)	.083+ -.069+	.050 .039	1.09 0.93	0.99 - 1.20 0.87 - 1.01

† p<.10; * p<.05; ** p<.01; *** p<.001

Probability of local residence if move

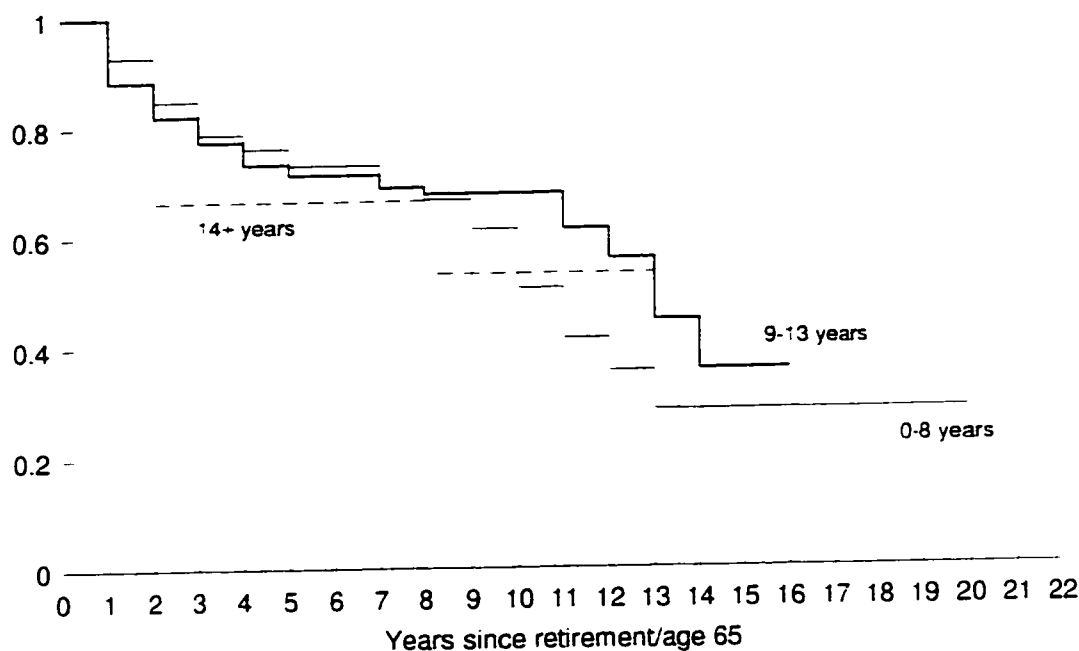


Figure C 2.3.15.1 Estimated survival curves for local residence after retirement/age 65 given a move by years of education

Risk of migration ratio given a move

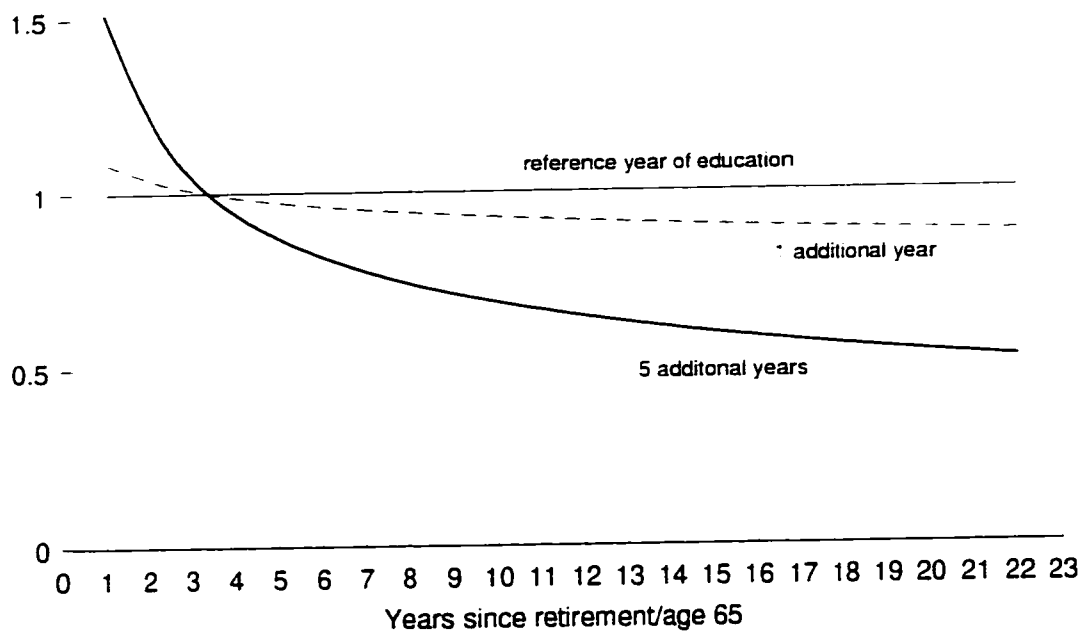


Figure C 2.3.15.2 Risk of migration ratios after retirement/age 65 given a move by years of education and by years since retirement/age 65

Table C 2.4.1 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by perceived health rating throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Health rating			1.00	
good (ref)			1.00	0.93 - 1.52
later poor	.170	.126	1.19	1.12 - 1.91
early poor	.380**	.137	1.46	1.12 - 1.91

+ p<.10: * p<.05: ** p<.01: *** p<.001

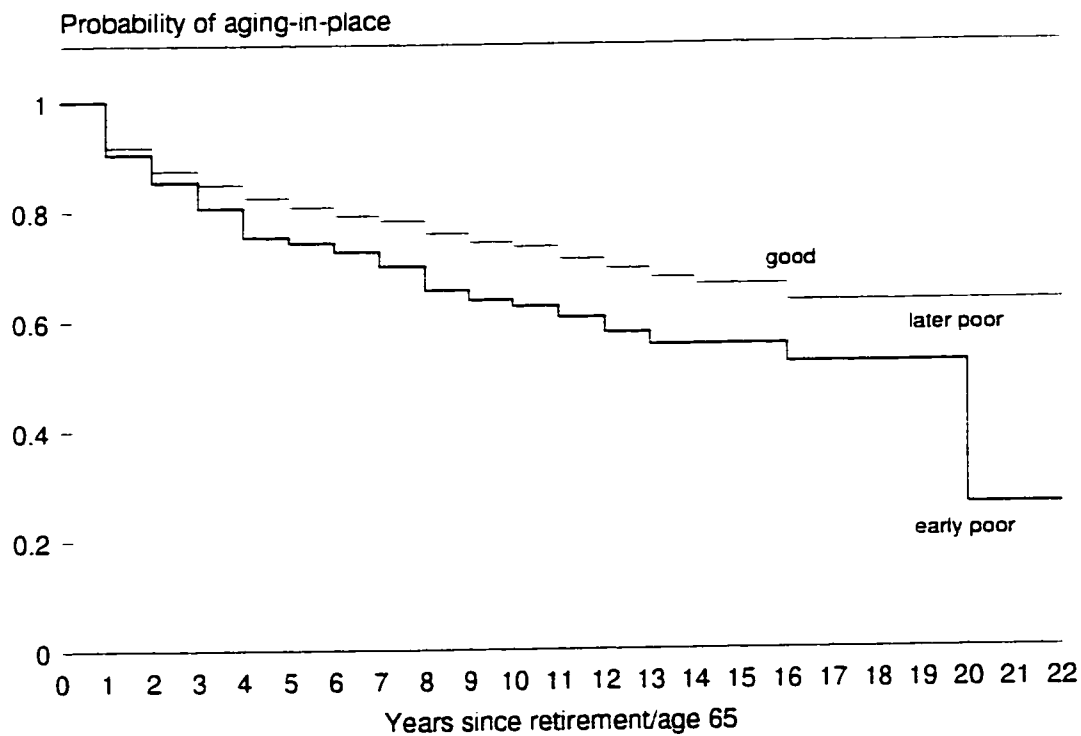


Figure C 2.4.1 Estimated survival curves for aging-in-place after retirement/age 65 by perceived health rating throughout mid-life

Table C 2.4.2 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by perceived health rating throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Health rating				
good (ref)			1.00	
later poor	-.209	.233	0.81	0.51 - 1.28
early poor	-.024	.260	0.98	0.59 - 1.63

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.4.3 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by perceived health rating throughout mid-life

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Health rating				
good (ref)			1.00	
later poor	-.359	.234	0.70	0.44 - 1.11
early poor	-.412	.260	0.66	0.40 - 1.10

† p<.10; * p<.05; ** p<.01; *** p<.001

Table C 2.4.4 Bi-variate proportional hazards model for time to a residential move after retirement/age 65 by proportion of mid-life years with declining health (without and and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years with declining health				
low (ref)			1.00	
moderate	-.204	.142	0.82	0.62 - 1.08
high	-.152	.144	0.86	0.65 - 1.14
Years with declining health				
low (ref)			1.00	
moderate	-.645**	.217	0.53	0.34 - 0.80
(moderate x time)	.408**	.157	1.50	1.11 - 2.04
high	-.786***	.228	0.46	0.29 - 0.71
(high x time)	.557***	.159	1.75	1.28 - 2.38

† p<.10: * p<.05: ** p<.01: *** p<.001

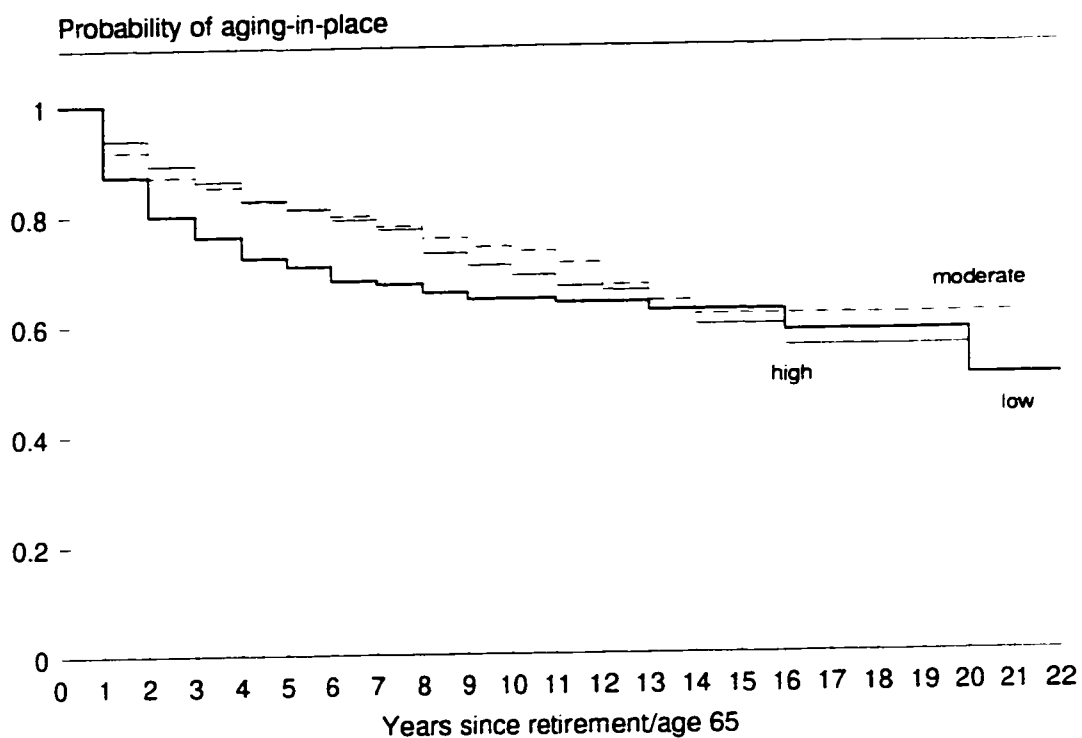


Figure C 2.4.4.1 Estimated survival curves for aging-in-place after retirement age 65 by proportion of mid-life years with declining health

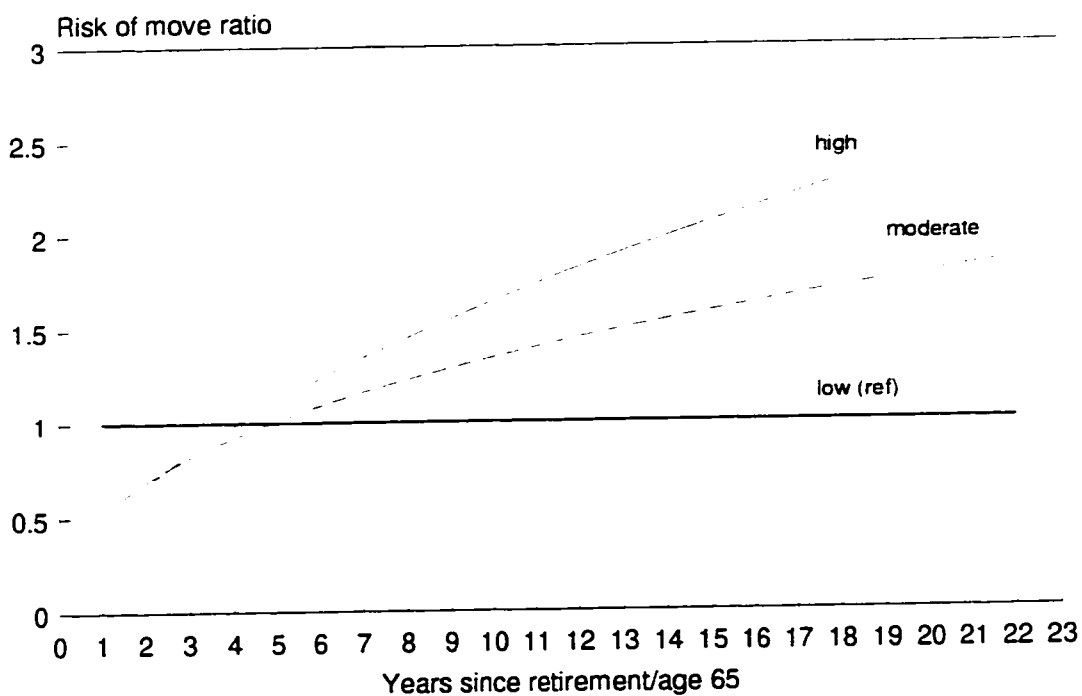


Figure C 2.4.4.2 Risk of move ratios after retirement/age 65 by proportion of mid-life years with declining health and by years since retirement/age 65

Table C 2.4.5 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 by proportion of mid-life years with declining health (without and by years since retirement/age 65)

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years with declining health				
low (ref)			1.00	
moderate	-0.806***	.233	0.45	0.28 - 0.71
high	-1.013***	.255	0.36	0.22 - 0.60
Years with declining health				
low (ref)			1.00	
moderate	-1.315***	.349	0.27	0.14 - 0.53
(moderate x time)	.561*	.280	1.75	1.01 - 3.03
high	-1.613***	.395	0.20	0.09 - 0.43
(high x time)	.641*	.304	1.90	1.05 - 3.45

† p<.10; * p<.05; ** p<.01; *** p<.001

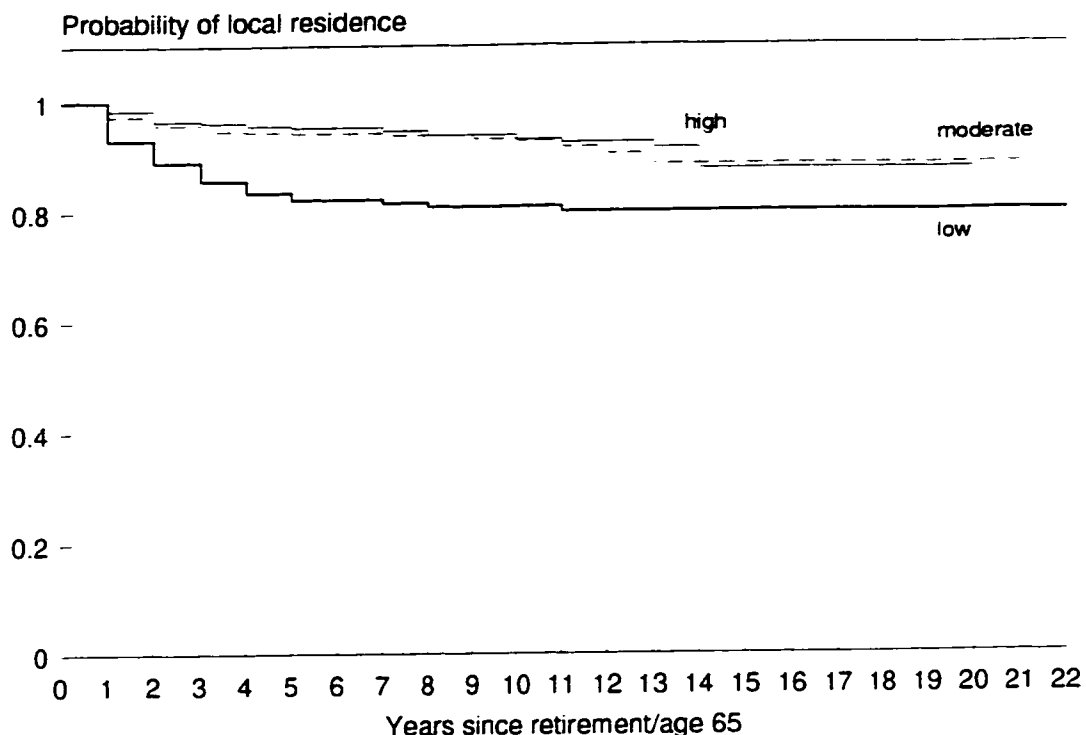


Figure C 2.4.5.1 Estimated survival curves for local residence after retirement age 65 by proportion of mid-life years with declining health

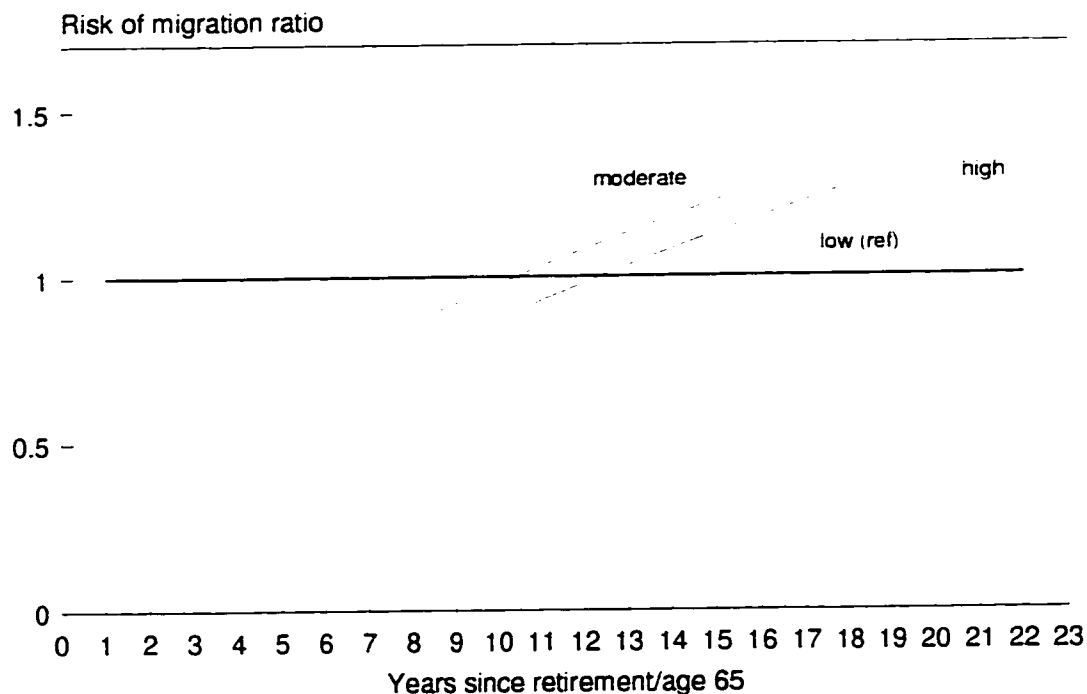


Figure C 2.4.5.2 Risk of migration ratios after retirement/age 65 by proportion of mid-life years with declining health and by years since retirement/age 65

Table C 2.4.6 Bi-variate proportional hazards model for time to a residential migration after retirement/age 65 given a move by proportion of mid-life years with declining health

Mid-life Variable	Parameter Estimate	Standard Error	Risk Ratio	95% Confidence Limits
Years with declining health				
low (ref)			1.00	
moderate	-.759***	.236	0.47	0.30 - 0.74
high	-1.038***	.256	0.35	0.21 - 0.59

† p<.10; * p<.05; ** p<.01; *** p<.001

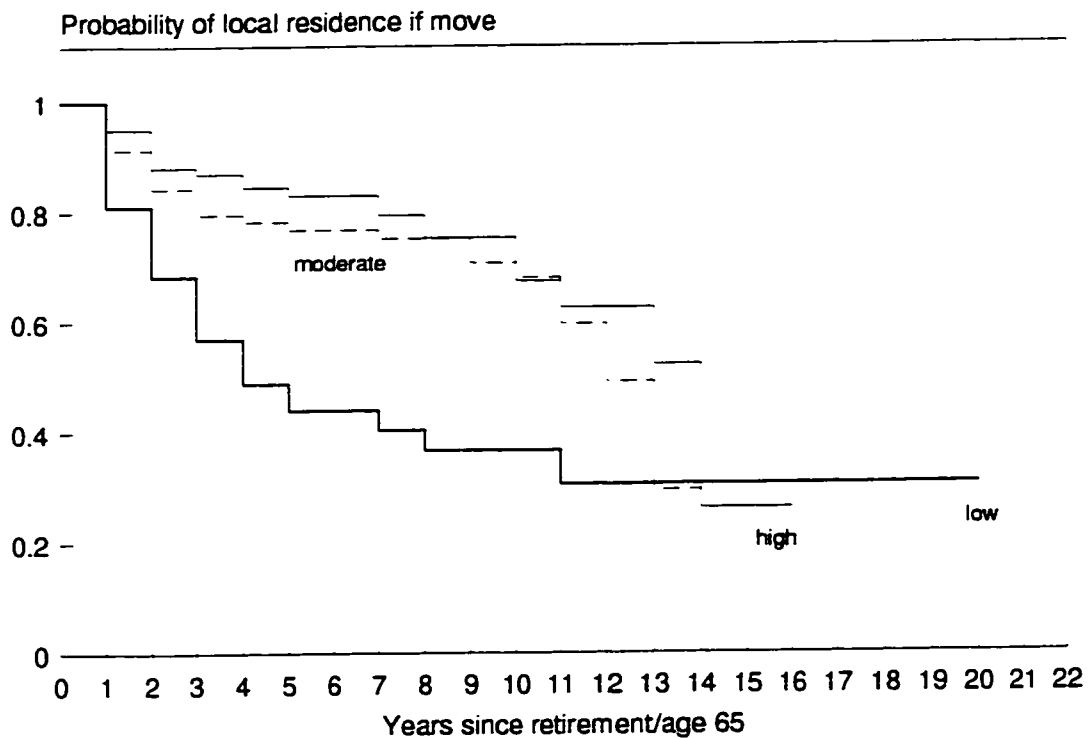
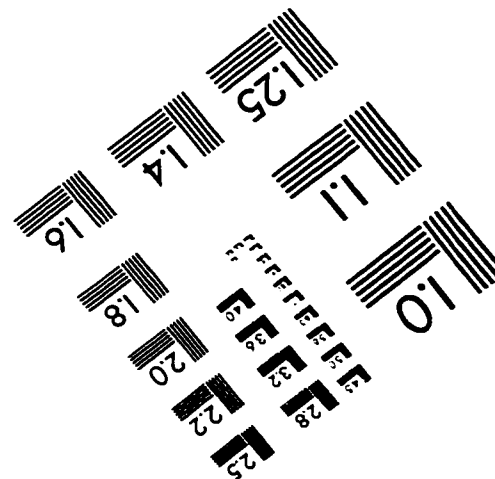
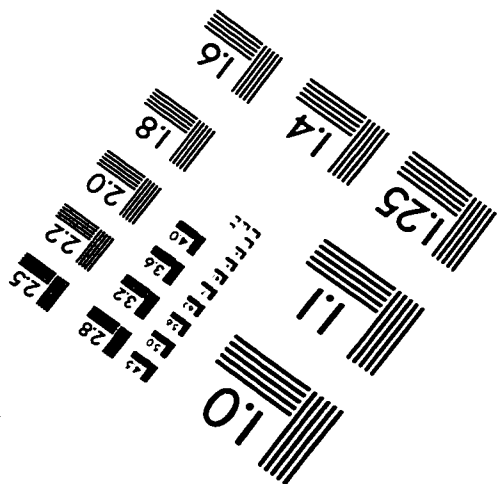
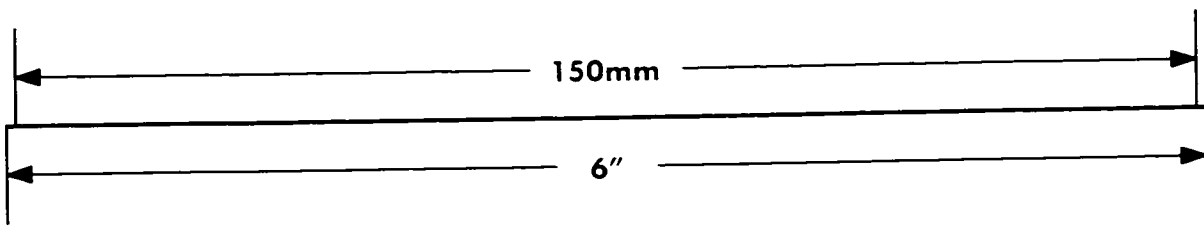
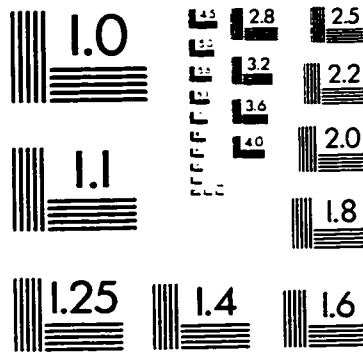
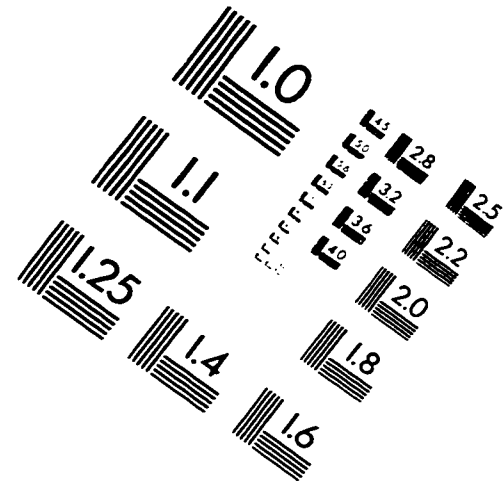
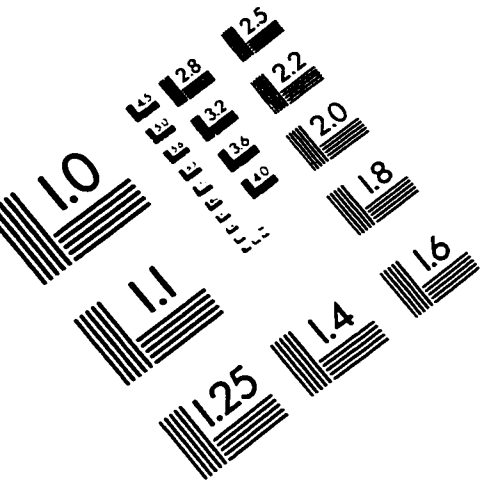


Figure C 2.4.6 Estimated survival curves for local residence after retirement/age 65 given a move by proportion of mid-life years with declining health and by years since retirement/age 65

IMAGE EVALUATION TEST TARGET (QA-3)



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