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Demand for accommodations by senior citizens in the city of Windsor, 1981.

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DEMAND FOR

ACCOMMODATIONS

BY SENIOR CITIZENS

IN THE

CITY OF WINDSOR,

1981

BY

Ⓒ EDWARD C. EGYEDY

A Thesis
Submitted To The Faculty Of Graduate Studies
Through The Department Of Geography
In Partial Fulfillment Of The Requirements
For The Degree Of MASTER OF ARTS At

The University Of Windsor

763015

ABSTRACT

The last few decades of Canadian growth has seen a gradual, but significant increase in the elderly population. The implications of this change have not yet been fully experienced by urban centres. Treatment and support for this aging group will require understanding from all sectors to sustain an acceptable housing standard.

In particular, the older population has special needs with respect to housing and health care and it is questionable whether the system is prepared. With increasing prices due to inflation and a lower income, the ability by the elderly to maintain themselves becomes difficult.

The greatest demand will be met when the needs escalate as the aging baby boom generation nears retirement. The City of Windsor offers an ideal situation for study, with a higher than average proportion of senior citizens.

A present demand study offers the opportunity to predict suitable accommodations in preparation for future housing needs. Demand is accomplished by an overview of socio-economic and health related factors. An examination of the housing market by demand will direct the city towards an adequate and satisfying supply of housing for the elderly.

Results showed that a majority of senior citizens wanted to live in single-family residences. With stable incomes and reasonable health many had the desire to remain independent through a house. Many seniors stated that highrise apartments were too small and often isolated from transportation and services. In total, senior citizens in the city want to remain in their own housing during their retirement years.

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Chapter I

INTRODUCTION

1.1 Canadian Elderly Population

The Canadian population in the past few decades has
been increasing substantially in the number and proportion
of elderly persons. The 65 and over population in 1976
was seven times larger than it was in 1901, while the total
population was only four times larger. This trend is con-
tinuing; between 1971 and 1976 Canada's population as a
whole rose 6.6 per cent while the 65 and over population
increased 14.8 per cent (Statistics Canada, 1979). A know-
ledge of the current age structure, how it developed, and
what its consequences are likely to be for future population
trends is essential, both for determining present housing
needs and for planning with regard to the future needs of
a population (Stockwell, 1972: 1-9).

The Economic Council of Canada in 1975 compiled
population projections to the year 2050, enabling the present
government to foresee the needs of the growing elderly
numbers. Their projections incorporated assumptions about
fertility, mortality rates and immigration. The results
show a growing population from 23.3 million people in 1975
to 31.2 million at the turn of the century and increasing

1

to 40.2 million by the year 2050. Over the full 75 year period, the population aged 65 and over increases more than threefold, from less than 2 million in 1975 to 6.8 million in 2050 (Denton, Robb, Spencer, 1980 13).

To summarize, it is evident that the population of Canada will continue to expand and that both family and non-family households will change as the post-war baby boom generation enters their 50's and retirement years of the life cycle.

The trends discovered at the national level are being repeated at the local levels in many parts of Canada. The City of Windsor reported an increase of 11 per cent in the number of senior citizens (defined for the purposes of this study as the population aged 55 and over) from 1971 to 1976, compared to only 8.9 per cent increase in Ontario's senior citizen population. The 65 and over group showed the second highest increase in numbers among all cohorts of the city, rising 5.4 per cent for the same time period.

With the growing number of senior citizens, communities will be confronted with the problem of providing the necessary accommodations for this group. Many of the socio-economic characteristics associated with the life-style of senior citizens such as lower incomes, small family units, physical disabilities, less mobility, and lessened ability to maintain property, contribute to shelter problems. As the elderly population continues to grow, its impact will

be keenly felt by all sectors of society. This is a population whose dependency on ameliorative welfare policies covers a wide variety of aspects of social and economic life (employment opportunity, health, housing, recreation, transportation, community service, education, etc.) and consume a large segment of the national, and the local budgets of cities as well (Stone and Marceau, 1977 51).

This paper focuses on the determinants of housing demand by senior citizens in the City of Windsor. The size and character of the senior citizen group creates changing demands for space in a metropolitan area. Eventually, these demands affect both housing policies and the supplies of shelter, and, in turn, the composition and character of urban neighborhoods. The elderly may stay in their neighborhoods as long as they can, but may lack the resources to maintain and to conserve the housing stock. Or, they may move in order to adjust their changing life styles to a variety of shelter types in other neighborhoods or the same neighbourhood. The redistribution of the local elderly population thus reflects changes in housing demand patterns. An understanding of the determinants of residential demand is not only of intellectual interest to social scientists, but also of immediate practical importance to planners and local officials.

The City of Windsor was chosen as a study area because it presently has a large number of elderly people.

Compared to other Canadian metropolitan centres, this com-
munity supports a higher than average proportion of those
65 and older. The data sample adequately represents this
condition.

The subject of determining Canadian housing needs
for the elderly population has received limited attention.
Existing investigation has been conducted mostly by govern-
ment agencies, usually providing only an inventory view of
the elderly housing market. These studies lack the explan-
ations for their numerical findings and often offer no
solutions in presenting their inventories. Past data sources
have usually reflected the actual patterns of consumption
for housing units and empirically projected these consump-
tion patterns into the future. They are of little use for
explaining underlying needs related to separate dwelling
units or for apartment complexes.

Specific services such as medical facilities,
shopping centres and recreational areas are often required
by senior citizens. It is understood that perceived needs
for housing services depend on several socio-cultural and
economic factors (on both the demand and supply sides of
housing) so that the collection of data on housing needs
is not a routine matter (Stone, 1980: 98).

Current and historical statistics on the availability,
use, and demand for housing facilities by older people is
not extensive. This research will attempt to focus on some

of the gaps which have been found to exist in the Canadian
literature (Ontario Welfare Council, 1975 '4).

Data for this research will be complemented by
directly participating with the senior citizens of the com-
munity, incorporating their opinions, wants, and desires
for specific housing choices. This research will include
the housing view of the people in determining its objectives.
This research has determined the perceptions of the elderly
with respect to their past and present shelter needs.

Research has shown that housing is of key importance
as a means of maintaining independence for as long as pos-
sible (Mumford, 1979. Rossi, 1955 Carp, 1966). Satisfactory
housing policies rank high on the list of priorities among
the retired and those concerned with their needs (Morris
and Winter, 1978). While marked progress is being made in
this policy area, lack of adequate data means that while
it is possible to describe what progress has been made, we
do not know what progress is needed and therefore, whether
needs are being adequately met (Brown, 1975: XXX).

In Ontario, the Ministry of Housing estimates that
they have provided housing for less than ten per cent of
the elderly households. There may be a need for a greater
choice of housing to all seniors through development of
government programs.

Furthermore, the Ontario Welfare Council saw a lack
of co-ordination between the municipal and provincial

governments in response to senior citizens'housing needs.
Many times the objectives were poorly defined and they had
no sense of direction where the monies and effort should be
allocated (Ontario Welfare Council, 1975: 4). This study
hopes to contribute to a solution by providing a one user
oriented research study into the demand for accommodations
by seniors.

A possible shortage or lack of adequate accommoda-
tions may be attributed to the number of older people re-
tiring from the active work force earlier to enjoy the
leisure of retired life (Goldscheider, 1966; Binstock, 1975;
Newman, 1975; Agan, 1976; Morris and Winter, 1978; Stone,
1980). This is characteristic of an auto-related industry
town such as Windsor. The decision to take early retirement
is most likely to be determined by health (Cliffin and Martin,
1977: 16). Working conditions were found to be partly res-
ponsible with jobs that involve repetitive work, stress;
strength or other physical demands causing higher early
retirement rates (Quinn, 1978: 318). A factory city such
as Windsor contains many workers in this situation. There-
fore, the evaluation of the elderly for this research will
commence at age 55. This is the allowed age for retirement
in a union-operated factory.

The retirement age categories for this study have
been grouped into seven cohorts up to the age of, and over,
85; viz. 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85 plus.

In this way a more detailed and accurate study of each cohort can be investigated.

Household lifestyles adjust within three to four years after retirement, usually forcing the elderly to examine their housing type. In Ontario, one half of all elderly households received some portion of income supplement, but they were still below recognized poverty levels. As a result, many seriously reconsider their location and type of residence for their remaining years.

Shelter requirements of the elderly are different from younger families' needs. Much of the public interest in the problem of housing the aging has been centered around the infirm and chronically ill. However, in terms of total numbers, a larger need for thought and action is in housing for generally healthy but aging persons (Ashley, 1954: 17). Canadian opinion is similar to the English attitude where successive government ministers and official publications have made it clear over many years that they equated old people's dwellings with one-bedroom apartments (Mellor, 1973: 15).

This research will show that attitudes of the past must change along with the evolving population structure. People's ideas and needs must be examined to supply proper accommodations. The growth and longevity of older citizens in Canadian society and in particular their concentration

in the central cities has placed considerable strain on
a part of the nation's housing resources.

1.2 Objectives and Anticipated Results

The objective of this project will be to measure the
need for shelter by retired people in relation to changes
in their income, size of family, health and life style.
This study will thus investigate the economic, medical,
physical and social relationships of the elderly to their
housing choice at different age levels. Their perception
of the adequacy of housing for various age cohorts will
also be determined.

The following are the objectives of this research·
1) To determine the demand for specific types of accommod-
ation by various age groups of senior citizens through an
examination of their satisfaction with their present
residences.

2) To determine whether early retirement from the work
force will affect the type of residence in which retirees
live.

3) To determine locational preferences of senior citizens
when choosing retirement housing.

4) To determine the desired services and facilities which
influence seniors in deciding on the choice of a specific
shelter type.

5) To determine the effects of reduced family income at retirement for accommodation choices.

6) To determine which socio-economic factors affect housing need and the decisions to stay or relocate.

7) To determine control points in the life cycle affecting housing needs and decisions to stay or relocate.

8) To determine the dimensions of satisfaction with retirement accommodations, that is, to determine the relative importance of different aspects of accommodations to retirees' housing satisfaction.

It is anticipated that this project will result in a better understanding of actual housing needs of the elderly in Windsor, by using an age-progression model to predict what types and what supplies of housing are needed now and in the future. This demand study will describe desired types of housing being supplied in regard to the present aging of the Canadian population and will determine whether adequate plans are being made to satisfy future demands for shelter.

1.3 Dimensions of Senior Citizen Housing Problems

A large majority of the senior citizens in many communities have a substantial investment in their homes. Housing continues to be the largest single expense for these people. According to Statistics Canada, housing costs are thirty per cent of a retired couple's budget (Statistics,

Canada, 1974, Cat. 62-544). As a result, these people are
house-poor, because they are spending too much·money for
accommodations.

Much of the supporting data are seriously deficient
in the coverage of relevant variables and there appears to
be a substantial demand for housing in the older population
which is not being supplied (Stone, and Fletcher, 1980. 49).
One of the areas of data information needing improvement can
be found when examining census material of senior citizens.
with household heads below the age of 65. This gap of in-
formation fails to record what proportions of senior citizens
are living with their relatives or friends, perhaps against
their own accord (Stone and Fletcher, 1980. 49). The data
lack information on what proportion of the older residents
desire and are physically able to occupy private households,
but fail to do so due to the lack of housing at affordable
prices (Stone and Fletcher, 1980: 49).

Reports on housing problems suggest that many muni-
cipalities have long waiting lists of senior citizens looking
for good housing at subsidized prices. Information from a
seminar on housing needs of the elderly in 1978 revealed that
the chances of getting a housing unit in a government spon-
sored development where rent is geared to income is about
one in thirty-three. Truly, this indicates an unmet need
for housing by our senior citizens.

This section will concentrate on the critical points where difficulties arise for senior citizens during retirement years trying to select available accommodations. Areas of discussion will involve income needs, health related needs and their relationships along with housing quality needs.

The nature of housing choice by the elderly is often influenced by their reduced physical abilities and by their financial inability to maintain their homes. Maintenance services have often to be bought or obtained from friends or neighbors. Their physical inability to move around and make an inquiry for units at a more advantageous rent also sharply constricts their choice of alternative rental housing (Leeds, 1973· 13).

The general inadequacy of sympathetic government programs has prevented the elderly from becoming new home owners. But, the dominant mode of house occupancy has been home ownership. This has declined from 77 per cent in 1961 to 64 per cent in 1976 (Statistics Canada, 1970: table 84, 1978: table 13).

The newer shelter patterns that are beginning to emerge may include changing from living in one's present home to rental of an apartment house, or ownership of a condominium apartment or town house, or membership in a cooperative, hotel living, moving to a retirement community or mobile homes. All these ways of living tend to break up the former living pattern of the elderly.

When senior citizens examine their incomes, usually
the cost of housing is their first consideration. Elderly
incomes tend to be fixed while prices keep rising so they
may be caught in the price squeeze. Rises in prices started
about 1965 to 1970 which increased the buying and maintaining
costs of a house by 80 per cent while in the same time period,
elderly incomes rose only 40 per cent. A solution to this
cost problem is to supply the type of affordable housing
the elderly need, with further housing supplement payments,
if necessary.

The next area of concern is health since it has a
very important bearing on living arrangements. Housing
need, in part, derives from, and relates to, health needs.
This suggest that age changes housing needs into another
expression of health needs (Leeds, 1973. 18). As a person
moves through the life cycle from self-sufficiency to
dependency, he moves into a different state of housing need.

Income may be a constraint. Social need must be
translated into economic expression and through this the
social need is met or greater stress is imposed. Most
seniors require government financial aid in one form or
another to allow themselves the decent housing they are
entitled to as citizens.

Over the past decade there has been an increase in
apartment residency by seniors. The factors related to this
change are the need for personal company, while maintenance

problems tend to be solved automatically in apartment living.
But many senior citizens find that the space allowed them
with their small incomes is not sufficient and as time
passes, new problems arise.

One of the major problems discovered when examining
Canadian government policies is the lack of a reasonable
minimum standard for the quality of housing in Canada. A
statement by the Canadian Council on Social Development
Board of Governors claims that,"hundreds of thousands of
Canadian families and individuals are still either housed
inadequately or pay a disproportionate share of their income
for housing." (Canadian Council on Social Development,
1975 1).

The Council endorsed a housing cost standard of 25
per cent of income spent on accommodations. Some senior
citizens spend more than 25 per cent of their income on
housing and still do not attain adequate shelters.

Other standards of the past recognized the "number
of rooms per persons" or considered "one housing unit to one
household" as being adequate housing. Maurice Yeates des-
cribed his adequate standard as the "demand for housing
being determined by the number of existing households and
the rate of formation of new households." (Yeates, 1975: 116).
Harvey Lithwick stated in his article that "if we extra-
polate the number of households coming into the market place
we can estimate the amount of housing units needed to accom-
modate them." (Lithwick, 1972 91).

Much of the existing stock of housing in Canada is the result of private development. This development has emphasized the supply of housing to achieve a satisfactory return on investment rather than to accommodate the housing needs of all segments of society. The housing standards established by public agencies have been applied to households without consideration to the age of the household head and to the family life cycle stage. Attention should also be directed to the quality of housing to be provided and not merely to the number of units (Stone, 1980: 104).

Questions concerning the number of housing units required in Canada have been around since World War II, but questions as to the quality of this housing have just entered the political arena. In particular, senior citizens were the last group to be provided with quality housing. Perhaps one problem has been the lack of definition of "quality housing" for the elderly. The literature search failed to suggest any general consensus concerning the quality of housing that Canadians should enjoy.

As a society we must review and examine the total elderly situation before and after any housing changes are made by the seniors. Many times what is suggested sounds good, but, later, appears to impose new and unforeseen burdens. The isolation and difficult access within high-rise developments for the elderly may be an example.

Chapter II

CANADIAN DEMOGRAPHIC TRENDS

2.1 A Profile of the Elderly Population

The purpose of this chapter is to describe in detail the Canadian demographic trends with respect to the elderly population. Before research.can be undertaken it is necessary to examine the present population structure to establish a basis for comparison in the direction of research. To accomplish this goal, this chaper will describe by charts and illustrations the areas of most concern to the research. These sections will relate to the overall Canadian population and future projections, the Ontario population situation and Windsor's present status. To lead on from the basic population numbers, examination will pertain to the life expectancy for the general elderly populous and a comparison of numerical changes over a selected time frame.

Once the past, present.and future population trends have been established more detailed examination of the elderly population will commence. Housing demands of senior citizens are affected by many different factors. Some of the main factors which will be examined here are marital status, death rates and financial situations of the elderly. It is advantageous to overview the present senior citizen

housing structure in Canada and Windsor. By completing this general 'analysis a firm basis has been established for the undertaking of the present research. All statistical indications show that Canada's general population is steadily growing older. This means that the elderly persons 65 and over now form a larger proportion of the total population than ever before in Canadian history (see figure 2A).

In 1901, 5 per cent of the total population was 65 or older. By 1976 this proportion had risen to 8.7 per cent and all indications show that by the year 2001, this elderly group will number between 11 and 13 per cent of the Canadian population (see figure 2B) (Statistics Canada, 1978).

There have been three main reasons which were responsible for the relatively high growth rate of the elderly population. The first may be attributed to the increase in births during the early 1900's. This period was marked by high birth rates of 36 per 1000 population. As a result of the high rate of births during 1900 these persons contributed to an increase in the proportion of the 65 and over population in later years.

Secondly, between 1911 and 1931, Canada accepted 2.6 million immigrants. Their general age on arrival ranged from 20 to 35 years. Presently, most of these people are 65 and over in the population.

Figure 2A

PERCENTAGE DISTRIBUTION
OF THE POPULATION
BY AGE GROUP AND SEX,
CANADA, 1911-1976.
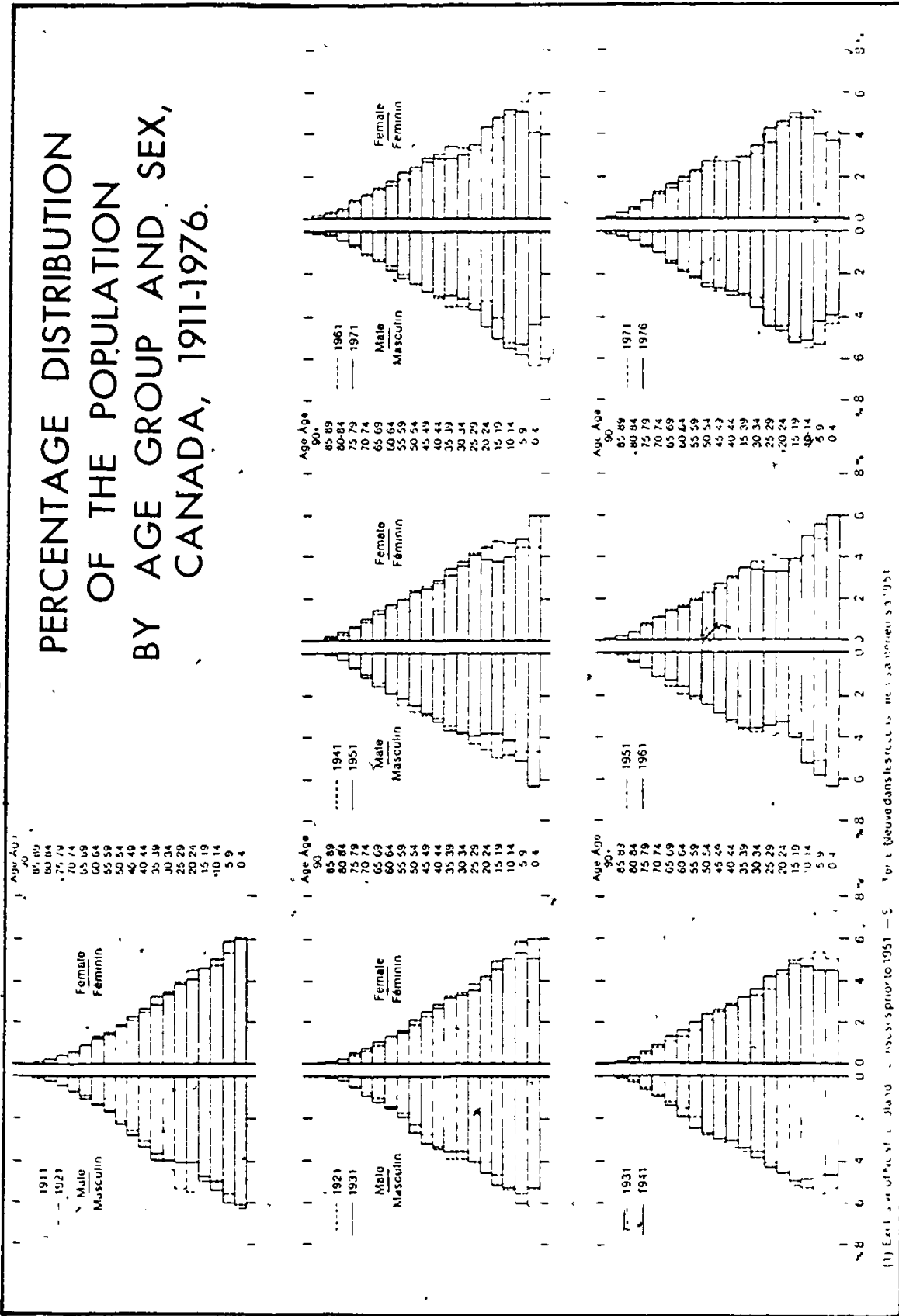
Figure 2B

Past and Future Growth of Canada's Total Population and Persons 65+, 1851-2001
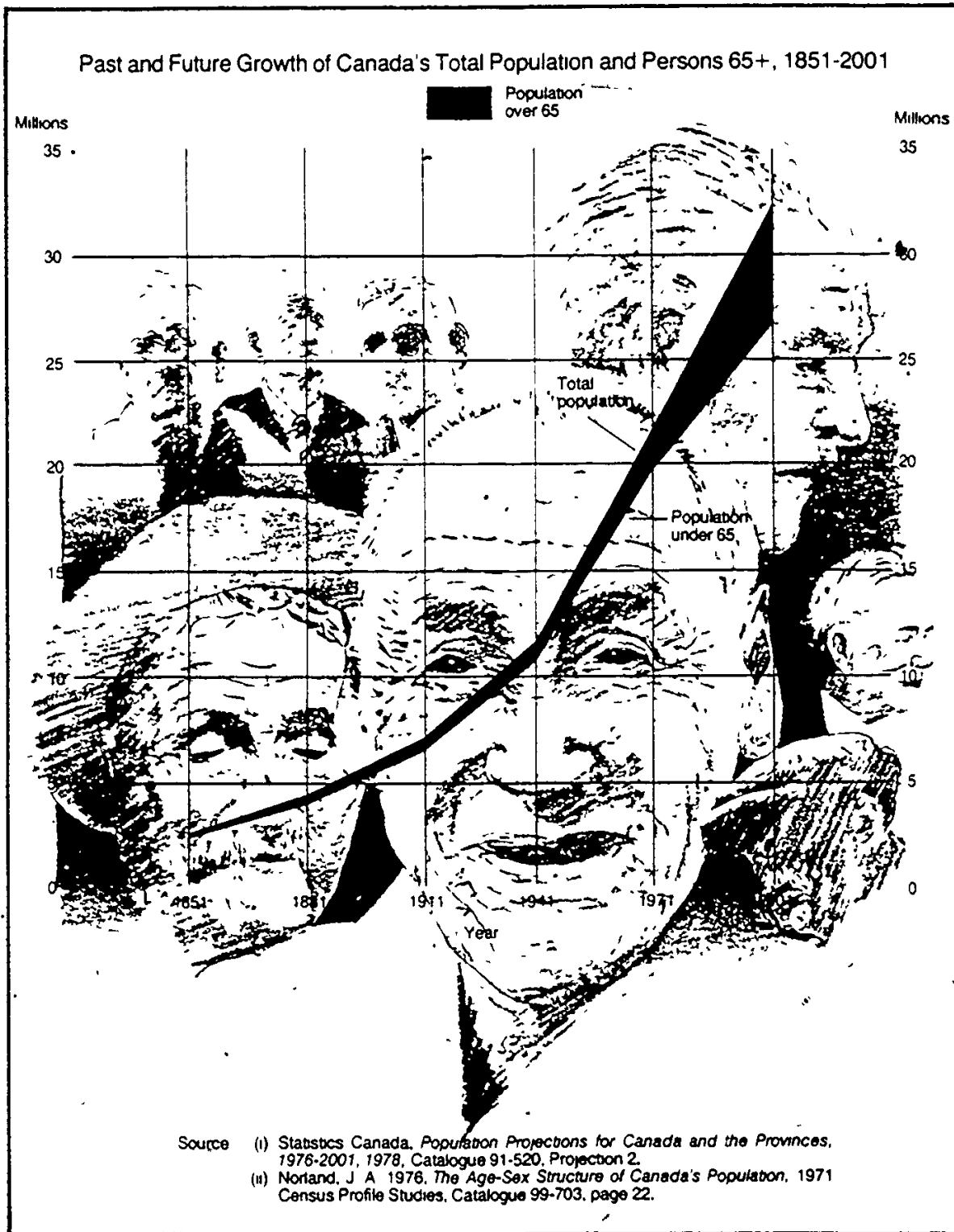
Taken from: **Canada's Elderly, 1976 Census of Canada**, Minister of Supply and Services, 1979

Lastly, medical advances combined with improvements in the overall standard of living have increased the average life expectancy from 61 to 73 years. These reasons contributed to the increase in the growing numbers of the elderly.

Examination of figure 2B shows a strong increase in the population after 1945. Much of this may be attributed to the postwar baby boom experienced by the country. At this time, a large number of returning veterans started new families, encouraged by the government to produce larger families with baby bonus incentives. In future years, this large population group will move into the elderly section. Figure 2C illustrates that the province of Ontario has also been experiencing growth patterns similar to that of Canada.

In Ontario the province experienced growth during the 1950's which may be attributed in part to a period of industrial expansion and development. It can also be seen that the Ontario elderly reflect very closely the effects of the Canadian immigration period of 1911 to 1930.

By examining the Ontario population more closely through age groups, the highest cohorts with increases occur in the 55 and over categories (see table 2.1).

Figure 2C

GROWTH OF THE OLDER POPULATION OF ONTARIO

Numbers in
Thousands

650
600
550
500
450
400
350
300
250
200
150
100
50
0

1901 1911 1921 1931 1941 1951 1961 1971 2001

MEN   WOMEN   65 YEARS OF AGE OR OVER
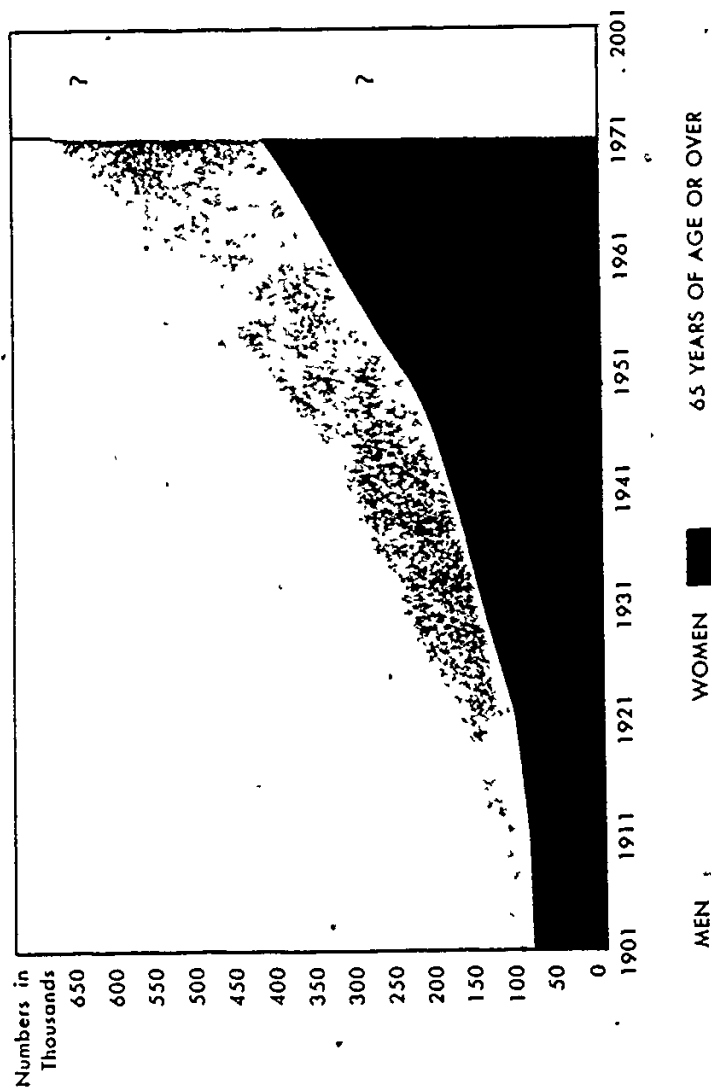
Source Data — Census of Canada 1901 1971 (1971 based on advance information received from Statistics Canada prior to publication)

Chart format adapted from AoA Pub No 146, U S , H E W Aging, Mby, 1970

Taken from: Homes for the Aged, 1972, Ministry of Community and Social Services, Ontario, 1972

Table 2.1

CHANGES IN SELECTED AGE GROUPS AND THEIR PROPORTIONATE DISTRIBUTION, ONTARIO POPULATION

AGE GROUPS (Years)	Number*		PERCENTAGE DISTRIBUTION — 'D'		
	1901	1961	1901	1961	% Change in 'D' 1901-1961
Under 5	224 8	740 2	10 3	11 9	+15 5
5 to 9	230 6	674 5	10 6	10 8	+ 1 9
10 to 14	229 9	593 0	10 5	9 5	− 1 0
15 to 19	229 8	436 9	10 5	7 0	−33 3
20 to 24	216 0	387 0	9 9	6 2	−37 4
25 to 29	178 6	422 7	8 2	6 8	−17 1
30 to 34	154 9	459 8	7 1	7 4	+ 4 2
35 to 39	144 0	469 3	6 6	7 5	+13 6
40 to 44	127 1	397 3	5 8	6 4	+10 3
45 to 49	104 4	360 8	4 8	5 8	+20 8
50 to 54	89 1	309 8	4 1	5 0	+22 0
55 to 59	70 6	258 3	3 2	4 1	+28 1
60 to 64	62 7	218 5	2 9	3 5	+20 7
65 to 69	47 3	180 1	2 2	2 8	+27 3
70 to 74	34 7	146 3	1 5	2 3	+53 3
75 to 79	21 3	97 7	1 0	1 6	+60 0
80 to 84	11 6	53 5	5	9	+80 0
85 and Over	5 7	30 5	3	5	+66 6
Total	2,183 1	6,236 2	100 0	100 0	
Under 20	915 1	2,444 6	41 9	39 2	− 6 4
20 to 44	820 6	2,136 1	37 6	34 3	− 8 8
45 to 64	326 8	1,147 4	15 0	18 4	+22 7
60 and Over	183 3	726 6	8 4	11 6	+38 1
65 and Over	120 6	508 1	5 5	8 1	+49 1
70 and Over	73 3	328 0	3 3	5 3	+60 6

In thousands
Source: Census of Canada 1901 1961
Table format adapted from Ontario Legislature Select Committee on Aging Final Report 1967 (See Entry 153)

Taken from *Homes for the Aged, 1972*, Ministry of Community and Social Services, Ontario, 1972

To make further comparison the population numbers
are grouped and compared in the table below to a more recent
period. Again, the greatest increase in numbers for the
population from 1901 to 1971 occurred in the 60 and over
age groups (see table 2.2).

Table 2.2

CHANGES IN SELECTED AGE GROUPS AND THEIR PROPORTIONATE DISTRIBUTION, ONTARIO POPULATION, continued

(8) 1901 TO 1971

AGE GROUPS (Years)	Number*		PERCENTAGE DISTRIBUTION — 'D'		
	1901	1971	1901	1971	% Change in 'D' 1901-1971
TOTAL	2,183 1	7,703 1	100 0	100 0	
Under 20	915 1	2,921 8	41 9	37 9	− 9 5
20 to 44	820 6	2,662 3	37 6	34 6	− 8 0
45 to 64	326 8	1,474 6	15 0	19 1	+27 3
60 and Over	183 3	924 5	8 4	12.0	+42 9
65 and Over	120 6	644 4	5 5	8 4	+52 7
70 and Over	73 3	416 6	3 3	5 4	+63 6

* In Thousands

Source Census of Canada 1901 1971
    (1971 based on advance information received from Statistics Canada prior to publication)
Table format adopted from Ontario Legislature Select Committee on Aging Final Report 1967 (See Entry = 153)

Taken from: **Homes for the Aged, 1972**, Ministry of Community and Social Services, Ontario, 1972

This comparison may be taken one step further by comparing the population from the industrial growth years of Ontario to 1971   Table 2.3 below shows the highest increase for the 45 to 64 age group supporting the labour force needed for industry during the growth years.

Table 2.3

CHANGES IN AGE GROUPS, ONTARIO POPULATION, 1951-1961, 1961-1971

AGE GROUP	Number*			INCREASE			
				1951 1961		1961 1971	
	1951	1961	1971	Numerical*	%	Numerical*	%
Under 20	1,555 0	2,444 6	2,921 8	889 6	57 2	477 2	19 5
20 to 44	1,733 8	2,136 0	2,662 3	402 2	23 2	526 3	24 6
45 to 64	908 4	1,147 4	1,474 6	239 0	26 3	327 2	28 5
65 and Over	400 3	508 1	644 4	107 8	26 9	136 3	26 8
Total	4,597 5	6,236 1	7,703 1	1,638 6	35 6	1 467 0	23 5
60 and Over	582 9	726 6	924 5	143 7	24 7	197 9	27 2
70 and Over	245 3	328 0	416 6	82 7	33 7	88 6	27 0

* In Thousands
Source Census of Canada 1951 1961 1971
    (1971 based on advance information received from Statistics Canada prior to publication)

Taken from. Homes for the Aged, 1972, Ministry of Community and Social Services, Ontario, 1972

Trends in shifts of age groups for the City of Windsor are comparable to those in the rest of the Province of Ontario. Table 2.4 below shows the declining birth rate experienced over the past several years is reflected in the changes in population for age groups 0-4 and 5-14. The 8.13 per cent growth in the age groups 25-34 reflects the results of the post World War II baby boom of the late forties and early fifties. The other age group which has undergone significant growth are seniors 65 years of age and over.

Table 2.4

CHANGES IN WINDSOR'S POPULATION BY AGE GROUPS, 1971-1976					
Age Groups	1971 Population	% of Windsor	1976 Population	% of Windsor	% of Population Change 1971-76
0 - 4	16.565	8.15	14,140	7.19	14.64
5 - 14	40,020	19. 9	33.975	17.29	15.10
15 - 19	19,275	9.48	19,550	9.95	1.41
20 - 24	18,645	9.17	18,321	9.34	1.74
25 - 34	25.599	12.59	27,865	14.15	8.13
35 - 44	23.410	11.52	20.740	10.56	11.41
45 - 54	22,760	11.20	23,185	11.79	1.83
55 - 64	16,640	8.18	17 330	8.76	3.98
65+	20,385	10.03	21 550	10.97	5.41

Taken from Demographic and Social Data for Human Services Planning Windsor and Essex County Monograph II 1979, United Way of Windsor and Essex County, Windsor

To summarize the situation, this study was selected because our growing elderly population will present increasingly serious problems to our society. To predict future trends will suggest the possible path in which our population will expand. More reasonably, the present exact figures point to a need for research on the elderly. The following table (2.5) prepared by the Economic Council of Canada shows the future increases of the Canadian population to the year 2050. The results are alarming and indicate that the senior citizens of this country will present a growing need for lifestyle support by those who remain in the workforce.

Table 2.5

CANADA'S POPULATION PROJECTIONS

	1975	1980	1990	2000	2010	2020	2030	2040	2050
					(Thousands)				
Population									
Total	23,291	24,872	28 212	31,229	33,791	36 080	37 771	39 027	40 151
Aged 65 and over	1 990	2,309	2 886	3 533	4,156	5,488	6 772	6 655	6 804
Retirement beneficiaries									
Total									
Male	655	765	1,119 0	1 359 0	1,593 0	2 124 0	2 602 0	2 479 0	2 561 0
Female	349	416	854 4	1 355 9	1 901 9	2 814,5	3 628 3	3 667 3	3 721
Both	1,004	1 181	1 973 4	2,714 9	3 494 9	4,938 5	6 230 3	6 146 3	6 284

Taken from The Future Financing of the Canada Quebec Pension Plans Some Alternative Possibilities 1980, Minister of Supply and Services, Canada, 1980

All of these statistics indicate that the elderly population will present an important aspect of shelter to the entire population. People will always require housing and the growing numbers of senior citizens need help to acquire their appropriate accommodations.

To analyze the elderly population fully, an examination of more detailed characteristics must be incorporated. The first to be discussed is the marital status of older persons in Canada. It is obvious that married and single senior citizens have different housing needs. The accompanying figure 2D and table 2.6 show the present marital structure of the elderly population.

In recent years the number of elderly women has increased. Before 1961, there were always more men than women in the 65 and over category. In 1976 however, there were only 777 males to every 1,000 females. Between 1961 and 1971 the female population 65 and over increased annually by 3.4 per cent compared with 1.6 per cent for their male counterparts. This trend is continuing, but the difference in the rate of increase for males and females has narrowed to a 3.4 per cent annual increase for females as opposed to a 2.4 per cent increase for males. Medical advances have contributed to the elderly living longer.

Previous immigration patterns have added to the unequal sex ratio of the 65 and over population. During the years 1931 to 1948 there were more females than males entering Canada.

Figure 2D

Mantal Status of Persons 65 and Over. 1976

Males

9 6%
Single
(never married)

1 2%
Divorced

15 2 %
Widowed

74 0%
Married — includes persons
living in common-law
and the separated category

Females

10 2%
Single
(never married)

1 0%
Divorced

39 0%
Married — includes
persons living in
common-law
and the separated
category

49 8%
Widowed

Source   1976 Census ... Catalogue 92-825. Table 22
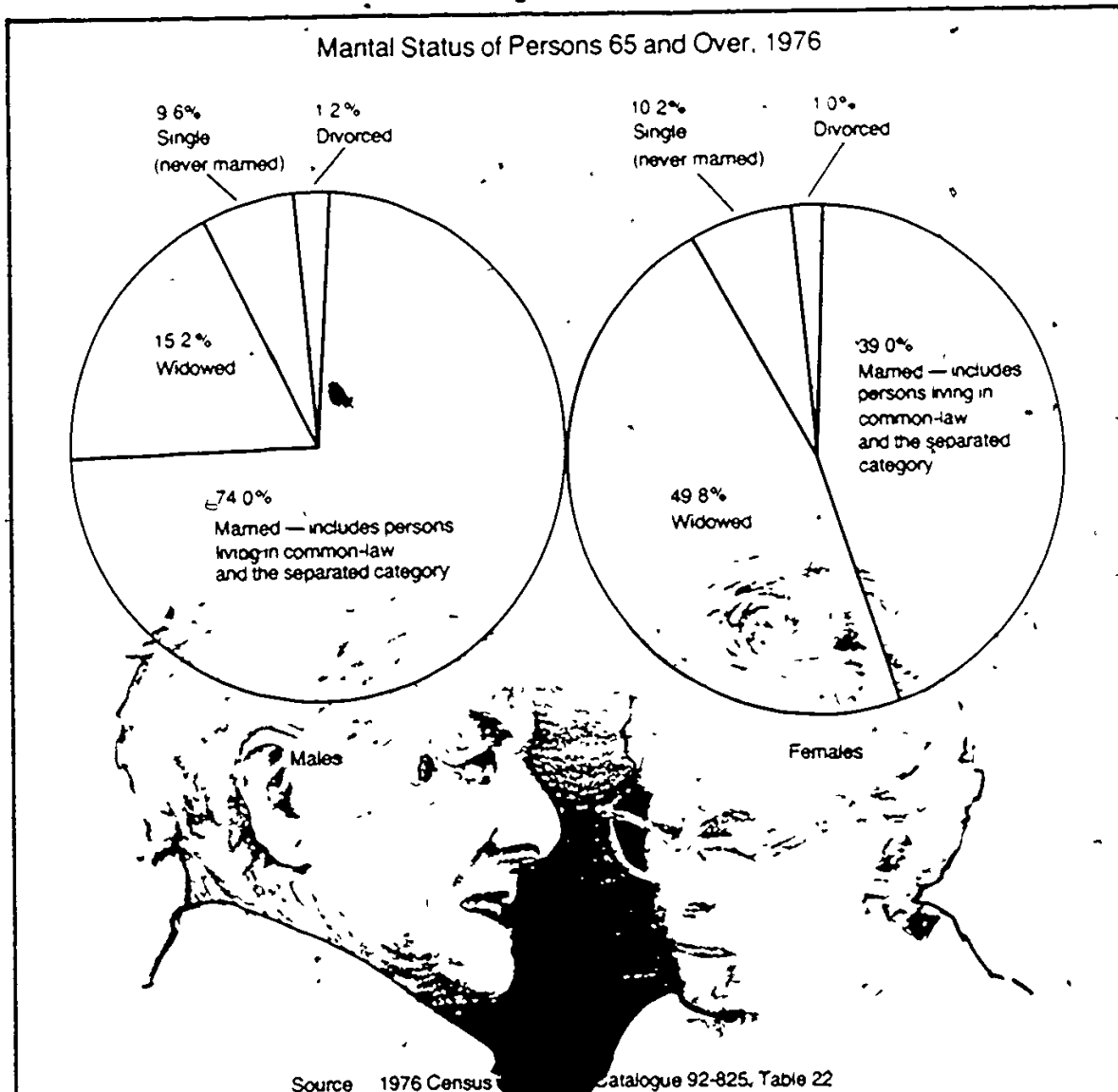
Table 2.6
Males and Females 65+ and Sex Ratio, 1901-1976

	1901	1911	1921	1931	1941	1951	1961	1971	1976
Males	138 913	170,613	214,964	294 550	390 909	551 303	674 117	781 865	875 405
Females	132,288	164,704	205,280	281 526	376,906	534,970	717,037	962,540	1 126 940
Ratio of males to 1 000 females	1 050	1,036	1,047	1,046	1,037	1,031	940	812	777

Source   (i) 1961 Census of Canada, Catalogue 92-542. Table 20
(ii) 1971 Census of Canada. Catalogue 92-715. Table 14
(iii) 1976 Census of Canada. Catalogue 92-823 Table 11

Taken from: Canada's Elderly, 1976 Census of Canada, Minister of Supply and Services,1979

When examining the Ontario marital status it is seen
that there is a great difference between married and widowed
men and women (see table 2.7).

Table 2.7

MARITAL STATUS OF OLDER PERSONS IN ONTARIO

	Married	Widowed	Single (or Divorced)
Of every 100 men	70	19	11
Of every 100 women	38	51	11

Most men 65 years or over are married, most women of that age are widows (There are over three times
as many widows as widowers in this age group) Even at age 75 or over more than half of the men are
married two thirds of the women are widows
Source, Census of Canada 1966 (Statistics Canada Cat 92 613)
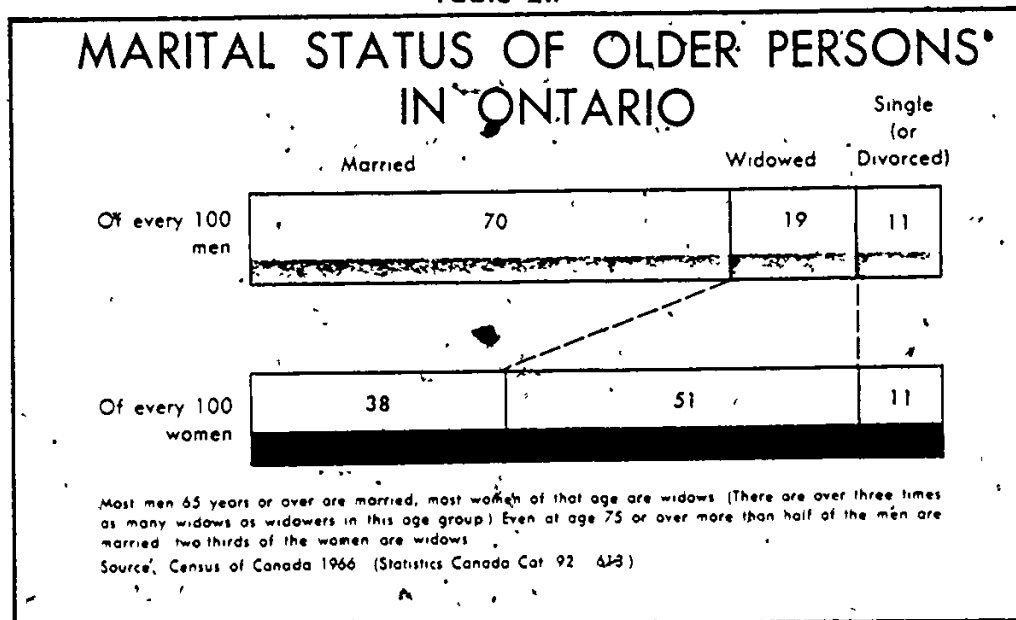
Taken from: Homes for the Aged, 1972, Ministry of Community and Social Services, Ontario, 1972

Marital status becomes important when examining
housing demand because single elderly women prefer to live
in small apartments and married elderly couples would rather
remain in their own residence. Single elderly men usually
live in nursing homes or a residence providing some form of
help. This knowledge aids in determining the present housing
demand (Ministry of Community and Social Services, 1972,
Retirement Bibliography).

Many researchers have tried to answer why the elderly population has continued to grow. Today Canadians are living longer and the chances of surviving to old age have increased for all people. At 65 people can expect to live more years than previous generations.

Life expectancy over the past decades has increased for both sexes. In 1971 life expectancy at birth for males was 70 years and for females it was 77 years. At 65 the average man can expect to live another 13.7 years while women can look forward to an additional 17.5 years.

Most of these gains in life expectancy are attributed to the decline in infant mortality. But the death rates for each elderly age group have also declined (figure 2E; table 2/8). Between 1921 and 1976 for instance, the death rate for women 70 to 74 has dropped by 50 per cent while the rate for men declined by 10 per cent.

The table figures show that the 80 and over cohort has the highest increase in numbers for both males and females. This could indicate a growing need for nursing homes in future years by communities since older cohorts require more care.

Canada's 65 and over population will continue growing more markedly as the children from the high birth rate years of the 1940's and 1950's move into the elderly segment. Preparation for this group should start with adequate accommodations.

Figure 2E

65+ Men per 1,000 65+ Women, 1976

90 - 543

85-89

80-8

709

70-74

65-69 886
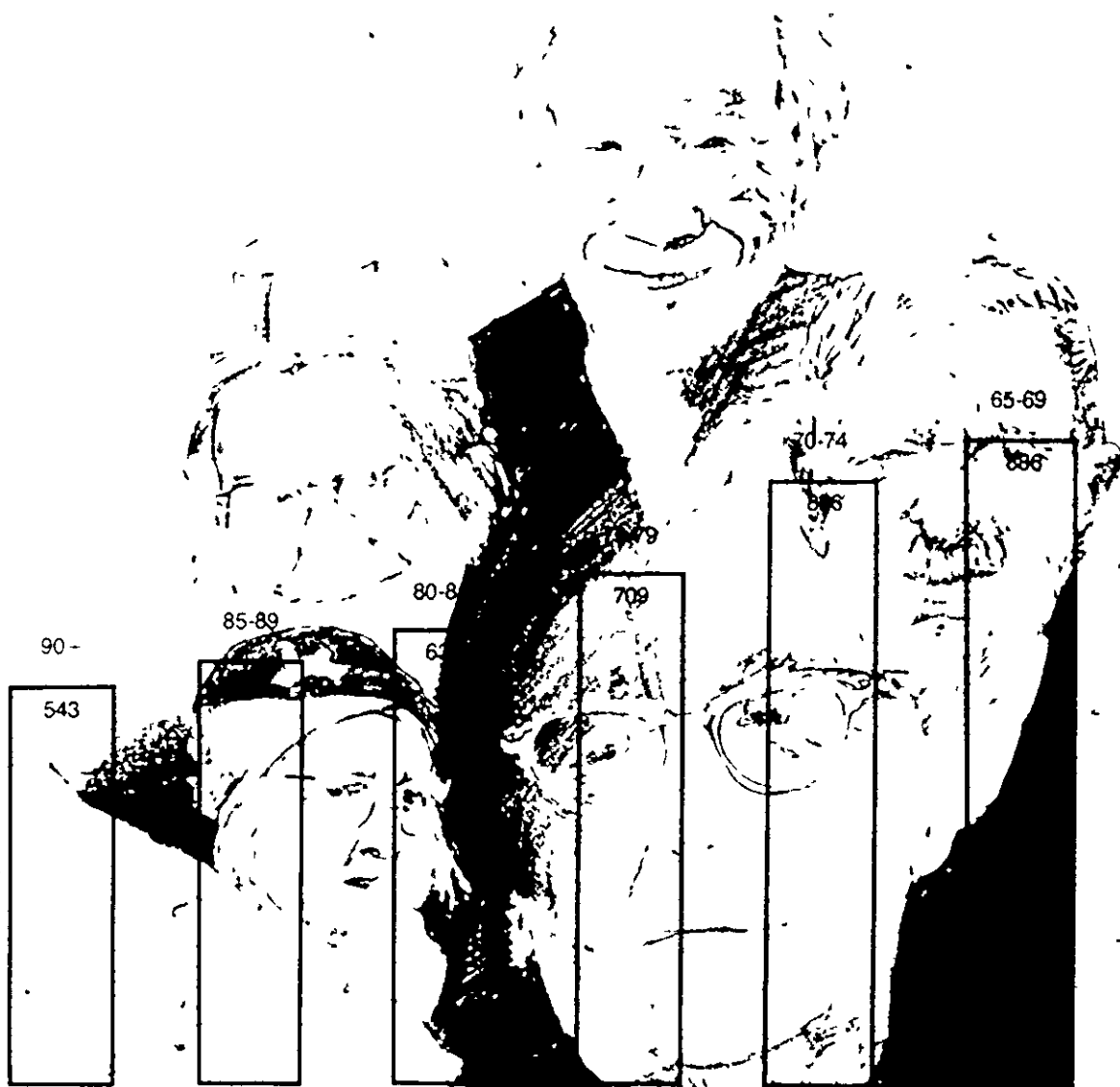
Table 2 8

Death Rates Per 1,000 Elderly Population by Age and Sex, 1921 and 1976

Age	Males		Females	
	1921	1976	1921	1976
65 69	33 4	33 3	33 2	16 4
70 74	56 9	51 4	52 8	26 3
75 79	89 4	77 3	80 9	44 7
80 84	133 8	118 2	122 4	76 8
85 +	228 2	195 7	224 9	154 7

One of the most important factors which influences housing demand is income. When applied to the elderly, their financial capacity usually dwindles over time. Housing is provided to senior citizens in accordance with the amount of money that they receive from different sources. In the following figure (2.F) the number of senior citizens who receive full or partial guaranteed income supplement is shown.

In 1975 the average income of families with a head 65 and over was 10,171 dollars. This was slightly less than two-thirds of the average income of all families. The average income for unattached individuals 65 and over was 4,138 dollars. The relative differences in income between the elderly and other groups have remained the same over the years. For example, the difference in average income between families with head of all ages and families with head 65 and over was 61.2 per cent. When applied to housing the communities must scale their services accordingly.

The sources of revenue for the elderly are derived from employment, pensions, investments and transfer payments. Employment income forms 32 per cent of the family income for the elderly. A further 29 per cent is made up from investments and private pensions. But for many whose payments from these sources are fixed, the value of income is dwindling by inflation.

Percentage of Old Age Security Pensioners Receiving Full and Partial Guaranteed Income Supplement (GIS), April 1975 — March 1976

24 1% with full GIS

31 1% with partial GIS
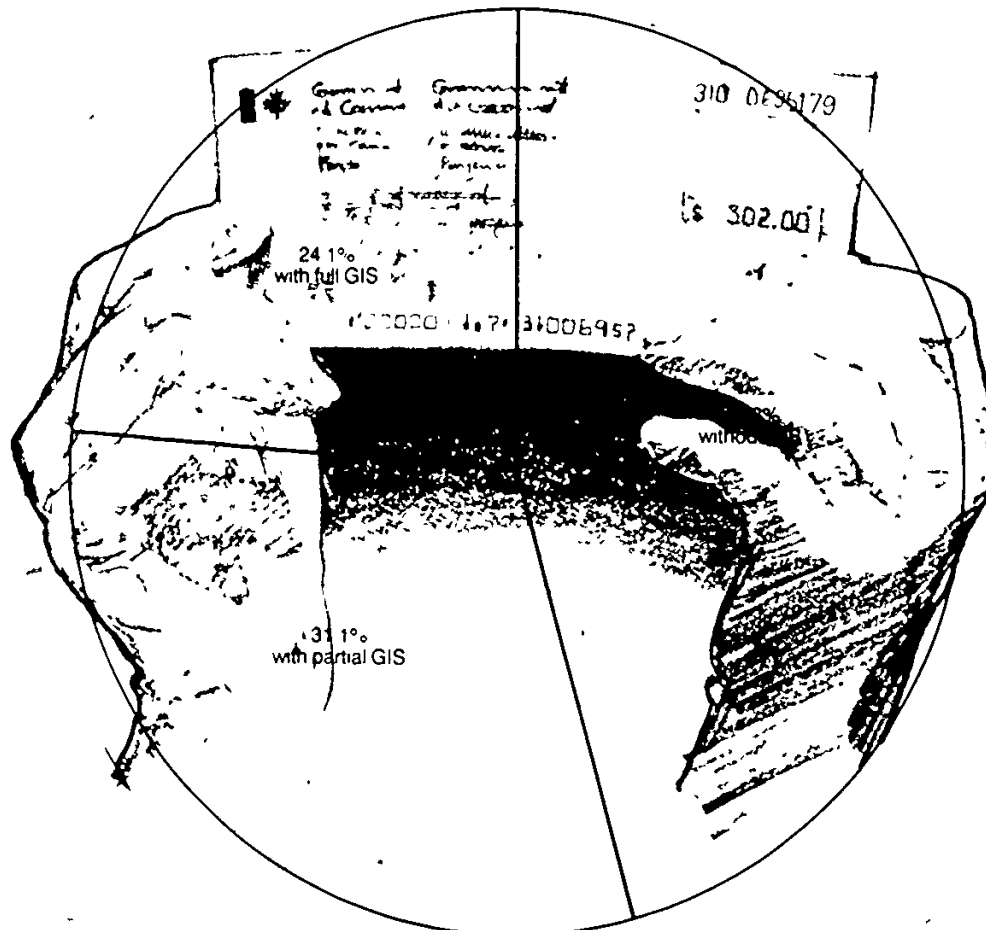
Source   National Health and Welfare Welfare Information Systems, Welfare, 1975-1976

Table 2.9

Average Income of Families, Unattached Individuals and All Family Units, 1969 and 1975

	1969	1975
Families head all ages	$ 8 927	$ 16 613
Families head 65+	5 490	10 171
Unattached individuals all ages	3 980	6 595
Unattached individuals 65+	2 525	4 138
All family units head all ages	7 686	13 805
All family units head 65+	4 205	7 489

Source   Statistics Canada Income Distribution by Size in Canada, 1975, Catalogue 13-207, Tables 26 and 29 Income Distribution by Size in Canada 1969 Catalogue 13-544 Tables 2 and 20

Taken from· Canada's Elderly, 1976 Census of Canada, Minister of Supply and Services, 1979

Transfer payments from government sources account
for 39 per cent of the total income going to family units
with heads 65 or over. To determine housing demand the
amount of money spent by the elderly on their shelter will
indicate the types of accommodations which should be sup-
plied. The following graph examines the budget of senior
citizens in Canada for 1974.

The statistics show that the elderly spend a greater
percentage of their income on food and shelter. Unattached
individuals 65 and over and families with head 65 and over
spend a higher proportion of their incomes on food and
shelter than unattached individuals and families in general.

In 1974, for example, unattached individuals 65
and over living in fourteen major cities reported that they
spent 52.7 per cent of their budgets on food and shelter,
while in comparison, all unattached individuals spent only
36.6 per cent of their budgets on these items. The figure
2.G shows allocation for all other expenses required by the
elderly family. To determine housing demand, it is learned
from this information that if the average elderly family's
income for 1975 was 10,000 dollars they might spend more
than half on shelter. More than likely the residence would
be a single family residence. If the senior citizen were
single and only had an income of 4,100 dollars as indicated
by this type, then their affordability for shelter would be
an apartment.

Figure 2G

Allocation of Budget for All Unattached Individuals and Unattached Individuals 65+, Canada, 1974

All unattached individuals

Unattached individuals 65+

%	All unattached individuals	Unattached individuals 65+	
100	16.2	7.5	Personal taxes
90		5.8	Security and contributions
80	8.2	10.6	Other
70	12.9	4.4	Recreation
		2.9	Medical and health care
		5.2	Household operation
60	4.4	5.4	Travel and transportation
	2.3		
	4.0	5.5	Clothing
	9.7		
40	5.7	29.8	Shelter
	19.6		
20			
	17.0	22.9	Food
0			
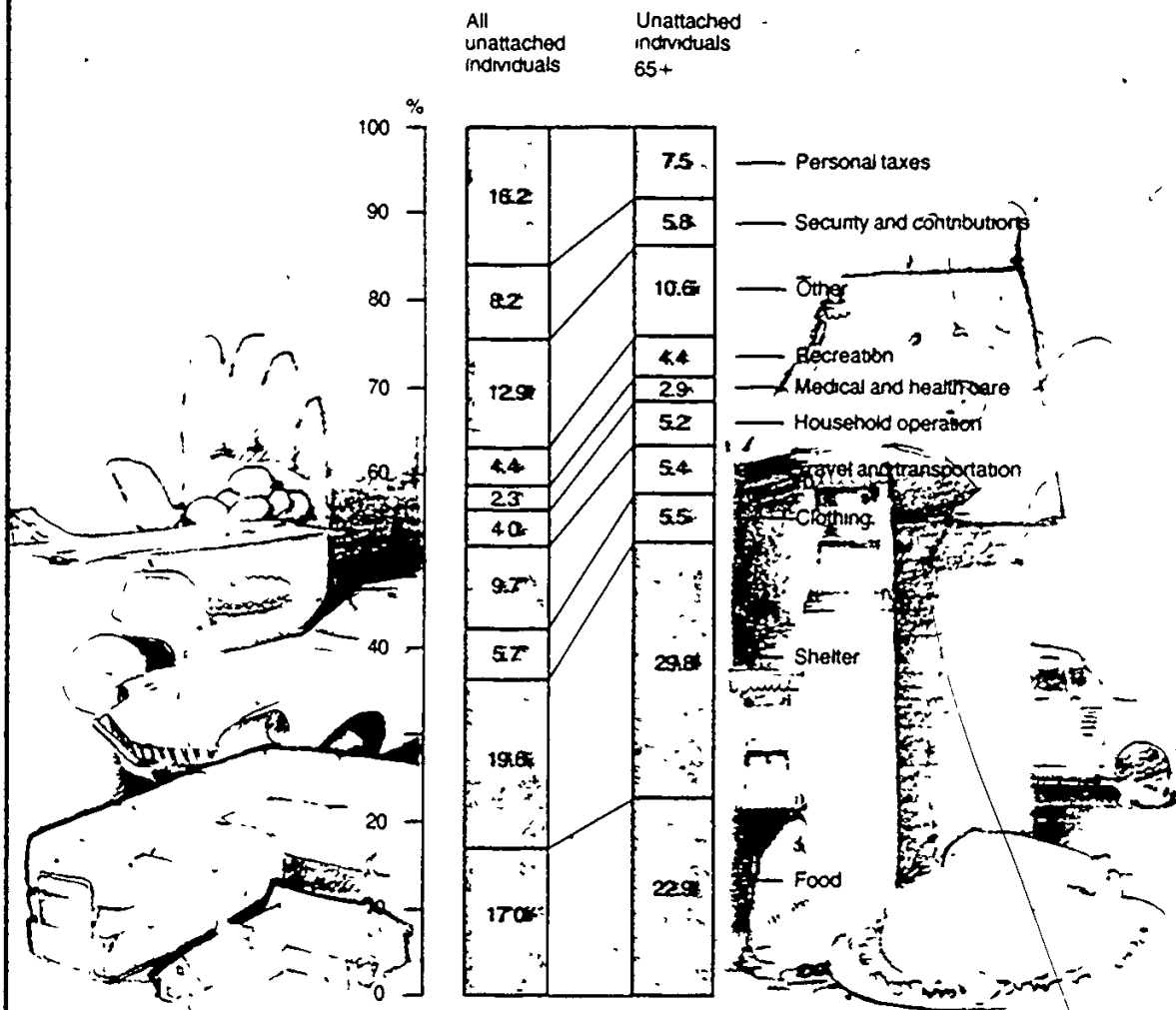
Source   Statistics Canada, *Urban Family Expenditure*, 1974, Catalogue 62-544, Occasional, Tables 2 and 3

The problem to be solved here is clearly indicated in whether or not our communities are providing the adequate housing type for each senior group. Only through a housirg demand study will this problem be answered.

The final area to be discussed concerns the present housing accommodations of the elderly in Canada and Windsor. The following figure (2.H) shows the percentages of elderly persons in each unit. A large percentage of elderly heads of private households own their homes. The 1976 census shows that 64.3 per cent of the 1.2 million elderly households were home owners. The comparable percentage for all private households was 61.8 per cent.

Among elderly male and female heads of households there is a great difference in the percentages of home owner- ship. Concerning the elderly males, 72.9 per cent own their homes while 50.2 per cent of the females are owners.

Approximately, 55.7 per cent of the total Canadian households live in single detached dwellings as compared to 57.1 per cent o. the elderly households that live in such dwellings. Apartments are an important form of dwelling for the elderly. Almost a third, 31.3 per cent of the elderly households live in apartments.

In comparison rented dwellings were found to be popular with elderly women. The proportion of households with elderly women heads living in rented apartments is twice that for households headed by elderly men, 40.2 per

Figure 2H

Type of Private Dwellings Occupied by All Household Heads
and Those 65+, by Sex, Canada, 1976

Legend:
- Total household heads
- Household heads 65+
- Male household heads 65+
- Female household heads 65+

Single detached: 55 7, 57 1, 65 2, 44 2

Single attached: 8 2, 5 4, 5 1, 5 8

Apartment: 3 7

Duplex: 4 9, 4 9, 4 5, 5 4

Movable: 2 4, 1 4, 1 7, 0 9
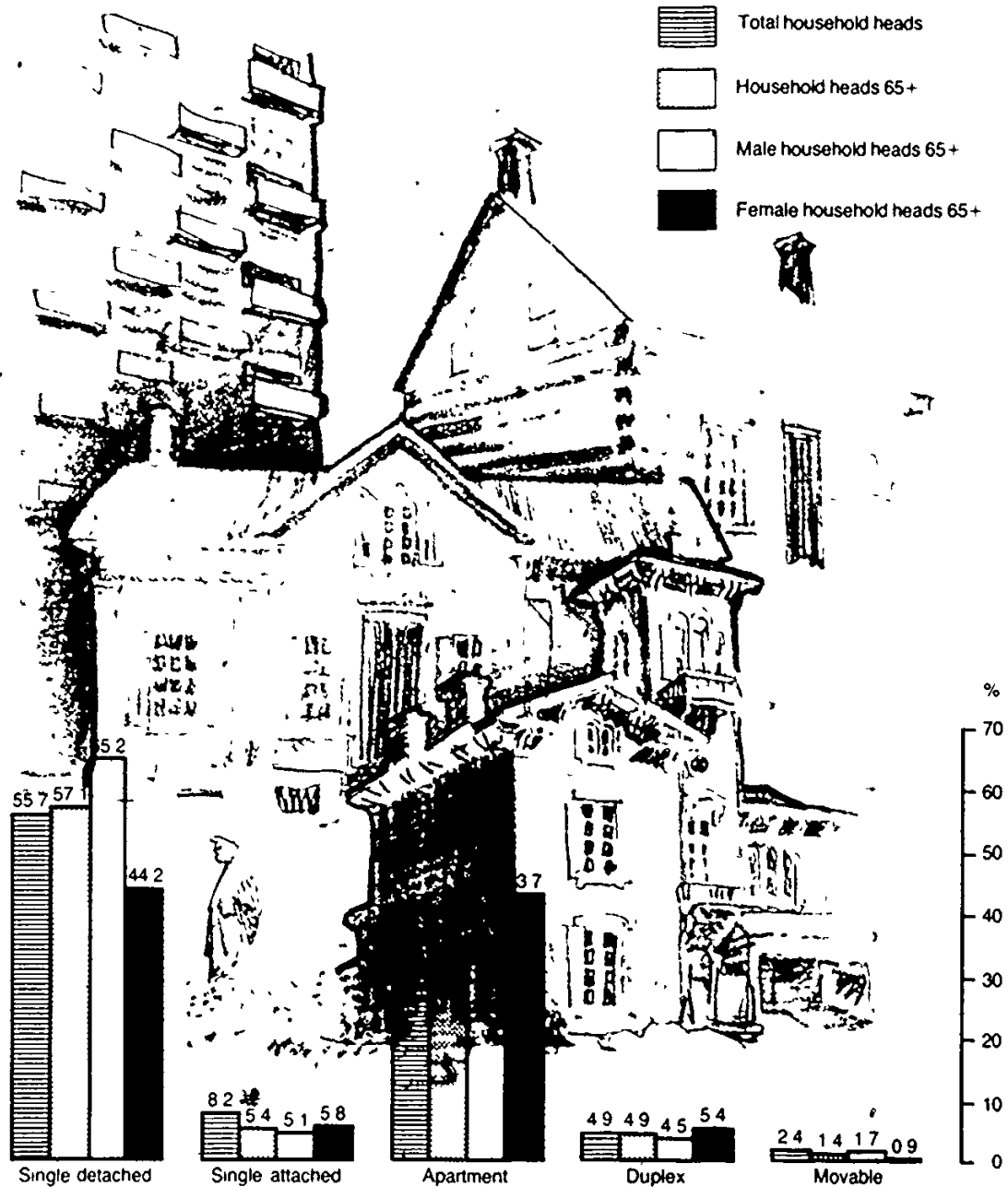
Source   1976 Census of Canada, Catalogue 93-804, Table 13

Taken from: <u>Canada's Elderly</u>, <u>1976 Census of Canada</u>, Minister of Supply and Services, 1979

cent and 19.4 per cent respectively. Furthermore, 76.9 per
cent of these women are widows.

With these statistics a type of housing unit can be
matched further with the suitable person. The following
Windsor statistics (table 2.10) show a comparison for all
age groups to the elderly population. It is seen from this
table that in Windsor, the majority of senior citizens live
in single detached dwellings.

Table 2.10

HOUSING CHARACTERISTICS FOR THE CENSUS METROPOLITAN AREA OF WINDSOR, 1976

	Age or sex of household head	*Single detached dwellings (%)*	*Rented dwellings (%)*	*Rooms per dwelling*	*Median house value ($)*
Total		71 3	29 6	5 7	22 327
Male		74 9	26 3	5 8	23 050
Female		55 0	44 5	5 0	18 518
Under 25		30 8	80 7	4 5	19 295
25-34		61 2	45 1	5 5	23 869
35-44		80 8	21 5	6 2	25 380
45-54		82 5	16 9	6 1	23 646
55-64		79 1	18 1	5 7	21 335
65-69		50	20 6	5 4	14 240
70 plus		68 2	26 5	5 2	17 953

REVIEW OF THE RELATED LITERATURE

3.1 Introduction

The body of literature which supported the formulation of this research is vast since the study of senior citizens' living conditions relates to many social science disciplines. The most abundant literature comes from gerontology. Recognition of gerontological works has been most favourably accepted by geographers as an excellent source of information (Golant, 1979).

This study tries to establish a geographical perspective by concentrating on spatial as well as social-economic aspects concerning housing demand. The separation between the two areas is undefinable, but the geographical sections must determine their own perspectives by relating and joining research principles and ideas. Housing is one such study area which requires tremendous input from many related disciplines.

The review of literature concentrates upon the six most relevant areas: family life cycle and housing turnover, residential satisfaction and residential mobility, socio-economic characteristics related to accommodations,

residential characteristics of senior citizen accommoda-
tions, housing demand and supply models, and general
housing concepts of the elderly.

3.2 Family Life Cycle and Housing Turnover

A basic overall model which explains senior citizen
accommodation requirements can be attributed to the Family
Life Cycle. Some of the earliest applications using this
structure as an explanation for research were those of
Glick (1947), Mumford (1949) and Rossi (1955).

The life cycle was used originally to reflect the
fact that household change is a more or less regular response
to vital processes of life such as births, deaths, marriages
and divorces. Although the family life cycle is not a per-
fect predictor since the course of a person's life may alter
considerably from the model, the individual will still ex-
perience the major changes in life (Clausen, 1972, Riley,
1973. Quigley and Weinberg, 1977).

In relation to time, the family life cycle shifts
with the size and age composition of members of a household.
Accordingly, the housing needs of families at different
points in the socio-economic life cycle will change and
will be expressed by changes in type and location of housing
(Rossi, 1980· 25).

The major difficulty with this concept is dis-
agreement among researchers over the particular stages that

are distinguished (Quigley and Weinberg, 1977). Ray (1976)
identified the following five clusters of age groups repre-
senting the five stages of the family.

A) the young family, ages 0-4 and 25-34;

B) the middle-stage family, ages 5-14 and 35-44;

C) the mature family, ages 15-19 and 45-54;

D) older households, ages 55-64;

E) retired family households, ages 65 plus.

Research will primarily examine and concentrate on
retired persons starting at age 55 (see accompanying diagram).
This age was chosen and is supported as a starting position
since early retirement is possible in a union-influenced city
such as Windsor. Others have used this commencement point
since personal lifestyle changes are likely to occur following
retirement (Goldscheider, 1966, Tibbitts, 1960; Epstein,
1976, 12).

Lewis Mumford summarized the senior citizens' function
in the family life cycle by describing the planning process
for the "phases of life." His article concentrated on the
definitions and applications of the life cycle from the
point of view of a city planner. As we know, future housing
needs are determined by the city planner and therefore, his
complete understanding of the theory is required. Mumford
stated that, "the city planner must come to realize the
full nature of his task: the provision of an environment

STAGES OF THE FAMILY LIFE CYCLE

Size of Accommodation
Apartments (smallest unit)

INCREASING RANGE

Single
Person

Young Married
Couples (Aged
18-25)

Married, children
(0-5 yrs.)

Married, with children
(Aged 5-14 yrs.)

Married Couples, with children
(Aged 35-44)   (15-17 yrs.)

Older Married Couples (Aged 45-64)
with children (18 +)
Maximum Family Development

Older Married Couples (45-54 yrs.)
without children

Middle Age Retired Families
(55-64 yrs.)

Retired Older Families
(65-70 yrs.)

Stable Retired Families
(71-79 yrs.)

Mature Older Families
(80-89 yrs.)

Retired Older
Singles
(90 yrs.
plus)

Single Family
Residence
(largest
total space)

DECREASING RANGE

Apartments,
lower class
(single residence,
less expensive)

suited to every phase of life and growth from infancy to
senescence." (Mumford, 1949. 5).

Mumford suggested the type of housing and environment
that should be associated with each phase of life. He stated
"no community should be considered well-laid out, and no
housing adequate, unless it provides special accommodations
for all groups." (Mumford, 1949: 16).

This is actually where the problem of supplying
accommodations originated. Mumford was suggesting that city
planning must deal with all the phases of life as well as
all the functions of a community. Within the community one
must think of establishing a balance in time through inter-
relationships between the phases of life (Mumford, 1949. 16).

A "balance in time" has been recognized by many
researchers concerned with senior citizens. Many think
that there are special requirements for each phase that
can only be served when the cumulative needs of all age
groups are taken into account.

Family life cycle was taken a step further by Rossi
in 1955 with the direct application to housing in his book
"Why Families Move." Rossi emphasizes the link between
housing and mobility by undertaking research on the patterns
of residential relocation. For the first time his study
applied the "purpose factors" which were responsible for
change. He isolated social issues, economic change and
spatial patterns (Rossi, 1955: 10). Rossi was one of the

first researchers to document how residential satisfaction involved primarily the interplay between households' housing needs and the physical structure it occupied.

Residential mobility will be discussed more extensively in the following section, but it should be pointed out here that Rossi's conclusions showed the relationship to family life cycle when he stated that, residential mobility was interpreted as a phenomenon of the housing market driven by autochthonous changes that take place as families and households formed, grew and declined in size and eventually dissolved. He further stated that peoples' housing choices are conditioned by income and the housing opportunities presented by the local housing market (Rossi, 1980: 17).

Rossi developed in his research a complex model of duration of stay and mobility which was the interplay of cumulative inertia and dissatisfaction. There is no question that the life cycle was a critical parameter of his model (Rossi, 1980: 11).

Further research on the life cycle was conducted by Yee and Van Arsdol (1977) showing that age-related events influenced moving probabilities. This idea of age status was examined earlier by Cain (1964), Erikson (1959) and Einsenstadt (1956) as a behavioral link between the social system and the individual. When describing senior citizens regarding their age-related events, such as retirement,

conditions may vary dramatically according to place and the specific population cohort (Riley, 1973; Strauss, 1959).

This research makes hypothetical formulations using age divisions from the investigation of these authors. These researchers described how age and the life cycle were related to expected and actual residence changes in terms of transition points. Rossi thought in 1955 that the extent to which transition events by age indicate residence changes remains unspecified, but Yee and Van Arsdol contradicted him by showing that the life cycle described the relations between age, transition points and residential mobility.

It was realized that elderly attitudes can also be attributed to housing changes (Jerome, 1959). When considering ages this method can be related back to specific family responses of life cycle changes such as retirement (Long, 1972; Morrison, 1967; Speare, 1970; Uhlenberg, 1969).

Furthermore, there are frictional factors intervening between age points such as employment opportunity, availability of suitable housing and financial resources which may impede or facilitate residential change (Yee and Van Arsdol, 1977 212). The life cycle was seen to influence residential moves through familism, aspirations and social status, the residential environment and by social or locality participations (Sabagh et al., 1969). With senior citizens their factors of aging take precedence, such as past experiences which modify their perceptions and influence their choices (Yee and Van Arsdol, 1977; 212).

Earlier researchers found that generalizations pertaining to one group or age level do not necessarily apply to another (Duncan, Cussort and Duncan, 1961; Kendall and Lazarsfeld, 1955; Robinson, 1950). From other investigations, Yee and Van Arsdol concluded that:

1) age must be shown to be associated with mobility;

2) normative events demarking cycle stages must be specified,

3) age and normative-based behavioral changes must correspond,

4) the influence events exerted on residential mobility

must remain relatively constant with each life cycle

stage (Yee and Van Arsdol, 1977: 213).

These researchers concluded that there were two transition points at 40 and 65 years of age. Their analysis showed that age had a consistent relation to mobility, a conclusion also drawn by Bogue (1959), Shyrock (1964) and others; furthermore, it was seen that age underlies a family life cycle step as a function which explained residential mobility (Yee and Van Arsdol, 1977. 218).

In conclusion, Yee and Van Arsdol suggested that these transition points might be used in predictive models as time points where behavior probabilities change for different cohorts. It was agreed by other researchers that the life cycle obviously had differential effects on residence change by population (Long, 1972; Morrison, 1967; Spears, 1970; Uhlenberg, 1969).

When applied directly to senior citizens Yee and

Van Arsdol stated that at ages 55 and older, there may be
an increased tendency for persons to both plan and implement
moves (Yee and Van Arsdol, 1977. 219). In addition to this
statement, is the idea put forth that the volume of resi-
dential mobility is inversely related to distance moved
(Galle and Taeuber, 1965; Isard and Romhall, 1960; Stouffer,
1940). We may deduce that senior citizens will plan a move
more carefully than other age groups and will move less
frequently.

The fact that older households are far less likely
to move than younger households is not a particularly good
indicator of whether their housing needs are being met
(Roistocher, 1974; Goldscheider, Van Arsdol and Sabagh,
1965; Long, 1972; Chevan, 1971). There are a variety of
constraints which may be operating that prevent mobility.
In particular the constraints for senior citizens could be
more serious.

3.3 Residential Satisfaction and Residential Mobility

3.3.1 The meaning of Residential Satisfaction
       and Dissatisfaction

In extension of the family life cycle, the demand
for housing by senior citizens will be greatly influenced
by their satisfaction or dissatisfaction with their present
residence. Although the concept of residential satisfaction
is intrinsically related to the housing turnover process,

this element has been downplayed in previous analyses
(Dzus, 1975).

Residential dissatisfaction is a stress caused by
housing that deviates from cultural, family or community
norms. When the level of stress exceeds the limits a
family is willing to tolerate, they will develop behavior
to adjust their housing (Morris and Winter, 1978).

The importance of satisfaction in the development
of demand for specific housing adjustments has only re-
cently been the focus of research. Much of that research
has been conducted in the fields of business administra-
tion and marketing. In many cases, findings have limited
applicability to housing (Morris, Winter and Beutler, 1975).

Rossi's study of residential mobility represented
a major theoretical and empirical advancement in the study
of housing behavior. He organized his interpretation
around the concept of the family life cycle and viewed
housing needs as directly related to family composition
(Rossi, 1955: 178). It is the households' needs which
determine satisfaction or dissatisfaction with their shelter.
Most research specifically related to residential mobility
as a housing adjustment process has followed Rossi's lead
and have viewed changing family composition as being di-
rectly responsible for changes in housing needs (see eg.,
Speare, 1970; Chevan, 1971; Long, 1972).

The basis of the residential model has been

attributed to stress factors which lead to dissatisfaction
and a change in residence (Wolpert, 1965; Speare, Goldstein
and Frey, 1974; 175). These researchers pointed out that
the residential environment was the link between stress and
housing change. This idea has been measured by many re-
searchers in trying to assess the question of why people
move and which destination will be selected (Brown and
Moore, 1970; Bueter et al., 1969; Chapin, 1974, Deutschman,
1972, Golant, 1971; Michealson, 1970 and Yeates, 1972).

The idea of stress was further measured by Goodman
(1974) when he discussed housing adjustment in terms of
disequilibria. These disequilibria were induced by changes
in family factors such as income, family composition or
health. Goodman referred to such disequilibria as being
directly related to "housing stress." While satisfaction
is only one of the complex set of relationships involved
in the residential location process, it nonetheless seems
to be the single most effective measure (Ermuth, 1974).

In particular, senior citizens may display dissat-
isfaction with their residence as a result of growing older
and having insufficient means to relocate which increases
their stress by remaining in their present residence. Being
either dissatisfied or satisfied requires only a slight
shift in the life cycle. Many seniors see themselves in this
situation. The events occurring at a given moment in time
within a given family are important to the family members

(Thomas and Znaniecki, 1927: 28). These researchers con-
cluded that family situations must be defined by a set of
values and attitudes with which the individual or group
has to deal through their family changes which result in
planning and appreciating this activity.

The discussion from Thomas and Znaniecki can be
applied to housing satisfaction-dissatisfaction within the
housing process. The family develops a set of values and
attitudes which arise from the cultural, community and family
norms. The specific means by which families achieve con-
sensus about the level of satisfaction depends upon family
structure and organization. Elderly families approach a
period of drastic change in which adjustments must be made
to remain intact either in location or accommodation.

The process of satisfaction development is the same
for all classes of people and involves three basic steps
(Morris and Winter, 1978; 151). First, the household head
compares his current housing type with family norms. Sec-
ondly, there is the assessment of any constraints that might
prevent change if there were problems present. Thirdly, the
family develops preferences for improving their housing
conditions (Morris and Winter, 1978; Day, 1976, Miller, 1976).

Household characteristics are more complex when
incorporating these steps into housing choice. Since most
senior citizens are on pensions and are low-income-families,
they are more satisfied with housing that has more

deficiencies or problems than middle-income families would tolerate (Morris and Winter, 1978. 152). Low income acts as a constraint in that poor families cannot obtain better housing. Thus, the propensity to adjust their housing is reduced by the tendency for low-income families, such as senior citizens, to be satisfied with less than optimum housing conditions.

The measurement of satisfaction can be difficult since consumers' needs define the terms for a family's cultural norms when applied to various aspects of life style or level of living. Speare's (1974) analysis of residential mobility included residential satisfaction as an intervening variable used to predict the propensity to move.

Perhaps the most acceptable method of measuring satisfaction that has been applied in the empirical analysis of housing was used by Yockey (1976); Harris (1976) and Morris (1976). Yockey developed a scale of satisfaction with space-oriented characteristics of the dwelling. Harris developed a scale based on quality-oriented characteristics. Morris developed an overall measure of satisfaction including quality, quantity, ownership and structure-type satisfactions. All three of these studies used a set of paired factors in which a question of satisfaction with a characteristic of the dwelling was asked. The respondents were asked to assess the importance of these factors to the family.

All results were similar and Yockey (1976) found that feelings of powerlessness produce a reduced sensitivity to the housing problems and, therefore, a reduced tendency to be dissatisfied. This is the major reason given for senior citizens' undesirability to relocate.

Morris (1976) analyzed the influences of housing deficits and household characteristics on housing satisfaction. He examined cultural problems in space, tenure and structure type in contributing to the explanation of housing satisfaction. Only age and income had statistically significant relationships to satisfaction. Morris concluded that the older the household head and the higher the income the greater was the housing satisfaction (Morris and Winter, 1978: 161). The tenure, structure type, space, quality and neighborhood problems have been shown by other researchers to produce lower levels of housing and neighborhood satisfaction. Therefore, neighborhood satisfaction was found to be the strongest influence on housing satisfaction (Morris and Winter, 1978: 161).

Recognition of the role of residential satisfaction in housing adjustment and adaptation has been relatively recent. Hence, conclusions regarding stages in the development of dissatisfaction and relationships to family characteristics require further research. In particular, studies are needed to further refine the measurement of housing and neighborhood satisfaction.

3.3.2 Residential Mobility and Senior Citizens

When describing residential mobility concerning the
elderly, life style factors which affect younger age groups
become a more serious consideration for senior citizens'
decisions. Many people over sixty years express dissatis-
faction with the settings in which they live and feel that
their lives generally would become much better if only
their housing were improved (Carp, 1966· 5).

It is true that the elderly population are the least
mobile age category and age has been found to be one of the
crucial determinants of residential mobility (Bogue, 1959;
Shryock, 1964, Thomas, 1938; Thomas, 1958). Since the
absolute number of the older population is increasing, the
volume of movement of older persons can be expected to
increase (Goldscheider, 1966: 103).

Despite the increasing importance of residential
changes in the living patterns of a growing number of older
people, previous research has not focused in any detail on
the differential propensity to move among various social and,
economic categories within the older population.

Previous research has shown that mobility rates
decline with increasing age and duration of residence.
Rossi (1955) found that home owners were much less likely
to express an interest in moving than renters. Thus, one
might expect that renters would be "movers" and home owners
would be "stayers." The probability of an individual staying

in a particular place increases with increasing length of
residence. Speare found this to be true for home owners,
but not true for renters when he examined their occupancy
in a residence (Speare, 1970· 456).

He concluded that the renter moving into a housing
unit has fewer ties and often his commitment to his landlord
can be dissolved. The only economic bonds considered may
be the cost of moving his possessions to a new place.
Senior citizens often find the slightest economic burden a
hindrance to relocating. Often their costs are greater than
younger families since all moving operations must be per-
formed by younger workers (Speare, 1970; Rossi, 1955).

Home owners develop a social bond with their neigh-
borhood. These primary social bonds tie a person to a
particular location (Speare, 1970: 457). Lansing and Mueller
(1967) and Spea·e (1966) have shown that social bonds tend
to increase with duration of residence.

Many senior citizens decide to move because they
want to get "something a little cheaper" or "a little better
quality" or "to be with people" (Carp, 1966: 65). Carp's
research discovered that the reasons for elderly people
moving were attributed to a need for lower rent, a need for
improved living conditions and a need to overcome social
isolation or interpersonal stress. The elderly have a high
rate of mobility trying to improve themselves (Carp, 1966:
66).

Relocation by older people was found to be very
stress provoking when the decision to move was not made by
the mover (Aldrich and Mendkoff, 1963. Bourestom and Past-
alon, 1975, Killion, 1970, Markus et al., 1971, Miller and
Lieberman, 1965). They suggest that relocation entails
considerable risks for the elderly. Markus (1971) suggested
that the chronically disabled and most elderly are at a
greater risk of dying when they are relocated even when the
move seems to indicate a change for better conditions.

One of the most important factors for seniors con-
cerning their relocation is independence and the freedom
of choice to make that decision. Research relative to this
point indicates that voluntary participation may be an im-
portant factor in relocation outcome (Carp, 1967; Donahue,
1968, Ferrari, 1962; Hamovitch, 1968; Lawton and Yaffe, 1970).

Few researchers have examined the outcome of a move
through the decision-making process. The decision-making
process is a complex process that takes into consideration
the reasons for the move, planning and preparation for the
move and the emotional responses to the move (Beaver, 1979;
567). It is reasonable to suggest that the underlying dy-
namics in the decision-making process plays an essential
role in relocation outcome. Some elderly people may look
forward to moving; others may be more apprehensive and
ambivalent. A few may perceive this as the last move before
dying (Beaver, 1979 569).

In Goldscheider's research on residential mobility
of the older population, he found that there was a relatively
higher mobility among those 50 to 64 years of age. This
age group may reflect shifts associated with occupation and
retirement changes, as well as the movement of persons in
this age category into a stage of the family life cycle which
is more congruent with different housing facilities
(Goldscheider, 1966. 104). Other researchers observed that
members of higher social classes in the older ages were more
mobile than other groups, attributing this to economic rea-
sons (Carson and McConnell, 1956).

A further description of movers and non-movers by
Goldscheider in the elderly population found that married
older people are less mobility-prone in terms of both atti-
tudes and behavior than widowed, never married, divorced or
separated people (Goldscheider, 1966: 106). Furthermore,
older persons who rent were more than twice as successful
in anticipating mobility behavior than owners.

Goldscheider's results showed that the overwhelming
majority of reasons older people gave for moving were di-
rectly related to dissatisfaction with their current housing
and neighborhood. His research results showed that econ-
omic, employment, and family and health related considerations
were not as significant or important determinants on the
perceptual level (Goldscheider, 1966: 107).

Economic reasons may not have been perceived as

important to mobility in this study, but economics is an essential underlying factor in neighborhood and housing dissatisfaction. Unquestionably, the volume of the older population moving will increase in the future. Along with other social problems of the elderly will be the problems associated with older people who want to move but cannot find appropriate housing and neighborhood facilities and those who did not want to move but were forced to relocate.

3.4 Socio-Economic Characteristics Related to Elderly Accommodations

The socio-economic factors which influence housing adjustment are the same for the overall population. Adjustments and changes of particular socio-economic factors make housing choices more difficult for certain groups than others. The ability to overcome these constraints may vary with socio-economic status from family to family.

Butler et al. (1970) used a socio-economic index composed of education, occupation and income to classify their sample into various groups. They found that there are major differences in mobility within age levels by socio-economic status (Butler et al., 1970: 14).

The census compiles comprehensive data on individuals according to age, income, education and occupation. From followup analysis it was learned that mobility rates vary according to occupation groups. The highest mobility

was found among skilled and semi-skilled blue collar workers.
Duncan and Newman (1975) found similar results with regard
to education.

Other researchers found that income had little re-
lationship between mobility and family plans (Goodman,
1974, Lansing et al., 1964; Roistacher, 1974). Roistacher
associated mobility as a means by which families adjust
housing consumption to fit their altered economic status
(Roistacher, 1974: 50).

For many of the elderly socio-economic factors
decrease in order of importance compared to younger age
groups. When retirement is achieved the set pension acts
as a barrier determined by past activities in early life.
Most of the elderly's lives amount to a struggle for economic
survival; for many it is a struggle for some social recog-
nition, for all it is a struggle against being pushed out
of the mainstream into a subculture...a subculture of poverty
and social uselessness (Lindheim, 1971: 9).

Many older people have become poor as they have
grown old (Smith, 1977:5). As people grow older their
housing needs change along with changing socio-economic
conditions. The utility of the house deteriorates unless
careful consideration is given to ways that can meet the
needs of the changing person (Stubbs, 1976· 540).

The older person is faced with changing living
arrangements trying to re-order who he is and where his

"life space" is in the world. The mental health aspects of any alteration in life styles becomes a giant consideration (Smith, 1977· 1). 'Many older·people cling to living spaces which seem inadequate because their home may be the last bastion of reality and competence.

Before discussion can begin on the types of living arrangements for the elderly, it is necessary to see how researchers examine the socio-economic profile of the elderly. Zay (1965) divided his analysis into the following areas: age, sex, marital status, personal physical conditions, economic situation, environment and community resources (Zay, 1965: 6-9). Quotations would show little significance from this period since the quantitative figures are greatly outdated.

The basics of his study showed that with regard to age, the population over 65 years was distributed very un-evenly. His statistics showed that in 1965 two-thirds of the population were under the age of 75. He therefore pre-dicted that the 1980's would have an expected increase in the number of persons requiring medical and nursing care (Zay, 1967: 7).

When examining the sex distribution, Zay realized that the older population had more women than men and that women preferred to live in self-contained dwellings, whereas men tend to live in hostels, boarding houses or the home of a relative.

Among all the factors taken individually, marital
status is probably one of the most important because it had
a decisive effect on living arrangements. Zay found that
approximately half of the 65 and over group were single.
This proportion was increasing from one age cohort to another.
His results showed that women living alone formed the fastest
growing group. From this it may be deduced that the most
rapid increase in demand will be for accommodations to
house solitary female persons (Zay, 1965: 8).

When the information on health conditions was exam-
ined Zay concluded that living arrangements for the elderly
would be affected in two ways. The lowering of the mortality
rate by medical science would create special needs for
specialized institutions and would reduce the functional
capacity of individuals to lead an independent existence.

The relationship between the economic situation of
aged persons and their living arrangements has been examined
by Beyer (1961) and Smith (1961). They brought out clearly
the difference that exists between the means of persons who
live in their own homes, of those who are tenants, of those
who live in rooms and of those who live in the home of a
relative. They concluded that income is the decisive factor
in the choice of a dwelling (Beyer, 1961: 17; Smith, 1961).

When Zay examined the environment he found that the
important factor was the geographic distribution of the aged
between the urban and rural environment. Results showed

that the proportion of elderly persons who own their homes was much higher in rural areas. From his study period, there was an increase in the proportion of elderly persons residing in urban centres (Zay, 1965: 9). It must be remembered that elderly people remain individuals and if there is one area in which they should not be lumped together within a single solution, it is housing (Guillemette, 1966: 58).

3.5 Residential Characteristics of Senior Citizen Accommodations

When thinking of housing needs of the elderly, we often think of meeting those needs in retirement villages. Housing needs of the elderly have been met in part by retirement villages, retirement homes and nursing homes. Other housing needs have been met by facilities funded by government programs. Yet, the vast majority of the elderly population live in their own homes (Morris and Winter, 1978: 210).

One of the most important aspects of retirement is a senior's accommodation. Wherever a person lives, his surroundings and kind of housing will directly affect the quality of his life (Crawford, 1979: 106).

Housing needs of the elderly are significantly different from the concept of housing for any other age group. For all age groups, housing is invested with the emotions

of family living and independence of spirit and action.
It encompasses friendship patterns and all of the dimensions
of community life. It is an environment in which one can
take pride and find the resources needed to mold a meaningful
way of life (White House Conference on Aging, 1971. 12).

To the old, home may be the last grip on reality
and security. Many elderly people fight institutionaliza-
tion even when their own housing is unsatisfactory or un-
manageable. If "a man's home is his castle," for the old,
it is also his sanctuary, refuge and identity (Smith, 1977:
78).

Because decreased mobility often reduces the amount
that older people can travel outside their homes, the living
place becomes a life focus. For persons restricted by age
infirmities, the home may be the centre of practically all
life activities (Smith, 1977: 13, Green, 1975; A. W. and
P. J. Cluff, 1970). Retirement at 65 is becoming the ac-
cepted practice and in this connection people are coming to
realize that there exists wide individual differences in
the physical and mental state at that age (Heron and Chown,
1967 10).

Traditionally, the elderly lived with their children.
Most families now live in relatively small houses or apart-
ments which do not provide the space required for grand-
parents. With increased family mobility, the close family
ties that existed in the past are rarely found today
(A. W. and P. J. Cluff, 1970: 36).

A problem arises when the aged have some specific requirement which is not supplied in the usual house or have a need for specially designed facilities which are not distributed in an available manner. One characteristic common to all elderly, regardless of their stage in the aging cycle, is the desire to attain independence and the happiness associated with it (Rad, 1976: 516).

Independence is defined by the architect Isaac Green as being.

1) that which requires ability to cope fully with the demands of everyday living;

2) that which is possible only if a special setting of congregate housing complete with a program of personal, social and health services, short of full medical care, is made available (Green, 1975: 1).

When seniors retire they have four choices open to them: to stay where they are, to sell their big home and buy a smaller one, to sell and then rent an apartment or smaller home, or to lease their big home and use the revenue to rent a smaller place (Crawford, 1979. 107).

Desired housing characteristics of older people were reviewed by Alice Stubbs when she examined the quality of elderly's housing desires. Her results showed that older people

1) do not want to move from familiar surroundings

2) prefer single family residence

3) need physical improvements in their present housing

4) have fixed low incomes

5) are lonely

6) have physical impairments which necessitate having

modifications (Stubbs, 1976: 541).

A further study to examine the elderly housing situation was conducted by Beyer and Woods (1963). They questioned 5000 elderly individuals and discovered that 81 per cent lived in their own household, 10 per cent lived with their children and 25 per cent lived alone. In the community where the sample was taken, 60 per cent of the population owned private homes (Beyer and Woods, 1963).

This type of study was continued by Montgomery (1965) with 500 individuals in the Commonwealth of Pennsylvania. He found that 15 per cent lived alone, 60 per cent lived with their spouses and 75 per cent were home owners (Montgomery, 1965).

The picture that emerges is a set of housing conditions not very different from the housing of the rest of the population. Households with an elderly head are more likely to own a single-family dwelling than any other combination of structure type and tenure status. The elderly are also more likely to be home owners than families headed by an individual under 35 years of age (U.S.B.C., 1973 1-10).

By t..e time seniors reach retirement age, their
homes are usually paid for, but in need of extensive repair.
With only their pensions and a small inflation-eroded savings
account, seniors have not the money to cope with costly im-
provements (Crawford, 1979: 107). Sometimes their poor
health or the lack of financial resources lead to delay or
postponement of routine maintenance. Hence, the dwelling
may need major repairs. The house and yard may be far too
large for the couple to care for with ease. This condition
is apt to create problems for the elderly which are not
easily solved through residential alterations or additions
(Morris and Winter, 1978: 212).

There are many different types of housing for seniors
to choose from: independent units, which include single
family homes in communities and retirement villages, second
homes which include vacation and mobile homes and multi-
units which take in condominiums, apartments and cooperatives.

During the last decade, high rise complexes have
become a way of life for many seniors. Since most of these
units have rents in direct ratio to income, almost every
segment of the senior population can afford them if avail--
able. The problem in·this type of unit is the difficulty
some seniors have in adjusting to the accommodation
(Crawford, 1979: 115).

Senior apartments provide an answer to the housing
needs of pensioners with small savings, but the loneliness

is overwhelming. Usually when seniors move into a high-rise, they have sold their homes and their lives are dependent on their landlord, often a large government agency (Crawford, 1979· 116).

There are basically two types of institutions for the elderly, namely: the nursing homes which are privately owned, and homes for the aged, which are owned and operated by a government source. This group of people form a small section of the elderly population (Crawford, 1979· 123).

From a study by Cluff, they found that tenants in apartments complained of poor transportation to facilities, noise, incompatibility with neighbors, lack of amenities in surroundings and rent (Cluff, 1970· 38). They isolated the facts that elderly people guard their independence and wish to keep it as long as possible. Most aged people feared change (Cluff, 1970: 39).

In conclusion this study found a need for a wide range of living accommodations which will meet the needs of the elderly and allow an extended period of independence and freedom of choice in which to enjoy their retirement years. .

3.6 Housing Supply and Demand Model

The price for housing depends upon the supply of, and demand for, housing. Supply and demand are theoretical constructs that provide an organized way to think about the

many factors affecting the market price of housing (Morris
and Winter, 1978; Lithwick, 1977).

The concept of supply and demand relates to the
marketplace, since it is the interaction between buyers
and sellers which results in a trade for a specific price.
Therefore, the price of housing will represent to the public
the factors that affect demand for housing and the factors
which affect the supply for accommodations (Lipsey, Sparks
and Steiner, 1973).

Determining the supply of housing available to the
elderly begins with knowledge of the number and quality of
accommodation units in existence at a given time for an
area. In conjunction, the measurement of the demand for
housing begins with knowledge of the number and character-
istics of the elderly households that exist at a given
period in an area. These two sets of information are usually
available from census data (Lithwick, 1977; Heilbrum, 1974;
Toyne, 1974; Lipsey, Sparks and Steiner, 1973; Morris and
Winter, 1978).

The estimation of the demand for housing is made
additionally difficult because demand will consist of only
those households who are ready to buy or rent a different
accommodation. This group of households includes people
residing in other localities who are considering a move
into the locality and potential households in the form of

people considering formation of a separate household in the
locality. Therefore, the actual supply of housing consists
of the units vacant and available and those potentially
vacant if a buyer were available (Morris and Winter, 1978 236).

As a result, only a portion of the population of
households and only a portion of the housing stock are in-
volved in the demand for and supply of housing. Also not
all families are the same, nor are their preferences, and
not all housing units are identical. The housing market
is segmented by tenure, size of units and location (Morris
and Winter, 1978· 237; Lipsey, Sparks and Steiner, 1973).

Housing markets are essentially local in nature,
and therefore, requirement analysis has to be firmly based
on a viable regional approach (Armitage and Audain, 1972· 5).
The ability of households to occupy the housing they need
is constrained by their ability to afford it. Thus, income
and wealth variables must be introduced into an analysis
(Armitage and Audain, 1972: 9).

To analyze housing these researchers developed an
"economic-demographic model" for the elderly because they
thought that demographic factors were the strategic factors
in determining the level of housing demand (Armitage and
Audain, 1972. 6 and 36).

When determining housing demand it is necessary to
examine the special housing needs of senior citizens. The
term "housing needs" is used in a social sense to express

the extent to which housing conditions fall below the levels
or norms considered necessary for health, privacy and the
development of normal family living conditions (United
Nations, 1967 7). Reliable estimates of housing needs are
an important factor in establishing housing policy and for
the formulation of housing programs. They indicate the
magnitude of the housing problem while changes in the age
levels can be interpreted.

The demand for housing refers to the characteristics
and constraints on the behavior of consumers. Conventionally,
the housing market is divided into submarkets according to
certain key characteristics on the demand side. A demand
model was developed by Mandelker and Montgomery (1973) using
three characteristics; income, size of the household group
and tenure (Montgomery and Mandelker, 1973· 161).

Most housing problems reflect change in people
concerning their houses. Over a period of time houses change
in quality and price, usually both decline with age. House-
holds also change in the sense that an individual ages and
passes through the life-cycle.

The findings from these researchers showed that
housing did filter down in quality and as it did, it filtered
down through the spectrum of household income moving from
the richer to the poorer. Their results showed the elderly
at the poorer end of the scale (Montgomery and Mandelker,
1973· 226).

The demand for housing was further investigated by
Lithwick in 1973. He projected the need for accommodation
in Ontario from 1971 to 1981. His variables were similar
to those of other researchers. Results from Lithwick's
model were accurate enough to indicate the requirements for
new construction, demolition, maintenance, rehabilitation
and subsidization for the period considered (Lithwick, 1973
14-20).

As with most housing researchers, Lithwick had
problems in gathering data since availability was difficult .
In conclusion, his research found that the poor and elderly
are often forced to trade quality for size of unit and
accessibility to services and facilities (Lithwick, 1973:
22).

The elderly are a distinct segment of the population
with special needs which are not being met. "It has been
estimated that a fourth to a half of all patients in nursing
homes would not have to be there if there were adequate
alternative housing of various types." (Rad, 1976: 524).

When considering how little specially designed
housing has been built for those of lower income, it is
obvious that the great majority of elderly persons find
themselves without the kind of housing they need. Those
who need and would most benefit by more and better housing
are largely inarticulate and are not organized to make their
needs known (Rad, 1976: 527). Rad's findings showed the

most predominant U.S. constraints to elderly persons' accommodations were a national set of priorities, high interest rates, construction costs and zoning or building codes. The growth and longevity of older citizens in Canadian society and in particular their concentration in the central cities has placed considerable strain on the nation's housing resources (Epstein, 1976: 5).

A substantial number of old people own their own homes. This is also true of most European countries and even more so of the United States. About 79 per cent of elderly persons live in dwellings owned outright by themselves (Williams, 1979: 130). These houses are usually the old family home and have been occupied for a considerable time. Undoubtedly, old people prefer the independence of owning a house and are reluctant to move even when the residence becomes unsuitable and financially extending (Stone, 1980).

When examining the rented housing market it can be seen that a sizeable number of old people live in rented accommodations. Most of these buildings are operated by a local authority. The elderly in these houses have usually been in them for a long period of time, although there is usually a larger turnover than in owner-occupied houses, as it is easier to persuade old people to move into smaller and more convenient accommodations when there is not the sentimental tie of home ownership (Williams, 1979: 130).

In recent years government policy has encouraged local authorities to build special housing for old people which has resulted in an increase for this type of accommodation. These projects are aided by additional central government financing which reduces the economic burden to senior citizens (Stone, 1980).

The provision of sheltered accommodations for old people has developed in recent years. These units are of the bungalow type with communal eating and meeting facilities. Other services are provided on a group basis with nursing and domestic help. Accommodations have a highly qualified staff for the home, yet the seniors maintain a more satisfying state of independence. If increasing age brings about a general physical deterioration, then the move into the residential home can be far less traumatic.

Finally, senior citizens are able to fulfill their housing needs through established housing associations. These groups have special accommodations for the housing needs of the elderly. There are variations in the type of accommodation which provide elderly with their own rooms, within the security and companionship of small households (Williams, 1979. 131).

It is important to remember that the community as a whole is responsible for their senior citizens. These people have earned a right to proper accommodations for

their past community services and should be provided with
a continuing role as a retired member of the community.

3.7 General Housing Concepts of the Elderly

The aim of this literature review has been to des-
cribe the housing problems of caring for old people in the
community and to outline the facilities which should be
available to improve their situation. Many senior citizens
fear disengagement from the community but society seems to
encourage this. However, attitudes m st change. Professional
workers must fully realize the special problems which affect
the elderly. Families and society must accept the respons-
ibility of care. Old people themselves must learn to inte-
grate and not segregate. Retirement must not mean disengage-
ment but rather an opportunity for fulfillment and positive
living.

The initiative must come from government agencies
which have the power to legislate direction towards senior
housing solutions. Proceedings from the Research Conference
on Aging, 1965, in Washington, D. C. stated the principles
for the planning of old age housing:

1) Every aged person should retain a maximum amount of
   independence.

2) Accommodation, service and help should be in accordance
   with individual physical and mental needs.

3) The individual should decide how much organized aid he or she demands and accepts.

4) Planning should aim at maximizing opportunities for help from the family and personal friends.

(Conference on Aging, 1965: 40).

With the trend toward early retirement, millions of persons in t'eir 50's will face many of the problems now associated with the chronologically aged. They will exper- ience the economic dependency that comes from living on a reduced fixed income in an inflationary economy. They may have inadequate housing, lack access to transportation and be confronted with other problems stemming from limited purchasing power (Binstock, 1975: 42-3).

Governments from different areas and countries have tried to approach these problems in diverse ways. The Canadian government should learn from examples abroad which policies would be best for its own elderly population.

Trends in government policy take many different forms throughout the world. England and several European countries lead in providing elderly accommodation services. In the United Kingdom the government provides sheltered housing for its senior citizens. These accommodations are small row apartments grouped throughout the community. A study conducted by Lloyd Jones (1975) examined this method in his country. His research showed that 84 per cent were lonely, 53 per cent had accommodation size problems and 19

per cent were unable to care for themselves (Jones, 1975: 8).

The English government sees this type of housing as a solution to the problem of elderly housing. They feel that these accommodations allow the people to remain with a feeling of independence and have all the services needed by them provided. The majority of the costs are captured by the government.

An excellent example on which the Canadian system could pattern itself is provided in Sweden, Denmark, Norway, Finland and Holland. In these countries there is an emphasis on independence and self-sufficiency which is balanced with government insurance, pensions, housing subsidies and home service programs. There is also an increasing diversity of services and choices for the elderly by centres designed with a wide range of housing, recreation, health, cultural, commercial and social services. The main objective of European attitude is to have a continued involvement for the elderly in society (McRae, 1979: 8).

One of the best examples in Europe for elderly housing choices is found in Sweden. Sweden has a widely ranging program and spends approximately 40 per cent of the national budget on programs for seniors. They have learned to allow the individual to live in a normal environment by making enough options available to allow freedom of choice to the elderly.

In Sweden the elderly are helped to remain as

long as possible in their own homes retaining their independence. What makes this country different from Canada, the United States and England, is the acceptance by the younger generation that it is their financial and social duty to care for their senior citizens (McRae, 1979: 54).

The Canadian problem can be described more clearly when examining the housing situation in Ontario, since it affects the policies undertaken in Windsor. This situation is described by the Ontario Welfare Council when they state that one-half of the elderly households in Ontario are below the acceptable poverty lines (Ontario Welfare Conference, 1975: 1).

The Ministry of Housing recognizes the fact that our senior citizens are in need of better quality housing. Today's rents impose an almost intolerable burden on many seniors.

There is the recognition of the need for more sensitive and open development and better management methods because the lack of choice many elderly people face is distressing. The solution is to have at the provincial and local level a much more accurate general assessment of need and a set of targets for programs which clearly indicate how these needs will be met. Each community's population ages in a different way and in each area the elderly have different patterns of housing tenure, income and other important characteristics. It is important to uncover the universals

which apply to North American communities, such as applica-
tions of the family life cycle, while recognizing the dif-
ferences in housing and shelter adjustments from place to
place.

While the patterns and problems of the aged are
similar throughout the industrialized nations of the world,
there is no doubt that Holland, Denmark, Sweden, Norway
and Finland have been making significant strides towards
identifying and solving the problems of elderly people and
their physical environment.

Chapter IV

STUDY DESIGN OF THE RESEARCH

4.1 The Decision-Making Process and The Housing Demand Model

The main objective for this research has been to determine the demand for accommodations by senior citizens in the City of Windsor. In order to accurately determine housing demand the present supply of accommodations must be established for the senior citizen population. To help determine this goal a model of housing demand is presented in this chapter. Operational procedures for the model are based on the family life cycle, changing over time. As well, the affecting socio-economic and residential factors within the model are incorporated, enabling the determination for elderly housing demand.

The decision-making process by the elderly in determining their choice of housing, is also presented to further aid explanation. This flowchart is only descriptive to help the reader better understand the selection process for a specific housing type.

The hypotheses for this research are discussed and analyzed in chapter seven. Hypotheses were derived to measure the different aspects of elderly housing adjustment.

With the changing lifestyles of retired persons the hypo-
theses offer an indepth analysis of the various factors
which result in the demand for accommodations. The relevant
characteristics of decisions have been assessed along with
present changing environments of the elderly.

The flowchart commences when a family first considers
their residential position as a determinate to move. Before
any changes are made careful consideration by the family will
occur evaluating their present residence. The evaluation
of housing conditions are more important at specific age
related periods than at others. The relative importance of
housing conditions depends upon changes in the family's
situation and the contribution of housing to the family's
overall well-being.

In particular, for this study, the first decision
concerns the evaluation of the actual housing conditions
weighted against family preferences and community location.
If the results indicate a housing adjustment then the family
will assess their housing decision to move. This second
decision process will examine the housing unit, future
accommodation perceptions, if any, and specific factors
which could force a change such as a drop in income resources.
The result of this first process will either be a high level
of satisfaction allowing the elderly couple to remain in their
present residence or a low level of satisfaction where they
will consider moving into a new accommodation type.

DECISION MAKING PROCESS
FOR ELDERLY ACCOMMODATIONS
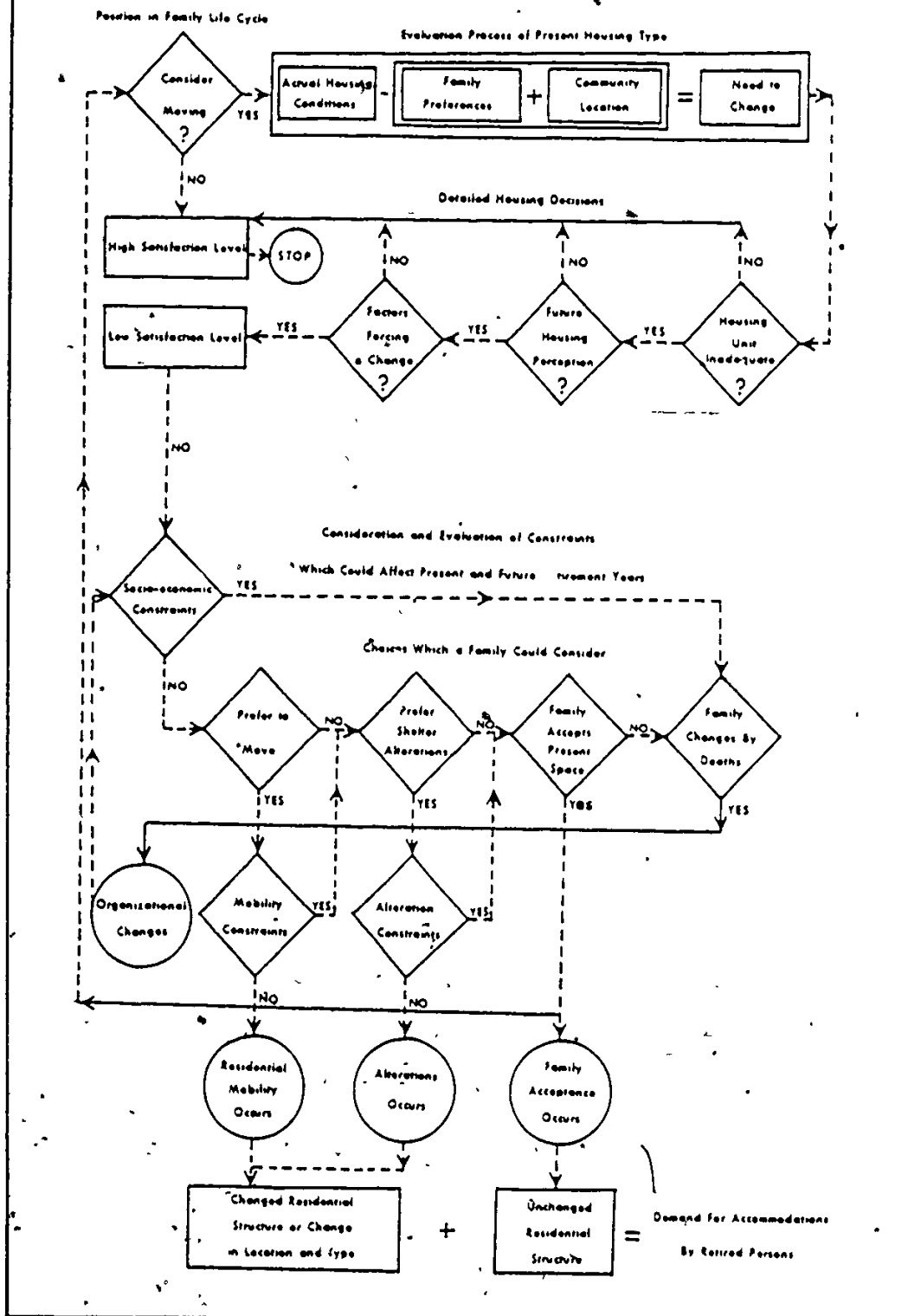
The third decision-making process will involve the socio-economic constraints on the elderly family. As presented in the research model these characteristics are income, education, occupational status, family structure and medical or physical disability. With the consideration of these factors, the family will decide:

1) to move into a smaller residence and new location,

2) prefer to make accommodation alterations;

3) to make personal adjustments and remain in their present residence,

4) to consider family reorganization, by moving in with other family members or allowing members to live with them.

The last stage occurs when the final decision process begins whereby the family changes or retains their actual housing conditions. Regardless of the final output the determination of demand for accommodations by retired persons is revealed.

The importance of the decision-making process is the application to the demand model presented in the research (see accompanying diagram). The factors to be measured are presented in determining housing demand. The model is influenced by a transition time throughout the family life cycle changes. Any specific age group from 55' to 90 plus assess their housing status-when desiring a change in residence.

Figure 4B

HOUSING DEMAND MODEL

Socio-economic Characteristics

Residential Characteristics

Stage in the Family Life Cycle

| 55-59 |
| 60-64 |
| 65-69 |
| 70-74 |
| 75-79 |
| 80-84 |
| 85-89 |
| 90+ |

Income
Education
Occupation

Family Structure
- Age
- Norms
- Headship
- Family Size
- Preferences

Disability or Impairment
Medical Physical

Stage in Accomodation Cycle

- Tenure
- Structure Type
- Shelter Costs
- Quality of Structure
- Space Requirements
- Community Preference
- Neighborhood Preference

Housing Demand Satisfaction

Location Satisfaction

Desirability to Adjust Housing Type

Mobility

Residential Change By Type

Acceptability

Residential Adaptation of Present Accomodation

Time

With this model the analysis of socio-economic characteristics are assessed against the different residential characteristics which the elderly family must consider before making a selection. The model is divided into a series of stages allowing the elderly persons or family to find a suitable situation. In completion the model shows a variety of choices possible resulting when family changes in their residence occurs or they decide to remain in their present shelter. As time passes the process will start over, but not necessarily at every age group indicated. Each individual in the life cycle proceeds at different rates, so that this model is flexible enough to accommodate all persons. Once the process of assessment has occurred the demand for any specific housing type at any specific age can be provided to the elderly.

The model of family housing behavior is simplified since families are self-regulating and complex in decision-making. Nevertheless, the model is a close approximation of reality and can provide the basis for the refinement and testing of detailed hypotheses. The utility of the model of housing demand as presented here shows value as a guide to research and secondly, as a means of teaching the implications of various housing actions.

Chapter V

RESEARCH METHODOLOGY

5.1 Questionnaire Procedure and Analysis

In order to achieve the objectives of this study,
the starting point of research was to establish the age
characteristics of the elderly population under investiga-
tion. For the purposes of this research, the study area
is defined as the City of Windsor (see figure 5A). Because
of difficulties with readily available population data
sources for the elderly, a methodology for collection was
established to provide a solution to this problem.

Description of the elderly population numbers were
derived from the 1976 census of Windsor. Allocation of
dispersion in census tracts locations indicated the number
of retired persons for each area (see figures 5B, 5C). The
total elderly population over age 55 was gathered into
five year groups for a more detailed and accurate analysis
(see table 5.1). A representative sample for early retire-
ment was established for ages 55 to 64 through advice and
consultation of local auto union referees.

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Figure 5A

CENSUS TRACT AREAS
FOR THE CITY OF WINDSOR, 1981
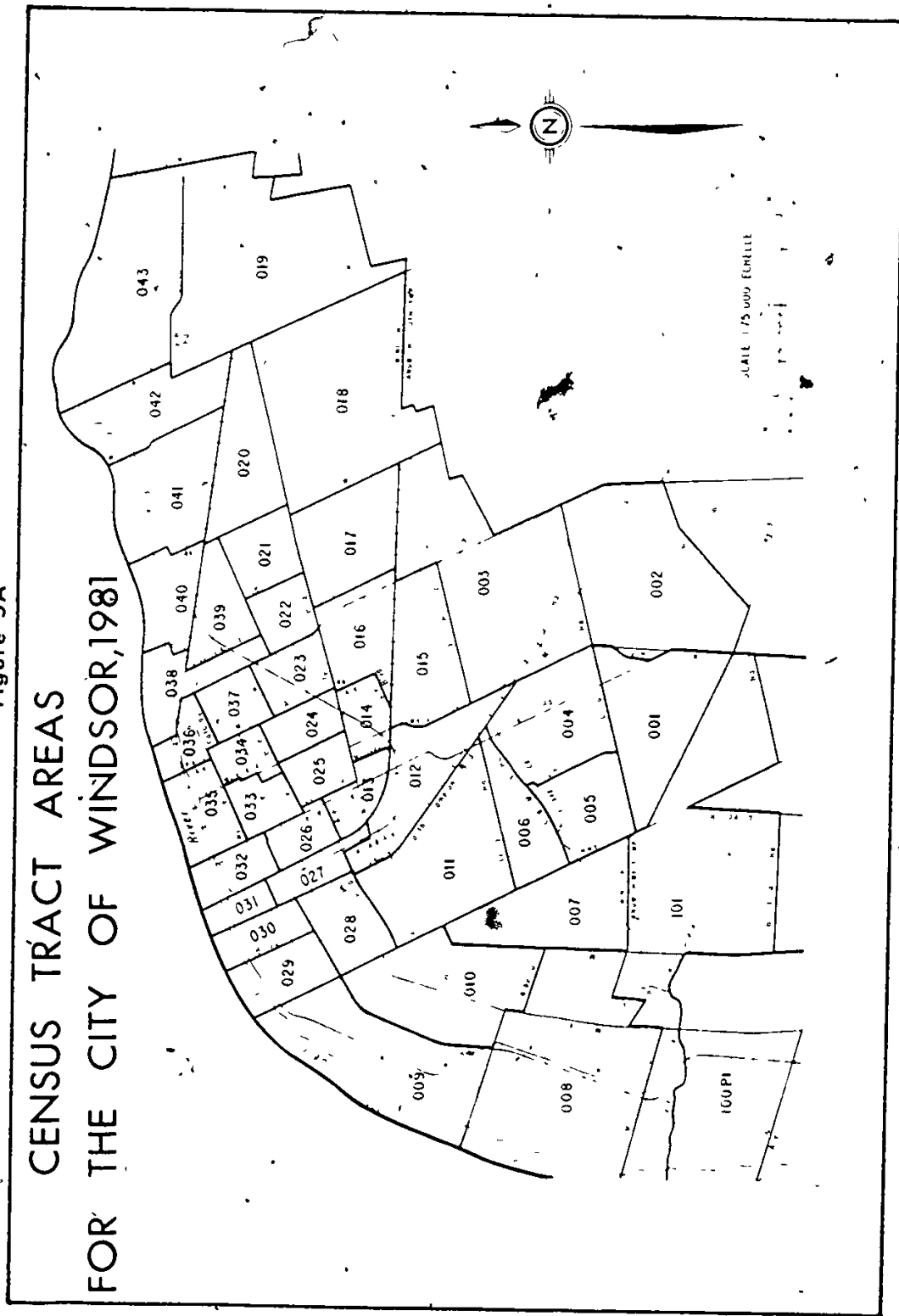
Source, Statistics Canada, 1976

Figure 5B

WINDSOR'S RESIDENTIAL POPULATION, 1981

1 Dot Represents 50 Persons

Miles
Kilometers

Source: Author

Figure 5C

CONCENTRATION OF SENIOR CITIZEN
POPULATION BY CENSUS TRACT, 1981

1-200
2-300
3-400
4-500
5-600
6-700
7-800
8-900
900+

SCALE 1:25 000 ÉCHELLE

Source: Author
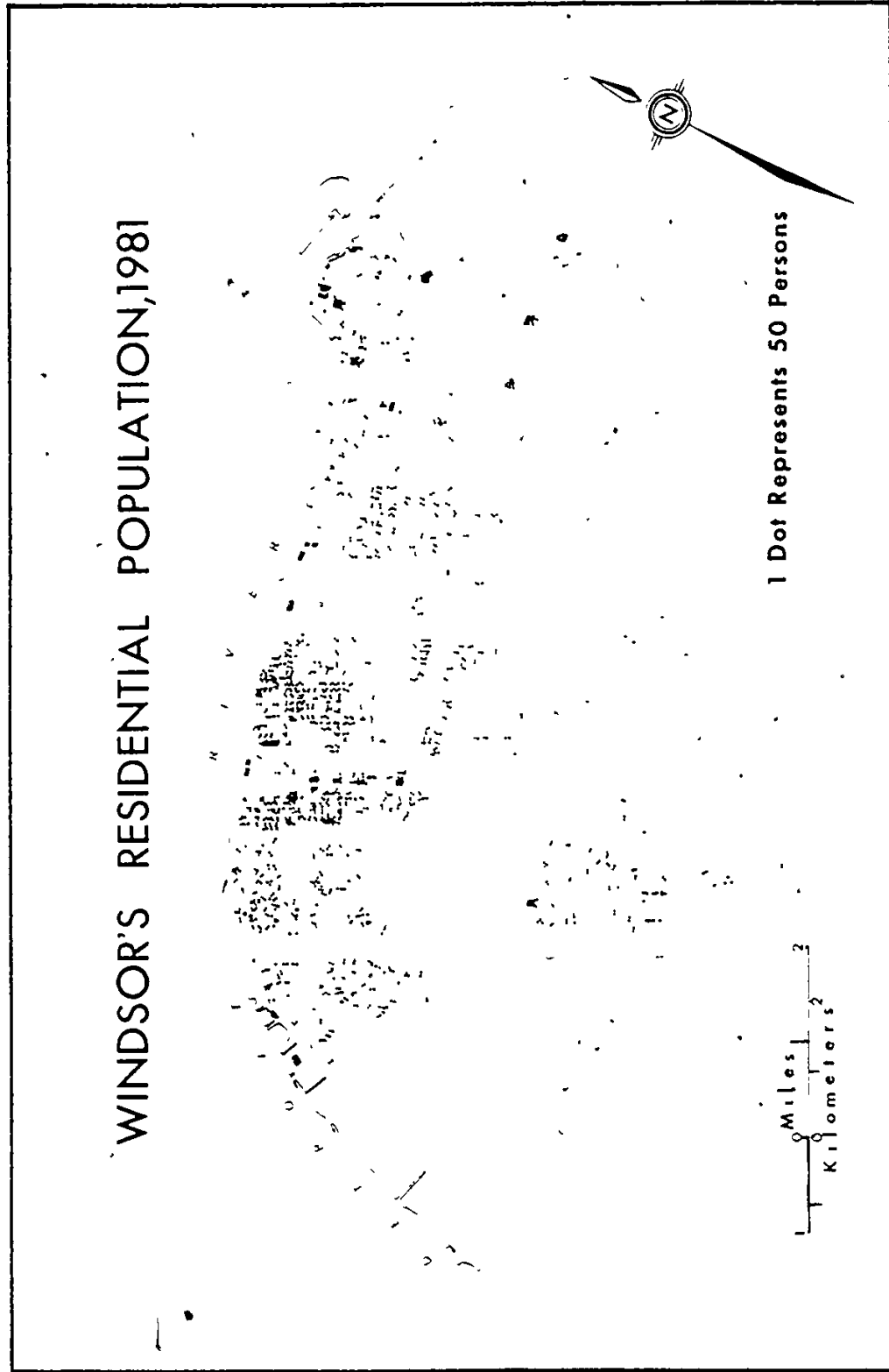
Table 5.1

RETIRED PERSONS IN THE CITY OF WINDSOR 55 YEARS AND OVER

Age Groups	1976 Canada Census Windsor		1981 Survey Samples
55 - 59	11,005	(1,200 retired)	12
60 - 64	9,330	(2,600 retired)	26
65 - 69	8,700	(5,395 retired)	54
70 - 74	6,840		69
75 - 79	4,650		49
80 - 84	2,585		26
85 - 89	1,125	(1,515)	15
90 +	390		

Total Sample = 251

The sample was drawn by stratified random selection from the seven major age categories for the total elderly population. sample population of one per cent was decided for interviewing purposes. There were 251 respondents from the city for data gathering purposes.

A questionnaire schedule was prepared on the basis of the literature review and in accordance to fulfill the study objectives. The first set of questions was designed to provide a statistical profile of the accommodation characteristics of older people (i.e. housing types: present, past, location, tenure status, housing description). The

second set of questions pertained to family characteristics

(i.e. family size, marital status, buyer's family size).

The next section concerned financial characteristics while

the last section asked opinionated questions on need for

housing (i.e. services, satisfaction, desired changes).

Several dimensions were extracted from the target population

measuring both socio-economic and residential characteristics

to determine housing demand.

The questionnaire was administered during the period

November 1980 to January 1981. A method of interviewing was

devised enabling the selection of respondents from senior

citizen centres in the city area. The total number of centres

in the city represent approximate membership for 70 per cent

of all senior citizens in Windsor. Therefore, 30 per cent

of the survey was conducted at the residence to account for

non-participating members. These respondents were randomly

chosen from the city directory using random number tables.

In total, there were 30 senior citizen centres located

throughout the city boundaries. From this group 11 centres

were chosen as strategic locations for residents' coverage.

The locational pattern of the selected centres represent a

market potential for the seniors within the city (see for

example Applebaum, 1968: 214; Haggett, 1975. 364).

This method provides more centre representation in

the city areas of high senior citizen density (for comparison

see figure 5C) and eliminated redundancy of residents among

centres. Justification for the use of centres allowed
accessibility to apartment residents, eliminated duplica-
tion of surveyed residents, provided locational represent-
ation of the city, provided ethnic respresentation and
allowed accessibility to hospital and nursing home residents.

The next stage of the study was the tabulation,
mapping and analysis of the collected data. The analysis
was carried out in two phases -- an analytical descrip-
tion of the data tabulations and catographic representation
of the housing residents and a more detailed statistical
analysis which refined the results of the preliminary review.

The first analysis compiled will consist of fre-
quency tables and graphing of the data while tests in phase
two will cross tabulate key variables to test the hypo-
theses. A chi square test for relationship among two var-
iables was used to measure association, and a contingency
coefficient to determine the strength of the relationship.
The formulas for both procedures can be found in the appendix
and are used for calculations.

Figure 5D

SENIOR CITIZEN CENTRES
MARKET AREAS, 1981

Chapter VI

PRELIMINARY ANALYSIS

6.1 Introduction

The preliminary analysis constitutes the first of two phases of data analysis. The interview data are tabulated and mapped (see figure 6A). Different age groups are compared when analyzing the different study factors in Part One. The accommodations types presently lived in and anticipated accommodation types are examined first, followed by a locational description. This section is followed by a discussion of the cost factors related to present accommodations for seniors. The ability to pay and the cost of living constrains household spending and residential improvement.

The analysis then focuses on the effects of the later stages of the Family Life Cycle, since seniors find themselves in these categories (see figure 3A, chapter III). The largest family size achieved by seniors and their housing is compared to the buyer's family for their previous residences. This should reveal a turnover of units within the housing market. The final part of the preliminary analysis examines medical and physical factors along with service and transportation needs which affect housing choice of senior citizens.

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Figure 6A

LOCATION OF SURVEYED
SENIOR CITIZENS
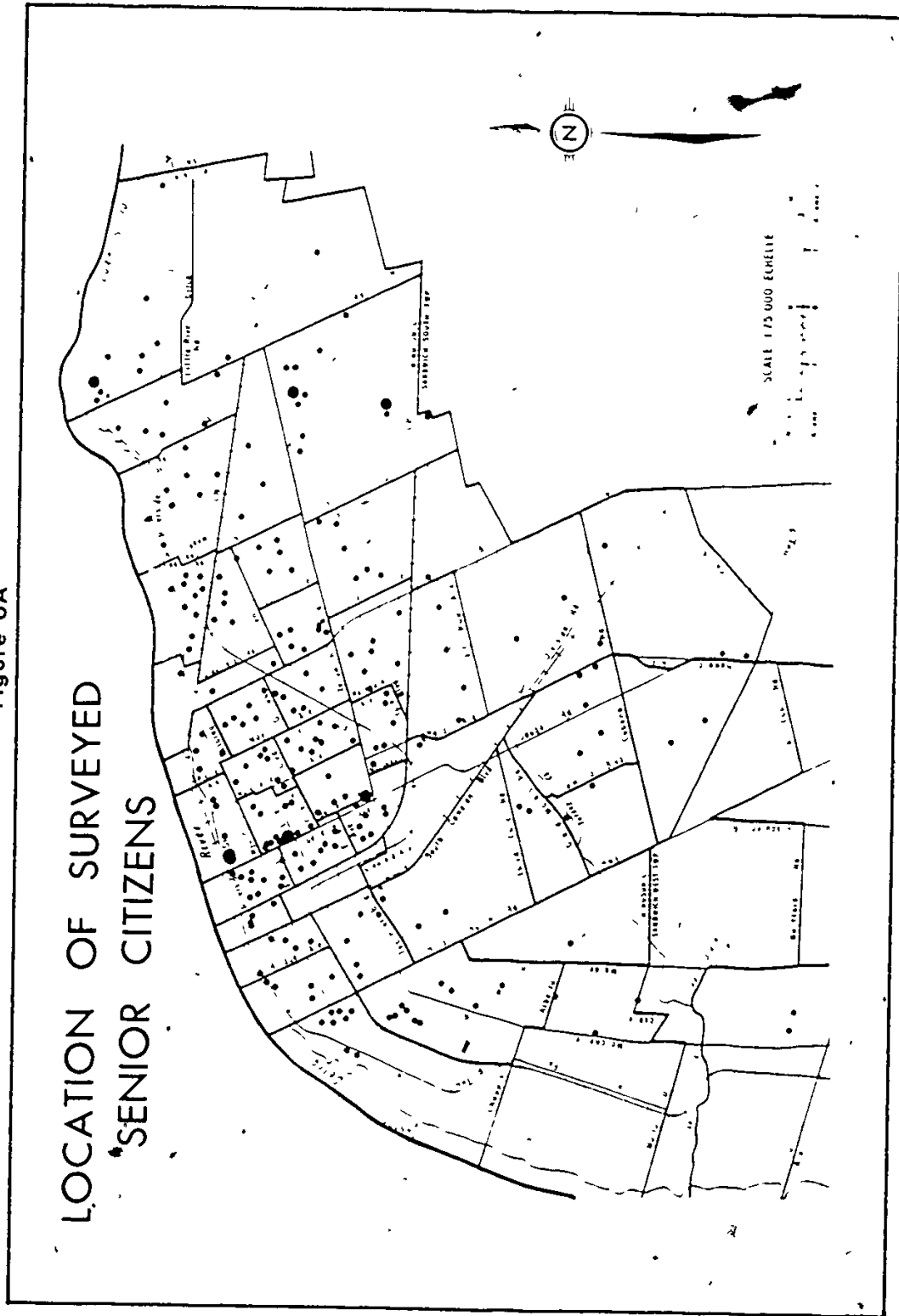
Source: Author

6.2 Survey Data Distribution, Age Cohort Comparisons

As mentioned in chapter five, the survey question-naire was conducted in senior citizen centres and interviewing at the place of residence. The location of surveyed residents are displayed on figure 6A. All census areas of the city show a representation proportional to population concentrates. The survey had a response rate of 87 per cent. From the map residents are heavily concentrated within the city highrise apartment complexes resulting in a clustered pattern. Other seniors also located in this area are found within the older city neighborhoods.

An examination of figure 6B showing distribution by age cohort of the sample reveals a range with a near normal distribution increasing from the 55 to 59 age group, peaking at ages 70 to 74, and then declining.

In addition to data analysis, the researcher made personal observations of the residents interviewed. One such example may be the emotional aspects which people convey in expressing their particular problems. While conducting a questionnaire one may experience different strengths of feelings and interrelationships that can only be recorded and discussed at a later stage in the analysis, but should not be eliminated. Therefore, the personal aspects of the survey have also been incorporated within the final analysis.

Figure 6B

AGE DISTRIBUTION OF SAMPLE

Number in Sample

100 90 80 70 60 50 40 30 20 10 0

55-9 60-4 65-9 70-4 75-9 80-4 85+

Elderly Age Cohorts
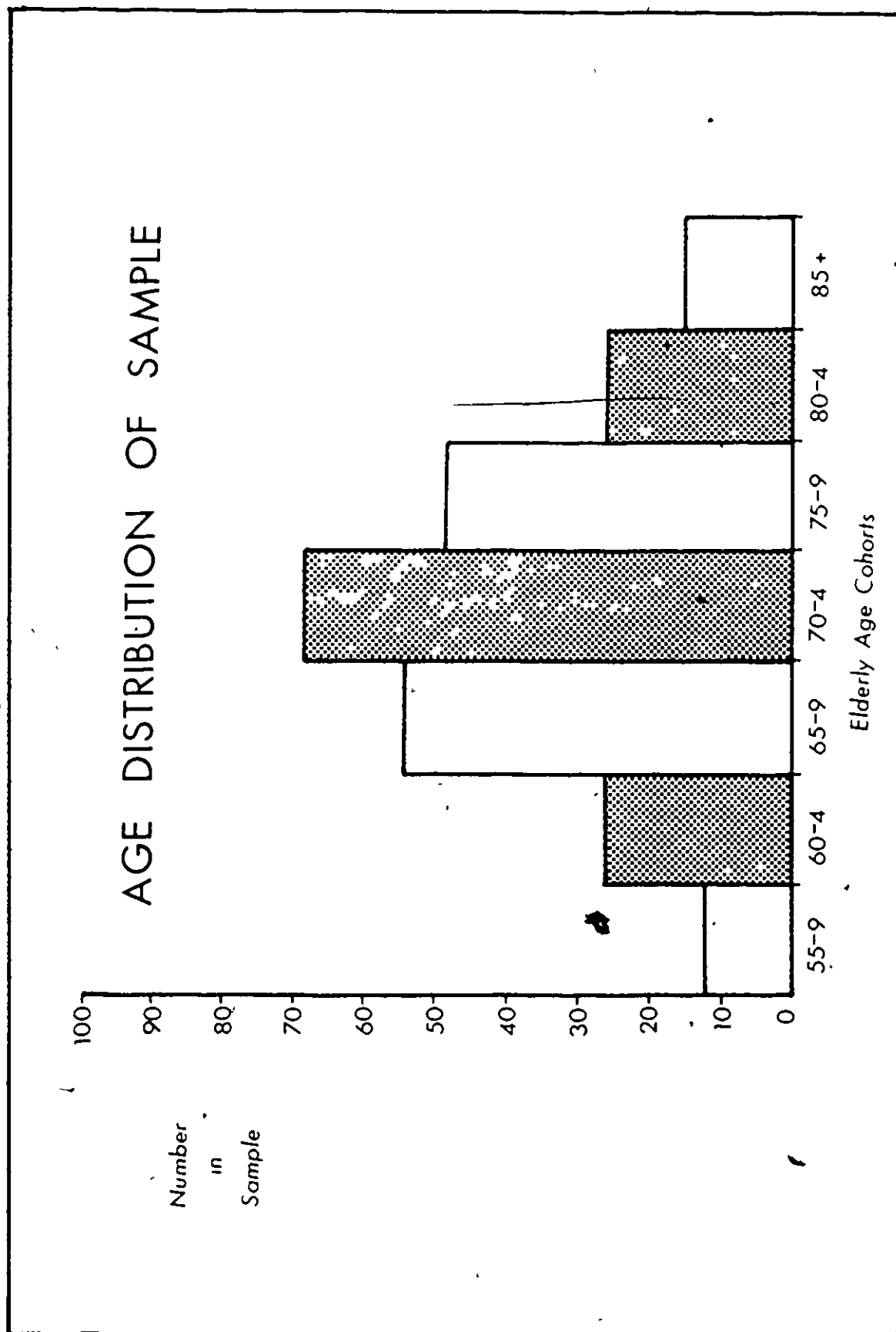
Source. Author

6.3 Comparison of Accommodation Types, Past, Present, Future

The accommodation descriptions indicate the extent to which senior citizens establish themselves in different types of housing throughout the urban area. The greater the number of residents found in one particular type of shelter, the greater the demand for that type. A comparison of residents by age groups and total population showed the changes in housing types over the years. Past housing has been surveyed to establish the link over time, which can then be projected to future desired housing types. An important aspect in the study of housing demand is to establish the present accommodation pattern and examine the past trends to project future needs.

This study recognizes that several factors may have an impact on the demand for senior citizen housing. In particular, the choice of the present pattern is affected by type, price and location in the urban area. As well, personal factors which have tremendous impact upon the senior, such as health, income and mobility, will relate to the demand for accommodation.

The analysis of the demand for housing commences with an overview of the entire survey results for the study area. The results for the past, present and predicted future housing situations are presented in tables A.1, A.2, A.3, found in the appendix. Present housing shows a total

of nine accommodation types that were inhabited by the 251 surveyed residents. The highest level of occupancy was in single-family residences with 62.5% followed by highrise apartments accounting for 24.0% of the respondents. The seven other types comprised 13.5% of the remaining sample (see tables in appendix).

Nursing homes contained only 2.8% of the sample, and this indicates that many seniors who reach older ages are relatively healthy. The large proportion of seniors who remain in their own homes indicated that this is the most desired type of residence, given the choices available.

Results for the specific age cohorts are presented in figures 6C, 6D and 6E showing the actual past, present and future preferences for housing. By comparing the past and present housing percentages for each cohort, the overall market shows a decreasing gap between single-family residences and highrise apartments. The figures also show a general lowering of occupancy in single-family residences and a steady increase for highrise apartments as more and more are put on the market for seniors. When extended to the future, demand preference shows that the decrease of single-family homes continues to a leveling off point. This plateau is reached when all seniors who want to stay in houses are established (see figure 6E).

When examining the age cohorts for present accommodations it is seen that there are definite decreases in the

Figure 6C

Past Elderly Housing Occupancy

Single Family Residence

Lowrise Apartments

Highrise Apartments

Townhouse

Nursing Home

Percent Occupancy

100 90 80 70 60 50 40 30 20 10 0

55-9 60-4 65-9 70-4 75-9 80-4 85+

Elderly Age Cohorts

Figure 6D

Present Elderly Housing Occupancy for 1981.

Percent
Occupancy

Single Family Residence

Highrise Apartments

Nursing Home

Lowrise Apartments

Townhouse

Mobile Home

Condominium

Elderly Age Cohorts

55-9,   60-4   65-9   70-4   75-9   80-4   85+

100
90
80
70
60
50
40
30
20
10
0

Figure 6E

Preference for Future Elderly Housing

Percent
Occupancy

Single Family Residence

Highrise Apartments

Lowrise Apartments

Townhouse

Nursing Home

Mobile Home

Condominium

100
90
80
70
60
50
40
30
20
10
0

55-9   60-4   65-9   70-4   75-9   80-4   85+

Elderly Age Cohorts
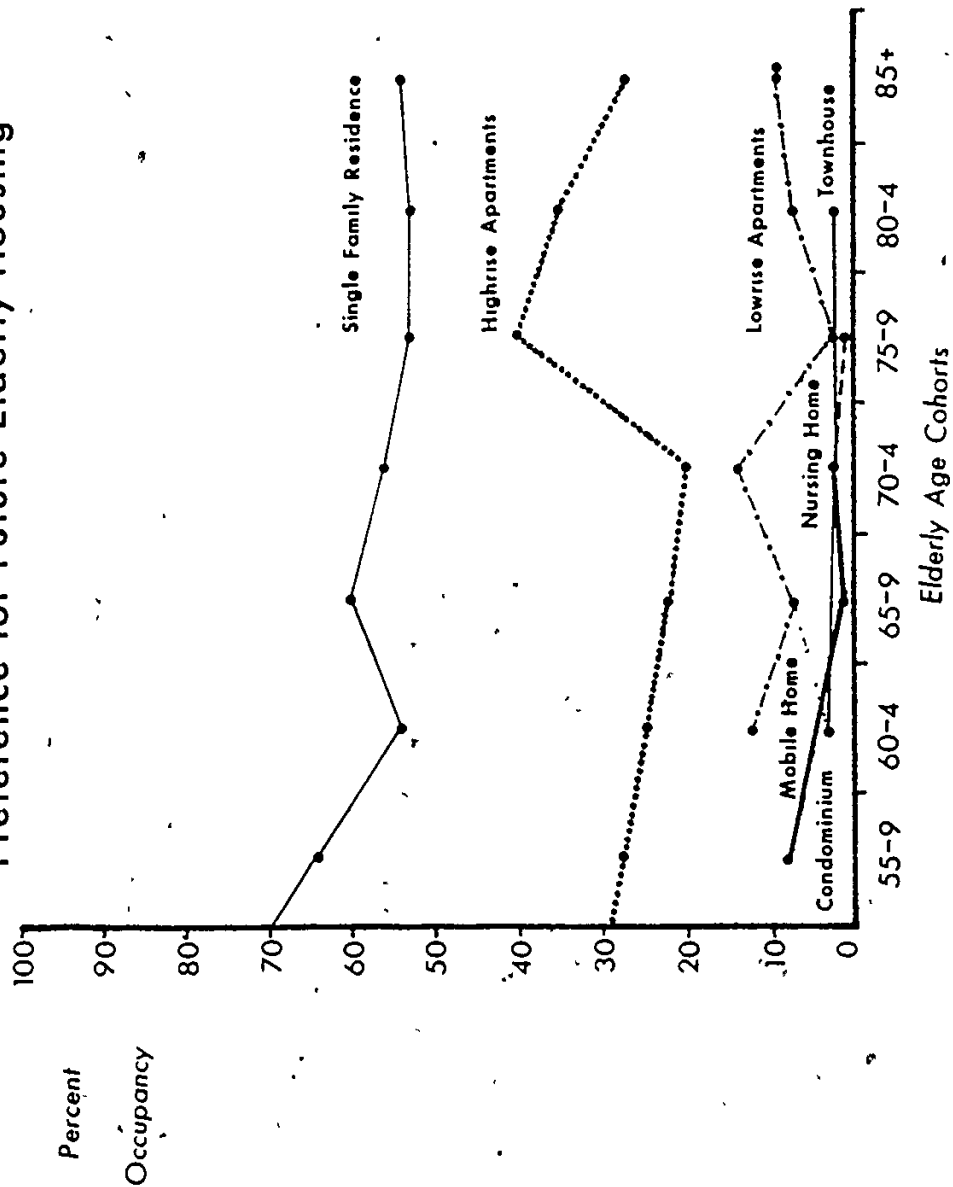
proportion of single-family residences between the ages of
59 to 64. This may be attributed to decisions to relocate
prior to retirement, further explanation will be given later.
Among all age groups there was a larger number who lived in
highrise apartments. The steepest increase occurred between
the age groups of 70 to 74 and 75 to 79 moving from 20.0%
to 33.3%. These figures show that at these ages the demand
for apartment living increases at the expense of other shelter
types (see figure 6C. and table matrice 6.1)

From examination of the present housing graph, an
abruptness in decision-making can be seen at age 55 to 64.
At this point there are decisions made by these seniors to
experience a new shelter. Some may be trying to solve any
anticipated problems they might have with a present location.

A "turning point" is seen on the graph which may be
explained by the fact that this younger group's ability to
function and afford relocation is not affected. They still
have relatively high incomes, from more recent retirement
pensions than older groups and are in good health. Therefore,
the incidence of relocation is higher in the younger age
cohort.

A loss in single-family residence occupancy is seen
by the increase of other housing types in the market for age
55 to 64. Once these seniors have had the opportunity to
explore the net+red housing market and start nearing the
government pension age of 65, they become more content by

Table 6.1

TRANSITION OF OCCUPANTS FROM PAST TO PRESENT HOUSING

Past Housing Types	Present Housing Types				
	Single-Family Residence	Highrise Apartments	Lowrise Apartments	Other, Joined Units	
Single-Family Residence (79.7%) 200	152	31	5	12	=200
Highrise Apartments (3.5%) 9	0	9	0	0	= 9
Lowrise Apartments (11.2%) 28	5	15	8	0	= 28
Other, Joined Units (5.6%) 14	0	5	0	9	= 14
Totals 251	157 (62.5%)	60 (24.0%)	13 (5.3%)	21 (8.2%)	=251 (100.0%)

All numbers are in absolute values

Source   Author

either remaining in a selected new shelter or reverting back
to a single-family residence. This is supported by the
sudden increase at age 65 to 69 for both single-family res-
idences and highrise apartments. This occurs at a loss of
other housing types taking away their residents. A situation
such as this results from housing inertia whereby a person
establishes over a lifetime a taste for a particular accom-
modation type. Some seniors never feel comfortable in any
place other than their own homes. .

Single-family residents comprise more than 50%
throughout the different age cohorts. This supports the
fact that seniors wish to remain independent within their
own house throughout their retired lives. Figures also show
that approximately 24.0% of the seniors live in highrise
apartments: Investigations of the other socio-economics and
health factors should indicate the reasons for this change.

When compared to past occupancy patterns from figure
6C it can be seen that there were greater numbers of seniors
living in single-family residences. The future trends from
.figure 6E indicate a growing shift towards apartment living
and a leveling off for houses. This figure for all apart-
ments increases to 28.2% with a high of 40.7% for the 75 to
79 age group (see figure 6E for comparison).

Shifts in the senior housing population is further
supported by an analysis using matrices to measure moves
from past to present and to future housing preference

types (see figures 6C,6D). The housing types were collapsed

for a better distinction of moves. Within the past to pre-

sent matrix (table 6.1), the single-family residence gave

up 17.2% of its occupants to highrise apartments. There

was also a loss of 5.9% in lowrise apartments with 2.6%

moving to highrise apartments and 3.3% to the remaining

varieties. In general there was a 23.1% shift in the elderly

housing population from a past shelter to their present

residence.

The accompanying present to future matrix (table 6.2)

shows the preferences for moves to accommodations. Future

changes are modestly predicted changing only 7.8% as compared

to 23.1% earlier. This shows a stabilization in future housing

trends. Again, single-family residences will lose occupants,

but this time only 6.0%. Of this amount, 4.2% stated they

will choose highrise apartments and 1.8% stated lowrise apart-

ments. There will also be losses of 1.7% in joined housing

to lowrise apartments.

The rising costs to live and to maintain a single-

family residence because of inflation are further reducing

the number of senior occupants. These diagrams show that

the future supply of housing for senior citizens should be

adequate. It could be surmised that lesser housing quality

and lower family incomes would cause seniors to choose high-

rise living. The fact remains that a majority of seniors

prepare for retirement and remain during retirement in their

Table 6.2

TRANSITION OF OCCUPANTS FROM PRESENT TO FUTURE HOUSING PREFERENCES

Present Housing Types	Single-Family Residence	Highrise Apartments	Lowrise Apartments	Other, Joined Units	
Single-Family Residence (62.5%) 157	142	10	3	2	=157
Highrise Apartments (24.0%) 60	0	52	4	4	= 60
Lowrise Apartments (5.3%) 13	0	4	9	0	= 13
Other, Joined Units (8.2%) 21	0	6	5	10	=21
Totals 251	142 (56.5%)	72 (28.5%)	21 (8.4%)	16 (6.5%)	=251 (100.0%)

All numbers are in absolute values

Source Author

own homes. The future housing types (figure 6E) shows only
a small increase in highrise apartments from single-family
residences. This increase could be explained through know-
ledge of the availability of these units, but the number of
seniors who remain in their own homes indicates that they
feel this environment is the proper type for themselves.

6.4 Location Situation of Accommodations

Certain location factors may determine the preference
for a particular housing unit chosen by senior citizens.
As the years pass and the family fragments a large single-
family residence in a particular location may not adequately
serve the elderly couple or single person. Shopping or med-
ical services and transportation are maybe available only
at a distance which may impose a burden on the elderly person.
In the survey, many individuals responded that they
were willing to adjust to any inconvenience caused by loca-
tion. With rising transportation costs many seniors distin-
guished the location as varying systematically with distance
and chose services as near to their housing as possible.
At times their location resulted in poorer shopping condi-
tions with reduced quality and higher prices for goods.
They attributed this to the lack of commuting ability to
provide competitive shopping facilities within the city.
Elderly residents are concerned about their isolation. When
age increases and mobility decreases the central shopping

location of a city market becomes difficult to reach. Some-
times the resident will make substitutions for goods and
services caused by the lack of ability to travel greater
distances.

In this manner, the choice of accommodation becomes
critical for retirement years. Highrise apartments offer
the most central location, but many seniors own single-family
residences (62.5%) within the older city neighborhood (see
table 6.3). As long as health, which affects mobility, is
stable the present location in a highrise or older single-
family neighborhood was feasible.

From table 6.3 of the survey, results showed a pre-
ference for living in city neighborhoods with 70.1% of the
sample being located in these areas. There was a distinct
decline away from this area towards the central business
district core and central business district fringe for those
ages of 65 to 69 and 70 to 74, dropping from 69.0% to 66.2%.
This indicates an adjustment period, supporting the shift
in population towards highrise apartments of the more central
location.

Only 0.8% of elderly residents choose to live within
the outlying county. If city neighborhoods are considered
most desirable with single-family residents, then the direc-
tion of service aid should be applied to these areas of
housing units that enable better services for the elderly.
More small local clusters of shops and smaller but discrete

Table 6.3

SENIOR CITIZENS PREFERRED HOUSING LOCATIONS

Location	55-85+	55-9	Elderly Age Cohorts 60-4	65-9	70-4	75-9	80-4	85 +
Central Business District	10.4		8.3	5.4	12.3	16.7	7.1	18.2
Central Business District Fringe	9.5	7.1	12.5	10.9	13.8	9.3		
City Neighborhood	70.1	71.4	66.7	69.0	66.2	68.5	85.7	72.7
City Suburbs	9.1	21.4	8.3	12.7	7.7	5.5	7.1	9.1
Within the County	0.8		4.2	1.8				

All values are in percentages

Source Questionnaire

housing units appear to be demanded. Perhaps a sharing of
present residences by several elderly couples or singles
should be encouraged.

With the small percentage of seniors willing to live
in the county the need for housing is greater within the
city limits. Perhaps 1 or 2 persons of the total sample
said they would relocate outside the country. As a result,
housing developers will need to locate their facilities in
those areas of the city suitable to seniors. Shopping and
walking are important facts for highrise location. As
indicated in section 6.3, the highrise does supply and will
accommodate a substantial number of seniors.

Most seniors said they saw Windsor as a city with
a comfortable climate for retirement. Location is important
to the developer for future building and it is important to
the senior for present housing choices.

6.5 Cost Factors Related to Present Accommodations

The overall economic status of any group of people
is partly determined by their ability to pay for the cost
of a commodity. Housing usually imposes the single largest
expense for any person. While seniors' incomes usually
remain at a stable level throughout their retirement years
the financial obligations of society could lead to an
adjustment in their housing types. Perhaps a more centrally
located and smaller housing unit will adjust their expenditures.

to fit retirement incomes. Income is one reason why seniors relocate themselves into downtown highrise apartments.

The survey results will be analyzed in terms of total family income, the amount spent by seniors for their housing and the costs related to improvements for their residence. A combination of these factors leads to decisions to relocate or to improve their present housing structure. Either decision is strongly influenced by the income of that household.

Total family income is presented in figure 6F. Immediate effects of retirement are seen by the majority of senior citizens living on 10,000 dollars or less which totaled 65.8% of the sample. This indicates that since income is relatively low, the budgeting of household expenditures must be cautious. At the other extreme of the scale it was realized that only 5.5% of the seniors earned 20,000 dollars or more.

From this table the turning point of expenditure was seen to be at ages 70 to 74 with a drop in earnings shown by the increase in the less than 5000 dollars group. The single highest income cohort was between the ages of 55 to 59, earning between 5 to 10,000 dollars which totaled 42.9%. This could be attributed to a more recent retirement age and higher retirement wages attained by the group.

Since 81.6% of all seniors had their mortgages paid in full and 98.4% of those who did not thought the payments

Figure 6F

TOTAL FAMILY INCOME FOR 1981

Less than $5000

$5-10,000

$10-15,000

$15,000

$20,000

$20,000 Plus

Percent

60
50
40
30
20
10
0

55-9   60-4   65-9   70-4   75-9   80-4   85+

Elderly Age Cohorts
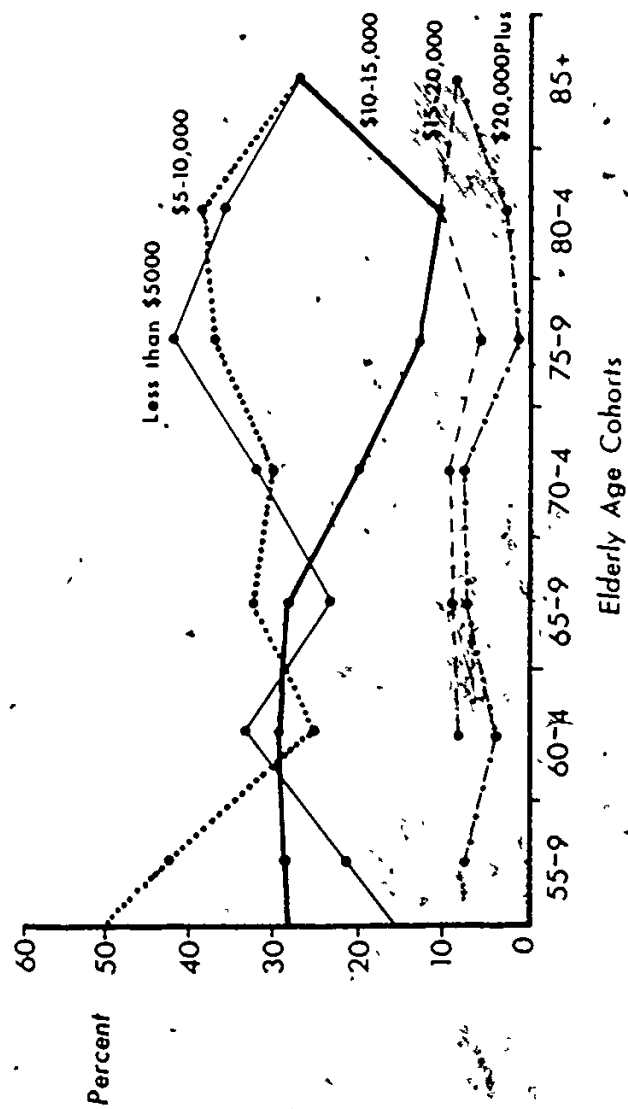
Source: Author

were of no burden, then it is logical to suggest that most seniors who own their homes are more financially secure than other owners.

Occupancy costs per household per annum are presented in table 6.4. From this table, the largest costs per household is within the 2 to 3000 dollar range comprising 39.8% of the sample. The second largest group of 30.2% spent between 1 to 2000 dollars per year on housing. As households moved down the wage scale the likelihood of home ownership decreases since upkeep costs for a single-family residence is greater than other housing units' costs.

The transition in tenure to a rented highrise or lowrise apartment requires expenditures approximately between 2 to 4000 dollars. This explains some of the 32.3% sample having incomes less than 5000 dollars choosing this type of accommodation. The low income groups would have no funds to spend on improvements. In one unique group sampled only 2.7% of the residents spent more than 5000 dollars on their households.

The trend for senior citizens shows a move toward the lower expenditure scale. Between the ages of 69 to 70 there is an increase from 1.8% to 10.8% of those seniors spending less than 1000 dollars. At the upper age category of 85 and over the expenditure for 5000 dollars and higher was 18.2% of the total group for which 9.1% were found in nursing homes. This supports the fact that health care

Table 6.4

AMOUNT SPENT PER ANNUM/PER HOUSEHOLD FOR HOUSING

Personal Costs for Occupancy	Elderly Age Cohorts							
	55-85+	.55-9	60-4	65-9	70-4	75-9	80-4	85 +
Less than $1000	5.5	7.1	8.3	1.8	10.8	1.9	7.1	9.1
1 - 2000.	30.2	28.6	25.0	23.6	30.8	48.1	21.4	27.3
2 - 3000.	39.8	50.0	29.2	47.3	33.8	38.9	50.0	27.3
3 - 4000.	11.9	14.3	16.7	14.5	12.3	5.5	7.1	
4 - 5000.	9.5		16.7	12.7	9.2	5.5	7.1	18.2
5000. plus	2.7		4.2		3.1		7.1	18.2

All values are in percentages

Source. Questionnaire

within nursing facilities is extremely expensive to the aged.

The second table for comparison of income and expenditure reveals the amount of money spent by seniors for repairs to their residences. This information is shown in 'table 6.5. The highest improvement expenditures was less than 1000. dollars (11.5%) followed by the 2 to 3000 dollar range (11.1%). This table is revealing because it is assumed that as people grow older the residence in which they live requires more repairs.

The age category of 55 to 59 showed an increased proportion of persons (28.6%) spending between 1 to 3000 dollars. Expenditure drops for the following group aged 60 to 64 to 4.2% within the same range. Most of the expenditures at age 60 to 64 falls within the 5000 dollar plus range at 12.5%. Figures reveal that some people between the ages of 55 to 59 prepare for retirement by investing money in their present home for later years. This also indicates that the decision to relocate and change their retirement housing is not foreseen by some of the group.

The costs of improvements rise again to 14.5% for the age cohort 65 whereby mandatory retirement perhaps forces the consideration of investment into personal property for later years. The oldest age group of 85 and over shows expenditures of 2 to 3000 dollars for 27.3% of the cohort. This supports the close relationship of age to building repair needs over increased time.

Table 6.5

AMOUNT SPENT FOR IMPROVEMENTS IN THE LAST FIVE YEARS

Elderly Age Cohorts

Amount Spent	55-85+	55-9	60-4	65-9	70-4	75-9	80-4	85 +
Less than $1000.	11.5	7.1	4.2	10.9	16.9	12.9	10.7	
1 - 2000.	8.4	14.3	4.2	9.0	6.1	11.1	10.7	
2 - 3000.	11.1	14.3		14.5	9.2	12.9	7.1	27.3
3 - 4000.	2.4	7.1	8.3	3.6		1.8		
4 - 5000.	3.5		4.2	5.5	4.6	1.8	3.5	
5000. plus	3.5		12.5	1.8	1.5	3.7	3.5	9.1
Not at all	58.5	57.1	66.6	54.5	61.5	55.5	64.3	63.6

All values are in percentages

Source: Questionnaire.

In summary, it was shown that a total of 58.5% of
the households attempted some form of repair to their res-
idence. These households generally progressed from moderate
expenditures at the early cohorts to no expenditure within
the middle age cohorts to again moderate spending at the
upper age cohorts. A description of living expense percep-
tion is presented in the appendix showing that 32.6% of the
survey felt there were medium effects from retirement living
on their expenditures. In conclusion, many senior citizens
showed that they do prepare for retirement by improving the
condition of their existing housing and are moderate to
thrifty spenders as a result of their reduced incomes. For
this reason the demand in senior housing can be found
through inexpensive apartment living or low cost housing.

6.6 Family Life Cycle Structure

Stages in the life cycle influence households in
their housing requirements as their family size and income
change at various stages in their life. If the transitions
described by life cycle concepts are correct then housing
choice should vary with the sequences of moves. When family
size is largest, housing facilities should also be at their
largest. As the family grows and progresses in age the
needs change for housing. The choices to elderly people are
twofold: they may remain where they are, usually in a house
too large, provided their income, maintenance and health are

sufiicient or they may adjust their needs to smaller accom-
modation. The survey data are analyzed to determine if the
turnover process was completed by older families, releasing
larger facilities to younger growing families.

Table 6.6 describes the largest family size ever
achieved by the present elderly person, showing the required
space needs for all age groups. The largest family size
achieved oy a majority of the respondents (33.8%) was three
children followed by two children families for 31.0% of the
sample.

The table shows a general stability for one to
three children in the early cohort groups. The most noted
family sizes appear in the upper age levels over 85 showing
63.7% of the group had more than three children. This was
due to the accepted attitude of raising very large families
when these people were younger. Indications show that most
large families choose to live in single-family residences
and therefore this type of accommodation is made available
to starting families at later times.

This table was compared with the buyer's age and
family size to determine if new growing families were
indeed purchasing larger accommodations from elderly people.
The age of the buyer for the elderly's past residence is
presented in table 6.7. Results show that buyers between
the ages of 20 to 30 years comprise 27.8% and those 31 to
35 made up 17.5%.

Table 6.6

LARGEST FAMILY SIZE ACHIEVED

Number of Persons	55-85+	55-9	60-4	65-9	70-4	75-9	80-4	85 +
1 Person	2.8		4.2	5.5	3.1	1.9		
2 Persons	7.5	7.1	4.2	7.2	10.8	9.3	3.6	
2 Adults 1 Child	21.5	28.6	25.0	21.8	23.1	22.2	17.9	
2 Adults 2 Children	31.0	28.6	37.5	29.1	32.3	35.2	17.9	36.4
2 Adults 3 Children	33.8	35.7	25.0	36.4	26.2	27.0	60.7	45.5
State Size	3.2		4.2		4.6	3.7		18.2

Elderly Age Cohorts

All values are in percentages

Source: Questionnaire

Table 6.7

SIZE OF BUYER'S FAMILY FOR ELDERLY PAST HOUSING

Number of Persons	Elderly Age Cohorts							
	55-85+	55-9	60-4	65-9	70-4	75-9	80-4	85+
1 Person	7.5	14.3	8.3	10.9	7.6	5.6	7.1	9.1
2 Persons	27.5	21.4	41.7	25.5	26.2	27.8	28.6	27.3
3 Persons	23.9	14.3	8.3	25.5	29.2	24.1	35.7	9.1
4 Persons	21.1	14.3	20.8	20.0	21.5	20.4	14.3	45.5
5 Persons	3.9		4.2	1.8	.15	7.4	7.1	
6 Persons	2.4			1.8	3.1	3.7		9.1
Response		50.0	16.7	14.5	10.7	11.1	7.1	

All values are in percentages

Source   Questionnaire

This information can be taken one step further by comparing the buyer's family size to the age of the household head. Table 6.7 shows that 45.0% of the young families had 3 to 4 persons in their household. This supports the idea that younger families with small children are looking for larger accommodations.

The smaller percentages in the larger families coresponds to the smaller percentages for the middle aged buyers. Usually when a couple have achieved their full family size by their late 30's or early 40's, they have established a permanent residence. It is the younger families who are searching for more suitable housing from the elderly population. From the survey it was also realized that a small percentage shared accommodations with relatives. This is presented in table A.5 found in the appendix.

In most cases seniors sold a larger house for a smaller more manageable apartment. This fact also supports the need for highrise facilities, if the housing stock is to be balanced among all groups. The demand for accommodations by this changeover process is directed to the supply of apartments for older people and single-family residence for younger families.

6.7   Health Factors Related to Housing Choice

This section attempts to describe the relationship

of health as it affects housing choice of the elderly.
When some element or condition in the household changes
from its set standard or norm a deficit may result. The
deficit could be biological, psychological or social. If
the problem is great enough it will trigger stress of some
kind. The stress produced may result in routine adjustments
by the elderly in their housing type or they may adapt their
situation through changes in the norms or standards of
living by a housing change. Finally, their pathology could
be in the form of physical or mental ill health caused by
severely decreased socio-economic well-being.

Table 6.8 ranks the specific reasons for which the
elderly said they moved from their past residence. Health
is directly related to physical upkeep of a residence and
accounted for 36.1% of the sample. Income was next at 13.1%
as a reason for relocation. The largest single reason
given for relocation was to raise a family at 44.6% of the
sample.

Health and upkeep peaked at ages 65 to 69 as causes
for moving to a new location. The oldest cohort at 85 years
of age stated upkeep (27.3%) as their single most important
relocation factor.

Table A.5, found in the appendix, shows the need
for an occasional nursing visit. Sample results indicated
only 18.3% residents needed help while over 80.3% said they
had reasonable health. This proves that the survival rate

Table 6.8

REASONS FOR MOVING FROM A PAST RESIDENCE

Reason	55-85+	Elderly Age Cohorts						
		55-9	60-4	65-9	70-4	75-9	80-4	85 +
Wanted a Change (Raise a Family)	44.6	71.4	58.3	36.4	41.5	40.7	53.6	36.4
Upkeep too great	23.9	21.4	16.7	30.9	24.6	20.4	21.4	27.3
Income	13.1	7.1	8.3	12.7	15.4	18.5	7.1	9.1
Health	12.4		12.5	14.5	9.2	14.8	14.3	18.1
Sold for a Profit	5.5		4.2	5.5	7.7	5.5	3.6	9.1

All values are in percentages

Source· Questionnaire

of seniors as measured by increase longevity in Canada is
further substantiated by this survey.

The last table 6.9 ranks the reasons which influenced
present housing choice of the elderly. Health was expressed
as the lowest factor of importance in the decision to move
at only 3.1%, while the resident who moved for reasons of
style was the highest at 32.2%. Income was the second
highest reason at 23.9% while location was given next at
16.7%. These results may be correlated to the graphs of
section 6.3. Income can certainly be a determinate to those
seniors who chose a highrise apartment.

The type of residence was probably expressed most
since health and income factors dictate to the senior which
type of accommodation is most suitable. A summary of this
table shows a transition or turning point between ages 64
to 65. The most important reasons given for selection were
by type, price and health related factors.

The motivation for relocation varies from age to
age since factors of importance have different importance
for each cohort. When related to the demand for housing
the single-family residence requires the most healthy and
able senior citizen, unless their incomes are substantial
to pay for the needed services or they receive free family
help. Many seniors indicated a highrise apartment complex
as their first choice, as a result of health and dwindling

Table 6.9

SPECIFIC REASONS WHICH INFLUENCED PRESENT HOUSING CHOICE

Reason	Elderly Age Cohorts							
	55-85+	55-9	60-4	65-9	70-4	75-9	80-4	85 +
Change of Type	32.3	57.1	37.5	20.0	29.2	31.5	32.1	45.5
Income	23.9	21.4	16.7	29.1	26.2	20.4	21.4	27.3
Change of Location	16.7		20.8		15.4	18.5	17.8	9.1
Physical Upkeep	14.4	14.3	4.2	14.5	15.3	16.7	17.9	9.1
Area too Large	3.9		8.3	25.5	3.1	5.5	7.1	9.1
Medical, Physical	3.1		4.2	3.6	4.6	3.7		
No Response	5.5	7.1	8.3	7.3	6.2	3.7	3.6	

All values are in percentages

Source Questionnaire

incomes. In summary, health factors may force a move but the selection of a new residence is dominated by style and type factors.

6.8 Services and Transportation Factors Related to Housing Choice

The final section examines any relationship which, may exist between the supply of services and facilities and the decision for a particular housing type or location by elderly people. As mentioned in the earlier chapters a choice of housing type may be decided by whether or not the neighborhoods can provide the services required by seniors.

Table 6.10 shows the preference for transportation usage while table 6.11 shows shopping and level of satisfaction with facilities. Many times, whether or not personal transportation is available will influence choice for a central city location. If personal mobility decreases, then seniors look for readily available services which reduce their dependence upon personal transportation.

It is a known fact that those senior citizens who live in highrise apartments are using a bus most for transportation. The sample showed (table 6.10) that 29.0% of these people used a bus intensively, which can be correlated with 30.0% of the seniors living in apartments.

Many seniors located within the central business district or its fringe are in the position to walk easily to facilities as compared to others located in outer

Table 6.10

TRANSPORTATION PREFERENCES BY SENIOR CITIZENS

Type of Service	Usage			
	Intensive	Moderate	Occasional	Not at all
Personal Vehicle	46.6	9.9	2.4	40.6
Bus	29.0	9.9	25.8	35.6
Taxi	4.7	4.7	22.7	67.7
Friends' Car	6.8	11.5	31.5	50.2
Walking	19.9	25.1	29.5	25.5

All values are in percentages

Source: Questionnaire

Table 6.11

SHOPPING SERVICE PREFERENCES BY SENIOR CITIZENS

	Very Satisfied	Satisfied	Satisfaction Unsatisfied	Very Unsatisfied
Food Stores	22.7	58.6	14.4	4.4
Hospital	17.1	76.9	5.6	0.4
Other Shopping Stores	13.9	72.1	12.4	1.6
Entertainment	10.8	74.1	13.2	1.9
Parks	9.9	74.5	13.2	2.4

All values are in percentages

Source: Questionnaire

neighborhoods or suburban areas. The first table shows that only 4.7% of the seniors will spend money intensively for taxi services. This figure is low because the expense for this type of transportation is not affordable by many seniors. The intensive usage column further shows that only 6.8% of the people will rely on friends for transportation. These figures were closely related to ethnic family ties in the questionnaire results, showing that the children in these families catered to the transportation needs of their parents.

The people sampled stated that the less independent they became in a combined housing type such as apartments, the more need they developed for public transportation. This was also true of the oldest cohorts that required more help as a result of less mobility to enable them to travel in the city. The developer should keep this in mind when constructing highrise facilities for seniors.

Related to transportation are the service stores and facilities which the general public use. Many times the choice of an accommodation is decided on the basis of proximity to services.

Table 6.11 describes the service preferences for senior citizens. Many elderly people are very satisfied with the type and location of food stores in their area. In general, the highest percentages fell within the satisfied category. It may be deduced that services play a

secondary role in housing choice behind income and health.
If the decision to relocate has been finalized most seniors
will adjust their living habits to satisfy their service
needs.

In summary, choices for housing by seniors are not
totally dependent on service availability as earlier thought.
Transportation creates the link between accommodations and
services and is directly related to the type and usage by
the individual. Therefore, the importance given to housing
demand decisions would only be secondary concerning service
availability and more directly decided by the uncontrolled
factors of health and income. The developer can learn from
these results to provide what the people want and not
force on the people what they do not want.

Chapter VII

TESTING OF HYPOTHESES

7.1 Introduction

In the preceding chapter, a preliminary analysis
of the housing demand factors was carried out based primarily
on questionnaire data tabulations. This analysis revealed
trends which indicated directions for further detailed inves-
tigations. A more precise and accurate statistical procedure
draws on these factors to express variable values. In accor-
dance, a number of hypotheses have been formulated to measure
the variables by numerical testing. The hypotheses fall into
five categories·

1) those concerned with relocation from or to an accomo-
   dation;

2) those concerned with the economic aspects of housing;

3) those concerned with the medical and health related
   dependencies;

4) those concerned with the family life cycle process,
   related to the turnover of housing;

5) those concerned with the locational factors related to
   housing choice.

These factors have been shown to be of importance

to the elderly in deciding on a housing choice. Hypotheses are formulated so as to discover the significance of variables which are influential in the decision-making process. The results should affect opinions which lead to the provision of necessary shelters for senior citizens.

7.2 Relocation Consideration Hypotheses

7.2.1 Test of Hypothesis I

H_0 the decision to move from a past residence is not similar to the decision which influences the present housing choice.

H_1 the decision to move from a past residence is similar to the decision which influences the present housing choice.

Hypothesis I is based upon the literature review and the observations obtained from the empirical field work for this study. Other researchers have studied the reasons which generated a move, but they did not follow the transition through to see if actual choice is related to the past decision to move.

As senior people progress through the aging process their reasons for moving may not necessarily be related to their reason for choosing a new shelter. Unlike other groups found in society many older people become unpredictable in their decision-making. A measurement of these variables creates the focal points for the housing demand model.

Many times logic does not play the deciding factor for choice. As a result of being unguided and unaware of

the present day buying or renting procedures in today's housing market the elderly make unpredictable moves. This is strongly evident in section 6.2 with the description of the 55 to 64 group that leave their single-family residences and the 85 plus group that want to move back into a single-family residence. Questionnaire respondents often revealed that their past housing was more suitable than their present placement and wanted to return, but could not as a result of selling. By testing the two variables this hypothesis should support that a majority of seniors perform logical acceptable housing changes.

The hypothesis was tested by means of a three by three chi square table (table 7.1) according to the methods prescribed by Blalock, Taylor, Hammond and McCullagh. The reason given for moving from a past residence is measured against the reason which influenced present housing choice.

Observed data values are those recorded from the field work. The expected values were obtained from the theoretical assumption that reasons for moving from a past residence are not influential on the decision to choose present housing. Since seniors often make forced decisions or moves, their relocation thinking may alter from those of younger groups. Younger families buy or sell for more space, seniors buy or sell for less space as affected by feelings of discontent, loneliness and possible critical

Table 7.1

TEST OF HYPOTHESIS I

Reason Which Influenced
Present Housing Type

Reason for Moving
from a Past Residence

	Income		Upkeep		Medical	
	O	E	O	E	O	E
Health	32	35.2	52	46.	7	9.7
Income	21	12.8	6	16.7	6	3.5
Upkeep	44	49.1	69	64.3	14	13.7

N = 251

$\propto$ = 0.05 X^2 = 16.7   O = observed frequency value

df = 4   chi square = 9.49   E = expected frequency value

c = .2497

Source. Author

aging. For this reason, a measurement of the moving decision may not be associated with the buying choice.

All hypotheses were tested by the same method and description procedures will not be repeated throughout the text. For further information on methodology consult the appendix. The rejection level for H_o was decided at .05. At 4 degrees of freedom, chi square is 9.49 at the .05 level of confidence. Through calculation, the value of x^2 was 16.7. Since x^2 observed is greater than chi square crit. the null hypothesis can be rejected. There is indeed a relationship between the reason for moving from a past residence and the specific reason in choosing a present residence.

Senior citizen decisions to change their residence has been proven to relate to their reason of choice. Even though they may have difficulty in understanding others, or physical handicaps, the elderly usually seek out advice from a reliable source. Most seniors were cautious to relocate and only moved if they felt an absolute benefit by the change. The variables only showed a modest relationship having a contingency coefficient of .2497. Although the relationship is not strong, the importance of the two variables is great enough to indicate that senior citizens are aware of their actions.

7.2.2 Test of Hypothesis II

H_0 the housing size of a present accommodation has no
influence on the future preference for housing space.

H_1 the housing size of a present accommodation has an
influence on the future preference for housing space.

The statistical analysis for hypothesis I showed a
direct relationship between the reason for moving and present
housing choice. It is necessary to take this idea one step
further by measuring whether or not the size of a present
accommodation has an influence on the decision choice for
a future housing type. As recorded by other social scien-
tists, lifestyles of people determine their living space.
Whether they are willing to change their space for future
housing will be dictated by the present accommodation they
occupy.

Over the years families develop a particular type
of inertia towards certain living conditions. Many set
personal norms and will not alter their living spaces even
though family changes have occurred. In particular, senior
citizens look upon a large house as their right, earned
through years of hard work. They do not want to lose this
reward and their freedom, and, therefore, maintain a larger
than necessary residence for many years beyond their actual
space needs. If they decide to relocate, the decision will
usually be influenced by the present size of residence, trying
to maintain yard and space wants in their new type of accom-
modation. It was thought that this expressed feeling is an

important determinate for a final future housing choice.
In particular, a proportion of seniors stated that they
would not go to a highrise apartment complex or nursing
home because they would not want to give up housing space.

Hypothesis II completes the relocation process by
measuring the household space characteristics of the housing
occupancy size for the present and suggested future. The
size of accommodation need can be measured by the number of
bedrooms in the present and desired future housing.

In order to determine the significance of space
requirements over time a chi square table was used to assess
the variables (see table 7.2) . It describes present housing
size cross-tabulated by future housing size. Standard pro-
cedures were used to determine the results.

The results show that X^2 was much larger than chi
square crit. The null hypothesis can therefore be rejected
and a relationship does exist between present housing size
and the predicted future size. This relationship is stronger
than hypothesis I having a contingency coefficient of .4948.
Therefore, actual present housing size is related to deter-
mining the size of a future housing preference.

These results can be used to explain the housing
graphs presented in section 6.2, which show a stable occu-
pancy rate for future single-family residences, and why a
low percentage of elderly are found in nursing homes. Many
elderly people want to remain in the familiar size and

Table 7.2

TEST OF HYPOTHESIS II

Number of Bedrooms Preferred in Future Residence

Number of Bedrooms Within Present Residence	1		2		3		4		5	
	O	E	O	E	O	E	O	E	O	E
1	1	3.2	5	21.5	24	20.4	37	22.9	5	4.0
2	2	1.8	25	12.5	9	11.8	5	13.4	1	2.3
3	2	1.2	15	8.1	4	7.6	4	8.6	2	1.5
4	2	3.2	10	21.5	25	20.4	31	22.9	4	4.0
5	4	1.7	20	11.4	9	10.7	3	12.1	2	2.1

X^2 = 81.4   O = observed frequency value

chi square = 26.30   E = expected frequency value

N = 251

$\propto$ = 0.05

df = 16.

c = .4948

Source   Author

surroundings of a particular residence. By retaining size
preferences senior citizens remain independent in their
minds.

7.3 Economically Related Hypotheses

7.3.1 Test of Hypothesis III

H_0 the type of residence chosen is not influenced and not
related to the income of the elderly.

H_1 thé type of residence chosen is influenced and related
to the income of the elderly.

From preliminary analysis it becomes apparent that
income plays an important part in the overall spending of
a household. The amount of money received by any family
determines their ability to pay and choose housing within
the supply market. For senior citizens, income determines
their independence through various housing types. The
choice of residence is more important to the senior since
other hindrance factors such as health may require adjust-
ments in accommodations.

A four by five chi square table (table 7.3) was used
to test hypothesis III. The amount of dollars attained per
household is measured against the most selected housing
facilities. In this case, nursing homes were included which
show a particular dependent housing type among the other
independent types.

The rejection level was set at .05. At 12 degrees
of freedom, chi square is 21.03 at the .05 level of confidence.

Table 7.3

TEST OF HYPOTHSIS III

Family Income, 1981

Present Housing Type	$5000.		$5-10,000.		$10-15,000.		$15-20,000.		$20,000+	
	O	E	O	E	O	E	O	E	O	E
Single-Family Residence	37	48.8	53	48.8	39	33.2	15	13.8	13	12.5
Highrise Apartment	25	18.6	20	18.6	7	12.7	4	5.2	4	4.7
Lowrise, Joined Apartment Units	10	7.1	4	7.1	6	4.8	2	2	1	1.8
Nursing Facilities	6	3.4	1	3.4	1	2.3	1	.9	2	.9

$X^2 = 22.8$

chi square = 21.03

$N = 251$

$\alpha = 0.05$

df = 12

c = .2885

O = observed frequency value

E = expected frequency value

Source. Author

Since x^2 observed is greater than chi square crit., the null hypothesis can be rejected. The results showed that there is a relationship between the family income and the type of accommodation chosen.

These facts are important to realize since development for senior citizen housing must be directed to the affordable housing areas. Since the type of housing is determined by amount of income, the developer should not overprice a senior citizen project.

Results show that 62.5% of the seniors live in single-family residences and of these 35.8% have incomes less than 10,000 dollars per year with 14.7% being less than 5000. dollars. Since a large proportion of seniors remain in single-family residences and the incomes they have are smaller than expected to maintain their properties, then services must be provided by others, such as their children or neighbors. The income that these seniors have would make it impossible to purchase a single-family residence in today's market. Therefore, when relocation occurs to a highrise or other units the costs must be related to their incomes. This relationship is important since a majority of seniors want to remain in their own homes.

7.3.2 Test of Hypothesis IV

H_0 personal living expenditures do not influence the amount of improvement expenditures which is spent on a residence.

H_1 personal living expenditures influence the amount of improvement expenditures which is spent on a residence.

The relationship between personal expenditures and improvement costs is important to every household. The maintenance of property is required for the protection of a housing investment. Senior citizens are particularly vulnerable in this case since upkeep becomes personally difficult over time and increases with the age of the residence.

The preliminary analysis suggests that income is one of the significant factors for a housing choice. It stands to reason that as a result of income the amount of compulsory living expenditures determines the ability to spend money elsewhere, i. e., to improve the physical condition of an older residence. Researchers have shown that living expenditures are directly related to income, but have not measured the two expenditure relationships separately.

In order for senior citizens to remain in a single family residence, then maintenance and upkeep are important costs, a part of total expenditures. Related to table, section 6.2, one of the reasons given for relocation was the inability to pay for needed improvements for a single family residence. Seniors can be seriously affected by the lack of funds to afford improvement expenditures. This

may lead to a relocation to an unwanted accommodation. As related to section 6.2, it was realized that people between the ages of 55 to 64 spent more money for improvements on their residence. They did this to remain in a suitable building during later retirement years when repairs become difficult and more costly for themselves. The purpose of hypothesis III is to test the relationship between the building physical upkeep costs and personal living costs.

Hypothesis III has been tested through a four by five chi square table (see table 7.4). The specific dollar amount for each expenditure contained the allocated frequencies from survey data. The expected values were founded on the theoretical assumption that personal costs have no relationship to the amount spent on improvement costs. Standard procedure was used for testing (see appendix).

Calculated x^2 was greater than chi square crit., therefore the null hypothesis can be rejected. On the basis of this chi'square analysis there is a definite relationship between the amount of money spent on personal housing expenditures and the amount of money spent on improvement costs. For the strength of the relationship see the contingency coefficient.

The importance of the results confirms the idea that income maintains independence for a household. When necessary improvements become a burden and result in relocation to a less desirable housing type then independence can be lost.

Table 7.4

TEST OF HYPOTHESIS IV

Residential Improvement Costs

Personal Expenditure on Residence	Not at All		$1000.		$1-2000.		$2-4000.		$4-5000.	
	O	E	O	E	O	E	O	E	O	E
$2000.	66	53.4	11	10.4	.4	7.5	6	12.2	3	6.5
$2-3000.	58	59.4	11	11.6	13	8.4	12	13.5	6	7.2
$3-4000.	14	17.8	1	3.5	1	2.5	10	4.1	3	2.2
$4-5000.	11	18.3	6	3.6	2	2.6	6	4.2	6	2.2

N = 251

x^2 = 36.0

chi square = 21.03

α = 0.05

df = 12

c = .3541

O = observed frequency values

E = expected frequency values

Source. Author

Results from this hypothesis show directions that local

governments could provide in the form of maintenance upkeep

for seniors. This will allow them to remain in their own

homes. In the long run total costs would be less for both

the city and resident, since relocation, including public

housing construction, are more costly.

7.4 Hypotheses Concerning Health Related Factors for Housing Choice

7.4.1 Test of Hypothesis V

H_0 dependency on other family members is not related to
health requirements for specific housing types.

H_1 dependency on other family members is related to health
requirements for specific housing types.

A) Tested for single-family residences

B) Tested for Highrise Apartments

One factor which must be considered during housing

choice is the health and medical status of the individual.

Usually a person's dependency increases for health related

services as they grow older until total medical care must

be provided in a nursing facility. Depending on the indi-

vidual's income, health problems could become more serious

if they are unable to pay for the needed services.

Past researchers have taken this aspect and con-

sidered it separately in analyzing the overall housing

market. This situation is not one separate medical issue

alone, but becomes a complex of many factors, which include

health and dependency on others.

Hypothesis V was postulated to show if a relationship
exists between the health care needed by seniors against any
dependency upon family members. This situation, as mentioned
in the preliminary analysis, is more common to families
having strong ethnic ties within the family group. It was
also decided that the strongest responses arising from
single-family residences and highrise apartments should be
measured separately and then compared to see if one accommod-
ation shows more collaboration with friends than the other.

A two by four chi square table (table 7.5) was used
to test Hypothesis V for single-family residences. A re-
jection level of .05 was chosen for the null hypothesis.
At 3 degrees of freedom, chi square is 7.82 at the .05 level
of confidence. Since the calculated X^2 is greater than
chi square crit., the null hypothesis can be rejected for
the single-family residence accommodations.

Procedures were exactly the same to test hypothesis
V for highrise apartments. The rejection level and degrees
of freedom were identical. Since the calculated X^2 is less
than chi square crit., the null hypothesis could not be
rejected for highrise apartments.

It would appear that senior citizens living in single-
family residences have more dependency on family members
than those living in highrise apartments. Seniors who live
in a single-family residence require physical help to main-
tain their residence if they wish to remain living there

Table 7.5

TEST OF HYPOTHESIS VA

Dependency on Family Members' Help
for Single-Family Residences

Medical, Health Requirements	Very Little		Occasional		Moderate		Intensive	
	O	E	O	E	O	E	O	E
Very Little Care	100	91.5	19	24.6	9	11.0	5	5.9
Moderate Care	8	16.5	10.	4.4	4	1.9	2	1.1

N = 157

X^2_s = 17.2   O = observed frequency values

chi square = 7.82   E = expected frequency values

α = 0.05

df = 3

c = .3142

Sourve: Author

Table 7.5

TEST OF HYPOTHESIS VB

Dependency on Family Members' Help
for Highrise Apartments

Medical, Health Requirements	Very Little		Occasional		Moderate		Intensive	
	O	E	O	E	O	E	O	E
Very Little Care	33	29.8	6	5.4	4	6.9	3	3.8
Moderate Care	6	9.1	1	1.6	5	2.1	2	1.2

N = 60

X^2 = 7.6   O = observed frequency values

chi square = 7.82   E = expected frequency values

α = 0.05

df = 3.

Source. Author

in the future. Many times their children provided the building

maintenance required, therefore allowing the parents to spend

old age in their own homes

. The elderly who choose to live in highrise apart-

ments do so to become independent from housing upkeep and

therefore required less help from family members. Usually

these seniors were more physically fit than others for

walking and had no, or little, family who cared for them.

As a result, they represent more independent living.

7.4.2 Test of Hypothesis VI

H_0 there is no relationship between the type of residence
and the amount of time that is spent living or short-
term visiting with a relative.

H_1 there is a relationship between the type of residence
and the amount of time that is spent living or short-
term visiting with a relative.

From hypothesis V it was shown that the dependency

factor was more important to those living in single-family

residences than those in highrise apartments. Hypothesis VI

proceeds to test all housing types against the amount of

time an elderly person might spend living or visiting with

a relative. Literature has shown this to be a type of

psychological health factor for senior citizens knowing

they are wanted or cared about by others. The question

arises as to whether or not different types of accommodations

have a higher or lower significance with this variable. If

the senior citizen spends a greater amount of time away

from his residence, then the need to live elsewhere is greater than in the present accommodation.

Hypothesis VI was tested by means of a three by four chi square table (table 7.6), with a rejection level set at .05 for the null hypothesis. At 6 degrees of freedom, chi square is 12.59 at the .05 level of confidence. Since calculated X^2 is less than chi square crit., then the null hypothesis could not be rejected. Final conclusions showed that the type of residence has no relationship as to whether or not senior citizens spent time living or visiting relatives.

Therefore, a large residence is not necessarily maintained for visiting family members. Seniors who choose a highrise apartment do not seek time away from it by visiting relatives to try to escape their own living space reality. Rather, seniors maintain the comfort·of their own homes for themselves and their own independence and the type in which they live does not influence travelling to others. If the relationship were positive then perhaps the senior could maintain a lesser or shared residence, such as winter and summer travellers might.

Table 7.6

TEST OF HYPOTHESIS VI

Time Spent With Relatives

Present Housing Type	Less than 1 Week		1-4 Weeks		4-6 Weeks		Yearly	
	O	E	O	E	O	E	O	E
Single-Family Residence	120	121.9	17	16.3	5	6.2	15	12.5
Highrise Apartments	51	46.6	5	6.2	3	2.4	1	4.8
Lowrise, Joined Apartment Units	24	26.4	4	3.5	2	1.4	4	2.7

N = 251

X^2 = 6.2

chi square = 12.59

O = observed frequency values

E = expected frequency values

α = 0.05

df = 6

Source: Author

7.5 Hypotheses Concerning Family Life Cycle Effects on Housing Choice

7.5.1 Test of Hypothesis VII

H_0 past family size of the elderlys' requirement for space is not related to the buyer's family size requirement for space.

H_1 past family size of the elderlys' requirement for space is related to the buyer's family size requirement for space.

Housing market. theory suggests changes in housing needs accompany household life cycle changes. As shown by earlier hypotheses the housing types and costs have proven to be important variables which determine choice. The number of household members will dictate the need for space. Progression throughout the life cycle stages will reflect changing housing types. Younger families need larger spaces while older families require less space. This hypothesis will measure the relationship that the choice of past housing purchased from the elderly, who established space needs by their family size, is related to the space needs required by a younger growing family.

Hypothesis VII was tested by means of a four by four chi square table (table 7.7). This table measured whether a relationship existed between the elderly's largest family size achieved by the size of the buyer's family. Standard methods were used as described in the appendix for table calculations.

Table 7.7

TEST OF HYPOTHESIS VII

Size of the Buyer's Family

Largest Family Size Achieved by Elderly Families	1-2 Persons		2 Adults 1 Child		2 Adults 2 Children		2 Adults 3 Children	
	O	E	O	E	O	E	O	E
1-2 Persons	22	21.2	31	20.6	10	21.5	11	10.6
2 Adults, 1 Child	15	19.5	23	18.9	24	19.8	6	3.2
2 Adults, 2 Children	17	13.5	5	13.1	18	13.7	7	6.7
2 Adults, 3+ Children	18	17.8	11	17.3	21	18.0	12	8.9

$N = 251$

$X^2 = 27.9$ O = observed frequency values

chi square = 16.92   E = expected frequency values

$\alpha = 0.05$

$df = 9.$

Source: Author

In this case, X^2 observed is greater than chi square crit., therefore the null hypothesis was rejected. There is indeed a relationship between the past family size of the elderly's need for space and buyer's family size requirement for space.

Implications for this hypothesis show a completed transition stage in the family life cycle. When the elderly give up their larger homes to younger families then the cycle is completed. As a participant in the housing turnover process, the elderly initiate the last link for exchange and relocation of both family groups. The elderly can affect part of the housing market in a city by deciding whether or not to give up their larger residence to younger, more needy families and to relocate to a smaller more suitable accomodation for themselves. It is this decision which arises sooner or later for them in retirement.

7.5.2 Test of Hypothesis VIII

H_0 the number of years lived at a present residence is not related to the age of the residence.

H_1 the number of years lived at a present residence is related to the age of the residence.

A change of residence through the turnover process is a normal procedure in the family life cycle. The exception to the model is found when seniors remain in their present housing beyond a normal family length of time into their retirement years. In particular, single-family

residences which have the longest occupancy rate sometimes remain in the same hands for many years. Hypothesis VIII will determine if there is a relationship between the length of time lived in a residence and the age of the building. By knowing this fact the need for new accommodations could be established.

Hypothesis VIII is tested through the use of a four by four chi square table (table 7.8) with a rejection level of .05 set for the null hypothesis. After calculations the value of X^2 observed was much larger than chi square cut. Therefore, the null hypothesis was rejected showing that there is a relationship between the age of the building and owner occupancy rates.

This hypothesis shows that the expected turnover rate for single-family residences will not occur as fast as expected. Therefore, the provisions for new housing or other accommodations can be projected according to this prolonged occupancy of seniors that remain in their residence.

7.5.3 Test of Hypothesis IX

$H_{0(i)}$ the number of years lived at the past residence is not related to the past type of accommodation.

$H_{1(i)}$ the number of years lived at the past residence is related to the past type of accommodation.

$H_{0(ii)}$ the number of years lived at the present residence is not related to the present type of accommodation.

$H_{i(ii)}$ the number of years lived at the present residence is related to the present type of accommodation.

Table 7.8

TEST OF HYPOTHESIS VIII

Age of the Residence

Years Lived at Present Residence	1-10 yrs		10-20 yrs		20-30 yrs		30 yrs +	
	O	E	O	E	O	E	O	E
1-4 years	29	12.8	9	9.7	6	8.3	7	20.1
5-10 years	23	11.8	12	9	4	7.7	8	18.5
10-20 years	9	14.0	24	10.7	8	9.1	5	22.1
20 years plus	2	24.3	3	18.5	23	15.8	69	38.3

N = 251

X^2 = 131.0   chi square = 16.92

α = 0.05

df = 9.

c = .5856

O = observed frequency values

E = expected frequency values

Source. Author

This hypothesis follows directly after the previous one in that people who occupy a single-family residence have usually lived in the same type of housing unit for many years. In accordance, since highrise apartments are newer in the housing market for the elderly, residents would not occupy this unit as long. A comparison is made between the past residence and the present residence, since formulation of life styles can be determined by past types.

Hypothesis $IX_{(1)}$ and $IX_{(ii)}$ have been tested separately by a three by five chi square table (table 7.9; table 7.10). Both sub-hypotheses were tested according to procedures described earlier. The X^2 observed was larger in both cases than chi square crit. The null hypothesis can be rejected for each table. These tests revealed that present and past housing types can be determined by the number of years lived at a residence.

Again, the turnover process is supported with a description for the past residence related to housing type. Usually the most extensive number of years were related to single-family residence. The period of time which a couple require the housing unit to raise a family is from 20 to 30 years (see chapter 3, figure 3A on Family life cycle). They may then decide to sell and change their housing type, attaining more convenient units after their family grows and leaves the house.

In contrast to this, the present housing can be

Table 7.9

TEST OF HYPOTHESIS IX$_{(1)}$

Number of Years Lived in Previous Residence

Past Housing Type	1-4 yrs.		5-9 yrs.		10-14 yrs.		15-24 yrs.		25+ yrs.	
	O	E	O	E	O	E	O	E	O	E
Single-Family Residence	34	39.8	33	35	40	36.7	34	36.7	59	51.8
Highrise Apartments	8	3.6	3	3.2	2	3.3	2	3.3	3	4.7
Lowrise, Joined Apartment Units	8	6.5	8	5.8	4	6.0	10	6.0	3	8.5

N = 251

X^2 = 17.6

chi square = 15.51

O = observed frequency values

E = expected frequency values

α = 0.05

df = 8

c = .2559

Source. Author

Table 7.10

TEST OF HYPOTHESIS $IX_{(11)}$

Number of Years Lived in Present Residence

Present Housing Type	1-4 yrs.		5-9 yrs.		10-14 yrs.		15-24 yrs.		25+ yrs.	
	O	E	O	E	O	E	O	E	O	E
Single-Family Residence	14	31.9	13	29.4	25	23.1	26	20.0	79	51.3
Highrise Apartments	26	12.2	24	11.2	7	8.8	2	7.6	1	19.6
Lowrise, Joined Apartment Units	11	6.5	10	5.9	7	4.7	4	4.1	2	10.5

N = 251

$X^2 = 102.2$ O = observed frequency values

chi square = 15.51   E = expected frequency values

$\alpha = 0.05$

df = 8

c = .6168

Source. Author

measured to examine the younger elderly cohort's situation.
With this in mind, a definite relationship can be established
for the amount of time lived at a residence and the type of
residence. The survey results showed that 62.5% of seniors
stay in a single-family residence for 25 years. Figures
revealed that 24.0% of seniors remained in a highrise apart-
ment complex for 10 years. Therefore, the need for accommo-
dations can be determined if there is a knowledge of the
general amount of time spent in a residence and how fast it
will be returned to the housing market. It is reasonable
to project that the supply of single-family housing will
not greatly increase over the next few years since many
retired persons will likely remain in their present single-
family residence and be satisfied. Stating this in another
way, the persistence or inertia of the elderly to live in
single-family residences causes a lag in the filtering process.

7.5.4 Test of Hypothesis X

H_0 the costs of improvements are not related to the age of
        the present residence.

H_1 the costs of improvements are related to the age of the
        present residence.

At this stage of the analysis it was thought that
since the age of housing has been related to type, the costs
of an older residence may also be related. Since senior
citizens were shown to be affected more seriously by expen-
sive repairs, then the relationships of older accommodations

and higher costs should be avoided. Both factors have some impact during the turnover process of family life cycle if the unit is to remain in the housing stock. Younger families may not want to purchase housing from older households if the costs of improvements are too great. When this occurs, senior citizens are forced to remain in an accommodation not suited to their actual needs.

Hypothesis X was tested by means of a four by five chi square table (7.11) with a rejection level of .05 set for the null hypothesis. With 12 degrees of freedom, chi square is 21.03 at the .05 level of confidence. After calculations, x^2 was 43.3 proving to be significantly exceeding the value of chi square crit. The null hypothesis was therefore rejected. There was a strong relationship between the costs of improvements and the age of the present residence.

This test compares with hypothesis IX when younger families see no usefulness in a residence that has aged and deteriorated beyond repairs. Improvements to a residence must be maintained if the housing stock is to remain vital to all groups. In particular, seniors should sell to others if they cannot afford or cannot perform the necessary repairs to keep the quality of their housing equal to the minimum maintenance standards. If the stock deteriorates beyond repair, then new housing must be built and put on the market for younger families. By showing that costs are directly related to the age of the residence, the building itself

Table 7.11

TEST OF HYPOTHESIS X

Costs of Improvements

Age of Present Residence	Not At All		$1000.		$1-3000.		$3-5000.		$5000.+	
	O	E	O	E	O	E	O	E	O	E
1-10 years	49	33.9	2	7.5	3	12.3	5	5.5	4	3.8
10-20 years	32	25.8	3	5.7	8	9.3	2	4.2	3	2.8
20-35 years	22	34.4	14	7.6	21	12.5	5	5.6	2	3.8
35+ years	32	40.9	11	9.1	17	14.8	10	6.7	6	4.5

N = 251

$X^2 = 43.3$

chi square = 21.03

O = observed frequency values

E = expected frequency values

$\alpha = 0.05$

df = 12

c = .3835

Source: Author

becomes an integral part of the housing life cycle, which

is related to family life cycle.

7.6 Hypotheses Related to Locational Factors

7.6.1 Test of Hypothesis $XI_{(1)}$ and $XI_{(11)}$

$H_{0(1)}$ present housing choice is not related to or not
determined by locational preference.

$H_{1(1)}$ present housing choice is related to and determined
by locational preference.

$H_{0(11)}$ future housing choice is not related to or not
determined by locational preference.

$H_{1(11)}$ future housing choice is related to and determined
by locational preference .

The locational factor is important to consider when

senior citizens are making a choice for a residence. Pre-

vious hypotheses tested both past and present housing fac-

tors, but hypotheses $XI_{(i)}$ and (11) will test the present

and suggested future housing types related to location. As

indicated in the preliminary analysis the provision of

services are related to distance which are both related to

the housing location.

Literature review has shown many researchers weak

on locational analysis. The location will relate to a

market for services in the residential area. For senior

citizens this becomes a very important choice when deciding

on a type of residence. Different locations within the city

provide different services and goods. If the needs for

services change as a result of aging, then perhaps housing choice may change in the future,

Hypothesis $XI_{(1)}$ and $XI_{(11)}$ have been tested separately by a three by four chi square table (table 7.12, table 7.13). The rejection level was set at .05 for the null hypothesis. Each table had 6 degrees of freedom and chi square is 12.59 at the .05 level of confidence. After calculation for table 7.12, $x^2_{(1)}$ was 31.0 compared to 12.59 for chi square crit. The null hypothesis can therefore be rejected.

The value of $x^2_{(11)}$ was 30.7 for the future housing type compared to 12.59 for chi square crit. The null hypothesis was again rejected. These tests revealed that present and future housing types are directly related to their location.

The implications from this hypothesis show that if seniors want a specific housing type then developers must realize the importance of location to them. Location was found to be the third most important factor when deciding on a housing choice, behind income and health. The result showed a moderate relationship between the variables (see tables 7.12, 7.13).

It appeared that as seniors grow older their future housing choice will become more related to specific locations. If the choice is a nursing home then the location variable becomes a most important factor, because of the

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Table 7.12

TEST OF HYPOTHESIS XI$_{(1)}$

Location

Present Housing Type	C.B.D.		C.B.D. Fringe		City Neighborhood		City Suburbs	
	O	E	O	E	O	E	O	E
Single-Family Residence	6	16.3	10	15.0	120	110.1	21	15.6
Highrise Apartments	14	6.2	9	5.7	36	42.1	1	5.9
Lowrise, Joined Apartment Units	6	3.5	5	3.3	20	23.8	3	3.4

N = 251

X^2 = 31.0   O = observed frequency values

α = 0.05

df = 6   chi square = 12.59   E = expected frequency values

c = .3315   C.B.D.= Central Business District

Source: Author

Table 7.13

TEST OF HYPOTHESIS XI(11)

Location

Future Housing Type	C.B.D.		C.B.D. Fringe		City Neighborhood		City Suburbs	
	O	E	O	E	O	E	O	E
Single-Family Residence	4	14.7	9	13.5	112	99.6	17	14.1
Highrise Apartments	17	7.4	11	6.8	39	49.8	4	7.1
Lowrise, Joined Apartment Units	5	3.9	4	3.6	25	26.6	4	3.8

N = 251

$X^2 = 30.7$

$\alpha = 0.05$

df = 6

c = .3301

chi square = 12.59

O = observed frequency values

E = expected frequency values

C.B.D. = Central Business District

Source: Author

wanted nearness to relatives. When nursing homes or hospitals are accepted as the final accommodation, location becomes even more important, since income is given up to authorities and health is deteriorating faster. In this situation, locational choices are severely restricted, and the final selection of a nursing home or hospital is most likely made by family members, or by a doctor, rather than by the patient.

Chapter VIII

CONCLUSIONS

8.1 Windsor's Elderly Households

This study has examined the current housing patterns and anticipations of retired persons, age 55 and over in the City of Windsor. Conclusions drawn could be tested with other comparable Canadian cities; however, since cities differ widely, conclusions drawn from this study and from other localities should be treated cautiously. General characteristics of the elderly are similar everywhere reflecting the same wants and needs. However, housing demands are different from place to place because of differences in economic base, local history and housing stock.

The continuing increase in the numbers of elderly population will result in more need for proper projections which use resources, money and time concerning both public and private endeavours in housing for the elderly.

The research has shown that there is a need in Windsor for accommodations for the elderly and that the direction should be in the form of improvements to the present single-family residences of seniors. There is also a lesser need for development of highrise apartments geared to lower income and lower living expenditures but with more

bedroom space allowed for couples. Other shelter types
such as mobile homes or lowrise apartments and joined units
are needed, but on a limited basis. Generally requirement
needs for maintenance on single-family dwellings is the most
pressing need.

The questionnaire revealed the overwhelming prefer-
ence of senior citizens to remain in their own homes as
independent individuals within the community. From the
survey sample 28 per cent favoured highrise apartments,
but many were dissatisfied with services and transportation
provided. The results showed that the city's housing stock
was adequate at the present, but much of the stock was old
and required repairs. To ensure the necessary number of
units for the growing elderly population an assessment of
the adequacy of present senior citizen housing could be
completed.

8.2. Decision Factors Which Influence Housing Choice; Income, Health, Location and Size of Family

Analysis of questionnaire data has shown that the
major influence and constraint on housing choice was income
followed by health and then location-reasons related to
services and transportation. Within this sphere of factors
the family life cycle has been the major catalyst for change.
The elderly see themselves at the end of family development,
decreasing in size with the loss of children and perhaps a
spouse.

Income, as with all groups of society was the most influential variable on housing choice. Results showed that seniors in the extreme age cohorts were the poorest, surviving on only 2 to 3 thousand dollars per year. The lack of resources for improvements were evidenced by residential deterioration. Many times those in the older age groups expressed the feelings of "no hope" or "not caring" since they realized their remaining years were limited.

At the other end of the age cohorts, the 55 to 64 age groups were usually quite secure financially, but spent their money cautiously. They had a greater tendency to make repairs to their residences, but they were greatly distressed when penalized by housing authorities as they relocated to government aided housing for having built up personal equities.

Rises in housing prices did not seem to affect many seniors since their homes were paid in full and purchased many years ago. If they sold their homes it was usually to relocate into smaller less expensive accommodations.

The health factor was also found to be a major reason for the relocation decision, but was of secondary importance when actually choosing the new accommodations. Income was the final decision factor.

All cohort groups were found to be in reasonable health. Very few required daily health assistance, except those living in nursing facilities. Others required weekly

visits from a traveling nurse. This group represented only 18 per cent of the sample. In general, senior citizens are a very healthy group. This is supported by the fact that many have lived well past their life expectancy rates. Better care and improved medical techniques have provided society with a relatively physically fit group of senior people. Many would never think of being hospitalized for old age and want to spend their entire life independently.

Areas of needed improvements are related to location and transportation for services. Difficulty with walking and the lack of driving forced many seniors into isolation. In terms of shopping many could not buy cheaper and better quality goods. Health services were set to locations in downtown areas and the buses often did not pass close to their homes.

The health future of our elderly seems to be improving every year with modern medical advancements. The requirements should be adequate if maintenance aid can be provided.

8.3 Housing Preferences Related to Age Cohorts

The desire for housing was structured for this study by age cohort breakdown of the elderly. Each specific group was given the opportunity to express their ideas, opinions and preferences concerning housing. It was hypothesized that each group is different and varies in tastes and wants for accommodations.

The survey revealed the following conclusions for the cohort groups. The youngest age cohort was between the ages of 55 to 64. The questionnaire revealed a propensity, of members of this group who were able to retire, to change their residence. A majority of these retired persons did not follow the emphasis upon single-family residence ownership, and somewhat surprisingly, expressed the desire to move into highrise apartment complexes. This may be attributed to the overall flexibility that these people still retain as a result of high income immediately following retirement. Most people at this age are still near the peak in their earning capacity and therefore, would probably have financial security. They still have reasonably good health enabling them to make quick decisions to relocate into large highrise apartments, if desired, with less discomfort on them than for the older cohorts. Most people begin to question their state of well-being at this age and decide to move before they actually become less mobile, and thereby attained more permanent residences for later retirement years.

The next "turning point" within the age groups was 65 to 69. This is the age of compulsory government retirement. Generally, this group stated their housing will remain the same.

If prepared for long term retirement these people made the decision to relocate and reduce their housing size by moving into a more appropriate shelter for later years.

The alternative for many was to make repairs to their present residence and stay at their present location. This fact was supported by a stable single-family residence occupancy rate among the group. It was seen from the data that adjustment to retirement housing was evident at age 70 with the increase in demand for highrise apartments and a decrease in single-family residences.

At age 70 to 74 the elderly showed an adjustment to retirement living with an increase in decisions to relocate and change their housing choice for later years. There is evidence of more moves to highrise apartments but the stronger, more independent and healthy seniors remained within their own single-family residence. Usually this housing was located in the older city neighborhoods in older buildings. These people had occupied their homes for more than 25 years and were attached to their neighborhood and style of living.

The next age cohort within the survey was 80 to 85. There was a tendency to move to highrise apartments, nursing homes or lowrise apartments. It is a fact that health plays a major role in their decision. With lessened mobility and increasing maintenance for a single-family residence, many sell their homes.

In conclusion, the most unpredictable group was the 55 to 59 cohort who could retire if they were economically secure. They were found to be the most decision-oriented group, permitted the greatest number of alternatives in

their lives at this time. If they had lived at a residence for many years now they were faced with change. Many questioned whether they could cope with their future retirement years as options change and prices rise so quickly.

Several surprises were experienced in the survey with respect to the family life cycle. First, there is no smooth curve delineating a cutback in space utilization as income and family size diminish in the successive retirement groups. Secondly, it might have been expected that a larger percentage of the elderly would have declared for moves out of the city to the county fringes, or perhaps to sunnier climates, partly in pursuit of cheaper housing and less maintenance. Family and neighborhood loyalty and determination to stay in the old residence were indicated by questionnaire response.

8.4 A Demand Model for Windsor

The demand for housing in the City of Windsor shows a continuing need for single-family residences. Elderly people described their ideal accommodation as being a small two bedroom house with a moderate yard suitable for gardening. Most wanted to be located within the city neighborhood close to downtown or plaza shopping.

The second most important accommodation desired was for highrise apartments. Many seniors enjoyed apartment living but felt crowded and said they lacked sufficient

space. Some seniors thought their independence was pre-
served in apartments if they had their required bedroom and
living spaces. Most couples wanted two bedroom apartments
for health and aesthetic reasons, but were allowed only
single bedroom facilities.

Windsor's model is judged sufficient for ethnic
community housing. Many seniors expressed satisfaction and
had community travel groups which worked together for mutual
needs. These areas were quiet and located in outer neigh-
borhoods of the central city.

One of the explanations given for the relatively
high degree of satisfaction of the elderly with housing in
Windsor is the good supply of modest single-family homes.
Historically, Windsor has had a high proportion of home
ownership and the various ethnic groups have had strong
pride in owning and maintaining property. Overall, housing
stock is in good condition.

This housing study should direct our attention to
the many different areas related to the provision of housing.
Consumer demand, regardless of whether the commodity is
housing or some other commodity, always reflects to some
extent the nature and condition of supply. From this study
the elderly expressed preference towards single-family housing
in a rather persistent way because this has been their life-
style and the choice of the community for many years. If
the population growth in Windsor had outrun single-family

housing supply, or if, as in the case of Toronto, single lots and houses had become too expensive for most incomes, then it is likely that a much greater proportion of Windsor's elderly would already either be residing in, or opting for, some form of rental accommodation.

The most important point from the survey revealed a strong inertial element in housing demand within the elderly group and the same characteristic is probably true of other age groups as well. Only a total survey of both demand for and supply of all types of housing by all age groups would provide the necessary information on filtering upward and downward in the Windsor market.

8.5 General Conclusions

Housing demand acts as a regulator to the supply of housing for all groups in the city. The elderly are only a modest part of the total demand for accommodations in the city. As seniors, these people must compete for housing just like any other group of home owners. Many times their financial constraints and mobility problems hinder their competition for adequate residences. Their inabilities to travel and inquire quickly may result in the loss of affordable, well located accommodations. Usually they are not informed of suitable accommodations when they appear on the market and lose a chance to move into the better residences.

As economic times change within many cities the housing market becomes tighter in competition and the affordable rental units are absorbed by other age groups. To solve this unfair competition for space the elderly need better communications so that they are well aware of the housing opportunities in the market as they arise.

Compared to the European housing experience where total accommodations are paid for and supplied to all elderly people, Windsor can only learn to regulate and help the supply of housing for their elderly by providing maintenance services at lower costs. From the survey results the full provision of housing as in Sweden, is seen as not being workable in the Canadian system because the elderly here have expressed a total independence towards all their housing operations, whereby this is provided socially in Europe.

8.6 Implications and Suggestions for Further Research

The study has shown the demand for specific housing types broken down by different elderly age groups. It reveals the demand side for accommodations in the City of Windsor. The most prominent factors of housing decision were examined and measured as to the effect on housing choice. To fully consider housing choice, outside secondary factors such as shopping services and transportation locations were included. Positions in the family life cycle

were investigated to determine the needs for space by the
elderly.

To further aid the community in the provision of
housing, demand must be matched with supply. A demand study
is only one side of the housing market, which should be com-
pared to the actual supply of the housing stock. Specific
types of accommodations should be detailed to determine their
number, location, size, conditions and costs.

Included in this analysis are the geographic appli-
cations concerning neighborhood patterns by boundaries,
which produce small sub-markets within the entire city
housing system. A recently completed expressway system
will certainly change the neighborhood's of people and will
possibly change their future retirement lives. Each area
is a unique and separate community. By completing a total
inventory study, the projections for future supply will be
directed to the needed areas of housing. Together, the
demand and supply model comprise the housing system of a
city.

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APPENDIX A

SUPPLEMENT TABLES

Table A.1

PAST HOUSING TYPE FREQUENCIES

Type of Residence	Elderly Age Cohorts							
	55-85+	55-59	60-64	65-69	70-74	75-79	80-84	85+
Single-Family Residence	79.7	92.8	83.3	72.7	76.9	79.6	89.3	81.8
Co-operative								
Townhouse	2.4		4.2	5.4	1.5			3.5
Mobile Home	1.5				6.2			
Highrise Apartments	3.5			5.4	4.6	3.7		
Lowrise Apartments	11.2	7.1	12.5	14.5	6.1	14.8	7.1	18.2
Condominium	.8				3.0			
Hotel Motel								
Nursing Home	1.2		1.8	1.8	1.5	1.8		

All values are in percentages

Source Questionnaire

Table A.2

PRESENT HOUSING TYPE FREQUENCIES

Type of Residence		Elderly Age Cohorts						
	55-85+	55-59	60-64	65-69	70-74	75-79	80-84	85+
Single-Family Residence	62.5	71.4	58.3	65.4	61.5	61.1	64.3	54.5
Co-operative	.8			1.8				9.1
Townhouse	1.2		4.1		1.5		3.5	
Mobile Home	2.0		8.3	3.6		1.8		
Highrise Apartments	24.0	21.4	12.5	21.8	20.0	33.3	32.1	18.2
Lowrise Apartments	5.0		12.5	3.6	9.2	1.8		9.1
Condominium	1.0	7.1		1.8	1.5			
Hotel, Motel	0.4			1.8				
Nursing Home	2.8		4.1		6.2	1.8		9.1

All values are in percentages

Source. Questionnaire

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Table A.3

FUTURE PREFERENCE HOUSING TYPE

Type of Residence	Elderly Age Cohorts							
	55-85+	55-59	60-64	65-69	70-74	75-79	80-84	85+
Single-Family Residence	56.5	64.3	54.2	60.0	56.9	53.7	53.6	54.5
Co-operative	0.4							9.1
Townhouse	1.5		4.2		3.1		3.6	
Mobile Home	1.9		4.2	7.3				
Highrise Apartment	28.2	28.6	25.0	23.6	20.0	40.7	35.7	27.3
Lowrise Apartment	8.4		12.5	7.3	13.8	3.7	7.1	9.1
Condominium	1.5	7.1		1.8	3.0			
Hotel, Motel								
Nursing Home	1.2				3.0	1.9		

All values are in percentages

Source. Questionnaire

Table A.4

TOTAL FAMILY INCOME, 1981

Income	Elderly Age Cohorts							
	55-85+	55-59	60-64	65-69	70-74	75-79	80-84	85+
Less than $5000	32.3	21.4	33.3	23.6	32.3	42.6	35.7	27.3
$ 5000-10,000	33.5	42.9	25.0	32.7	30.7	37.0	39.3	27.3
$10,000-15,000	20.7	28.6	29.2	27.3	20.0	12.9	10.7	27.3
$15,000-20,000	7.9	7.1	8.3	9.1	9.2	5.6	10.7	9.1
$20,000 plus	5.5	7.1	4.2	7.3	7.7	1.9	3.6	9.1

All values are in percentages

Source: Questionnaire

Table A.5

ELDERLY LIVING EXPENSE PERCEPTIONS

Elderly Age Cohorts

Ratings	55-59	60-64	65-69	70-74	75-79	80-84	85+
Very Seriously	21.4	12.5	12.7	12.3	5.6	14.3	27.3
Medium Effects	7.1	29.2	36.4	32.3	37.0	35.7	27.3
Very Little	21.4	12.5	29.1	23.1	35.2	32.1	18.2
No Effects	50.0	45.8	21.8	32.3	20.4	17.9	27.3
No Response					1.8		

All values are in percentages

Source. Questionnaire

Table A.6

LIVING WITH RELATIVES

Time Spent	Elderly Age Cohorts						
	55-59	60-64	65-69	70-74	75-79	80-84	85+
1-2 weeks	7.1		9.0	3.0		10.7	
2-3 weeks			9.0	6.2	5.5		27.3
3-4 weeks				1.5			
4-5 weeks		4.2	1.8			7.1	
5-6 weeks				1.5			
6+ weeks			1.8	3.1			
Yearly	7.1	8.3	5.4	6.2	3.7	10.7	9.1
Not at all	85.7	87.5	72.7	78.5	90.7	71.4	63.6

All values are in percentages

Source: Questionnaire

Table A.7

REQUIRED NURSING CARE VISITS

Elderly Age Cohorts

Amount of Care	55-85+	55-59	60-64	65-69	70-74	75-79	80-84	85+
Intensive Care					3.1			
Moderate	18.3	21.4	16.7	14.5	13.8	24.1	25.0	18.2
Not at all	80.3	78.6	83.3	85.5	83.1	75.9	75.0	81.8

All values are in percentages

Source· Questionnaire

APPENDIX B

FORMULA PROCEDURES

1) CHI SQUARE TEST FORMULA

Calculations were obtained using the following formula,

$$X^2 = \sum \frac{(O-E)^2}{E}$$

where O=observed frequencies from field data.

E=calculated expected frequencies by, (row x column ÷ number)

2) CONTINGENCY COEFFICIENT

To compute the significance level, to obtain the contingency coefficient the following formula was used,

$$C = \sqrt{\frac{X^2}{N+X^2}}$$

APPENDIX C

INTERVIEW SCHEDULE

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Dear Sir/Madam

The following questionnaire is being conducted to gather statistical research information for a Master of Arts thesis. It is sponsored by the Department of Geography at the University of Windsor.

This is a completely confidential survey and your name is not requested or needed. The information however is very important. The intent is simply to gather accurate facts about elderly and retired persons with regards to their type of residence. It will help prevent old misconceptions being used in the continuing controversy over the "where," "how" and "why" of accommodating retired residents within our cities in the future. The survey has been prepared under the supervision of Dr. J. C. Ransome, Advisor of Urban Studies in Geography at the University of Windsor.

All information will be transformed into statistics and coded for computer analysis at the University. A final report will be presented in September, 1981. Copies of the study may be reviewed by the public at the Geography map library in Windsor Hall at the University of Windsor.

Your cooperation in accurately answering the questions will be greatly appreciated.

Sincerely yours,

Edward Egyedy
Edward Egyedy
Project Supervisor

J. C. Ransome
Technical Advisor
Urban Studies

A. Blackbourn
Chairman
Department of Geography

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ELDERLY HOUSING QUESTIONNAIRE

PART I

Accommodation Characteristics

1) What is your present housing type? What was your immediate previous type?

    a) Single Family Residence   ——— ———
    b) Co-operative Housing   ——— ———
    c) Townhouse   ——— ———
    d) Mobile Home   ——— ———
    e) High Rise Apartment   ——— ———
    f) Low Rise Apartment   ——— ———
    g) Condominium   ——— ———
    h) Hotel, Motel   ——— ———
    i) Nursing Home   ——— ———

2) Do you live in public housing ? a) Yes ___ b) No ___

    Do you receive rental assistance? a) Yes ___ b) No ___

3) Do you live with your relataves? a) Yes ___ b) No ___

    If yes, how long in weeks?
    a) 1-2 ___   e) 5-6 ___
    b) 2-3 ___   f) 6 - ___
    c) 3-4 ___   g) Yearly ___
    d) 4-5 ___

4) What is the location of your present housing? Be specific, state area _____

5) What are the personal costs to maintain your present housing in terms of utilities, taxes, upkeep, improvements, per year?

    a) Less than $1000. ___   e) $4000. - $5000. ___
    b) $1000. - $2000. ___   f) $5000. plus ___
    c) $2000. - $3000. ___
    d) $3000. - $4000. ___

6) Did you make any major improvements to your residence in the last 5 years? a) Yes ___ b) No ___

    If yes, how much?
    a) Less than $1000. ___   e) $4000. - $5000. ___
    b) $1000. - $2000. ___   f) $5000. plus ___
    c) $2000. - $3000. ___
    d) $3000. - $4000. ___

7) Is your mortgage paid in full?   a) Yes ___   b) No ___

8) If no, do you find this a financial burden?   a) Yes ___   b) No ___

9) How many bedrooms has your present shelter?

    a) 0 bedrooms ___   d) 3 bedrooms ___

    b) 1 bedrooms ___   e) 4 bedrooms ___

    c) 2 bedrooms ___   f) 5 bedrooms ___

10) How does your family fit into the following age classifications?

	Male	Female		Male	Female
a) 55-59 yrs.	___	___	d) 70-74 yrs.	___	___
b) 60-64 yrs.	___	___	e) 75-79 yrs.	___	___
c) 65-69 yrs.	___	___	f) 80 - yrs.	___	___

11) Are you retired?   a) Yes ___   b) No ___

    If yes, state number of past years ___
    If not, state number of future years ___

12) When you retire, where will you prefer to live?

    a) Central business district ___
    b) Central business district fringe ___
    c) City neighborhood ___
    d) City suburbs ___
    e) Outside city within the county ___

13) Will you move out of the city when you retire?
    a) Yes ___   b) No ___

    If yes,   a) outside Windsor ___   c) outside Ontario ___
              b) outside county ___   d) outside Canada ___

14) What type of housing are you planning to move into within the immediate future of your retirement?

    a) Single Family residence ___   f) Low Rise Apartments ___

    b) Cooperative Housing ___   g) Condominium ___

    c) Townhouse ___   h) Hotel, Motel ___

    d) Mobile Home ___   i) Nursing Home ___

    e) High Rise Apartment ___

15) What was the housing type that you lived in at age 55, 65, 75, 80 where applicable?

	55	65	75	80
a) Single Family Residence	___	___	___	___
b) Co-operative Housing	___	___	___	___
c) Townhouse	___	___	___	___
d) Mobile Home	___	___	___	___
e) High Rise Apartment	___	___	___	___
f) Low Rise Apartment	___	___	___	___
g) Condominium	___	___	___	___
h) Hotel, Motel	___	___	___	___
i) Nursing Home	___	___	___	___

16) What is the age of your present residence?

a) 1-5 yrs. _____   d) 20-30 yrs. _____

b) 5-10 yrs. _____   e) 30-35 yrs. _____

c) 10-20 yrs. _____   f) 40 + yrs. _____

17) How do you rate your neighborhood, with regard to the following characteristics?

	Green space	Neighbors	Services	Transportation	Physical Appearance
a) Excellent	___	___	___	___	___
b) Good	___	___	___	___	___
c) Satisfactory	___	___	___	___	___
d) Poor	___	___	___	___	___

18) Why did you move from your past residence:

a) Health _____   c) Upkeep too great _____   e) Wanted a change, discuss _____

b) Income _____   d) Sold for a profit _____

19) Was there a specific reason which influenced your present housing choice?

a) Income _____

b) Physical upkeep _____

c) Area too large _____

d) Desired a change of type _____

e) Desired a change of location _____

f) Physical, Medical _____

g) Other, specify _____

20) How many years have you lived at your present residence?

a) 1-4 yrs. _____   d) 15-19 yrs. _____

b) 5-9 yrs. _____   e) 20-24 yrs. _____

c) 10-14 yrs. _____   f) 25 + yrs. _____

PART II
Family Characteristics

21) How many members are in this household?

a) 1 person _____   d) 4 persons _____
b) 2 persons _____   e) 5 persons _____
c) 3 persons _____   f) 6 persons _____ .

22) What is your present marital status?

a) married ____   d) widow, widower ____   g) Other,
b) single ____   e) separated ____   specify _____
c) divorced ____   f) retired partners ____

23) What was your largest family size achieved?

a) 1 person _____   d) 2 adults, 2 children _____
b) 2 persons _____   e) 2 adults, 3 children _____
c) 2 adults,1 child _____   f) 1 adult, state number
                                        of children _____

24) How many years ago did you sell your previous housing?

a) 1-4 yrs. ____   d) 15-19 yrs. ____
b) 5-9 yrs. ____   e) 20-24 yrs. ____
c) 10-14 yrs. ____   f) 25 + yrs. ____

25) How many years did you live at your previous housing?

a) 1-4 yrs. _____   d) 15-19 yrs. ____
b) 5-9 yrs. ____   e) 20-24 yrs. ____
c) 10-14 yrs. ____   f) 25 + yrs. ____

26) What was the age of the buyer for your previous residence?
    Approximate.

a) 20-30 yrs. ____   d) 41-45 yrs. ____   g) 61-70 yrs. ____
b) 31-35 yrs. ____   e) 46-50 yrs. ____   h) 71-80 yrs. ____
c) 36-40 yrs. ____   f) 51-60 yrs. ____   i) 81- yrs. ____

27) What was the size of the buyers family? Approximate.

a) 1 person _____   d) 4 persons _____
b) 2 persons _____   e) 5 persons _____
c) 3 persons _____   f) over 5 persons _____

28) Do you or your spouse require physical or medical aid which
    affected your housing choice?

a) Yes _____   b) No _____

If yes,   a) intensive care (nurse required) _____
           b) moderate care (occasional nurse) _____
           c) none at all
                                                    _____

29) Do you have a dependency on other persons for required services?

    a) intensive need _____   c) occasional help _____

    b) moderate need _____ ,   d) not at all _____

30) What type of transportation do you use or depend upon?

	intensive	moderate	occasional	not at all
a) personal vehicle	_____	_____	_____	_____
b) bus	_____	_____	_____	_____
c) taxi	_____	_____	_____	_____
d) friends' car	_____	_____	_____	_____
e) walk	_____	_____	_____	_____
f) special service and charter rides	_____	_____	_____	_____

PART FII

Financial Characteristics

31) What is the highest level of education attained by the head of the household?

    a) primary _____   d) vocational _____

    b) secondary _____   e) university _____

    c) post secondary _____ f) university graduate _____

32) Please check the approximate total annual family income group to which you belong.

    a) less than $5000. per year _____

    b) $5000. - $10,000 per year _____

    c) $10,000. - $15,000. per year _____

    d) $15,000. - $20,000. per year _____

    e) $20,000. plus per year _____

33) How is your income derived?

	Major Source	Minor Source(s)
a) pension	_____	_____
b) full time job	_____	_____
c) part time job	_____	_____
d) welfare	_____	_____
e) paid services	_____	_____

34) What was your occupation ? State exactly _____

35) Do you have a supplementary job now?

    a) Yes ___   b) No ___   If yes, state exactly _____

36) Has living expenses seriously affected your housing choice?

    a) very seriously _____   c) very little _____

    b) medium effects _____   d) no effects _____

37) Has your income drop since retirement affected your housing choice?

a) very seriously _____   c) very little _____

b) medium effects _____   d) no effects _____

PART IV

Opinionated Needs

38) Do you have all the services and recreational facilities you desire?

	Very Satisfied	Satisfied	Unsatisfied	Very Unsatisfied
a) food stores	_____	_____	_____	_____
b) other shopping	_____	_____	_____	_____
c) parks	_____	_____	_____	_____
d) transportation	_____	_____	_____	_____
e) hospital	_____	_____	_____	_____
f) entertainment	_____	_____	_____	_____

39) Would you move into a senior citizen housing complex?

a) Yes ____ b) No ____ . If no, state reason _____

40) Do you think there are sufficient senior citizen complexes?

a) very sufficient _____   c) sufficient _____

b) moderately sufficient _____   d) not sufficient _____

41) Do you want to live with people your own age?

a) Yes ____ b) No ____ . If no, state reason _____

42) Are you on a waiting list for accommodations in a government funded senior citizen complex?

a) Yes ____ b) No ____ . If yes, how long? ____ Yrs. ____ Months

43) To what type did you apply?

State exactly _____

44) What would be your ideal housing or living type, with no conditions attached? Describe exactly.

_____

_____

_____

APPENDIX D

LIST OF VARIABLES

LIST OF VARIABLES

Variable

1 = Present Housing Type

2 = Past Housing Type

3 = Public or Private Housing

4 = Living with Relatives

5 = Time Spent Living with Relatives

6 = Personal Costs, Maintenance

7 = Improvement Costs

8 = Amount of Expenditure

9 = Mortgage Status

10 = Related Mortgage Burdens

11 = Number of Bedrooms

12 = Male Age of Husband

13 = Female Age of Wife

14 = Living Partner's Age

15 = Retirement Status

16 = Preference to Live when Retired

17 = Retirement Relocation Outside City

18 = Housing Preference Type After Retirement

19 = Housing Type at age 55

20 = Housing Type at age 65

21 = Housing Type at Age 75

22 = Housing Type at age 80

23 = Age of Present Residence

24 = Neighborhood Rating Greenspace

25 =   "   "   Neighbors

26   "   "   Services

27 =   "   "   Transportation

28 =   "   "   Physical Appearance

29 = Reason for Relocation from Past Residence

30 = Reason for Present Housing Choice

31 = Years Lived at Present Residence

32 = Number of Members in the Present Household

33 = Marital Status

34 = Largest Family Size Achieved

35 = Past Years Previous Residence Sold

36 = Number of Years Lived at Previous Residence

37 = Age of Buyer for Previous Residence

38 = Size of Buyer's Family of Previous Residence

39 = Medical or Physical Requirements

40 = Amount of Required Care

41 = Dependency on Others

42 = Transportation Intensity, Auto

43 =   "   "   Bus

44 =   "   "   Taxi

45 =   "   "   Friends' Car

46 =   "   "   Walking

47 = Educational Level

48 = Total Family Income

49 = Income Sources

50 = Past Occupation

51 = Supplementary Job Status

52 = Living Expense Affects

53 = Retirement Income Affects

54 = Services and Recreational Facilities, Food Stores

55 =   "   "   "   "   Shopping Stores

56 =   "   "   "   "   Parks

57 =   "   "   "   "   Transportation

58 =   "   "   "   "   Hospital

59 =   "   "   "   "   Entertainment

60 = Opinion of Senior Citizen Housing Complexes

61 = Opinion of Senior Citizen Housing Complex Sufficiency

62 = Living with People Own Age

63 = Waiting List for Accommodations

64 = Ideal Type of Accommodation

VITA AUCTORIS

Edward Carl Egyedy was born December 22, 1950 in Windsor, Ontario, Canada. He received his secondary school education in Leamington, Ontario. His post - secondary education was completed at the University of Windsor, where he received an Honours Bachelor of Arts degree in Urban Studies in 1979. Continuing his education at Windsor as a graduate he recieved his Master of Arts degree in Geography in 1981.