

Distinguishing the Spending Preferences of Seniors

Zachary Zimmer and Neena L. Chappell, *University of Victoria**

RÉSUMÉ

Mille quatre cent six aînés furent interrogés sur leurs préférences en tant que consommateurs. Alors que certains pouvaient nommer des produits qu'ils préféraient, d'autres ne le pouvaient pas. La présente étude examine les caractéristiques qui définissent le mieux les aînés qui ne s'intéressent pas à l'achat de produits de consommation par rapport à ceux qui expriment leurs préférences particulières. À l'aide de discriminants, les analyses montrent que l'âge est ce qui distingue le mieux les personnes non-intéressées des autres; cela va à l'appui d'une étude antérieure de Walker et Schwenk (1991). Le revenu et la santé sont ce qui distingue de la façon la plus fiable les personnes, pour qui l'achat de produits de loisir constitue la dépense la plus importante, des personnes qui s'intéressent principalement à des besoins fondamentaux ou aux produits domestiques. Les personnes, qui dépensent principalement pour des articles domestiques, sont souvent propriétaires d'une maison qu'ils habitent depuis longtemps. Les résultats confirment que chez les aînés, l'hétérogénéité dans d'autres domaines (comme la santé et les habitudes sociales) s'étend à leurs préférences en tant que consommateurs. La diversité qui s'exprime dans le choix des produits de consommation s'explique par le désir d'une meilleure qualité de vie.

* The data for this study were provided from the Canadian government's National Centres of Excellence program, funded by: the Medical Research Council; the National Health Research Development Program; the National Science and Engineering Research Council; National Centres of Excellence program; and the Social Science and Humanities Research Council of Canada.

Key words: Seniors, Heterogeneity, Consumer Issues, Spending Preferences, Discriminant Analysis.

Mots clés: Aînés, hétérogénéité, enjeux de consommation, produits préférés, analyse discriminante.

Manuscript received May 26, 1993; manuscrit reçu le 26 mai 1993.

Manuscript accepted August 24, 1994; manuscrit accepté le 24 août 1994.

Requests for reprints should be sent to:/Les demandes de reproduction doivent être adressées à:

Neena L. Chappell
Centre on Aging
University of Victoria
P.O. Box 1700
Victoria, BC
V8W 2Y2

ABSTRACT

One thousand, four hundred and six seniors were asked about their consumer spending preferences. While some could name a product spending preference, others could not. This study examines the characteristics that best distinguish those elders who are uninterested in spending on consumer products from those who choose product specific preferences. Discriminant function analyses show that age best distinguishes the non-interested group from the others, supporting a previous report by Walker and Schwenk (1991). Income and health status most reliably separate those whose most important spending priority is a recreational product from those most interested in basic needs or housing products. Those whose spending priority is a housing item tend to be home-owners who have lived in their residences for long periods of time. The results confirm that the heterogeneity among seniors documented in other areas (such as health and social characteristics) extends to their consumption preferences. The diversity in spending preferences can be understood in terms of a desire to enhance quality of life.

Introduction

The proportion of the North American population that is 65 years of age and older has nearly doubled over the last 40 years, and will double again in the next 40. For the first time seniors will constitute well over 20 per cent of the population (U.S. Bureau of the Census, 1989; Statistics Canada, 1990). Moreover, recent research has demonstrated that the older segment of the population represents an important consumer group with increasing buying potential (Lees, 1987; Martin, 1992; Minkler, 1989). Seniors are less likely to be in debt (Chappell, 1993), and have a greater net worth than others (National Advisory Council on Aging, 1991). According to Torrey and Taeuber (1986), income from assets continues to increase until the age of 85.

Despite their increasing importance as part of the consuming public, the market needs of seniors have not received much attention from the academic, gerontological research community. Some general surveys on consumer spending have been conducted (Harrison, 1986; Moehrle, 1990). In Canada, Heslop has used expenditure patterns as an indicator of well-being for the general population (Heslop, 1985a) and for elderly women living alone (Heslop, 1985b). But, the spending preferences of various groups of seniors have not been well established. Seniors have often been characterized as a homogeneous consumer group, but their buying potential is not all the same, nor are their needs and preferences. As we know, seniors are heterogeneous in terms of other characteristics – health, housing, activity, age and gender to name but a few (Bass, Torres-Gil, & Kutza, 1990; Tynan & Daryton, 1988; Moehrle, 1990; Harrison, 1986) – so we would expect wide variation in their spending preferences as well. This paper focuses on the predictors which distinguish consumer choices among seniors.

Specifically, there are two aims to this study. The first is to determine whether, and with which characteristics, those who are interested in spend-

ing money on consumer goods can be distinguished from those who are not. The second aim is to identify the characteristics of elders who choose a particular spending preference as their most important spending priority so that subgroups can be identified and the heterogeneous nature of the market defined. Examining the spending preferences of seniors is an important step in determining their needs and ascertaining the types of products which would enhance the quality of life of various subgroups of elders.

Interested and Uninterested Consumers

Several stereotypes have dominated the market approach to the elderly. One characterization of the elderly is of a frail and poverty stricken group, with little interest in consumer spending (Lambert, 1979; Phillips & Sternthal, 1977). A number of writers have noted that these stereotypes push business away from this component of the population (Harris & Feinberg, 1977; Lambert, 1979). Despite more recent interest in seniors as a consumer group (Festervand & Wylde, 1988; Martin, 1992; Minkler, 1989), these portrayals still dominate market place attitudes (Tynan & Daryton, 1988, 1985).

The fact that not all seniors are poor is well-established. A recent report on the elderly by Statistics Canada (1993) shows that although a high concentration of seniors are in lower income brackets, the distribution of wealth is quite diverse, with younger seniors displaying the greatest variance. In addition, the elderly receive income from a number of different sources including government transfer payments, investments, retirement plans and work earnings. The proportion who receive their major source of income from each of these sources varies greatly (Statistics Canada, 1984). Those who receive a majority of income from social security programs would be expected to have lower levels of annual income than those who receive a good proportion of their income from private sources. There are those who still live below the poverty line, but the incidence of poverty among the elderly has been decreasing faster than the rate for the rest of the population (Chappell, 1993; Festervand & Wylde, 1988).

In addition, the stereotype of all seniors as frail is false. Many seniors live with chronic ailments such as a heart condition or arthritis, but this does not necessarily affect their functional ability to perform everyday tasks. Less than half of seniors suffer from some functional disability, less than one-third have severe functional disability and only a minority have severe functioning problems with basic activities of daily living, such as eating and personal mobility (Chappell, 1990).

There are those who are ill and disabled, but this by no means describes all individuals aged 65 and over, and more importantly, it does not preclude the elderly from living a healthy and active lifestyle. However, the long-standing market stereotypes of seniors as poor, frail and therefore uninterested in consumer spending, may well point to an uninterested group, while the rest who are healthy and have higher standards of living may be the interested consumers. The first aim of this paper is to test the hypothe-

ses that seniors who are poor and frail are uninterested in consumer spending and that those who are healthy and have higher incomes are interested consumers.

The Heterogeneous Nature of Interested Consumers

A second depiction of the seniors' market is of a homogeneous group, barely distinct from one another (Block, 1974; Gelb, 1978; Towle & Martin, 1976). Yet gerontologists have long informed us of the diverse nature of this group. Research in a number of areas has confirmed the diversity among seniors. To name just a few examples: Beckham and Kart (1977) describe the heterogeneity of elderly living in large metropolitan areas; Chappell (1991) discusses the diverse living arrangements of the elderly; and a study by Carlsson-Agren, Berg and Wenestam (1992) supports differentiation of the elderly in terms of daily life experiences. Yelaja (1989) discusses politics and gray power and concludes that, "older people with all their heterogeneous characteristics are difficult to categorize as one cohesive group ..." (Yelaja, 1989, p. 120). In addition to this gerontological research, a number of studies in the marketing sciences have demonstrated the falsity and danger of assuming a homogeneous elderly market (Cooper & Marshall, 1984; Davis, 1985; Day, Davis, Dove, & French, 1988; Sorce, Tyler, & Loomis, 1989). Although there are a number of areas in which seniors' consumer interests may differ, we examine three broad areas of consumer interests: recreation items, housing items and basic need items.

A recent report by Walker and Schwenk (1991) defines the characteristics of elderly households by age, gender and race, education, employment, marital status, family composition, urban/rural residence, home-ownership, housing type and income factors, suggesting that consumption patterns may differ along these dimensions. According to these authors, such socio-demographic variables influence expenditure patterns because they reflect circumstances, needs and preferences and impact on economic status. In other words, the consumer behaviour of seniors, like others, reflects individual product interests.

In the following analysis, we build on the argument made by Walker and Schwenk, and utilize a similar set of variables to classify interested elderly consumers into one of the three spending preferences mentioned above by examining the most important spending priority reported. We hypothesize that seniors' spending preferences relate to their individual needs for enhancing quality of life. That is, decisions about which consumer products are most important to an individual are often based upon the perception that they will enhance quality of life. For instance, recreational goods are used to fulfil leisure pursuits which are thought to enhance life quality. But, those with low income levels, or who are in poor health, may have more immediate needs like better food or clothing. In fact, it is likely that those interested in recreational versus basic need items may be most different from each other since interest in these two areas is influenced by similar factors,

for instance income and health, with those preferring recreation being on the favourable end of both.

The consumer group identified as the seniors' market represents a number of age cohorts, differing from each other by 30 years and more. Older seniors may differ in preferences and tastes from younger seniors due simply to growing up in a different era (Schulz, 1985). For instance, Heslop (1985a) shows the importance of cohort effects on spending patterns. Breakwell and Fife-Schaw (1988) discovered that, among the elderly, increasing age is correlated with a belief that new technologies are not personally beneficial, suggesting that younger elders are more accustomed and receptive to, and more often utilize, new technological products. Kerschner and Chelsvig Hart (1984) report that age is negatively correlated with the utilization of calculators, cable TV, computers, video recorders, automatic tellers and video games. This might suggest that age is associated with interest in recreational products. We would hypothesize then, that younger seniors are more likely to fall into the recreational preference group. On the other hand, with increasing age comes increases in the incidence of disability and chronic health conditions and therefore older seniors would tend to emphasize basic needs in their consumer behaviour (Schulz, 1985).

Besides age, income and health, differences in other socio-demographic characteristics may also promote differences in consumer preferences and it is important to control for these additional influences when examining spending preferences. For example, in Canada 76 per cent of older men and 42 per cent of older women are married or live in a common law union while 25 per cent of seniors live alone (Statistics Canada, 1991). An additional 15 per cent live with someone other than a spouse (Chappell, 1991). That is, seniors differ in terms of marital status, housing arrangements and household sizes. Although the majority are not isolated from family and friends, there are disparities in their support networks (Chappell, 1992). These social support variables tend to be highly correlated with health status, life satisfaction, feelings of loneliness and other important indicators of well-being (see for example, Chappell, 1992; Cohen & Syme, 1985; Duff & Hong, 1982). They may also influence consumer behaviour. It may be more difficult for those without support to get by in terms of day to day activities, suggesting a need for more basic items in their consumer behaviour. Those with more support, and who live with others or are married, may be more likely to have basic needs satisfied and look to enhance quality of life with recreational products.

Females may be more interested in basic items because their levels of income tend to be lower, and their health status tends to be worse. Education, which has been shown to influence interest in technological products (Breakwell & Fife-Schaw, 1988) may also be related to product interest, with those more educated having a greater interest in recreational items since their basic needs are more likely to be already satisfied. Previous experience in the market place also indicates spending preferences. Those who have a history of spending on recreation, for instance, are likely to be more inter-

ested in this type of consumer product.

We may also hypothesize that those who can be classified as being interested in housing products, like new furniture for their home, are those who own housing, have lived in their present home for a long period of time, and have more invested in its upkeep. They see maintaining their home as enhancing their quality of life.

To summarize, the second aim of this study is to classify seniors into one of three spending preference areas based on various characteristics by which seniors tend to differ.

Data and Methods

The data utilized for these analyses come from the Canadian Aging Research Network (Group A) needs assessment. The overall aim of the larger project is to determine the needs of seniors which can be met through product and service development. The needs assessment involved personal interviews lasting an average of one hour and 15 minutes. The data include a wide variety of demographic and health status information, as well as information on product needs and spending preferences. The total sample comprised 1,406 seniors, 65 years of age and older, living in Manitoba. One-half of the respondents were residents of Winnipeg, while the other half of the sample was chosen from eight smaller communities throughout the province, with populations ranging from about 2,000 to 10,000 inhabitants.

The sampling design involved a two-stage strategy. First, nine sites were selected. Second, individuals from each site were chosen for personal interviews. The choice of sites was purposive, using the following criteria: an equal number of rural sites relatively near and far from the metropolitan centre were included; only sites with population sizes of about 2,000 inhabitants or more were selected; sites with a high proportion of elderly living in the community were considered; and an equal number of rural sites with and without the availability of a Provincial Department of Health office were included. Selection of respondents within sites used a random sample drawn from the list of medicare recipients in the designated sites. (The province provides universal medical coverage to its residents.) Potential respondents were first contacted by telephone at which time an appointment for the interview was arranged. Respondents were, in the vast majority of cases, interviewed in their own homes. The response rate for this study was 78 per cent.

The random sample was stratified for age and sex according to the age and sex population distribution of Manitoba in the year 1990. Specifically, 58 per cent of the sample are female, and 42 per cent male. Fifty-one per cent of the sample are 65 to 74 years of age, 36 per cent are 75 to 84, and the remaining 13 per cent are older. The mean age is 75.8 years. The mean household size is 1.7, with 40 per cent of respondents living alone. The mean years of education is 9.3. Fifty-five per cent of respondents are married, 35 per cent are widowed, and the remainder are single, never married, divorced

or separated. Income level was recorded using a 13-point total household income scale. Twenty-eight per cent of respondents report total monthly household income below \$1,000, 45 per cent report it to be between \$1,000 and \$2,000, and the remaining 27 per cent have monthly household incomes of over \$2,000. A more detailed description of the sample and methods of data collection can be found in Zimmer and Segall (1992).

Two questions were asked about the spending preferences of seniors. First, seniors were asked: "If you had what you consider to be some additional or extra income, would you spend it on any of the following?". Respondents were asked to respond "yes" or "no" to each of the following items: better housing, house repairs, more or better food, more or better clothing, more or better furniture, medical needs, recreational equipment or activities, transportation or a new car, and trips and/or holidays. In addition, respondents were asked if there was something else, not named, that they would spend their money on. Some respondents did not report an interest in any of the items listed and could not name any other product that they were interested in spending money on. Surprisingly, no respondents noted that they would like to save any extra income. Others reported a non-product interest such as giving money to charity or to family. These respondents are classified as "uninterested consumers" in the analysis to follow. Those who reported at least one product interest are classified as "interested consumers".

Using a factor analysis, the preferences were categorized into a smaller number of groups. Considering a factor score of .5 or over as a cutoff point to determine factor groupings, the procedure confirmed that the items listed generally represent three broader areas which we have named housing, recreation and basic needs. The results of this procedure can be seen in Table 1. The first factor consists of furniture, better housing and house repairs. No other item approached a factor score of .5. This factor has an eigenvalue of 2.2 and accounts for 24.8 per cent of the variance. We refer to the second factor as a basic needs factor since it is associated with food, clothing and medical needs, three items which are often conceptualized to represent individual basic needs. This factor has an eigenvalue of 1.1 and accounts for 12.5 per cent of the variance. Items which loaded highly on the third factor include recreational equipment, trips and transportation or a new car. This factor has an eigenvalue of 1.0 and accounts for 11 per cent of the variance. In total, 48.3 per cent of the variance is explained.

We would caution that our definitions of recreation, housing, and basic need items are based on this factoring solution rather than on a definition encompassing all aspects that could be related to these concepts. Although there are obvious differences between all of the consumer items tested, the factor solutions suggest that there are strong links between certain items which can be summarized by the broader definitions of recreation, housing, and basic needs. That the three factors represent distinct groups is affirmed by the fact that no item loaded highly on to more than one factor. The resultant factor patterns are clearly distinguishable from one another, and

Table 1
Principal component factor analysis of priority spending items

<i>Factor Patterns</i>	<i>1</i>	<i>2</i>	<i>3</i>
1. Housing			
- Furniture	.71	.21	.16
- Better housing	.62	.15	-.07
- House repairs	.57	-.04	.27
2. Needs			
- More or better food	.02	.78	.10
- More or better clothing	.33	.62	.23
- Medical needs	.08	.58	-.10
3. Recreation			
- Recreational equipment	-.22	.26	.72
- Trips	.21	.04	.61
- Transportation or new car	.30	-.11	.55
Eigenvalue	2.2	1.1	1.0
Variance explained	24.8%	12.5%	11.0%
<i>Total variance explained = 48.3%</i>			

Note: Rotated factor scores of .5 or over are in bold.

are meaningful and interpretable.

Since respondents could report that they would spend money on multiple items, a second question was asked in order to delineate their *priority*. Specifically, respondents who had more than one spending interest were asked: "Which of these items would you say you would spend the money on first. That is, of (list of items mentioned), which is *most important* to you as of now?". Although both of these questions are utilized in the analysis below, to clearly define interest and avoid contamination in the responses, only the *priority* is analysed as a dependent variable. This variable depicts the *most important* spending item of the respondent. Of interested consumers, 50 per cent selected a recreational item as their spending priority, 40 per cent chose a housing item, while only 10 per cent felt that one of the basic need items was most important to them.

A number of predictor variables are examined. The literature review revealed that senior populations vary according to demographic and health status characteristics. A number of these attributes are identified as predictors.

The demographic characteristics include income, education, marital status, household size, gender, place of residence, and age. Marital status (married versus not married), gender (female and male), and place of residence (rural and urban) are measured dichotomously. For the purposes of this study, respondents from communities outside of Winnipeg are considered rural residents. Income is measured on a 13-point scale of monthly household income. Age and education are measured in years, continuously. Household size is the number of residents living in the household.

The data set includes various indicators of health status, both objective and subjective. First, a measure for the number of health symptoms is constructed by adding the number of affirmative responses to a list of 11 symptomatic difficulties: dizziness, irregularity, tiredness, headaches, rashes, shortness of breath, pain, difficulty sleeping, loss of appetite, indigestion and depression. These symptoms indicate problems that are not necessarily specific to an illness but ones that might restrict the things that people do.

Second, respondents were asked whether they experience restriction with any of seven activities of daily living. The activities of daily living are: walking a city block, getting in and out of a car, getting in and out of the bathtub, getting in and out of bed, dressing and undressing, using the toilet, and feeding oneself. This measure indicates a level of mobility that could be important in determining the spending preferences of seniors. Alpha scores for these two indexes are .69 and .79 respectively, suggesting both have good internal consistency.

The final measure of health status is a subjective assessment of overall health. Specifically, respondents were asked, "For your age, would you say in general your health is excellent, good, fair, poor or bad?". A response of excellent is coded as 1, while the poorest health category, bad, is coded as 5. Seniors tend to report a relatively high level of self-assessed health status despite experiencing a number of health symptoms and activities of daily living restrictions. Self-assessed health is an important measure of how an individual feels on a day to day basis, despite facing objective health limitations, and this measure has been used successfully in much gerontological research. All three health measures are used in order to tap the range of health issues faced by seniors.

We have hypothesized that housing related variables, like ownership and length of tenure, would best distinguish those interested in housing items. These variables are also included in the analysis. Ownership of housing is measured as a dichotomous variable indicating owned housing or other. Number of years lived at the present residence is continuous, measured in years.

Two variables are introduced as possible correlates of recreational spending. Since one consumer product refers to trips and/or holidays, a variable is included for the number of trips taken in the last two years. Those who are already predisposed to this type of recreation would be expected to be more interested in recreational items. This is a continuous variable. In addition, interest in recreation likely correlates with ownership of recreational type products. Seniors were asked whether they presently own a VCR, and this characteristic is included as a dichotomous predictor. Ownership of a VCR is therefore a proxy for interest in recreational type products. As a proxy this latter variable must be interpreted cautiously.

Finally, we have argued for the importance of social network variables in determining spending preference. That is, we hypothesize that those with a larger network of friends and family, and those with sufficient contact with friends and family, may put less emphasis on basic needs since they

Table 2
Distribution of priority spending preferences

<i>Item</i>	<i>%</i>	<i>Item</i>	<i>%</i>
Trips	24.8	Charity	2.1%
House repairs	16.5	More/better food	2.1
Transportation	8.0	Better clothing	1.8
More/better housing	6.1	Recreation	1.5
Give to family	5.6	Maid service	0.2
Furniture/appliances	3.9	Other	0.1
Medical needs	3.3	Nothing mentioned	23.9
		Total	99.9%

Note: Percentages do not total to 100 due to rounding.

have a greater support network to help them out during financial and health difficulties. To test this, two network variables are included: size of the overall network, and whether an individual feels that he/she would like to have more contact with friends and family. Size of network is a continuous variable measured by adding the number of family and friends a respondent has and the contact variable is dichotomous indicating whether or not more contact is desired.

Two discriminant analyses are utilized below. The purpose of discriminant analysis is to predict group membership from a set of predictor variables. Using a linear equation similar to multiple regression, cases can be assigned a discriminant function score which separates them from other cases on the basis of the values of the predictor variables. This score is used to predict group membership. In order to simplify the second stage of the analysis, the most important spending preference is categorized into a smaller number of groups using the aforementioned factor analysis procedure. For a more detailed description of these analytical techniques, see Klecka (1980) or Tabachnick and Fidell (1989).

Analysis I

The distribution of spending priorities of seniors is displayed in Table 2. Trips and holidays are the priority of about 25 per cent of seniors, the most popular item on the list. The second most popular choice is house repairs, mentioned as the priority of over 16 per cent of seniors. Non-product spending preferences are: spend money on family and charity. Additionally, 24 per cent of seniors have no preference. Since the purpose of the first analysis is to distinguish those interested in spending on products from those who are not, these non-product items are collapsed into the "nothing" category. The 0.1 per cent of respondents ($N = 2$) who mentioned an "other" non-classifiable response are excluded. Maid service, which accounts for just 0.2 per cent of responses ($N = 3$) does not fit the classification scheme and is also excluded. About 32 per cent of respondents indicate no product spending interest, while 68 per cent could name some spending interest. Those

Table 3
Discriminant function analysis classifying interested and non-interested seniors

Eigenvalue	.13		
% of variance	100.00		
Canonical Correlation	.34		
Significance	.00		
% Classified correctly	72.0%		
% Classified correctly without predictor variables	58.0%		
	<i>Correlation between Discriminating Variables and Canonical Discriminant Function</i>		
<i>Predictor Variable</i>		<i>Univ. F</i>	<i>Sig.</i>
<i>Demographics</i>			
Age	-.65	61.67	.00
Household size	.21	4.30	.04
Income	-.21	6.79	.01
Married	.19	8.71	.00
Female gender	-.18	4.86	.03
Education	-.17	4.21	.04
Rural residence	-.10	1.44	.23
<i>Health Status</i>			
# activity limitations	-.26	9.97	.00
# health symptoms	-.09	.13	.72
Self-assessed health	-.03	.39	.53
<i>Other Variables</i>			
Own home	.47	33.03	.00
Own VCR	.36	19.24	.00
Years at residence	.30	13.39	.00
Desire more contact	.22	6.92	.01
# trips taken	.16	3.88	.05
Size of network	-.01	.00	.98

who do not name a preference are referred to as "uninterested consumers".

The first aim of the analysis is to test the long-standing stereotypical hypothesis that it is the poor and frail elders who are uninterested in consumer spending. In order to distinguish between the interested and uninterested groups, and in order to determine how well the predictor variables classify seniors into interested or non-interested consumers, a discriminant function analysis was performed.

The results of the discriminant analysis are seen in Table 3. Correlations of .30 or higher are most easily interpreted (Tabachnick & Fidel, 1989). The variable which has the greatest influence in determining whether a respondent has a spending interest is age. As age increases, interest in spending money on some product decreases. There are three other distinguishing variables. In order of importance, those who do not own housing, do not own a VCR and have lived at their present residence a shorter period of time are more likely to be uninterested consumers.

The results, therefore, do not support the hypothesis that it is the poor and frail who are most likely to be uninterested consumers. Rather, the find-

ings support Walker and Schwenk (1991) who found that age is a strong predictor of interest, with older individuals showing less interest in consumer products. It should be noted that one of the three health status variables – number of activity limitations – with a correlation of $-.26$, has some influence in distinguishing between the two groups. Still, its correlation is low in comparison to that of age, and the other health status indicators are less significant. Despite the moderate correlation with this variable then, overall the stereotype of frail elders being uninterested in consumer spending is falsified.

Since age emerges as the most important discriminating predictor, a crude comparison of older versus younger seniors concisely highlights the association. For those 85 years of age and older, only 45 per cent report some product related spending priority. On the other hand, of those under 75, 77 per cent report some spending priority.

The discriminant procedure was successful in correctly classifying 72 per cent of the cases, a percentage substantially higher than with no knowledge about the predictor variables. Therefore, based on the discriminant analysis results, it is with some confidence that we conclude non-interested consumers tend to be those who are older, who do not own their own homes, do not own VCRs, and have not lived in their present residence for a long period of time. These individuals appear to be less grounded in material possessions, but not, it is to be noted, to be poorer or more ill.

Analysis II

Having established that a substantial proportion of seniors are interested in products, is it possible to classify the interested seniors into subgroups based on their most important spending preference? To both better distinguish between the three groups and estimate how well these predictor variables classify seniors into one of the three groups, a multiple group discriminant function analysis was again performed, the results of which can be seen in Table 4. Two functions are formed. The eigenvalues, variance explained and canonical correlations indicate that both functions are significant and contribute to the classification of cases into groups. The first function explains 56 per cent of the variance, while the second accounts for 44 per cent. In addition, the canonical correlations ($.31$ and $.28$) are both similar. Hence, two functions distinguish the groups almost equally successfully.

By looking at the distance between the classification function centroids it can be determined how the two functions distinguish the three groups from one another. The first function best distinguishes those who choose a basic need as their most important spending priority item from those who choose a recreational item. That is, the function mean for the basic needs group is $-.68$ and is farthest from recreation ($.29$), while housing is in between. The second function distinguishes the housing group from the other two. The housing centroid on the second function is positive while the other

Table 4
Discriminant function results classifying spending preference

	<i>Function 1</i>	<i>Function 2</i>		
Eigenvalue	.11	.08		
% of variance	55.76	44.24		
Canonical Correlation	.31	.28		
Significance	.00	.00		
% Classified correctly	56%			
% Classified correctly without predictor variables	42%			
<i>Group Centroids</i>				
1. Housing	-.19	.31		
2. Needs	-.68	-.59		
3. Recreation	.29	-.13		
<i>Correlation between Discriminating Variables and Canonical Discriminant Function</i>				
<i>Predictor Variable</i>	<i>Function 1</i>	<i>Function 2</i>	<i>Univ. F</i>	<i>Sig.</i>
<i>Demographics</i>				
Income	.58	.16	15.35	.00
Education	.50	-.04	10.80	.00
Married	.38	.27	8.60	.00
Household size	.14	.41	6.47	.00
Female gender	-.26	-.25	4.86	.01
Rural residence	.03	.26	2.24	.11
Age	-.11	-.21	1.98	.14
<i>Health Status</i>				
# activity limitations	-.65	-.14	18.79	.00
# health symptoms	-.50	-.19	11.98	.00
Self-assessed health	-.47	-.19	10.73	.00
<i>Other Variables</i>				
Own home	.14	.74	19.37	.00
Years at residence	-.06	.69	16.40	.00
Own VCR	.21	.15	2.61	.07
Size of network	.22	-.11	2.44	.09
Desire more contact	.09	.12	.88	.41
# trips taken	.17	.07	.75	.47

two show negative centroids and are clearly separated from housing. In total, 56 per cent of cases are correctly classified using the function coefficients, a total substantially higher than is found when there is no distinguishing information.

Information about the predictor variables is displayed by presenting the correlations between discriminating variables and canonical discriminant functions. Again, correlations of .30 or higher are interpreted. It was earlier hypothesized that when classifying individuals based on various characteristics, the spending priority chosen would reflect an individual need for enhancing quality of life. Therefore, those with low income and poor health,

for example, may tend to choose a basic need item, while those with high income and better health may be more interested in recreational items. Or, those who tend to choose a housing item, like house repairs or furniture, are more likely to be home-owners as opposed to renters.

For the most part, these hypotheses are supported by the analysis. For example, the first function is best understood as that which separates the needs group from those who choose recreation. The best distinguishing characteristics are activity limitation and income. Overall, all three health status variables, and three of the demographic variables, distinguish this group from the recreation group. Specifically, those in poorer health, with lower income and less education, and those who are not married are more likely to choose a basic need item as their spending priority. In other words, those most in need would be most likely to choose basic items if they had extra income.

It should also be noted that not all of the hypothesized relationships are supported by the discriminant procedure. For instance, although age was shown to be important in distinguishing interested from non-interested consumers, it does not substantially discriminate between the most important spending priorities when controlling for other factors. Older seniors are equally interested in recreational type products as a priority when factors such as health are accounted for. The same can be said for gender. Although the magnitude of its correlation approaches .30, and is in the expected direction, gender, as a predictor, is certainly less important than other factors in distinguishing between priority spending interest.

The second function, which is interpreted as best defining the housing group, displays only three coefficients large enough to interpret, each in the expected direction. Specifically, as years lived in the present residence and household size increase, the tendency to choose a housing item increases as well. In addition, home-ownership has a strong correlation indicating that owners are more likely to choose a housing item over nonowners. The strongest distinguishing characteristics are home-ownership and length of residence.

Simple bivariate comparisons can clarify the effects of the most important predictors. For instance, a comparatively high proportion of those with a combination of three or more activity limitations and low income chose a basic needs item. This proportion is 30 per cent, which is three times that of the total sample and 17 times that of those with the combination of no activity limitations and high income. At the same time, despite the fact that 50 per cent of the total sample chose a recreational item as their spending preference, only 36.7 per cent of those with the combination of three or more activity limitations and low income selected one of these items as their primary spending preference.

Similar comparisons can be made with the predictor variables that distinguish the housing group from the others. For instance, although 40 per cent of the total sample picked a housing item, a combination of not owning housing and living at a residence for five or less years reduced interest in

housing items to 21.6 per cent of the total sample.

As a final note, it is important to recognize that possible differences may exist between the spending preference measure used in this analysis, constructed by asking seniors about their spending priorities, and their subsequent consumer behaviour. However, two points can be made in defence of the use of this measure. First, consumer spending data rarely contain the detailed demographic, health and attitudinal data necessary to conduct a study of this nature. The data presented above have provided an excellent opportunity to view the relationship between spending preference and other characteristics. Second, the measure used for spending preference does correlate with other available indicators of spending behaviour. For instance, there is a significant negative correlation between income and choosing a basic need item ($r = -.17, p < .001$). Those choosing a basic need item have the lowest mean household income level, while those choosing a recreational priority have the highest. Having recently travelled is positively correlated with choosing trips and holidays as a spending preference ($r = .17, p < .001$). While 85 per cent of those who choose a recreational spending preference have travelled for pleasure purposes in the last two years, only 61 per cent of those choosing a basic need item have travelled for pleasure purposes in the last two years. This evidence, together with data reported above, suggests that the dependent variable used in this study is an adequate proxy for potential consumer behaviour.

Discussion

Seniors represent an emerging market in North America. Their numbers are increasing, and the buying potential of this group is strong. It is important, therefore, to advance the scant body of research on seniors as a consumer group. This study distinguished between interested and non-interested senior consumers, and subgroups of interested senior consumers according to their most important spending priority.

When asked about their spending priority, travel clearly emerges as a popular choice with 25 per cent of seniors who reported that they would spend money on travel before anything else compared with about 16 per cent who selected the next most popular category, housing repairs. Transportation is the priority of 8 per cent, the third most popular choice. In comparison, food, medical supplies and clothing are the choice of very few seniors. Seniors are, therefore, generally satisfied with their ability to provide the bare necessities of life and primarily desire other material things in order to enhance their quality of life, namely travel, housing adjustments, and better transportation.

Based on the responses reported here, approximately 30 per cent can be classified as "uninterested consumers". It is significant that those who are uninterested can be distinguished from others most succinctly on the basis of age. Those less interested in spending on products tend to be the very old. However, health and wealth do not differentiate seniors into interested or

uninterested consumers. Unlike the traditional stereotype, the frail and poor elderly are not necessarily the ones least interested in consumer spending.

The results of two discriminant analyses lend credence to the notion of the heterogeneous nature of the elderly, this time in terms of consumer spending. Seniors can be divided into interested and uninterested consumers with age being the most important distinguishing variable. That is, older seniors tend to be less interested in spending money on consumer products. This conclusion supports the findings of Walker and Schwenk (1991) regarding the relationship between age and consumer spending behaviour.

The fact that younger seniors are the more interested consumers supports previous research regarding technological interests. Kerschner and Chelsvig Hart (1984) found that younger seniors are the ones who tend to use technological products such as calculators and computers. Fletcher (1990), looking at age cohorts of consumers, found that seniors continue to live more or less the same kind of life, pursuing the same kinds of interests, with more time and often more money than they did as younger adults. The obvious conclusion is that those who have been exposed to new technology for a longer period of time and have been brought up in the age of high technology, more easily comprehend the utility of, and are receptive to, technological devices on the market. Younger seniors are also more comfortable with the present market place and receptive to spending on consumer products to enhance their quality of life. Past research, in combination with the present results, implies that seniors of the future will be even more interested in consumer products, and will be even more sophisticated consumers, than are the seniors of today.

Using responses for the most important spending priority, interested consumers were divided into those interested in recreational items, those interested in housing related products, and those interested in basic needs. The basic need group tends to be less healthy, have lower income, have less education, and not be married. Those who are interested in housing products tend to be home-owners who have lived in their home for a long period of time and live in households of larger sizes.

It is noteworthy that while the stereotype of the frail and poor elder did not predict consumer interest, these variables did distinguish those who chose a basic need item as a spending priority from those who chose a recreational item. The poor and frail are not uninterested consumers, rather their spending preferences are tied to the realities of their living situation. They are the small percentage who require goods which best fulfil their basic needs. Recall, however, that this group represents only 10 per cent of the interested seniors market. For most, basic needs are not an issue; they have spending priorities which fulfil other purposes. The results, therefore, support the hypothesis that one's most important spending priority relates to an individual need for enhancing quality of life. That is, interested consumers are seeking to enhance their quality of life through consumer products, their specific needs dependent upon their own living situation. For

the healthy, well educated and less economically restricted, this enhancement is through recreational goods. The fact that 50 per cent choose a recreational item is a testament to the financial security felt by many seniors today. For those who own housing, their need is to better equip and maintain their homes and in this way enhance their quality of life.

It should be noted that the present results relate to the single most preferred spending item of seniors rather than a complete set of interests which may include those items listed as spending interests but not as priorities. This technique was employed purposely to more clearly define consumer interests and focus the analysis. Although the scope of the paper does not allow for analysis of other, non-priority, consumer interests, further research may benefit from a broader definition of spending preference.

The consumer behaviour of seniors has not received much attention in the past and much more research is necessary, particularly in the area of product needs. The business community is becoming fully aware of the potential profits to be gained from this market segment. Although this new attention given to seniors has its benefits, it also opens up the potential of exploitation of this consuming group (Minkler, 1989). More research is needed which examines the types of products that benefit elders most and enhance their quality of life. In short, with the elderly population growing and seniors becoming an economic force in society, it is becoming increasingly vital to understand their consumer needs.

References

- Bass, S.A., Torres-Gil, F., & Kutza, E.A. (1990). On the Relationship Between the Diversity of the Aging Population and Public Policy. *Journal of Aging and Social Policy*, 2(3/4), 101-115.
- Beckham, B.L., & Kart, C.S. (1977). Heterogeneity of the Elderly in Large Metropolitan Areas. *Urban Affairs Quarterly*, 13(2), 233-242.
- Block, J.E. (1974). The Aged Consumer and the Market Place: A Critical Review. *Marquette Business Review*, 18(2), 73-81.
- Breakwell, G.M., & Fife-Schaw, C. (1988). Ageing and the Impact of New Technology. *Social Behaviour*, 3, 119-130.
- Carlsson-Agren, M., Berg, S., & Wenestam, C.G. (1992). Daily Life of the Oldest Old. *Journal of Sociology and Social Welfare*, 19(2), 109-124.
- Chappell Neena L. (1990). *About Canada: The Aging of the Canadian Population*. Canadian Studies Directorate, Minister of Supply and Services Canada, Cat. # S2-184/6-1990.
- Chappell N.L. (1991). In-Group Differences Among Elders Living with Friends and Family Other than Spouses. *Journal of Aging Studies*, 5(1), 61-76.
- Chappell, N.L. (1992). *Social Support and Aging*. Toronto: Butterworths.
- Chappell, N.L. (1993). Technology and Aging. *The Journal of Canadian Studies*.
- Cohen, S., & Syme, S.L. (1985). Issues in the Study and Application of Social Support. In S. Cohen (Ed.), *Social Support and Health* (pp. 3-22). Orlando, FL: Academic Press.
- Cooper, P.D., & Marshall, G. (1984). Exploring Senior Life Satisfaction Via Market Segmentation Development and Value Exchange: An Initial Study. In S.M.

- Smith & M. Venkatesan (Eds.), *Advances in Health Care Research* (pp. 54–60). Brigham Young University.
- Davis, B. (1985). *An Empirical Investigation of Elderly Consumer Market Segments Based on Information Usage and Advertising Attitudes*. Ph.D. Dissertation. University of Georgia, Athens, GA.
- Day, E., Davis, B., Dove, R., & French, W. (1988). Reaching the Senior Citizen Market(s). *Journal of Advertising Research*, 27(6), 23–30.
- Duff, R.W., & Hong, L.K. (1982). Quality and Quantity of Social Interactions in the Life Satisfaction of Older Americans. *Sociology and Social Research*, 66(4), 418–434.
- Festervand, T.A., & Wylde, M.A. (1988). The Marketing of Technology to Older Adults. *International Journal of Aging and Technology*, 1(2), 156–162.
- Fletcher, S. (1990). Seniors in the Marketplace. *Canadian Business Review*, 17(4), 36–39.
- Gelb, B.D. (1978). Exploring the Gray Market Segment. *MSU Business Topics*, Spring, 41–46.
- Harris, A.J., & Feinberg, J.F. (1977). Television and Aging. Is What You See What You Get? *The Gerontologist*, 17, 464–468.
- Harrison, B. (1986). Spending Patterns of Older Persons Revealed in Expenditure Survey. *Monthly Labor Review*, 109(10), 15–17.
- Heslop, Louise A. (1985a). An Analysis of Expenditure Patterns of the Elderly: Cohorts – Going Through Life Together. Statistics Canada Research Paper No. 13a.
- Heslop, Louise A. (1985b). An Analysis of Expenditure Patterns of the Elderly: Expenditure Patterns of Elderly Women. Statistics Canada Research Paper No. 19.
- Kerschner, P.A. & Chelsvig Hart, K. (1984). The Aged User and Technology. In R.E. Dunkle, M.R. Haug, & M. Rosenberg (Eds.), *Communications Technology and the Elderly* (pp. 135–144). New York: Springer Publishing Company.
- Klecka, W.R. (1980). *Discriminant Analysis*. Beverly Hills, CA: Sage.
- Lambert, Z.V. (1979). An Investigation of Older Consumers' Unmet Needs and Wants at the Retail Level. *Journal of Retailing*, 5, 35–57.
- Lees, D. (1987). Golden Opportunities. *Canadian Business*, 60(5), 62–64, 112–122.
- Martin, M. (1992). Gray Power Makes Business See Green. *Canadian Business Life*, 12(2), 23–25, 36.
- Minkler, M. (1989). Gold in Gray: Reflections on Business' Discovery of the Elderly Market. *The Gerontologist*, 29(1), 17–23.
- Moehrle, T. (1990). Expenditure Patterns of the Elderly: Workers and Nonworkers. *Monthly Labor Review*, 113(5), 34–41.
- National Advisory Council on Aging. (1991). *The Economic Situation of Canada's Seniors*. Minister of Supply and Services Canada. Cat # H71-3/14-1991E.
- Phillips, L.W., & Sternthal, B. (1977). Age Difference in Information Processing: A Perspective on the Aged Consumer. *Journal of Marketing Research*, 14(4), 444–457.
- Schulz, J.H. (1985). *The Economics of Aging*. Dover, MA: Auburn House.
- Sorce, P., Tyler, P.R., & Loomis, L.M. (1989). Lifestyles of Older Americans. *The Journal of Consumer Marketing*, 6(3), 53–63.
- Statistics Canada. (1984). *The Elderly in Canada*, Cat # 99-932.
- Statistics Canada. (1990). *Population Projections for Canada, Provinces and Territories*, Cat # 91-520.

- Statistics Canada. (1991). *Market Research Handbook*, Cat # 63-224.
- Statistics Canada (1993). *Population Ageing and the Elderly*, Cat # 91-533E.
- Tabachnick, B.G., & Fidell, L.S. (1989). *Using Multivariate Statistics*. New York: Harper Collins.
- Torrey, B.B., & Taeuber, C.M. (1986). The Importance of Asset Income Among the Elderly. *Review of Income and Wealth*, 32(4), 443-449.
- Towle, J.G., & Martin, C.R. (1976). The Elderly Consumer: One Segment or Many? In B. Anderson (Ed.), *Advances in Consumer Research* (pp. 463-468). Urbana, IL: Association for Consumer Research.
- Tynan, A.C., & Daryton, J.L. (1985). The Methuselah Market. *Journal of Marketing Management*, 1, 75-85.
- Tynan, A.C., & Daryton, J.L. (1988). The Neglect of the Older Consumer. *Journal of Consumer Studies and Home Economics*, 12, 159-171.
- U.S. Bureau of the Census. (1989). *Projections of the Population of the United States, by Age, Sex and Race: 1988 to 2080*. Current Population Reports, Series P-25, No. 1018, by Gregory Spencer, U.S. Government Printing Office, Washington, DC.
- Walker, R.S., & Schwenk, F.N. (1991). Income and Expenditure Patterns of Consumer Units with Reference Person Age 70 to 79 and 80 or Older. *Family Economics Review*, 4(1), 8-13.
- Yelaja, S.A. (1989). Gray Power: Agenda for Future Research. *Canadian Journal on Aging*, 8(2), 118-127.
- Zimmer, Z., & Segall, A. (1992). Needs Assessment Survey Methodology. Technical report written for the Canadian Aging Research Network. Centre on Aging, University of Manitoba, Winnipeg.