THE WELL-BEING OF OLDER CANADIANS

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Longevity and declining birth rates have contributed to rapidly increasing numbers, actually and relatively, of aged individuals in developed countries. Currently in Canada, 2.5 million people are 65 years of age or older, representing at least ten percent of the population (Statistics Canada, 1985). Demographers tell us that this will change to 13 percent by the year 2000 and thirty years later will reach 24 percent (Denton, Feaver & Spencer, 1986).

Various professionals and organizations are actively involved in improving the state of health, housing and economics and are investigating many other areas of social concern related to the elderly population. Studies to evaluate the effectiveness of these efforts generally focus on particular groups of individuals. Occasionally, however, it is important to consider larger populations. A randomly selected, representative sample of a national population serves an important function for understanding members of that population and as a national base for comparison. Thus, the Canada Health Survey (Health and Welfare Canada, 1981) was conducted on such a representative sample and provides information on the Canadian population as a whole. For the currently reported study, the sample of subjects 65 years and over from the Health Survey population was judged to be representative of the Canadian elderly population.

The study reported here used an exploratory, multivariate design to address the following questions.

1. What is known about the well-being of today's elderly Canadians that can assist in providing a "good" or "better" life for tomorrow's elderly? and,
2. What set of factors is important in distinguishing older Canadians in terms of different levels of well-being?

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Specifically, the purpose of this study was to identify the socio-demographic, physical and psycho-social health status, and selected lifestyle factors that distinguish levels of well-being, as measured by the Bradburn Affect Balance Scale (1969), for the Canadian population 65 years of age and older. In keeping with the recommendation that archived data bases be used for seeking new information from already analyzed data to enhance the quality of life for the elderly (Cluff, 1981), this study was a secondary analysis of data from the national Canada Health Survey conducted in 1978-79 by Health and Welfare Canada (Health and Welfare Canada, 1981).

Background Information

Policy makers and planners must search for ways to maintain acceptable levels of quality of life for future populations, despite unknown factors and predictors. Providers of care are more concerned about specific groups within the population, yet they are influenced by information about provincial and national populations. Quality of life is a comprehensive and value driven concept. As such, it is difficult to identify its components for large populations. In terms of global health measures, long accepted standards such as mortality rates and life-expectancy indices are no longer adequate, partly because they do not take into consideration the current emphasis on the quality of the life (Kleinman, 1982). A very significant move beyond this approach has been the development of "Active Life Expectancy" by Katz and associates (Katz et al. 1983). As an alternate measure of health, this index reports the expected duration of functional well-being expressed as an index of activities of daily living (Katz & Akpom, 1976). By acknowledging the value of independent functional activity, this approach results in a measure of expected years of activity rather than merely the number of additional years to be expected. Using a different but similar approach with the Canadian population, Wilkins and Adams (1983) calculated an index of health expectancy that was defined as life expectancy in each of several different states of health.

Other concepts identified and evaluated as measures of quality of life for the elderly have included social constructs of health (Patrick, Bush & Chen, 1973); life satisfaction (Doyle & Forehand, 1984; Palmore & Kivett, 1977; Spreitzer & Snyder,1974); well-being (Andrews & Withey, 1976; Balaban, Sagi, Goldfarb & Nettler, 1986; Bradburn, 1969); and morale (Havighurst, Neugarten & Tobin, 1968; Kutner, Fanshel, Togo & Langner, 1956; Lawton, 1975; Morgan, 1976). The variety of concepts for quality of life and the even larger numbers of instruments used to measure these concepts have made it difficult to draw general conclusions from studies done. However, Larson (1978) has reported on a collection of thirty years of research on the subjective well-being of older Americans. He found that well-being was most strongly related to indicators of health. Socio-economic factors and degree of

social interaction were also related to well-being while age, sex, race and employment showed no consistent independent relation to well-being. A more recent study by Reker, Peacock and Wong (1987) reported linear trends showing that a sense of contentment, fulfillment and satisfaction were low during younger years and were highest in old age. Earlier, Doyle and Forehand (1984) had reported that the small negative correlation between age and satisfaction was largely eliminated when the factors of poor health, loneliness and money problems were controlled. These latter three factors were reported as the strongest negative correlates of life satisfaction across all age groups.

The study reported here addressed the specific concept of well-being for the elderly. This was accomplished by investigating the relationship between various health and lifestyle factors and the general well-being of the elderly Canadian population as measured by the Bradburn Affect Balance Scale (1969).

Methods

The data for this secondary analysis were taken from the 1978-1979 national Canada Health Survey (Health and Welfare, 1981). The survey instrument had been available to participants in either the French or English language. For the purposes of this study, the public use file from Statistics Canada was used. This placed some limits on the currently reported analyses, partly because of prior categorization of data. For example, age of subjects was available in five year increments up to the age of 69. However, all subjects 70 years of age and older constituted one age category. This is not an optimal grouping of ages for describing today's elderly population. There are increasingly more people beyond 80 years of age and the differences in characteristics between age levels beyond 70 years are becoming more meaningful.

Descriptive statistics were used in presenting the general findings of the survey. Discriminant analysis was used to determine the set of factors most strongly predictive of well-being. This multivariate technique determines the subset of variables that predicts group membership with the greatest statistical power. In this case, the groups were the states or levels of well-being, i.e. having a positive, neutral or negative affect balance.

The sample

The general purpose of the original survey was to obtain a global view of the health of Canadians. The design initially involved area cluster sampling of households within each province. It covered the non-institutionalized Canadian population, excluding residents of the Territories, Indian Reserves

and remote areas as defined by the Canadian Labour Force Study. Budgetary restrictions later limited the use of the original plan. Instead, a system of estimation procedures was developed which resulted in weighting mechanisms for different data collection instruments. Weights were further adjusted to account for non-response items in the nondemographic data and were used in the analyses reported here. This current secondary analysis was limited to data from men and women aged 65 and older.

Socio-demographic data on the sample are reported in Table 1. The sample included 1206 men and 1540 women aged 65 or older. More of the subjects, 62.2 percent, were in the older group, 70 years of age or older. Nearly three-fourths lived with others. Just over 60 percent of the subjects lived in Quebec or Ontario.

Table 1

Selected Characteristics of the Sample

		N	%
Sex			
	Male	1206	43.9
	Female	1540	56.1
	Total	2746	100.0
Age			
	65-69	1038	37.8
	70+	1708	62.2
	Total	2746	100.0
Household Composition			
	Lives alone	760	27.7
	Lives with others	1986	72.3
	Total	2746	100.0
Region			
	Atlantic	265	9.6
	Quebec	667	24.3
	Ontario	1008	36.7
	Prairies	464	16.9
	British Columbia	342	12.5

Measures

In the original study, a broad range of data collection instruments was used to examine the present health of the population, the consequences of various health problems and risk factors to future health. For this study, the following variables were selected as potential predictors of well-being and served as independent variables:

Socio-demographic
- Age
- Sex

Physical Health Status
- Activity limitation
- Duration of activity limitation
- Current drug use
- Visits to MD in past 2 weeks

Psycho-social Health Status
- Household composition
- Importance of religion
- Stressful life events in the past year

Lifestyle Factors
- Alcohol consumption
- Cigarette smoking

As with any secondary analysis, measures must be chosen from among an existing set of variables. For this study, the physical health status measures that were chosen included activity limitation and its duration as well as use of medication and the number of visits to a physician in the last two weeks. This provided a variety of physical health concerns that are of importance to the elderly. Psycho-social health status included household composition which was reported as living alone or with others. Importance of religion was included as a psycho-social health status measure because there often is a strong social component operative in most religions. The Social Readjustment Rating Scale (Holmes & Rahe, 1967) has been used extensively to determine the ranking of 43 life events, according to the level of stress they precipitate. For the purposes of this study, the scale provided a measure of the presence of these stressful life events. Physical and emotional energy are required to cope effectively with these stressors and, thus, have the potential of affecting the well-being of individuals. Two lifestyle factors, the use of alcohol and of cigarettes, were included because they are of current interest in relation to promotion of health. The subjects in this study would generally have formed habits related to alcohol and cigarettes prior to the current emphasis on their effects on health; therefore, it was of interest to see if there was a relationship with well-being for this elderly group.

The major dependent variable for this study was the Bradburn Affect Balance Scale. For the Canada Health Survey subjects responded in terms of the frequency (often, sometimes or never) of experiencing the following feelings during the few weeks prior to the interview: on top of the world, very lonely, particularly excited, depressed, pleased, bored, proud, restless, things going my way and upset. A single score was calculated and subjects were classified as having a positive, neutral or negative affect balance. McDowell and Praught (1982) have examined the psychometric merits of the scale using data from the Canada Health Survey and advocate its continued use. It was one of several scales examined by McCrae (1986) and found to be uncontaminated by socially desirable responses.

A single question addressing happiness was also used as a measure of well-being. Subjects were asked: Taking things all together how would you say things are these days-- would you say you are very happy, pretty happy or not too happy?

Results

In response to the first research question asking about the well-being of the current elderly population, the single question about overall feelings and the Bradburn Affect Balance Scale provided the measures of well-being. When asked about overall feelings, a large majority (nearly 77 percent) were pretty happy or very happy while only 12.3 percent reported themselves as being not too happy. Results are reported in Table 2.

Table 2

Overall Feeling: Canadians 65 and older

	N	%
Scale		
Very happy	524	19.1
Pretty happy	1583	57.7
Not happy	337	12.3
Missing	302	10.9

As reported in Table 3, scores on the Bradburn Affect Balance Scale showed that the highest percentage of subjects was in the positive affect group. Nearly thirty percent of the subjects had scores in the neutral category while a relatively large group, 24 percent, had missing data on items composing the scale and, therefore, were not classified. The effects of these and other missing data were somewhat diminished by substituting the group's mean score for missing values in all further statistical analyses.

Table 3

Scores on Well-being Scale: Canadians 65 and over

	N	%
Scale		
Positive	1116	40.6
Neutral	816	29.7
Negative	147	5.4
Missing	667	24.3

General beliefs about the elderly often include seeing them as very lonely, depressed and bored with their lives. These feelings are individual items in the Bradburn Scale and are reported here because of their particular relevance to the elderly population (see Table 4). The data reveal that members of this elderly Canadian population did not view themselves as lonely, depressed or bored. For each of these feelings, the largest number of responses was in the "never" category. Less than 10 percent reported experiencing any one of these feelings "often."

To evaluate differences in well-being related to age and sex, a two-way analysis of variance was done. Results are shown in Table 5. This revealed that the younger group, age 65-69, had significantly more positive scores (lower numerically) than those 70 years and older. There were no statistically significant differences between scores for males and females as well as none for age and sex interactions.

Table 4

Responses to Specific Affect Balance Items: Canadians 65 and over

Item	*Response* N (%) Often score=1	Sometimes score=2	Never score=3	Missing
Very lonely	183 (6.6)	737 (26.9)	1270 (46.2)	556 (20.3)
Mean 2.49				
Depressed	155 (5.7)	829 (30.2)	1176 (42.8)	586 (21.3)
Mean 2.47				
Bored	252 (9.2)	904 (32.9)	1066 (38.8)	524 (19.1)
Mean 2.37				

Table 5

Mean Well-being Scores by Age and Sex

Age	Sex M	F
65-69	1.43 (SD=.56)	1.52 (SD=.60)
70+	1.57 (SD=.64)	1.57 (SD=.64)

p<.001 for age differences
Not significant for sex differences

Regional differences in well-being for this elderly sample were also explored. Residents of British Columbia had the highest well-being scores while those in Quebec had the lowest. An analysis of variance showed that British Columbia residents had significantly higher scores than those in Quebec and Ontario ($p<.05$).

In response to the research question related to identifying the variables that distinguish various levels of well-being, the multivariate step-wise discriminant analysis was used. Table 6 shows the results of the initial analysis with each variable individually. There were seven predictors that, in themselves, made some statistically significant discrimination among the well-being groups. They were the following: age, visit to a physician, cigarette smoking, drug use, presence and duration of functional limitation and presence of stressful life events. As shown in Table 7, further analysis resulted in five variables with a correlation with the discriminant function of .40 or greater. These variables, therefore, constitute the set that is most strongly predictive of well-being. Examination of the average scores for these variables revealed that Canadians 65 years of age or older who are more likely than their counterparts to have a positive affect are those with minimal limitation of activity, limitation of shorter duration, taking fewer drugs, not having visited a physician in the past two weeks and experiencing fewer stressful life events.

Table 6

Univariate F-Ratio and Significance Level of Independent Variables in Relation to Well-being (before discriminant analysis)

	F	Significance
Household composition	.7311	.48
Age*	5.603	.01
Sex	2.626	.07
Visit to MD*	19.39	.01
Cigarettes*	3.017	.04
Drug variety*	23.59	.01
Functional limitation*	51.61	.01
Duration of limitation*	44.21	.01
Alcohol	2.989	.05
Importance of religion	2.587	.08
Stressful life events*	15.37	.01

*$p<.05$

Table 7

Ranked Correlations Between Discriminating Variables and Discriminant Function

Discriminating Variables	Correlation
Functional limitation	.76
Duration of limitation	.68
Drug variety	.52
Visit to MD	.45
Stressful life events	.41

Limitations

Obviously, there are some limitations with a study such as this. While the sample is well selected and representative of the entire population, it is a large sample and, thus, shows some statistically significant differences that represent minimal differences in actual scores or little clinical significance. In addition, many different questionnaires and instruments were used for the Canada Health Survey but not all subjects were asked to complete all instruments. Therefore, to maintain representativeness of the population it was necessary to use only the variables that were contained in the same battery and, thus, were weighted in the same way. For example, in this study more information would have been obtained by using the measure of physical activity index instead of the more specific measure of activity limitation. The index measure could not be used because it required weightings that were different from those of other variables chosen for the analysis.

Discussion

Notwithstanding its limitations, this study reports that subjects representative of the elderly Canadian population have described themselves as having a positive sense of well-being and happiness. These results are in contrast to the morbid, deeply depressed view of older people that is often held by the general public and at times by health professionals. The study provides information that can serve as an educational tool for those who associate with the elderly, either professionally or socially, as well as those who desire to plan actively for a positive well-being in their own later years.

The study has implications for planning and delivering programs of service for the elderly population. Planners with a sound knowledge of the current perception of well-being among the elderly are more likely to design services that promote maintenance or improvement in quality of life rather than those that encourage dependency and limited activity.

While much progress has been made in the recent past regarding the potential for happiness in later years, it remains important to continue to identify factors that are related to well-being in the elderly. It is also important to promote the use of this knowledge by professionals in all disciplines who plan and provide services and care. For individuals in the general population, knowledge about the high levels of well-being possible in the later years can be a motivating force for making decisions earlier in life that prepare for greater happiness later on.

In general, the results of this study on a nationally representative sample are in agreement with the studies reviewed earlier. Measures of physical health status have been found to be most significant in predicting well-being in the elderly (Doyle & Forehand, 1984). Although not reported according to age groups, the results of the recent Canada Health Promotion Survey show that activity limitation is inversely related to happiness (Epp, 1987). In the current study, little or no physical limitations or limitations of short duration were the strongest predictors of positive well-being. Limited drug taking and visits to a physician were next in predictive strength. Thus, it can be said that physical health factors in general are of the highest importance in predicting well-being in later years. This finding supports the current trend of efforts toward physical fitness that may lead to healthier physical states in later life. A recent study by Brown and McCreedy (1986) found that health protective behaviour was not related to overall health status. Therefore, more research is necessary to determine the relationships between health behaviours and health status and, consequently, factors that affect the quality of life in the elderly.

Contrary to some other research (Larson, 1978), psycho-social health factors and life style factors were not found to be as important as physical health status in relation to well-being. This may represent the use of a strong capacity for coping and adapting to the social circumstances of one's life. It may also be reflective of the fact that nearly three-fourths of this population lived with others. This lack of variability may have diminished the effect of the relationship between well-being and the particular psycho-social health factors chosen for this study.

Although the actual differences in scores in well-being for different regions were small, the findings support consideration for two major factors: climactic conditions and mobility patterns. It is generally accepted that many older

British Columbia residents have had the desire and the financial resources to relocate in that province particularly for the retirement years. At the same time it is likely that the population of Quebec represents people with strong linguistic and family ties that tend to limit their mobility. As well, the severity and length of winter months in Quebec differ greatly from climactic conditions in British Columbia. Physical functioning and activity may be limited significantly and the resultant social isolation may all contribute to the lower sense of well-being among elderly Quebec residents. Surely, these are areas needing much further study before conclusions can be drawn.

In summary, this study has demonstrated that the noninstitutionalized elderly population of Canada considers itself to be happy and to have a positive outlook on life. Physical health status measures, particularly activity related, are considered most important in determining well-being status. Contrary to some other studies, age (though poorly grouped in these data), sex and living arrangements as well as psycho-social health and lifestyle factors were relatively unimportant in relation to well-being among the Canadian elderly.

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RÉSUMÉ

Le bien-être des Canadiens du troisième âge

Cette étude s'adresse aux questions suivantes: 1) Que sait-on sur le bien-être des Canadiens du troisième âge? et 2) Quels sont les éléments qui distinguent les personnes âgées en termes de différences d'état de bien-être? Une conception exploratoire et descriptive a été employée et les données prises du dernier sondage du ministère de la Santé (1978-79). Parmi les variables indépendantes, on compte la situation socio-démographique, le style de vie, et les éléments de santé physiques et psycho-sociaux. La variable dépendante majeure s'est démontrée être le niveau de bien-être tel que mesuré par l'échelle affective de Bradburn (Bradburn Affect Balance Scale). Les résultats ont montré que cette population âgée a dit jouir d'une qualité de vie relativement élevée. Des différences mineures ont apparu selon l'âge et la région, aucune cependant selon le sexe. Une analyse discriminante a démontré que les éléments touchant à la santé physique étaient ceux qui jouaient le plus dans la prédiction d'une perspective positive envers la vie. Contrairement aux résultats obtenus d'autres études, l'âge, le sexe et le milieu se sont démontrés relativement sans importance. Ces résultats indiquent que les dernières années de vie peuvent être heureuses et que les personnes âgées qui réussissent à conserver une bonne santé physique sont plus aptes à faire preuve d'un état accru de bien-être.