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AUTHOR Guttmann, David
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ABSTRACT

This is a study of decision-making patterns among urban community-living older adults. Focus is on the utilization of resources by the elderly. The sample consists of 410 respondents who were interviewed twice. The results show that action-taking related to a significant life event is the most important predictor of well-being. Significant differences also exist between those who seek information from others, use several alternatives, and are ready to take higher risks in their decision making, and those who do not seek information from others. Age, education, income, capability to make decisions, and satisfaction with decisions made are significant variables in perception of life events and decision making. (Author/DOW)

SEEKERS, TAKERS AND USERS--

THE ELDERLY AS DECISION MAKERS

David Guttmann, D.S.W.
Catholic University of America
Washington, D.C. 20064

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Introduction

The study of decision making in old age with regard to resource utilization is a relatively new and uncharted territory as far as social gerontology is concerned. In contrast to the overwhelming literature on young adults, studies on decision making of older adults are relatively scanty. Empirical investigation has centered until recently on the economic aspects and monetary gains of decision making, i.e., gambling, while its social and cultural aspects have been largely neglected.

Decision-making theories in general are concerned with choices between alternative courses of action based on an individual's or group of individuals' estimates of the relative probabilities of outcomes and the relative preference or value of the outcomes. It is assumed that individuals will make choices in such a way that the maximum value or utility or the minimum of disutility related to various levels of objective or subjective probability will follow from the chosen alternative (Edwards, 1955; Fishburn, 1964; Wilcox, 1972).

According to Craik (1967), older people require more information than younger people before making a decision and they are reluctant to respond unless they are sure of being right, especially in new or in ambiguous situations.

The ability to analyze a situation or a problem requires several mental functions (Guilford, 1967; Bromley, 1967; and Birren, 1967). Among these are: intelligence, classification, generalization, conceptualization, problem solving, memory, learning, and reasoning. Brim et al (1962) claim that general values, life orientation, and cultural background account for more variability in decision making than the more traditional personality traits.

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The social environment has an important impact on decision making as well. For example, Hill (1970) found that age, education, sex, authority patterns, value orientation, marital organization, and social class were all related to rationality and satisfaction in decision making.

The review of the literature on decision making in old age indicates that the most useful theoretical approach is based on the problem-solving process, as elaborated by Brim (1962), Festinger (1967), Guilford (1967), and Holsti (1971). This is the model we selected for use in this study. Subjective probability of each alternative, desirability of decision to be made, its expected utility and preferential ranking, confidence in and satisfaction with decision made, are the elements integrated into the problem-solving model. We decided to use both the subject's own past life events and several standardized life situations (Botwinick, 1966) to test the decision-making processes utilized by the elderly. The decision-making process thus derived for the study involved the following stages: In stage 1 there is an awareness of a problem or need, or some stress or crisis occurs in the life of the subject which, in stage 2, engages the individual to search for a solution. In the search for a solution to the problem alternatives are created or emerge, information is sought (from self and/or significant others), and relative costs, utilities or values related to the problem are weighed. In stage 3 a selection is made of an alternative and a decision is reached whether to act or to delay action. Finally, in stage 4 the action taken is evaluated with regard to its outcome--whether it was successful or not.

Research Tasks and Objectives

The specific research task we committed ourselves to implement focused on the exploration of the following aspects related to decision making by older adults.

1. An analysis of the subjectively felt needs and their impact upon the decision-making capabilities of older Americans.

2. An assessment of the older adults' knowledge of, use of, and satisfaction with resources which may be mobilized to alleviate the subjectively felt needs.

3. A measurement of an individual's ability to make decisions, and

4. An analysis of the impact of age and of various living arrangements on decision making.

Methodology

Research Design

The basic research design employed called for a before-after measurement of the decision-making process used by older adults, that is, subjects were interviewed, and re-interviewed six months after the initial interview, to determine their patterns of decision making as related to and dependent upon the changes in their social-psychological world.

Variables assumed to be central to this study were: (1) subjectively felt needs; (2) knowledge of resources; (3) ability to make decisions; (4) living arrangements; and (5) age--as independent variables; while the actual decisions made and the degree of satisfaction or dissatisfaction were the dependent variables.

In addition to these central variables, control variables such as sex, income, education, and self-assessed health were also employed. It was particularly important to discover whether there are age-related changes in older Americans' capabilities for decision making.

Seven hypotheses were specified for the study. These dealt with the assumed relationships between the independent and the dependent variables and

their interactive effects on decision making by older adults.

A correlational design was used as the basic approach to the analysis of the data. It was assumed that several of the variables were interrelated and would have a combined impact on the decisions made whether to use or not to use services. The actual analysis consisted of basic descriptive statistics, such as frequencies, means, and standard deviations. Differences between the mean scores were further analyzed by one way analyses of variance (ANOVA). In addition, multiple regression analyses were performed to predict the most significant variables related to decision making in old age.

Participants

The study was conducted in the greater Washington, D.C., Standard Metropolitan Statistical Area (SMSA). Utilizing a social area analysis approach, 23 census tracts were selected to represent the range of socio-economic variation within each given geographic sector in relation to the proportion of the population who are elderly. Using goodness of fit statistics, the 23 census tracts enumerated in the household survey were found representative of the larger population in the SMSA in terms of age, sex, marital status, income and race.

The universe consisted of approximately 5,600 seniors aged 60 years and over. Only ambulatory, community living and non-institutionalized elderly were included in the study. Of the 959 persons selected by a systematic random sampling proceedure, 512 (53%) refused to take part in the survey leaving a sample of 447 respondents. A telephone survey of 10% of the refusers revealed similar characteristics to the overall population used in the study in terms of their composition and breakdown by age and by sex.

Data were collected by means of an interview schedule (Guttmann, 1977). Questions included in the final version of the instruments were pretested on a number of aged people from similar census tracts and were found reliable by a panel of experts.*

Characteristics of the Population

The sample included 183 male and 264 female respondents. Average age was 71.87 years. The average number of years of education was 11.9 years. Income levels ranged from less than $200 per month for 11.4% of the sample to over $1,000 per month for a third (33.7%), with an average monthly income of about $600. Close to three-fourths (73.9%) of the sample felt that they had adequate income for their needs.

Over half of the respondents (58%) were married and were living with their spouses. Single, never married persons, the widowed, the separated, and the divorced people who lived alone comprised the rest of the sample.

In our study, 54.2% assessed their health as good; 29.5% considered their health average; and 16.3%, poor. Moreover, in comparing their own health with the health of other older people of their age, more than half of our respondents reported that they felt themselves in better health than others (56.5%). Another 31% said they felt about the same, and only 0.8% considered their health poorer than that of other aged persons.

Measures Used

1. Assessment of Needs

Respondents were asked to report some of their "more important needs not being fulfilled now." They were questioned specifically on thirteen areas of

*Consultants: Dr. John C. Townsend, Dr. Jack Botwinick, Dr. James Rooney, Dr. Richard Kolm, and Dr. Lewis W. Carr.

need, as defined by Palmore (1970). These consisted of medical care, counseling, physical assistance, legal assistance, social interaction, financial assistance, day care, employment and transportation. For each of these areas, respondents were asked to indicate whether they had a need for help and, if they did, whether they were already receiving help. Those needs for which no help was being sought were considered "unmet needs" and those for which help was being received were called "needs being met".

Those respondents who reported at least one unmet need were asked which need was most important to them. All respondents were asked what needs they expected in the coming year or two and how they would plan for this possibility. After six months respondents were re-interviewed. Those who had had an important unmet need were asked whether they still had that need. They were also asked whether they had taken any action with regard to that need. For those who had taken some action a series of decision-making process questions was asked to assess the steps taken in problem solution.

2. Use of Resources

Psychosocial factors and decision-making processes associated with use and satisfaction with agency services were measured by questions relating to knowledge of agency services, use of services, decision making related to use of services, satisfaction with services, and suggestions for utilization and improvements of services.

3. Capability to Make Decisions

Respondents were asked to state how capable they felt themselves to make decisions about their health, budgeting their money, deciding where to live, use of their free time, and the decision whether to retire or to continue working. Perceptions of capability for making decisions as related to self and other elderly people were assessed by a scale consisting of 15 items. Of these

the first five items measured self-perceived capability; 5 items measured responsibility for decisions made and an additional 5 items were related to capabilities of elderly people in general to make decisions. On the basis of the responses to these items, two groups of respondents were identified. Those who considered themselves very capable to make decisions were assigned a code of "2", and those who considered themselves either "fairly capable" or "not capable" were assigned a code of "1". Similar groupings of the respondents was done with relation to scoring of responsibility and capability of other elderly people to make decisions as well.

Interactions between the five areas of decision making, as related to perceptions of self and others, and five demographic variables were also assessed. These demographic variables consisted of the following: (1) age, divided into 3 categories (60-69 years, 70-79 years, 80+); (2) sex (male, female); (3) income (under $400/month, $400-$1,000/month, over $1,000/month); and (5) living arrangements (living alone, living with spouse, living with others).

Finally, the same five areas of decision making by self and by other elderly were analyzed with regard to three components of the decision-making process: (1) action taking versus non-action taking, (2) the number of possibilities considered, and (3) satisfaction with the effort or the result.

4. Action Taking in Life Events

Respondents were asked the question: "Have you been involved in any of the following situations in the past six months?" followed by a list of 34 events derived from the social readjustment rating questionnaire (SRRQ) constructed by Holmes and Masuda (1974). These were organized according to the following categories: (1) whether the event was initiated by the respondent himself or by another person, (2) whether the event required some change in the personal condition or social condition of the respondent, and (3) whether

the event was both self- and other-initiated. We also wanted to see what the individual was considering doing in relation to a particular event; how desirable was the action taken; what were the chances for success in terms of the objectives; whether or not the respondent was able to use his or her first choice; where did the respondent seek information while deciding; how this information was ranked in terms of its importance; and finally, how satisfied or dissatisfied was the respondent with the decisions made concerning the reported life event.

Results and Implications

1. Results Related to the Hypotheses of the Study

As previously stated, there were seven hypotheses related to the study of decision making in old age. These were tested with a series of analyses of variance and with multiple regression analyses. Of the seven hypotheses, four were not supported by the data and were therefore rejected. Knowledge of services, choice for services, involvement and active participation in decision making and autonomy in making decisions were not significantly correlated with satisfaction about decisions made.

The hypothesis that older Americans who make decisions about service utilization on the basis of need for services would be more satisfied with their decisions than the elderly with a lesser felt need for services was supported in the reverse trend. There was a significant difference between those who knew and used services and those who did not. Respondents with one need or with no needs had higher satisfaction with their decisions than those respondents who had more than one need. For example, the knowledge and use of the police by the respondents was significant ($p = 0.001$). Similarly, knowledge and use of Social Security differed significantly ($p = .001$). Respondents with

no need were more satisfied with Social Security than those who had more than one need. Respondents with no need indicated greater satisfaction with services than those respondents with more than one need.

The relationship between living arrangement and satisfaction with decisions made by older Americans was partially supported by our findings. The biggest difference was between those who lived with children, grandchildren, and other relatives and those who were living with their spouses only. Those who lived with their spouses only were more satisfied with their decisions than those living in other living arrangements ($p = .05$).

The hypothesis which stated that older Americans' patterns of decision making are dependent upon the interaction of subjectively felt needs, knowledge of available resources, capability for making decisions, and living arrangements was supported by the data. Subjectively felt need was found to be the strongest predictor in this relationship (.21) followed by certainty of decision, physical ability, and knowledge of resources. The magnitude of the correlation reached, however, was relatively small (.30).

The variables found to be significantly related to knowledge of service agencies and life satisfaction included the number of alternatives considered, action taking, and use of services. Combined, these variables reached a magnitude of .73 and were all significant at the .001 level or beyond.

Satisfaction with the respondent's current life situation was strongly associated with the use of service agencies (.49). The perception of time of life, whether best or worst for the respondent, was correlated with perceived capability and with certainty about decision made and was related to the sources of information sought while deciding and to decision satisfaction. Both subjectively felt needs, knowledge of available resources, and capabilities for making decisions were significantly related to satisfaction

with decisions made by our respondents.

2. Decision Making Capability -- Perception of Self and Others

Over 80% of the respondents considered themselves very capable, and an additional 16.4% considered themselves fairly capable to make their own decisions. Few respondents (3.6%) reported that they were not capable to make decisions.

Well over two-thirds of the respondents thought that they were capable as well as responsible to make decisions on matters related to their health, budgeting their money, to work or to retire, to find suitable living arrangements, and to use their free time. It was interesting to note that the family was considered responsible for making decisions in all those matters by a very small percent of the respondents, not exceeding 6% of the total population.

Respondents in their 70's more often felt themselves capable to decide how to budget their money than respondents in their 60's or in their 80's. ($X^2 = 12.12$, df = 3, p = .007). Marital status, and sex did not differ significantly between the capable and the less capable subjects to make decisions but, income was significantly different between the two groups ($X^2 = 7.79$, df = 3, p = .05). Respondents with incomes of $400 or more per month more often felt themselves capable to decide how to spend their free time than those whose incomes were less than $400 per month.

In perceived responsibility on matters related to health, respondents differed by sex ($X^2 = 9.25$, df = f, p = .05). Females tended more than males to regard themselves as having the major responsibility for decisions made in these matters.

Respondents' perceptions regarding the capabilities of other elderly to make decisions were cross-tabulated by psychosocial variables. Results indicated that those with incomes of less than $400 per month tended to see other

elderly as less capable to decide about matters of health care (X^2 = 15.00, df = 3, p = .001). Similar findings were noted in relation to decisions about managing their monty (X^2 = 10.14, df = 3, p = .01) and the decision whether to work or to retire (X^2 = 15.48, df = 3, p = .001). Age, marital status, sex, and living arrangements were not significantly different between the two groups. Those who saw other elderly as less capable to make decisions tended to consider fewer alternatives in relations to health, budgeting their money, the decision of where to live, the decision about the use of free time, and the decision about retirement.

Those who perceived their capabilities to make decisions in positive terms indicated more alternative seeking behavior while deciding than those whose perceptions of their capabilities were less positive. Women, on the whole, tended to look at more alternatives than did the men but tended to see the possibilities for their decision making as less desirable than men did. Family relations were also related to the degree of desirability of decisions made. Respondents who reported their family relationships as less than satisfactory tended to see the possibilities for decision making as less desirable.

The older subjects tended to have less satisfaction with their decisions in relation to their needs than the younger subjects.

Information seekers tended to differ from those respondents who did not seek information from others while deciding about a course of action. Those who sought information tended to use significantly more services than the non-information seekers. The difference, however, was not significant in relation to the knowledge of services. In general, information seekers tended to look at more alternatives prior to making a decision than the non-information seekers.

Findings indicated that the availability of a confidant was related to the chances for success in decision making. Those respondents who had only a

friend as a confidant had fewer chances for success with their decision than those of the respondents who had both family and friends available to them as confidants. There was no significant difference between those who named their first choice as most successful and those whose first choice was not their most successful choice. But the trend found indicated that good health and living alone were positively related to looking upon the first choice as the most desirable one.

Over half of the respondents (53.7%) used the decision-making process in relation to a felt need, while almost two-thirds (66.3%) used the process in relation to a recent life event. The psycho-social variables found to be significantly related to the decision-making process consisted of health, living arrangements, income, sex, family relations, availability of a confidant, perceived capability, and life satisfaction.

3. Results Related to the Needs of the Respondents

The needs reported by the respondents were compared to nationally known surveys representing elderly people from all income groups, such as the Harris Poll (1974), Bild and Havighurst's study of the elderly in Chicago (1976), and to the study by the Essex County Office on Aging (1976).

Of the nine major areas affecting functioning in old age and reported in these studies as the most important in terms of needs, five were noted by our respondents as well. They were: transportation, financial assistance, loneliness, medical care, and care related to physical disability. In our study, transportation was the most important need for 21.7% of the respondents. Financial assistance, as the second most important need, was mentioned by 16.8% of the respondents.

The need for medical care was reported by 79.4% of the respondents as being met. Social needs, such as need for someone to contact the respondent

regularly, was reported met by 77.6%, and over 70% of our respondents said that their need to join a group or club to socialize was also met.

Almost half of the respondents (45.6%), reported a number of unmet needs. About one-third (31.0%) of the respondents said that they did not expect any problems or any need in the future, but a little over one-fifth (21.4%) listed health and medical care as their greatest future expected need. Only one in eight listed economic problems as the greatest worry in the future. Moving and/or problems related to living arrangements as most important needs in the future were listed by 10% of the respondents, and only 1.3% stated that loneliness would be a future problem. These findings correspond to those reported by the Harris Poll (1974) and approximate rather closely the findings of Bild and Havighurst (1976) and of Hyman. (1970).

More than one-third of the respondents (34.8%) had no plans to deal with their future expected needs. Reliance on self to solve needs was reported by one-third of the respondents. Reliance on family for solving future expected needs was rather small (9.4%), and friends played even a lesser role (2.2%). Professionals and organizations as possible sources of reliance for future needs were listed by one-fifth of the subjects.

Only a small percent of the subjects (5.6%) felt that they needed no information in order to deal with their particular needs. Most subjects relied on themselves to obtain the kind of information they thought they would need to deal properly with their needs. The most frequently consulted outside source of information was professionals (by 9.6% of the respondents). Since more than two-thirds of the population (68.5%) felt that they did not have any need at the present time, it was interesting to note that a great majority of those who did have a need did take some action.

4. Decision Making: Needs and Services

Four major needs reported by Harris (1975), Palmore (1968), Bild and Havighurst (1976) as well as in this study were: health care, financial help, loneliness, and lack of transportation. Respondents in our study who reported: their health as poor, their incomes as inadequate, being lonely very often, and having no transportation as an important unmet need were further analyzed.

Income was the most important indicator of problems. Age was related only to the problem of poor health, that is the older subjects assessed their health more often as poor than did the younger subjects. The need to talk over problems with a trained counselor was most often unmet (Bygren, 1974).

In our sample, 45.6% of the respondents had at least one important unmet need. This percentage is higher than found in the national sample, where about one-third of those interviewed defined their problems as very serious (Harris, 1975).

The likelihood of having unmet needs was related to sex, marital status, health, physical ability, and income. Other investigators have also found a relationship between income and unmet needs (National Council on the Aging, 1970; Bild and Havighurst, 1976; Harris, 1975). Sterne et, al., (1974) found that race--reinforced by differences in income, education, religion, and marital patterns--was strongly related to the existence of perceived wants.

The "most important unmet needs" found to be age-related in the present study were: (1) transportation, (2) physical assistance, (3) the need for social affiliation, (4) medical care, (5) legal assistance, and (6) financial assistance. Palmore (1971) found evidence for the first four of these to be age-related in Project FIND.

These findings indicate that many of the needs of the elderly may be alleviated if more financial assistance were available. Since the results of

this study show that respondents with more income have fewer needs, it is likely that by increasing the income of needy elderly people, other needs would be reduced because more money would be spent on buying needed services.

Alleviating needs by raising income has been suggested before. Barg and Hirsch (1974) report that respondents of low socioeconomic status identify more money as the essential aid toward greater satisfaction in social activities, home maintenance, mobility, and leisure pursuits. A policy question based on the findings of this study seems inevitable: How can we help reduce need while allowing the elderly to maintain as much autonomy and choice in their decision to use services as possible? The results of this study suggest that the best solution to this question would be a combination of direct financial assistance and provision of convenient services which can be purchased as the elderly themselves see fit.

Vig (1973) notes that some of the services provided for the elderly in Scandinavia are: collective housing projects with services on the ground floor (such as canteens, hot meal services, recreational activities, hairdressing, etc.), protected dwellings for those who need more help and care, free or very inexpensive domestic help, free home nursing services, day hospitals with transportation provided, and "folk high schools" which offer short courses on a wide variety of topics. Many of these services, if adopted, would offset the disadvantages of needy elderly in our society who suffer most.

5. Characteristics of the Action Takers

The social characteristics of those who took some action regarding a reported life event and those who did not, was explored next. The difference between action and non-action takers was highly significant (P = .0001). Change in regular personal habits was the most significant event in which the difference between the two groups was noted. Most people took action except when the event was clearly beyond their control, such as death of a spouse or a close

friend. Action takers outnumbered non-action takers by a ratio of approximately 2 to 1 (220 versus 112).

The events which resulted in action taking consisted of the following: illness of the spouse and major illness or injury to self, improvement in health conditions, achievement of an important personal goal, and taking a trip or going on a vacation. Those events in which the majority of the respondents took no action were: change in financial status, death of a close family member other than the spouse, death of a friend, and change in outlook on life.

Using a one-way analysis of variance, a significant difference ($p = .01$) was found between those who perceived their current life situation as no better or worse than usual and those who perceived their current situation as the worst time of their life. Action takers perceived their present life situation more positively than non-action takers. The relationship between the age of the respondents and action taking regarding life events was also significant ($p = .06$); however, the correlation was rather weak (Kramer's V = .013). In general, action takers were younger than non-action takers, while those 80 years and over tended not to take action for the events reported. Those who had higher income and education were more likely to be action takers than those with lower incomes. The sex of the respondents however, was not significant in terms of action taking in life events. About half of both males and females were in the group who did not make a decision in the past year, but took some action in the present. The health of the respondents was not significant in relation to a life event. However, the perceived capabilities of those who took action and those who did not differed significantly, ($p = .06$). Action takers scored higher in self-assessed capabilities than non-action takers who perceived their capabilities lower.

Further analysis of the data tested the differences between those who were satisfied with their decision regarding an action taken and those who were not satisfied. Action takers had significantly higher satisfaction with their decisions than non-action takers ($F = 7.15$; $df = 1.211$; $p = .009$).

6. Action Taking in Life Events

The results of this study indicate that action taking related to a life event is the most important predictor of psychological well being. Education and health are also important correlates of action taking. In general, the higher the number of life events, the more action is taken by the respondents. Age, education, income, perceived capability, and satisfaction with decisions made are significant variables in perception of life events as positive or negative. Those who are younger, better educated, have higher incomes, and who perceive their own capabilities positively look upon life events in a more positive way than do respondents having different characteristics.

One of the more important findings of this study was that action takers differed from non-action takers in each of the components that make up the decision-making process. They considered more alternatives, thought of the actions they took as viable, were ready to take higher risks in order to succeed, looked upon their choices more positively, and used their first choice by a much greater ratio than those respondents who did not take action. One may therefore speculate that action taking might be related to previously acquired skills in decision making which predisposes the older adult to engage in this activity whenever the need arises, and that levels of socialization and cultural background are important elements in predicting active use of the decision-making process. In addition, long standing personality characteristics

might predispose the individual for active or passive behavior thus generating more or fewer life events.

Perception of Life Events

Not all events in old age, or at any age for that matter, are perceived as stressful. Older adults who live in the community and who constitute the majority of the elderly in our society are much more diverse and unique in their perceptions of life events than depicted in the popular and in the scientific literature. They have a strong will to live and to enjoy life. For many, old age is a time of fulfillment rather than a tragic downhill process (Maas and Kuypers, 1974). Taking a trip or going on a vacation is often perceived as an activity which enhances living (Salmon, 1975). Similarly, achieving an important personal goal can promote the social functioning of the individual.

The findings of our study also indicate that we need to learn more about the characteristics of life events in old age and about the conditions under which they occur. Further information is needed on the extent to which these events shape the individual's adjustment to old age. New scales are needed to appropriately measure the relative importance of life events in terms of present and anticipated life satisfaction.

We also need to evaluate the merits of assessing life events as positive or negative by the respondents themselves rather than solely by the investigators. An event perceived by a particular investigator as positive may not be so perceived by a respondent. Life events perceived by individuals as decisive for their well being constitute an important field of study in social gerontology. By looking at aging through the eyes of the elderly, as they themselves assess their life events, we may gain important insights on old age.

References

Barg, S. K., and Hirsch, C. Neighborhood service support networks: an alternative for the maintenance of active community residence by low income minority group aged in the inner city. Paper presented at the 27th annual meeting of the Gerontological Society, Portland, Oregon, 1974.

Bild, B. R., and Havighurst, R. J. Senior citizens in great cities: the case of Chicago. The Gerontologist, 1976, 16 (1, Part 2).

Birren, J. E. Age and decision strategies. Decision making and age. New York: S. Karger, 1967.

Botwinick, J. Cautiousness in advanced age. Journal of Gerontology, 1966, 21, 347-353.

Brim, O., Glass, D., Lavin, D., and Goodman, N. Personality and decision processes. Stanford, California: Stanford University Press, 1962.

Bromley, D. G. Studies of intellectual function in relation to age and their significance for professional and managerial functions in decision making and aging. Decision making and age. New York: S. Karger, 1967.

Craik, F. I. M. Application of signal detection theory to studies of aging. In Decision making and age. New York: S. Karger, 1967.

Edwards, W. The theory of decision making. Psychological Bulletin, 1955, 51, 380-417.

Essex County Office on Aging. Essex County Senior Citizen Needs Survey, 1976.

Festinger, L. Conflict, decision and dissonance. Stanford, California: Stanford University Press, 1967.

Fishburn, P. C. Decision and value theory. New York: John Wiley & Sons, 1964.

Guilford, J. P. Intellectual aspects of decision making. Decision making and age. New York: S. Karger, 1967.

Guttmann, D., et al. The Impact of Needs, Knowledge, Ability and Living Arrangements on Decision Making of the Elderly. Final Report AoA Grant 90-A-522, July 1977

Harris, L., and Associates. The myth and reality of aging in America. Washington, D.C.: The National Council on the Aging, 1974.

Heyman, D. K., and Jeffers, F. C. Observations on the extent of concern and planning by the aged for possible chronic illness. In E. Palmore (Ed.), Normal aging. Durham, North Carolina: Duke University Press, 1970.

Hill, R. Family development in three generations. Cambridge, Mass.: Shenkman Publishing Company, 1970.

Holmes, T. H., and Masuda, M. Life changes and illness susceptibility. In B. S. Dohrenwend and B. P. Dohrenwend (Eds.), Stressful life events, their nature and effects. New York: John Wiley & Sons, 1964.

Holsti, O. Crisis, stress, and decision making. Social Science Journal, 1971, 23, 53-57.

Maas, H., and Kuypers. From 30 to 70. San Francisco: Jossey, Bass, 1974.

National Council on the Aging. Project FIND: the golden years: a tarnished myth. New York, 1970.

Palmore, E. Normal aging. Durham, North Carolina: Duke University Press, 1970.

Salmon, R. The values in vacations for senior citizens. New views on vacations for the aging. New York: Central Bureau for the Jewish Aged, 197[illegible].

Sterne, R. S., Phillips, J. E., and Rabushka, A. The urban elderly poor. Lexington, Mass.: Lexington Books, 1974.

Vig, G. Scandinavian experiences in health and social services for older people. Bulletin of New York Academy of Medicine, 1973, 49 (12), 1093-1099.

Wilcox, J. W. A method for measuring decision assumptions. Cambridge, Mass.: M.I.T. Press, 1972.