

INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.
2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.
3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.
4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.
5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms

300 North Zeeb Road
Ann Arbor, Michigan 48106

7904012

RANDLETT, MARY MCALISTER
THE PREDICTION OF OLDER ADULTS' PARTICIPATION
IN PREVENTIVE MENTAL HEALTH EDUCATION.

IOWA STATE UNIVERSITY, PH.D., 1978

University
Microfilms
International 300 N. ZEEB ROAD, ANN ARBOR, MI 48106

© 1978

MARY MCALISTER RANDLETT

All Rights Reserved

The prediction of older adults' participation
in preventive mental health education

by

Mary McAlister Randlett

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Department: Psychology

Major: Psychology

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

For the Major Department

Signature was redacted for privacy.

For the Graduate College

Iowa State University
Ames, Iowa

1978

Copyright © Mary McAlister Randlett, 1978. All rights reserved.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
INTRODUCTION	1
Existing Mental Health Services for the Aged	2
Proposed Improvements of Mental Health Services to the Aged	4
Mental Health Preventive Interventions	5
Preventive Education with the Aged	6
Methodological Approach of the Present Study	10
Statement of the Problem	15
Questions Posed by the Present Study	16
METHODS	19
Subjects	19
Instruments	23
Procedures	29
Data Analysis	33
RESULTS	35
Psychometric Refinement of Life Experiences Inventory and Future Life Expectancies Inventory	35
Homogeneous Cluster Groupings of Subjects	43
Outcome Variable Analyses	67
DISCUSSION	112
Verbal Reports of Interest and Possible Attendance	115
Actual Attendance and Workshop Outcomes	118
Reasons Encouraging or Discouraging Attendance	120

	Page
Conclusions	122
REFERENCE NOTES	125
REFERENCES	127
APPENDIX A: DEMOGRAPHIC DATA FORM	133
APPENDIX B: LIFE EXPERIENCES INVENTORY	135
APPENDIX C: FUTURE LIFE EXPECTANCIES INVENTORY	142
APPENDIX D: VALUE ORIENTATION INVENTORY & GOOD IMPRESSIONS SCALE	151
APPENDIX E: EXPRESSED INTEREST INVENTORY	160
APPENDIX F: WORKSHOP PARTICIPATION INVENTORY	164
APPENDIX G: WORKSHOP EVALUATION FORM	166
APPENDIX H: TESTS OF WORKSHOP KNOWLEDGE	168
APPENDIX I: INFORMED CONSENT FORM	179
APPENDIX J: AVERAGE CLUSTER GROUP PROFILES OF PRESENT STUDY . . .	181
APPENDIX K: AVERAGE CLUSTER GROUP PROFILES OF PRELIMINARY STUDY .	196

ACKNOWLEDGEMENTS

The process of conducting this research effort has given me a meaningful life experience. In spite of the complications and tedium that any applied research involves, I have had a unique opportunity for interchange with other human beings, which I value.

My thanks are given first to the subjects of this study, particularly to the participants of the workshops, who shared many of their own life experiences and views about the process called aging. Our dialogue was a learning experience which I consider invaluable.

Throughout my academic career at Iowa State University, Norm Scott has provided me with stimulation and guidance, as well as support through difficult times. Fred Borgen has also generously shared his expertise and assistance. I appreciate their help with this project and throughout my years at Iowa State, but am most pleased to share their friendships.

Thanks to Bob Strahan for his assistance with data analysis and to the other members of my advisory committee. My thanks also to Gary Berger from the Psychology Department at the University of Missouri-St. Louis for his considerable assistance in securing computer services and for his statistical advice.

My thanks also to the Multidisciplinary Gerontology Center of Iowa State University and the University of Iowa for the grant support of this research project.

INTRODUCTION

The social scientist is trained to think that he does not know all the answers. The social scientist is not trained to realize that he does not know all the questions. And that is why his social influence is not unfailingly constructive.

(L. J. Cronbach, 1975(b), p. 13)

There are many questions to be asked concerning the role of mental health practice in today's society. Mental health services will never be available in sufficient quantities to remedy serious mental health problems in our society (Lawton, 1973). Today's mental health clientele represent the socioeconomic elite of society (Zax & Specter, 1974). Questions remain concerning effective types of mental health services and their delivery to a wider spectrum of society. Hence, there is need for new approaches within mental health to accomplish the task of better serving the needs of society.

The community mental health movement represents a major trend in creating new methods of mental health treatment and delivery. The concepts of prevention and community-based programs were the keystones of the "bold new approach" of the Community Mental Health Centers Act of 1963. This act subsequently funded services combining traditional psychiatric services with indirect services of consultation and mental health education (Sarason, 1974). Through indirect services, it was hoped that a broader segment of society could be served in new ways--by providing knowledge and personal skills for coping with problems in living to pre-

vent serious mental health problems. These indirect services are therefore designed for target groups who might be expected to have a high risk of more serious mental health problems. The present research efforts focus upon the needs of aged persons for mental health education concerning stresses due to the aging process.

The present study asked some questions concerning preventive mental health programming efforts with the aged, a portion of the population much neglected by existing mental health services. Education about aging may be useful in preventing mental health problems among normal persons encountering the aging process and concomitant life stresses. While the research literature is limited, available sources support education about aging processes as a useful psychological intervention (Peterson, 1974; Petty, Moeller, & Campbell, 1976). The present study was designed to explore psychological characteristics of older persons and their interest in and utilization of a program of education about aging. The objective of the study was to answer questions relevant to the design of preventive mental health education interventions with the aged.

Existing Mental Health Services for the Aged

In general, provision of mental health services for community aged has been quite limited. Outpatient care, those psychiatric services which would be most needed by older persons experiencing normative life crises and problems in living, shows a serious underutilization by older persons. From 1955-1968, only 2% of outpatient clinic clientele were

persons 65 years and over (Kramer, Taube, & Redick, 1973). In 1969, persons 65 years and over accounted for only 4% of the admissions to Community Mental Health Center services of all types (Kramer et al., 1973). Since the aged represented approximately 10% of the U.S. population during this time period, it is apparent that the aged were quite underrepresented in all outpatient service clientele. Between 1966 and 1971, a 37% increase in all types of psychiatric patient care episodes occurred for the total client population of psychiatric facilities. A 22% decrease in this same general index of service occurred for the specific category of persons 65 years or over (Kahn, 1975). While community mental health, outpatient clinic, and psychiatric services as a whole increased dramatically during the 1960s, services to the aged appear to be increasingly limited.

The reasons for the underrepresentation of the aged as clients in outpatient care are complex. Kahn (1975) suggested there may be a reciprocal aversion between mental health care providers and the aged. Kastenbaum (1964) observed the reluctance of mental health workers to become involved with the aged due to negative values toward the older person's shortened life, impending death, and lower status in society. Several other authors viewed the neglect of the old in mental health care as the result of negative attitudes of mental health professionals (Group for the Advancement of Psychiatry, 1972; Kahn, 1975; Lawton & Gottesman, 1974). Cohen (1976) explained that psychiatric services do not reach the aged due to caregivers' myths, stereotypes, and misinformation about the aged, as well as poor service delivery. Gaitz (1974)

observed that planners and providers of mental health services place a low priority on services to the aged.

Less is known about the hesitancy of older persons to utilize mental health services. There is evidence that older persons' reluctance to use many types of services may be due to negative evaluation of their own competence and adequacy, if they become clients (Powers & Bultena, 1974). Kramer, et al. (1973) described the great shift of aged psychiatric inpatients to nursing homes during the 1960s. As a result, 75% of the psychiatrically diagnosed aged resided in nursing homes in 1969, while only 53% were in similar facilities in 1963. Custodial care for the old may well be viewed negatively by the older person. Awareness of this custodial trend in psychiatric service may combine with older persons' general reluctance to use most services, so that the mental health system is seldom used by this age group.

Proposed Improvements of Mental Health

Services to the Aged

There have been many suggestions for the improvement of service delivery to the aged, usually documenting the need for comprehensive services of many types (Gottesman, Quarterman, & Cohn, 1973; Group for the Advancement of Psychiatry, 1972; Kramer et al., 1973). There is also recognition of the need for preventive services to the aged to maintain psychosocial adjustment and deter development of more serious psychological problems meriting therapeutic services.

Kahn (1975) suggested the need to respond more to the strengths of

the aged in preventive mental health programming and to use a principle of minimum intervention to optimize the client's sense of control. He suggested that the improved educational, health, and economic status of future aged will stimulate preventive, rather than therapeutic services in mental health. Lowy (1972) saw the need for services provided by commonweal rights, including those that maintain ability to participate in daily living. Community services need to focus on reducing social needs of the aged population, rather than relieving specific problems of individuals (Daniels & Kahn, 1968).

Mental Health--Preventive Interventions

Preventive mental health programs for the aged are recognized as a needed intervention modality. The concept of prevention and services to maintain adequate human functioning in the general population has its strongest expression in the Community Mental Health Centers Act of 1963 and the services it subsequently funded (Sauber, 1973). Primary prevention, which attempts to forestall dysfunction and promote mental health, is one of the goals of the consultation and education component of the 1963 Act (Cowen, 1973; Sarason, 1974). Consultation and education services in mental health have become, in large part, synonymous with community psychology. Community psychology has developed due to the inability of traditional mental health practice to reach many pressing social problems, as well as the tendency to ignore all but socially elite clientele (Zax & Specter, 1974). Consultation and education services have been provided to community organizations to enhance their systemic functioning as a whole and to individuals to assist optimal functioning.

Direct education of normal individuals for the maintenance of psychosocial functioning has been supported by Kelly, Snowden, and Muñoz (1977) as a needed area of mental health services. Education for mental health was endorsed by Sauber (1973) to promote the public understanding that will enable better adjustment or to assist caregivers in providing better services. Examples of such preventive education for mental health include career development workshops and skill training for coping with life stress (Sauber, 1973).

There is, then, some precedent for the use of mental health education to normal community-dwellers to teach personal and social competencies. Public health education provides the models for most preventive educational interventions. The public health approach attempts to change beliefs about illness, as well as changing behavior aimed at prevention or cure of physical illness (Sauber, 1973). Mental health education analogously seeks to change understanding of social and emotional difficulties and to develop coping behaviors to prevent serious psychosocial problems.

There has been limited use of mental health education with older persons concerning processes of aging and common life difficulties. Education of this type has, however, been explored in both mental health and adult education fields. While relevant literature concerning this approach is limited, that which is available lends support for the present research.

Preventive Education with the Aged

A general endorsement of the need to educate older persons to meet the challenges of old age was made by Peterson (1974). He proposed that

such education should include coping strategies for life stresses that affect the direction and quality of life of the learner. An interesting review of important principles and some program attempts in elementary school education about the aging processes was offered by Jacobs (1974). Jacobs proposed the need for re-education and attitude change about the later lifespan among all age groups.

While it was conceptualized as a social work treatment, the Petty et al. (1976) group program with 30 aged persons is the only identified report of educational intervention about the processes of aging in the gerontology literature. The authors presented objective information about normal changes in later life and provided group activities to develop coping with these changes. Their subjects were persons 62 to 85 years of age recruited from an arthritis screening program; all reported some dissatisfaction with their adjustment to the aging period. Information was provided regarding common concerns in areas of health, death, memory, vision and hearing, interpersonal relationships, and housing. While limited data analyses were reported, the authors found an increase in measured awareness of commonality of problems of aging and observed a lessening of anxiety among participants. Narrative reports by participants indicated some behavioral changes, such as improved communications with family and upgrading home safety precautions. While this study lacks both conceptualization as mental health education and adequate statistical analysis of outcome data, it suggests a model for intervention. Information about aging processes and constructive strategies for coping with changes in late life were offered, along with opportunities

for participant interaction with peers.

Confer and Lessor (1967) described a preventive mental health group program sponsored by the Lutheran Church in two settings. Twenty-eight older persons, selected on the basis of their normal physical and emotional functioning, participated in 10 group sessions. The groups' main purpose was to discuss mutual problems of aging, utilizing a pastoral leader as a resource person. While no direct instruction about aging processes was provided, the authors described the informal sharing of information about aging processes. There was no data collection, but leaders observed "indications of more successful functioning" among participants.

Using a more traditional therapeutic approach, Keller and Croake (1975) offered a rational-emotive training program to 15 persons 60 years or older in a residential setting. Ellis's rational-emotive approach attempts to restructure thinking of clients to eliminate unrealistic and unattainable propositions about living. The intervention program sought to influence the aged participants' own negative views of aging to improve adjustment, by reducing both irrational thinking and anxiety. Measures of irrational thinking and trait anxiety showed significant reductions for treated subjects in comparison with a no-treatment control group. This study represents a rapprochement between psychotherapy and education as an intervention approach, but does not provide education about aging as a preventive intervention.

A few studies document the use of education about aging processes for human service workers who interact with aged persons. Hickey (1975)

provided education about sensory impairment in old age to 186 staff members of extended care facilities. Simulation exercises and films were used to present information about sensory changes common in old age. There were no statistically significant gains in content learning as a result of training. Hickey, Hultsch, Fatula, and Rakowski (Note 1) presented a program on sensory losses of the aged to 322 health care and social service workers. There were significant age effects, with younger participants showing less negative attitudes toward aging. Training produced a significant increase in positive attitudes about aging, when no-treatment control subjects were compared with workshop participants of all ages. Sheppard and Valla (1976) offered workshops to 200 older community members to provide information concerning the problems of the older person and community resources available to them. There was a significant increase in content learning about aging and services, while self-report of behavioral changes in community service involvement were equivocal. Sheppard and Valla described their intervention as an attempt to increase community service involvement of the aged as volunteer practitioners, but these authors lacked clarity as to the desired goal behaviors.

Although their reported outcomes are not impressive, these three reports suggest educational intervention methods to be used with human service workers, which may be useful in direct contact with older persons.

There is, then, some endorsement of the use of preventive education to maintain mental health of the aged, with education about the aging processes as a potential mode of beneficial intervention. The

available research, however, is limited and non-rigorous in nature. The underutilization of existing human services by older persons also suggests that attention to needs assessment and program design in the development of psychosocial intervention programs is merited. Design and evaluation of all community interventions are recognized as needed areas of research (Kelly et al., 1977).

Methodological Approach of the Present Study

The methodology of the present study derives from several origins. Research concerning utilization of programs of intervention in mental health is limited, but available psychotherapy utilization literature shares some conceptual similarity with the present study through its mental health focus. While there are reports of demographic characteristics of mental health service clientele, there is limited literature relevant to the self-selection of clients to utilize mental health services. Since mental health education is a fairly recent innovation in service delivery, it is not surprising that there is a small amount of literature concerning its utilization.

One study attempts to identify the psychotherapy client's decision to utilize mental health services. Kadushin (1958) interviewed 110 clients who requested service from a psychiatric clinic. He explored the source of problem identification which led to the decision to seek psychotherapy. Four typical sources of problem discovery included painful physical symptoms, general unhappiness, marital problems, or report by others of the problem.

In general, reviews of psychotherapy research relevant to the utilization of service have focused on the phenomenon of attrition. As a dependent variable, attrition has been related to multiple demographic independent variables with largely confusing findings across studies (Baekland & Lundwall, 1975). Garfield (1977) has further criticized these studies for ignoring drop-out base rates over sessions of psychotherapy, particularly since attrition is the rule rather than the exception among psychotherapy clients. While broad demographic descriptors have been provided in the research on client variables, these offer little information as to psychological characteristics of outpatient users compared with non-users of psychotherapy (Garfield, 1970).

Comparisons of client utilization of therapeutic mental health services with preventive services confuses an important issue concerning potential client characteristics. Psychotherapy presumes the presence of symptoms of illness in the population of potential clients, while a presumption of health is implied in preventive services. Since the concept of prevention has a brief history in mental health service, there is an understandable omission of focus on who seeks to maintain mental health. There is, however, some useful information available concerning the healthy individual who seeks health information or education to maintain general health.

Since most preventive education efforts derive from public health origins, available research on preventive education utilization is most sophisticated in health education literature. Relevant theoretical considerations and methodological approaches are provided.

McKinlay (1972) provided a systematic review of the utilization of health services, including preventive or health education services. McKinlay emphasized the need for small scale studies to generate hypotheses with particular interest in the social-psychological factors which actually instigate utilization behavior. Social-psychological factors of perception, motivation, and learning provide greater understanding of choices to utilize health education, according to McKinlay. He also endorsed the exploration of the decision-making processes of service clients. His suggestions for needed research in health education utilization are congruent with the focus of the present research on mental health education utilization.

"Health behavior" is a useful concept from health service research which is analogous to efforts to promote one's own mental health. "Health behavior" is defined as activity of a person who believes his/her health is good for the purpose of prevention or early detection of disease (Kasl & Cobb, 1966; Rosenstock, 1966). In a review of health behavior research, Rosenstock (1966) reported that the young and middle-aged, female, better educated, higher income, and Caucasian individual is more likely to engage in health behavior.

Rosenstock (1966) offered a theoretical conceptualization to explain health behavior, using the following components:

1. Perceived susceptibility of the health problem for the individual.
2. Perceived seriousness of consequences of such a problem.
3. Perceived benefits of taking action in reducing the threat of a problem.

4. Cues and barriers to action.

Rosenstock cautioned that the model is applicable only to voluntary behavior and probably more useful in predicting middle socioeconomic status behavior due to middle class persons' more deliberate and planful orientation. Research based on Rosenstock's model is reported vaguely to "support the model with internally consistent findings in the predicted direction" (Rosenstock, 1966). While empirical support for this conceptualization of health behavior is equivocal, there is wide acceptance of the conceptual and heuristic values of his theorizing regarding the utilization of preventive health services (Anderson, 1973; Kasl & Cobb, 1966; McKinlay, 1972).

The conceptualization of health behavior by Rosenstock offers a useful analogy to the present problem of preventive mental health efforts. In the present research, the anticipation and experience of multidimensional aging processes, rather than a specific health problem, were considered; preventive mental health behavior rather than health behavior was explored. Experience with aging processes and expectation of future negative aging processes were assessed, providing some information concerning susceptibility and seriousness of consequences, in terms of the Rosenstock model. The present research also explored cues or barriers to action in subjects' choices to participate in mental health education. Rosenstock's conceptualization of health service utilization provided a useful guideline for the exploration of preventive educational services in the present research context.

The present research methods also derive from the broad methodologi-

cal model proposed by Cronbach (1957, 1975(a)) to integrate the idiographic with the nomothetic research approach. Cronbach proposed a now classical critique of psychological research, urging the greater specification of laws of behavior through the study of aptitude x treatment interactions. Through idiographic study of persons (aptitudes), laws of behavior could more accurately and meaningfully be constructed through nomothetic, empirical research of treatment effects.

Owens (1968, 1971) elaborated on the use of the biographical report in the integration of idiographic and nomothetic research approaches. Owens suggested that biographical data be used to create homogeneous groupings of persons to derive more accurate laws of human behavior. Owens has proposed the measurement of multivariate dimensions of person aptitude, while Cronbach recommended further attention to all interactions of research design factors.

The biographical report has been widely used in research on human behavior in many contexts. Reports of 72 studies utilizing biographical report, most in industrial settings, showed outstanding predictive validity (Owens, Note 2). This approach has also been described as lending support to understanding developmental history (Owens, 1968) and has been used in psychological research on aging concerning the study of creative persons in many academic fields (Dennis, 1956).

The present research also sought to explore homogeneous types of persons based on Owens' quasi-actuarial approach, utilizing statistical clustering techniques (Owens, 1968). Homogeneous cluster groups were developed from reports of previous life experiences, measures of attitudes

about future aging, and global adjustment. While typologies have been developed from biodata in research such as Owens¹, there is also precedent for research developing typologies based on personality measures. The latter approach has been used in several landmark longitudinal studies of human development (Block, 1971) and with longitudinal studies of later life (Maas & Kuypers, 1974; Reichard, Livson, & Peterson, 1962).

In summary, there is some tentative research support for mental health education to maintain mental health of older persons and for the specific program of education about processes of aging. The limited utilization of existing mental health and other social services by the aged, as well as specific recommendations within the health services utilization literature suggest that utilization and decision-making are meaningful behaviors to study empirically. While outpatient psychotherapy utilization research seems to omit initial choice to use service, this becomes a more relevant issue with regard to preventive mental health behaviors of normal persons. "Health behavior" research provides the most direct analogy to the present project and suggests research methods to explore preventive behaviors among the healthy. The use of the biographical report and homogeneous groups of persons represents the additional influence from a major research trend in psychology.

Statement of the Problem

The purpose of the present study was to explore the psychological characteristics of older persons who utilize or fail to utilize a mental health education program concerning processes of aging. The study ex-

plored which of five topics about aging were of interest to homogeneous clusters of older people in order to provide information useful in the planning of mental health education about aging. The present research also sought to explore some important factors that encourage or discourage involvement in education about aging among groups of older people.

Cluster groupings were based on complex dimensions of life history and general personality functioning and were formed through application of cluster analytic techniques. In particular, experience with aging processes during the recent past and expectations concerning further effects of aging were used to group or cluster older adults into homogeneous types. Global psychosocial adjustment and tendency to portray oneself in a good light were also used in the process of grouping persons, adding some personality dimensions to the life history basis for grouping. The adult experiences of aging and attitudes about future aging might logically be expected to influence a person's interest in information about aging processes. For example, a person who experiences many health problems or anticipates future health problems might logically be expected to have more interest than others in information about health. The study explored whether such relationships between life experience and/or attitudes about aging were related to interest in information about aging, comparing types of people.

Questions Posed by the Present Study

Are there certain types of older persons who attend workshops about aging? The study sought to explore whether persons, homogeneous for some

aspects of adult life experience, adjustment, and attitudes about their futures, would actually differ in workshop attendance. A purpose of the study was to explore whether persons with certain life experiences or attitudes might be target groups for future education about aging. The study also sought to explore whether homogeneous groups differed in their response to education about aging, both in their subjective evaluation of workshops and on tests of content learning.

What information about aging is of interest to older lay persons? The present research explored verbal report of interest in five areas of aging. The study's purpose was, in part, to answer some preliminary questions concerning the curriculum design of education about aging. First, homogeneous groups of persons were compared in their expressed interest in topics about aging. Here, the study sought to establish whether groups differing on complex aspects of life experience, attitudes about future aging, and general adjustment also differ in their desire for information about aging. Second, the study compared reported interest in information about aging among persons who participated in workshops with others who did not participate in the workshops of the study. The study sought to explore whether verbal report of interest in workshop topics was useful in discriminating who attended.

Are certain reasons important in encouraging or discouraging older persons' attendance at workshops about aging? Workshop participants and non-participants were compared on a list of reasons that might encourage and discourage attendance at workshops to explore possible differences in the process of deciding to attend. Differences in reasons encouraging

or discouraging participation were also explored among homogeneous groups of persons. Comparisons of participants and non-participants on reasons influencing their workshop attendance offered possible information about other situational factors relevant to mental health education planning. At each workshop, participants were again asked which reasons encouraged their attendance, to assess changes in importance of factors bearing on decisions to attend.

METHODS

Subjects

Participants for the present study were solicited through 11 organizations of older persons in the Des Moines, Iowa metropolitan area. The investigator contacted 21 organizations and 11 consented to allow a slide-talk presentation concerning the study at an organizational meeting. Several of these organizations have different requirements for membership, such as retirement, but the majority of the memberships include persons 60 years of age or older. The organizations involved were six senior citizens' community center groups, a retired teachers' organization, two residential retirement center groups, and two church school classes. While no attempt was made to count the number of persons of each gender, due to time constraints, a head count was made at each presentation. A total of 467 older persons were present at the 11 talks.

The present study consisted of three phases of subject participation. Subjects voluntarily selected whether to participate in one, two, or three phases of the study. The three phases represent successive degrees of subject involvement and commitment, so that the second and third phases consist of smaller subsets of the preceding groups of subjects. Briefly, Phase I consisted of these initial presentations, Phase II of questionnaire completion, and Phase III of attendance at workshops about aging.

Subject participation throughout the study was voluntary; informed

consent was required for subjects of Phases II and III. A total of 190 persons providing data during the initial presentations of Phase I were self-selected into the two subsequent groups involved in the later phases of the study. Participation in the third phase of the study, workshop attendance, was a dependent variable of major interest in the study.

Table 1 describes the demographic characteristics of the subjects in all three phases of the study. Phase I participants were those individuals present at the initial slide-talk presentations who also completed some portion of the Expressed Interest Inventory (36 males, 152 females, 2 unknown). Their mean age of 71.35 years is similar to the groups of persons in the other two phases of the study. Average years of formal education was slightly less (14.15 years) in this large group of 190 persons, with a range of 1 to 20 years. Data concerning marital status and current employment were not solicited to minimize the length of time required to participate in this phase of the study.

The second phase of the study required the completion of a packet of questionnaires at home. Phase II involved 88 persons, including 17 males and 71 females. This group was slightly younger, on the average (70.80 years), than groups involved in the other two phases of the study. Their average years of formal education was 16.05, with a range from 8 to 20 years.

Twenty-three persons were involved in Phase III of the study, consisting of participation in one or more of five workshops about aging. A total of 44 observations were made on 23 subjects, since 10 persons

Table 1

Demographic Characteristics of Subjects in Three Phases of Study

	Phase I Initial Presentation	Phase II Questionnaire Completion and Clustering	Phase III Workshop Participation
<u>N</u>	190 ^a	88 ^b	23
Sex			
Male	36	17	4
Female	152	71	19
Unknown	2		
Mean Age in years	71.35	70.80	72.62
Mean Years of Education	14.15	16.05	16.57
Marital Status			
Never Married		23	4
Married		33	8
Divorced		7	0
Widowed		24	10
Unknown		1	1
Currently Employed			
Yes		8	2
No		79	21
Unknown		1	

Note. Tabular entries indicate numbers of persons.

^a190 persons of the 467 present at initial presentations completed some portion of the Expressed Interest Inventory providing demographic information. No data were collected concerning marital status or employment from the Phase I group.

^bDemographic data were available for 88 persons, while only 86 of these completed the questionnaires required for inclusion in the cluster analysis.

attended more than one workshop. A total of 4 males and 19 females were involved in Phase III of the study. The average age of Phase III subjects (72.62 years) was slightly higher than persons in the first two phases of the study. While their average educational level (16.57 years) is similar to persons in Phase II, the range of years of formal education in the Phase III group is from 12 to 20 years. See Table 1 for a comparison of other demographic characteristics of subjects of the three phases of the study.

The subjects of the present study are much more educated than the general population of older persons in the United States today. Peterson (1974) has suggested that future aged will have a higher level of formal education than current cohorts. Generalizations to future aged from the results of this study may be more appropriate than to the current aged population. This sample bias was anticipated due to the high education level of members in several of the organizations solicited, such as the National Retired Teachers Association. In a preliminary study by the investigator (Randlett, Note 3), a sample of voluntary subjects 60 years or older also had a high mean educational level of 14 years. This sample bias toward a group with high education level may be a common characteristic of research with older community members. It is also likely that older persons who might take an interest in mental health education will be more highly educated, from the evidence in the study of participants in continuing education of all types (Hiemstra, 1976). Thus, the subjects of the present sample also represent a group of persons more likely to participate in education about aging among current and future popula-

tions of older persons.

Instruments

Five paper-and-pencil instruments were used to measure the antecedent variables of the present research. Three paper-and-pencil instruments were used to measure dependent variables, as well as another behavioral outcome measure. All paper-and-pencil instruments were photocopied in enlarged type for easy reading. Colored papers were used to separate some of the instruments; each of the instruments appears in the Appendices as it was presented to subjects of the study.

Antecedent variable measures

Demographic Data Form This brief form solicited demographic data from Phase II respondents concerning age, education, sex, and marital status. Information concerning most recent occupation and whether or not the respondent was currently employed were reported. A copy of the form appears in Appendix A.

Life Experiences Inventory This inventory solicited respondents' evaluation of changes in several areas of life functioning during the last 10 years on 48 items. The Life Experiences Inventory consists of scales measuring social/intrapersonal, physical, work and family domains, based on logical and empirical refinement procedures described below. Respondents rated the frequency of occurrence of a life event or a change in functioning in the last 10 years on a seven-point Likert scale for each of the 48 items. A copy of the inventory appears in Appendix B.

The item pool for the Life Experiences Inventory was gathered from

the content of other biographical report inventories (Owens & Charles, Note 4), from "life-stress" inventories (Amster & Krauss, 1974; Holmes & Masuda, Note 5), and from the Life Satisfaction Index (Neugarten, Havighurst, & Tobin, 1961). Final items were selected that seemed clearly written and that reflected functioning in the domains of interest.

This inventory (and the Future Life Expectancies Inventory) was refined through a preliminary study by the author with a sample of 113 aged persons (Randlett, Note 3). The method of homogeneous-keying was used to validate and refine the scales of the inventory (Edwards, 1970; Nunnally, 1967). Logical groupings of items were made for the content areas of social/intrapersonal, work, family, and physical functioning. The Spearman-Brown correlation, an equivalent of Cronbach α , was used to assess scale homogeneity by examination of intrascale correlations. Each scale was subjected to a reliability coefficient criterion level of .70. Any item was included in a scale reaching criterion on either of two ratings completed by subjects in the preliminary study. The initial rating was made of frequency of a life event or its change. The second rating included in the preliminary study measured subjects' rating of importance of each item on a seven-point Likert scale. Items were included which contributed to the homogeneity index on either rating. This process of homogeneous-keying provided empirical support for the logical item groupings of the four scales.

A discriminant validity estimate was made by comparing cross-scale correlations with intrascale correlations. The four scales had cross-

scale correlations ranging from $-.002$ to $.430$, while the homogeneity indices for the four scales were all $.70$ or greater. A moderate level of discriminant validity was indicated from these comparisons.

Future Life Expectancies Inventory Respondents estimated future life functioning during the next 10 years on the 49 items of this inventory. The three scales of this inventory reflect common life experiences of older persons in areas of social/intrapersonal, family, and physical domains. The likelihood of an event's occurrence during the next 10 years was rated on a seven-point Likert scale. Standard scores of the three scales were three of the nine variables used in homogeneous cluster grouping of subjects within the study. A copy of the inventory appears in Appendix C.

Scale development followed the same procedures as described above for the Life Experiences Inventory. The Future Life Expectancies Inventory items parallel the content and wording of the Life Experiences Inventory items. The Future Life Expectancies Inventory therefore assesses expected functioning in the next 10 years in three of the same areas of life described in the Life Experiences Inventory report of the last 10 years. The scale concerning expected functioning about work was eliminated from the Future Life Expectancies Inventory due to the lack of scale homogeneity.

A discriminant validity check was made by comparing cross-scale correlations with intrascale correlations. The three scales had cross-scale correlations of $.15$, $.19$, and $.51$, while the homogeneity indices for the scales were all $.70$ or greater. Thus, a fair degree of discrim-

inant validity appears to exist among the scales.

Value Orientation Inventory This research scale of global adjustment consists of 110 items of the California Psychological Inventory (CPI) (Gough, 1969). Although standardized primarily with college students, the California Psychological Inventory has been used with some adult samples and is one of few well-standardized objective measures of normal adult personality (Megargee, 1972). The CPI has been used in longitudinal research with the University of California Intergenerational Studies (Institute of Human Development, U. of California, Note 6). One of few unpublished research studies with the CPI among an older adult population was completed by Brooks (Note 7).

The Value Orientation Inventory, representing the first of three factors of the total CPI, was developed by Nichols and Schnell (1963). It was derived by the principal components method with communalities estimated as the squared multiple correlation of each of the 16 scales with all other scales. Three factors were retained, which were rotated to orthogonal simple structure according to the normalized varimax criterion. Gough's (1957) original correlation matrices for the standardization sample of 7,670 subjects were used. Cross-validation was performed with several subsamples, including several college samples and one psychiatric sample. Factor estimation coefficients were determined for these subsamples, as well as relating the new scales to other variables. Good reliability and concurrent validity were established through these cross-validation efforts (Nichols & Schnell, 1963). The authors describe this factored scale as reflecting "general psychological maturity," which has

been generally confirmed by other factorial studies of the CPI (Megargee, 1972).

The Value Orientation Inventory and the CPI Good Impressions scale were administered together with all items appearing in the order as normally encountered on the total CPI. The general instructions for the CPI were used. The Value Orientation Inventory and Good Impressions Scale appear in Appendix D. The standard scores of these two scales were the remaining two of the nine variables used for statistical formation of homogeneous cluster groupings.

CPI Good Impressions Scale This CPI scale of 40 items estimates a tendency to "fake good," which is used as a validity index (Megargee, 1972). This scale evaluates relative guardedness of the respondents. Twenty-one items of the Good Impressions Scale overlap with the Value Orientation Inventory.

Dependent variable measures

Expressed Interest Inventory Demographic data are reported briefly at the beginning of this inventory. This inventory assesses interest and willingness to attend each of the five workshops of the study. It also assesses the importance of several reasons that might encourage or discourage attendance at any type of educational activity.

Each of the five workshops of the study (cognitive, social/emotional, family, physical, and work) is described briefly on this instrument. Respondents rated interest in each topic on a seven-point Likert scale. Blanks were checked to indicate whether respondents might attend

each of the five workshops. Seven reasons that might encourage attendance at educational activities, such as, "I might find some useful information," were presented. Each of these was rated on a seven-point Likert scale for its importance in considerations about attendance at the workshops. Seven reasons that might discourage attendance at educational activities were then described, such as, "Not enough time to attend." Ratings of the importance of each reason in considering attendance at workshops were made on seven-point Likert scales. A copy of this inventory appears in Appendix E.

Workshop Participation Inventory This inventory assesses the importance of several reasons that might have encouraged persons to attend a workshop. This form was administered at the beginning of each workshop to all workshop participants. Seven reasons that might have encouraged participants to attend were rated on seven-point Likert scales for their importance in considerations about workshop attendance. These reasons, stated in present or past tenses, are identical to those stated on the Expressed Interest Inventory in future or conditional tenses. A copy of the Workshop Participation Inventory appears in Appendix F.

Workshop Evaluation Form This form assesses subjective evaluation of the workshop usefulness and interest among participants. It consists of seven items concerning both the activities and the information provided at workshops. Each item was rated on a seven-point Likert scale and summed for a total evaluation score for each observation. The Workshop Evaluation Form was used for all five workshops. A copy of this form appears in Appendix G.

Tests of Knowledge Five tests of knowledge were used to assess the knowledge of the five workshop content areas. Each test consists of 15 multiple-choice and true-false items covering the content of each workshop as planned by the investigator. No validity or reliability data are available for these instruments designed for this study by the investigator. The same test was used in a pretest and posttest administration for each of the five workshops. The five tests of knowledge appear in Appendix H.

Procedures

Three phases of data collection included the initial presentation to organizations of older persons, completion of questionnaires constituting antecedent variables measures, and workshop presentations.

Phase I: Initial presentations

After securing the cooperation of community organizations for the aged, presentations were made to solicit volunteers. The five workshop areas were explained in standardized 10-minute talks to 11 groups of older persons. An accompanying slide presentation elucidated the five content areas of aging covered in the workshops. Approximately one and a half minutes was devoted to the discussion of each workshop topic, with four to five visual slides per topic. A total of 467 persons received this initial presentation concerning the available workshops and other aspects of the research participation.

All persons present at the 11 initial slide-talk presentations were asked to complete the Expressed Interest Inventory; 190 persons completed

some portion of that inventory. A schedule of the workshop dates, times, and topics was distributed with the Expressed Interest Inventory. All persons present at the initial presentations were invited to attend any or all of the workshops.

Phase II: Questionnaire completion

At each of the initial presentations, requests were made for those present to take home a packet of questionnaires constituting the antecedent variable measures for completion. They were advised that the questionnaires would take about an hour to complete. Persons intending to participate in any workshop were asked specifically to complete the questionnaire packets. Others were encouraged to complete questionnaire packets and a tangible incentive was offered. A contribution of \$.50 was donated to the organizational treasury for each questionnaire packet completed by a group member.

Questionnaire packets included the Informed Consent Form, Demographic Data Form, Life Experiences Inventory, Future Life Expectancies Inventory, Value Orientation Inventory, and Good Impressions Scale. All packets of questionnaires were stamped and addressed to the investigator for U.S. mail return. A completed Informed Consent Form was required for inclusion in the data analysis. Approximately 125 packets were distributed for completion and 99 were returned to the investigator by mail. A total of 88 questionnaire packets were complete enough for inclusion in the data analysis. Two of these packets were too incomplete to be included in the cluster analysis procedure, but were included in other

analyses, since the data were from two workshop participants.

Follow-up phone calls were made to 24 persons who did not return questionnaire packets within a 2 week deadline. Letters were sent to 9 persons who indicated a willingness to complete the questionnaires when phoned, but had not done so 10 days after the phone call.

Phase III: Workshops--Mental health education for aging

Five workshops about aging constituted the intervention phase of the present study. Each workshop was two hours in length, held from 10:00 to 12:00 a.m. All workshops were held at the Des Moines, Iowa Cottage Grove Presbyterian Church in the church lounge. This facility was quite comfortable, centrally located, and easily accessible by bus or car. Table 2 gives the workshop schedule and numbers of persons in attendance at each workshop.

Volunteers were allowed to choose which, if any, workshops they would attend. A total of 23 persons attended the workshops with a total of 44 observations across all workshops. Ten workshop participants attended more than one workshop.

At the beginning of each workshop, the Workshop Participation Inventory and the appropriate Test of Knowledge were administered. The Workshop Evaluation Form and the posttest of the Test of Knowledge were completed at the conclusion of each workshop.

The investigator served as the leader for each of the five workshops. An assistant helped with data collection and serving coffee. During each workshop, participants selected a list of topics to be dis-

Table 2

Schedule of Workshops about Aging and Numbers in Attendance

	Topic	Date	Number Attending
Workshop I	Memory and Thinking	July 13, 1978	19
Workshop II	Family Life	July 15, 1978	5
Workshop III	Social and Emotional Life	July 18, 1978	4
Workshop IV	The Physical Self	July 20, 1978	6
Workshop V	Work and Leisure	July 22, 1978	10

cussed from a group of possible choices prepared by the investigator. Brief lectures were given concerning each selected topic and the leader guided group discussion concerning questions related to processes of aging. Both factual information and possible strategies for coping with any changes of later life were provided.

Data Analysis

The Life Experiences Inventory and Future Life Expectancies Inventory were further refined as a preliminary step in data analysis. Inventory scales, based upon the validation sample of the preliminary study, were further refined to produce the most reliable scales in use with the present sample of subjects.

Homogeneous groups of subjects were formed through cluster analysis procedures, using the four scales of the Life Experiences Inventory, three scales of the Future Life Expectancies Inventory, Value Orientation Inventory, and CPI Good Impressions Scale as clustering variables. Ward's hierarchical grouping technique was used with a D^2 measure of profile similarity (Ward, 1963). Replicability of the clustering solution was assessed through visual comparison and cross-profile correlations between the cluster group patterns of the present study and those of the preliminary study. Replicability was further assessed by multiple discriminant analysis prediction of cluster membership, using the nine antecedent variables of the cluster analysis as discriminant variables.

Outcome variables were analyzed to answer the major research questions of this investigation. Verbal reports of interest in workshop

topics and possible attendance at workshops were compared between workshop participants and non-participants, as well as among cluster groups. These verbal reports provide evidence concerning interest among older persons in certain areas of information about aging. Actual workshop participation was compared among cluster groups to assess which types of older persons attend mental health education about aging. Among workshop participants, gains in knowledge and subjective evaluations of workshops were compared among cluster groups and among the groups attending each workshop. These measures of workshop outcome were compared, then, among homogeneous cluster types and among groups attending different workshops. Several reasons encouraging and discouraging participation at workshops were rated for importance in considerations about attending workshops by Phase I subjects. Comparisons were made between workshop participants and non-participants, as well as among cluster groups, to assess differences in the processes of deciding to attend workshops. Reasons encouraging attendance were also compared among cluster group members attending workshops.

RESULTS

Psychometric Refinement of Life Experiences Inventory
and Future Life Expectancies Inventory

As previously described, the Life Experiences Inventory and Future Life Expectancies Inventory were constructed through a preliminary study of 113 older persons (Randlett, Note 3). These inventories were further refined with the data of the present study in order to use the most reliable scales with the present subjects. A replication of the inventory scale construction process was completed, using logical and empirical procedures. A rationale for inventory scales, combining empirical psychometric support from both investigations, was developed. A classical cross-validation of reliable scales from the two studies was conducted to further support the inventories developed in this research program.

Original scale construction

In the preliminary study, the items of each inventory were rated twice. The first rating consisted of the change or occurrence of life experiences on the Life Experiences Inventory and the rating of likelihood of a future life event on the Future Life Expectancies Inventory. Each item of both inventories was also rated for subjective importance of the item to the respondent.

Logical scales were first constructed concerning social/intrapersonal, physical, work, and family domains of life for each inventory. The items of each inventory were grouped into these four areas by their logical content relationships. Reliability indices were calculated for the eight groups of logically-grouped items for each set of item ratings

by preliminary study subjects. Seven scales were developed through this logical and empirical process of scale refinement, eliminating the Future Life Expectancies Inventory work scale due to its low reliability.

Items were included in the seven scales which resulted in final scale groupings with a Spearman-Brown generalized prophecy formula coefficient of .70 or higher for either of the two item ratings. Single items were deleted from the original logical scales to reach the criterion of homogeneity for each scale. The Spearman-Brown reliability index, based on item intercorrelations, is the equivalent of Cronbach α (Nunnally, 1967). The Spearman-Brown generalized prophecy formula, a basic reliability index based on item homogeneity, was computed as follows:

$$r_{kk} = \frac{k r_{ij}}{1 + (k-1) r_{ij}}$$

where k = the number of items of each of the scales constructed (Nunnally, 1967).

Practical considerations of the inventory complexity suggested the need for revisions of the inventories after the preliminary study. Comments of the subjects of the preliminary study and the amount of missing data indicated a need to reduce the length and complexity of directions on the two inventories. While all 97 items of the two preliminary study inventories were included, the second set of item ratings of subjective importance were eliminated in the present study. The elimination of importance ratings greatly simplified the respondents' task in completing the two inventories.

Replication of scale construction

Since the original scale construction used empirical support from both of the original sets of item ratings, the scale construction process was replicated in the present study. One rating of the change or frequency of a life experience was completed by subjects of the present study for the Life Experiences Inventory items. One item rating of the likelihood of a future life event's occurrence was completed for the Future Life Expectancies Inventory item in the present study. Four logically-grouped sets of items (social/intrapersonal, physical, work, and family) of the Life Experiences Inventory were tested empirically for scale reliability. Three logically-grouped sets of items (social/intrapersonal, physical, and family) of the Future Life Expectancies Inventory were tested for scale reliability. The work-related items of the latter inventory were not subjected to a replication of scale construction, due to the poor scale reliability in the preliminary study.

Data for 86 Phase II subjects of the present study were available for both inventories. The Spearman-Brown reliability index was computed for the logically-grouped sets of items for each inventory. Single items were deleted from each scale to attain a reliability index criterion level of .70.

Table 3 reports the reliability indices for the logically-grouped and final scales of the Life Experiences Inventory and Future Life Expectancies Inventory used in the present study. A total of 4 of the 48 Life Experiences Inventory items were eliminated to reach the criteria for reliability for all four scales. Two of these scales, concerning

Table 3

Reliability Indices for the Logically-Grouped and
Final Scales of the Life Experiences Inventory
and Future Life Expectancies Inventory

Scale Name	Logically-Grouped Scales		Final Scales	
	Number of Items	Reliability Indices	Number of Items	Reliability Indices
Life Experiences Inventory				
Social/ Intrapersonal	12	.690	11	.727
Physical	8	.702	8	.702
Work	7	.802	7	.802
Family	14	.555	9	.739
Future Life Expectancies Inventory				
Social/ Intrapersonal	13	.447	11	.732
Physical	11	.668	9	.874
Family	12	.624	10	.711

physical and work functioning, showed sufficient reliability among the logically-grouped items to reach the criterion levels. A total of 6 items were eliminated from the 49 items of the Future Life Expectancies Inventory to attain the criterion level of reliability for the three scales. Table 4 reports the inventory item numbers for each scale of the Life Experiences Inventory and Future Life Expectancies Inventory used in the present study.

A discriminant validity check was made to assess whether the final, homogeneous scales of each inventory measured exclusive content categories. Cross-scale zero-order correlations were computed for the scales of each inventory. Low cross-scale correlations indicate a higher degree of separateness of scale content or discriminant validity.

Cross-scale zero-order correlations for the Life Experiences Inventory scales, reported in Table 5, ranged from $-.129$ to $.420$. Cross-scale zero-order correlations for the Future Life Expectancies Inventory ranged from $.169$ to $.559$ and are reported in Table 6. Reliability indices, based on scale item intercorrelations, for each of these scales is $.70$ or higher. A moderate degree of discriminant validity is suggested by this approximate test of cross-scale correlations. The present study and preliminary study data indicate a much higher cross-scale correlation between physical and social/intrapersonal scales of both inventories. It is possible that the actual occurrence or anticipation of physical losses is experienced concurrently with certain losses in the social and intrapersonal domains. There seems to be a logical relationship between these areas of physical and social/intrapersonal functioning

Table 4

Item Numbers of Life Experiences Inventory and Future
Life Expectancies Inventory Final Scales

Scale Name	<u>k</u> of Scale items ^a	Inventory Item Numbers Included
Life Experiences Inventory		
Social/ Intrapersonal	11	30, 31, 33, 36, 37, 38, 39, 40, 43, 44, 46
Physical	8	3, 4, 12, 13, 26, 27, 42, 45
Work	7	2, 7, 8, 9, 11, 15, 34
Family	9	10, 16, 17, 18, 19, 20, 21, 22, 23
Future Life Expectancies Inventory		
Social/ Intrapersonal	11	23, 24, 26, 28, 34, 35, 40, 43, 44, 46, 47
Physical	9	1, 4, 5, 9, 21, 25, 27, 31, 41
Family	10	6, 14, 15, 16, 18, 19, 20, 32, 48, 49

^ak = total number of items in each final scale.

Table 5

Cross-Scale Zero-Order Correlations of Life Experiences
Inventory Final Scales

	Social/ Intrapersonal	Physical	Work	Family
Social/ Intrapersonal	1.000	.420	.081	.065
Physical		1.000	.126	-.129
Work			1.000	-.118
Family				1.000

Table 6

Cross-Scale Zero-Order Correlations of Future Life
Expectancies Inventory Final Scales

	Social/Intrapersonal	Physical	Family
Social/Intrapersonal	1.000	.559	.189
Physical		1.000	.169
Family			1.000

which may be particularly salient among older persons.

Since the original scale construction of the preliminary study was based on two sets of item ratings, only one of which was available in the present study data, a strict use of empirical cross-validation was not possible. The replication of the scale construction with the present data sample provided further refinement of the scales' fit with the respondents of this study. Since inventory scale reliability was important in the scales' use as antecedent variables of the cluster analysis procedure, a logical decision was made to use scales most reliable with the present subjects. The combined empirical and logical psychometric approach provides a more meaningful grouping of the content of the two inventories. The research nature of these scales and obvious differences between the subjects of the preliminary study (mean age of 65) and the present study (mean age of 70) also indicate the need for a more flexible strategy in the use of inventory scales.

Classical cross-validation of inventory scales

While preliminary study scale construction included items reliable on either of two sets of item ratings, a comparison was made of reliable items based on the first set of item ratings available in both sets of data. A classical cross-validation of scales was computed by comparing scale reliability for the present data, using only reliable items on the ratings of change in life experience or likelihood of future change from the preliminary study data. Items which demonstrated reliability on the ratings of subjective importance in the

preliminary study were ignored in this procedure.

The Spearman-Brown reliability indices for groups of items reliable on the first set of item ratings of the preliminary study are compared with present study data on the same item ratings in Table 7. Six of the seven scales of the two inventories demonstrated a reasonable consistency in reliability of items. The social/intrapersonal scale of the Future Life Expectancies Inventory showed the least consistency of reliable items across the two samples in this classical cross-validation. It is important to note that the final scales used in each study included more items than used in this classical cross-validation. There appears to be some support from classical cross-validation for the reliability of a core of items used in each of the final inventory scales of the present study.

Homogeneous Groupings of Subjects

Statistical grouping of persons in Phase II of the study into clusters based upon antecedent variables was the second stage of data analysis. Homogeneous groups of subjects were formed through the cluster analysis of the nine antecedent variables measures (Everitt, 1974). The nine variables used to construct homogeneous cluster groups were the four Life Experience Inventory scales, three Future Life Expectancies Inventory scales, the Value Orientation Inventory score, and the CPI Good Impressions score. The subgroups or clusters were formed based on similarity on these seven measures related to actual experience with aging processes and anticipation of future aging, as well as the two per-

Table 7

Reliability Indices for Life Experiences Inventory and
 Future Life Expectancies Inventory Reliable
 Items--Comparing Preliminary Study and Present Study

Scale Name	Number of Items	Preliminary Study Reliability Indices	Present Study Reliability Indices
Life Experiences Inventory			
Social/Intrapersonal	9	.703	.772
Physical	4	.718	.646
Work	5	.724	.729
Family	10	.702	.665
Future Life Expectancies Inventory			
Social/Intrapersonal	13	.773	.447
Physical	11	.776	.668
Family	9	.571	.698

Note. Items included were reliable on the first rating of change or occurrence of life events or likelihood of change of future life events from preliminary study data.

sonality measures. The latter two measure personality attributes of global adjustment and tendency to portray oneself in a good light.

Ward's hierarchical grouping analysis was used in the present study to construct these homogeneous groupings of persons completing the antecedent variable measures (Ward, 1963). Support for the use of Ward's cluster analysis approach was provided by Blashfield's (1976) comparison of four agglomerative, hierarchical clustering procedures. Blashfield found that Ward's cluster analysis approach recovered original, fabricated data groupings most adequately among the four major approaches compared.

D^2 was used as the similarity index within the clustering procedure to preserve all profile characteristics of level, shape and scatter (Cronbach & Gleser, 1953). This similarity index seemed appropriate to describe levels of antecedent variables and ipsative differences among domains measured. The limited range of responses on these scales requires the inclusion of level characteristics for maximum interpretability of clustered variables.

Ward's hierarchical grouping analysis was computed for the nine variable measures of 86 persons, using Ward's computer program (Ward, 1963). The nine measures of the antecedent variables were transformed into standard scores with a mean of 50 and standard deviation of 10, in order to provide a standard scaling metric among the scales.

A seven-group solution was arrived at by evaluating the error scores for each level of the cluster analysis from 30 groups to the last 2-group solution of this stepwise grouping of the 86 persons. The error

variance accumulated in the cluster grouping process first increased most dramatically after the grouping of persons into seven clusters, as indicated by a large increase in slope. The error score increase between the seven- and six-group solutions was 934.78, the highest error variance increase first encountered in the comparisons of grouping solutions in the descending hierarchy from thirty to two groups. This approach to arriving at the best grouping solution is analogous to the "scree" test used in factor analysis to decide where to stop extracting factors (Cattell, 1952). In the factor analytic application, factor extraction ceases where the curve straightens out in the plot of the eigenvalues against the number of factors.

The seven-group solution chosen also yielded fairly equal cluster group sizes, which was desirable for the parametric analyses of dependent measures where clustered groups were the groups of comparison. One "cluster" of the seven-group solution consists of a single outlying person; this cluster was dropped from the dependent variable analyses.

Replicability

The replicability of a chosen cluster grouping solution can be assessed through a variety of methods used to establish that statistical groupings are based upon more than chance variation. Three methods were used to assess the replicability of the cluster solution of the present study. Two of these methods relied upon a generalization of the cluster groupings through comparisons with those obtained in the preliminary study. A visual comparison was made of the average group profiles of

the two studies, as well as zero-order correlations of the cross-study average group profiles. The remaining method utilized only the grouping solution of the present study. A direct multiple discriminant analysis was computed to assess the prediction of correct cluster groupings through the least squares solution, using the nine cluster variables as discriminant variables.

It was possible to use some unique methods to assess the replicability of the cluster-analyzed homogeneous groupings in the present study through comparisons with the grouping solution on the same variates in the preliminary study. Typical methods for assessing replicability within one data set involve the regrouping of the data based upon odd and even items of each original grouping variable. Here, support for the cluster-analyzed grouping solution is based upon the similarity of the new grouping solutions upon the same data set. The stability of the groupings is therefore based upon the rationale that chance error has been equally partitioned among the halves of the data and would not account for the comparable solutions provided. While no current methods conclusively demonstrate the replicability of homogeneous groupings, the comparison of grouping solutions based upon different data sets does provide a reasonable statistical estimation of stability. The stability of the present grouping solution is supported through the comparison across sampling conditions, a more stringent test of the basis of grouping upon true variance. This approach does, however, constitute a more complex and, perhaps, less clear-cut statement of grouping replicability.

Several important characteristics of the two subject samples are

relevant to the comparisons of the two grouping solutions. Important sample differences, which have not been quantified, exist due to the sampling for the preliminary study from a pre-retirement seminar at Iowa State University in Ames, Iowa and Des Moines, Iowa community groups, while the present study sampled only from the latter urban area. The average age of the participants in the preliminary study was 65 years, while the present study group had a mean age of 70 years. In the preliminary study, 41 of the 113 subjects were males, while 17 of the 88 subjects in the present study were males. There were 65 married persons in the preliminary study of 113 subjects, while only 33 of the 88 subjects of the present study were currently married. These differences in subject sample characteristics have considerable relevance to the life history variables used in cluster analysis, in particular. These sample differences dilute the overall homogeneity of the two groups, reducing the likelihood of similar grouping solutions. In spite of these overall sample differences, there is considerable support for replicability.

Visual comparisons of groupings Visual comparisons were first made among the configurations of the average cluster group profiles for the two studies. The average cluster group profiles for the present study, denoted with Roman numerals I-VII, appear in Appendix J. Average group profiles for the preliminary study appear in Appendix K and have been labeled with Arabic numbers 1-11. All further references to cluster groupings will use these numbering conventions to avoid confusion.

Visual comparisons of the profiles of the two studies were made, taking into account characteristics of level, shape, and scatter of the

mean cluster profiles. The means of the standard scores of the nine variables are reported for each cluster group of the two studies in Table 8.

No one-to-one comparisons of clustered groups were possible between the grouping solutions of the two studies due to the different number of groups in each solution. There was some congruence found for five profiles of the clusters of the present study through visual inspection of comparable preliminary study cluster profiles. This estimation of replicability through visual inspection among the two sets of cluster group profiles of the two studies is reported in Table 9.

While such a visual inspection of the nine variable profiles is not a vigorous test of replicability, the comparisons were largely supported by the cross-profile correlations between the two studies.

Cross-profile correlations for clusters Pearson product-moment correlations were computed for the average cluster group profiles, comparing the linear relationships between the two sets of profiles of the two studies. These correlations show the relationship of the shape and scatter of each pair of profile means for each cluster. Here, the usual procedure of correlating subject scores for two variables is reversed, that is, variables scores are correlated for paired cluster groups of persons, resulting in the correlations of profiles. The N for these cluster profile correlations is therefore equal to the number of variables used in the cluster groupings, in this case, nine.

These cross-study correlations of cluster profiles on all variables account for the pattern similarity, but reduce the effect of level charac-

Table 8

Mean Standard Scores of Nine Grouping Variables for each Cluster Group of
Present and Preliminary Studies

Cluster Group	<u>n</u>	Value Orientation	Good Impressions	Life Experiences Inventory				Future Life Expectancies Inventory		
				Social	Physical	Work	Family	Social	Physical	Family
				Present Study						
I	12	50.2	52.0	59.7	58.6	51.7	57.3	45.7	47.1	43.9
II	18	60.6	61.9	45.0	45.5	46.1	45.2	46.7	47.5	46.7
III	24	46.8	43.9	53.0	51.0	47.3	50.2	53.4	52.9	62.6
IV	18	49.6	48.5	48.9	48.6	59.8	46.6	52.0	51.1	45.4
V	9	39.2	40.7	52.1	58.6	48.7	47.3	59.3	60.9	42.4
VI	4	52.4	56.4	25.8	30.7	41.2	54.9	25.6	29.4	48.9
VII	1	29.3	41.4	50.2	28.9	35.3	109.8	57.5	27.2	35.5

Preliminary Study										
1	18	45.3	39.9	55.6	47.3	47.4	53.5	52.7	45.5	50.1
2	23	52.9	55.7	43.2	46.1	57.9	53.5	47.2	49.6	54.2
3	19	53.0	52.7	49.7	46.8	39.4	54.9	49.7	46.7	57.2
4	16	51.3	50.5	54.1	56.4	51.2	54.7	55.7	61.4	54.9
5	5	49.1	48.5	30.9	40.7	59.6	41.4	33.2	33.8	38.7
6	1	106.0	57.6	37.9	45.1	56.1	35.3	36.1	38.2	44.4
7	9	57.5	60.0	50.5	46.0	39.1	40.0	42.8	45.9	37.0
8	11	46.8	42.4	50.7	49.4	57.9	36.1	55.2	54.7	38.9
9	5	39.9	40.4	50.9	72.2	48.6	53.1	43.6	45.5	44.1
10	4	46.2	50.8	74.2	71.4	52.5	45.4	70.6	66.8	57.8
11	2	11.8	65.1	44.6	47.2	51.8	46.9	43.4	51.8	43.1

Table 9

Estimation of Replicability of Cluster Groupings of Preliminary
and Present Studies from Visual Inspection

Present Study Clusters	Preliminary Study Clusters
I	None
II	7
III	1,4
IV	8
V	10
VI	5,2,3
VII	None

Note. Preliminary study clusters 6, 9, and 11 not included.

teristics in the estimated replicability. Since the variable means for each cluster group are standard scores, level characteristics are not completely eliminated from the correlated relationships, as they usually are. In addressing the substantive questions of the present study, comparisons based upon shape and scatter of mean profiles is sufficient to answer many questions. The relative experience of certain life events and anticipated experiences of aging is less important than the high and low points of the profiles and their interrelationships. Level characteristics of the two personality variables (Value Orientation Inventory, Good Impressions Scale) are more important in comparisons with other groups of persons, although no appropriate norms are available for the comparisons on the basis of level alone.

Table 10 reports the zero-order correlations for the average of cluster group profiles of means, comparing the groups of the present study with those of the preliminary study. Significance levels for the t test of each obtained correlation are also reported, but must be considered more carefully due to the number and lack of independence of the statistical tests of significance computed. The usual procedure of correlating subject scores for two variables was reversed and variables scores were correlated for paired cluster groups. The correlated variables lack independence from one another, since each variable is part of a profile of measures of a cluster group. The significance levels reported in Tables 10, 11, and 12 must therefore be regarded as a rough comparison with actual significance levels.

Among these 77 correlations of cross-study group profiles, replicability of profiles would be most substantiated by a single signifi-

Table 10

Zero-Order Correlation Coefficients for Average Cluster Profiles--
Comparing Preliminary Study and Present Study Cluster Group Profiles

Preliminary Study Cluster Groups	Present Study Cluster Groups						
	I	II	III	IV	V	VI	VII
1	.243	-.749	.532	-.138	.310	-.418	.553
<u>p</u>	.264	.010	.070	.362	.208	.131	.061
2	-.356	.397	-.280	.265	-.657	.793	.030
<u>p</u>	.173	.145	.232	.246	.027	.005	.470
3	-.162	.291	.350	-.893	-.500	.506	.364
<u>p</u>	.338	.224	.178	.001	.085	.082	.168
4	-.178	-.548	.512	-.181	.780	-.593	-.050
<u>p</u>	.324	.063	.079	.320	.007	.046	.449
5	.017	.415	-.597	.536	-.554	.519	-.161
<u>p</u>	.482	.133	.045	.068	.061	.047	.339
6	-.111	.756	-.467	.113	-.626	.477	-.393
<u>p</u>	.388	.009	.102	.386	.036	.097	.148
7	.212	.838	-.640	-.155	-.336	.208	-.294
<u>p</u>	.292	.002	.032	.345	.188	.296	.221
8	-.110	-.223	-.163	.807	.612	-.738	-.495
<u>p</u>	.389	.282	.338	.004	.040	.012	.088
9	.655	-.544	.059	-.087	.488	-.356	.061
<u>p</u>	.028	.065	.440	.412	.091	.174	.438
10	.098	-.530	.419	.003	.792	-.934	-.294
<u>p</u>	.401	.071	.131	.497	.005	.001	.221
11	.109	-.210	-.069	.110	.265	-.086	.117
<u>p</u>	.390	.294	.430	.389	.245	.413	.382

Note. N = 9; p reported for one-tailed t test for obtained correlation.
Correlations presented are not independent and p levels reported are only
a rough comparison with significance levels.

cant positive correlation for one of the cross-study pairings. Since the 7 cluster profiles of the present study are being compared to 11 profiles of the preliminary study, there could be no perfect match of pairs using all the profiles. The reader should note that the Roman or Arabic number assigned to each cluster group in no way relates to the pattern of the profile, therefore the expected high correlation might occur between any of the profile pairings. The replicability would be further supported by the absence of significant positive correlations among the other pairings with a single profile.

Investigation of Table 10 reveals that a few of the cluster group profiles of the present study (in particular, profiles IV and VI) show a high degree of replicability across the two data samples. Two other profiles of the present study, profiles II and V, have quite highly significant similarity with two grouping profiles of the preliminary study. The contributions of level characteristics, diminished in the zero-order cross-study profile correlations, account in part for the significant similarity of profiles II and V with more than one of the preliminary study groupings. The remaining cluster profiles of the present study (clusters I, III, and VII) were all similar to one or two profiles of the preliminary study, but these can not be considered statistically significant ($p < .01$) due to the large number of tests run.

Cross-profile correlations were also computed within each set of cluster groups for the two studies. That is, the average group profiles of the seven groups of the present study were correlated, as well as eleven groups of the preliminary study. The correlation matrix of the

cross-profile correlations within cluster groupings of the preliminary study is reported in Table 11. Table 12 reports the correlation matrix of cross-profile correlations within the cluster groupings of the present study. These correlation matrices provide information about the similarity of the cluster profile patterns within each study's grouping solution. The most desirable outcome would therefore be low correlations among profile patterns arrived at for each grouping solution, indicating separation of the groups formed through Ward's hierarchical grouping. Since the Ward's grouping procedure was based upon D^2 as a measure of similarity among individual subject's profiles, the correlation of average group profiles will not take into account the level characteristics incorporated in the original formation of cluster groups. A comparison of the cross-profile correlations within each study, in Tables 11 and 12, can be made with Table 10 to assess the separation of clustered groups within each study and the replicability of profile patterns in the two sampling conditions. A perusal of the data in Table 12 indicates correlations within the set of cross-profile correlations within the present study. Clusters 2 and 5 of the preliminary study show a high degree of profile similarity from the zero-order correlation, however (see Table 11). The comparison of cross-study with within-study profile correlations provides a check of the discriminant value of each of the profile patterns arrived at in the present study, which appears to be quite good.

Multiple discriminant analysis A direct multiple discriminant analysis was computed to assess the classification of persons into homogeneous cluster groupings based upon the linear combination of the vari-

Table 11

Zero-Order Correlation Coefficients for Average Group Profiles--
Among Preliminary Study Cluster Groups

	1	2	3	4	5	6	7	8	9	10	11
1	1.00	-.510	.124	.221	-.539	-.503	-.559	-.021	.232	.373	-.177
<u>p</u>		.808	.375	.284	.067	.084	.059	.478	.274	.161	.324
2		1.000	.016	-.504	.808	.366	-.089	-.280	-.438	-.855	.115
<u>p</u>			.483	.083	.004	.167	.410	.233	.119	.002	.384
3			1.000	-.073	-.325	.075	.148	-.858	-.289	-.285	-.247
<u>p</u>				.426	.176	.424	.352	.002	.225	.229	.261
4				1.000	-.701	-.566	-.371	.215	.288	.582	.142
<u>p</u>					.018	.056	.163	.290	.226	.050	.357
5					1.000	.572	.106	.030	-.124	-.710	-.021
<u>p</u>						.053	.393	.470	.376	.016	.479
6						1.000	.579	-.029	-.358	-.549	-.690
<u>p</u>							.051	.470	.172	.063	.020
7							1.000	-.035	-.273	-.129	-.153
<u>p</u>								.465	.239	.371	.348
8								1.000	.040	.523	.027
<u>p</u>									.459	.074	.472
9									1.000	.408	.159
<u>p</u>										.138	.341
10										1.000	.192
<u>p</u>											.310
11											1.000

Note. N = 9; p reported for one-tailed t test for obtained correlation.

Correlations presented are not independent and p levels reported are only a rough comparison with significance levels.

Table 12

Zero-Order Correlation Coefficients for Average Cluster
Profiles--Among Present Study Cluster Groups

	I	II	III	IV	V	VI	VII
I	1.000	-.170	-.401	-.094	.074	-.072	.330
<u>p</u>		.331	.142	.405	.425	.427	.193
II		1.000	-.589	-.113	-.648	.592	-.282
<u>p</u>			.048	.386	.030	.047	.231
III			1.000	-.396	.217	-.300	-.207
<u>p</u>				.146	.288	.217	.472
IV				1.000	.231	-.278	-.274
<u>p</u>					.275	.234	.238
V					1.000	-.880	-.051
<u>p</u>						.001	.449
VI						1.000	.260
<u>p</u>							.250
VII							1.000

Note. N = 9; p reported for one-tailed t test for obtained correlation.

Correlations presented are not independent and p levels reported are only a rough comparison with significance levels.

ables used in the cluster analysis (Tatsuoka, 1971). This procedure was used to evaluate to what degree the cluster analysis grouping solution statistically separated the groups. This alternate procedure extends the least squares solution to the classification of subjects into several groups and provides an alternate test of the separation of groups formed through the agglomerative, hierarchical cluster analysis procedure.

A direct multiple discriminant analysis procedure was computed allowing an equal weighting of the nine variables used in the original cluster grouping solutions. Prediction of six cluster groupings of the present study was sought; cluster VII was eliminated from this procedure since it consisted of only one individual. Prior probabilities of group size were used in the prediction of cluster group classification, since the cluster group sizes were quite disparate. This weighting of the size of the groups to be predicted through the multiple discriminant analysis does somewhat minimize the probability of misclassification. This procedure makes the test of whether discriminant analysis generates correct classifications of cluster groups somewhat less conservative. Prior group probabilities were utilized since they were known and the group sizes were quite unequal.

Table 13 reports the univariate F tests for each of the nine variables used in the discriminant analysis procedure. The tests of significance for each variable's contribution to the separation of predicted groups is quite significant. The nine predictors of cluster group membership, considered as univariate predictors, produce significantly different predicted group means.

Table 13

Contribution to Between Group Differences by each Clustered Variable--
Univariate F Test of Predicted Cluster Group Membership

Clustered Variable	F
Value Orientation Inventory	11.20
Good Impressions Scale	17.80
Life Experience--Social/Intrapersonal	15.34
Life Experience--Physical	11.86
Life Experience--Work	7.04
Life Experience--Family	6.20
Future Life--Social/Intrapersonal	13.69
Future Life--Physical	10.57
Future Life--Family	28.97
<u>F</u> (5,79) = 2.34, <u>p</u> = .05; <u>F</u> (5,79) = 3.29, <u>p</u> = .01	

Five discriminant functions, the maximum possible for six groups, were adjudged important in explaining the total between group separation. Table 14 reports the eigenvalues, Wilks' lambda, and χ^2 relevant to these decisions. The Wilks' lambda measures the between group differences as calculated separately by five discriminant analyses. Wilks' lambda varies between 0.00 for perfect between group separation to 1.00 for total overlap of groups (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). The eigenvalues are special measures of the relative importance of the function in explaining the total variance existing in the discriminating variables, grouped in linear combinations. Since the relative percentage of the eigenvalue of the fifth discriminant function was 4.32%, all functions were included. The statistical significance of discriminating information not already accounted for by earlier functions was assessed by the use of Wilks' lambda. The larger lambda is, the less information remaining that has not been accounted for by earlier functions. The χ^2 tests of significance of lambda for the five functions were all significant at $p = .01$ or less, indicating that all functions contributed a significant additional amount of information.

The classification of subjects into previously formed cluster groups using the variables of the original cluster analysis as discriminant variables was quite good. As mentioned, prior probabilities of group size were utilized, due to the differences in cluster group sizes. The correct classification of 83 of the 85 cases (97.65%) was accomplished through the multivariate linear combinations of the discriminant analysis. A high degree of support for the classification of cluster groups from

Table 14

Total Between Group Separation of Predicted Cluster Groups Explained
by Discriminant Functions

Discriminant Function	Eigenvalue	Relative % Variance	Wilks' lambda	χ^2	df	<u>p</u>
1	3.01	40.20	.0167	312.97	45	.000
2	2.44	32.53	.0671	206.71	32	.000
3	1.28	17.12	.2305	112.27	21	.000
4	0.44	5.83	.5260	49.15	12	.000
5	0.32	4.32	.7556	21.44	5	.010

predictor variables was demonstrated. Table 15 reports the classification of cases into previously defined cluster groups through the multiple discriminant analysis procedure.

Narrative descriptions of cluster profiles

Each of the cluster groups is described below, providing relevant demographic information about the cluster, as well as a description of the important aspects of the profile. Since all nine variables used to form cluster groups were converted to standard scores prior to clustering, profile high and low points are reported in standard deviations from the mean of the total clustered sample of persons. Refer to Table 8 for reported means of clustered profiles and to Appendix J for figures representing these cluster patterns.

Cluster I Cluster I consists of 11 females and 1 male, none of whom are currently married. Nine of these persons are widowed, two divorced, and one was never married. Their average education of 15.5 years is similar to that of the total subject group. Their mean age is 71.8 years with two persons not reporting age.

This group profile of the variables used to form clusters is relatively flat. General psychological maturity and the tendency to present oneself in a good light are close to the mean for the total sample. While this group reports somewhat more than average losses in social and physical experiences during the past 10 years, they have slightly better than average expectations for the future in all domains measured. The anticipation of future family interactions, measured by the Future Life Expectancies Inventory family scale, must be viewed with some caution, since

Table 15

Prediction of Cluster Groupings through Multiple
Discriminant Analysis

Actual Cluster Group	Number of Cases	Predicted Group Membership						% correctly predicted
		I	II	III	IV	V	VI	
I	12	11	0	0	1	0	0	91.7
II	18	0	18	0	0	0	0	100
III	24	0	0	24	0	0	0	100
IV	18	0	0	0	18	0	0	100
V	9	0	0	0	1	3	0	88.9
VI	4	0	0	0	0	0	4	100
All Groups	85							97.65

several items regarding spouse could not be answered by these subjects, lowering the score artifactually.

Cluster II This group consists of 3 males and 15 females who are similar in age and educational level for the total sample (70.78 years; 16.11 years, respectively). Seven of these persons were never married, seven are currently married, three are divorced, and one widowed.

The indices of psychological maturity and tendency to portray one-self in a good light are the high points of this profile, both one standard deviation above the mean. In comparison with the rest of the subject sample, they report somewhat fewer losses in all areas of life functioning in the last 10 years. They also view the future in a slightly more optimistic light in the three areas of future life measured.

Cluster III This group of 13 females and 11 males are all currently married, with the exception of one widow and one person not reporting marital status. Their mean age of 71.17 years and average years of education (16.5) are similar to the total sample. While this group has a somewhat flat profile, they show slightly lower psychological maturity and tendency to make a good impression than the group at large. They report losses during the last 10 years and expected functioning in social and physical areas close to the mean for the total sample. They view the future of their family life somewhat more pessimistically, one standard deviation higher than the average for the sample.

Cluster IV This group consists of 17 females and 1 male with a mean age and educational level close to the average of the entire sample (69.12 years; 16.72 years respectively). Ten of these persons have never

been married, three are currently married, and five are widowed. They report somewhat higher than average losses, approximately one standard deviation above the mean, in the areas of past work experiences. Their report of family losses in the last 10 years and their expectations of future family life are both slightly more pessimistic than the remainder of the total sample. Both family report measures may be artifactually lowered by questions that were not applicable to these unmarried persons.

Cluster V This group is made up of nine females, whose average age of 73.56 years is somewhat higher than the remainder of the total sample. None are currently married; four were never married; four are widowed and one divorced. Their average years of education (15.78) is close to the mean for the total sample.

Profile low points include the personality measures of psychological maturity and tendency to portray oneself in a good light, both more than one standard deviation below the sample mean. They report slightly higher than average physical losses in the last 10 years. They have a higher expectation of social and physical losses during the next 10 years, both about one standard deviation above the sample mean. The report of losses in the area of family and work areas are slightly less than the mean, while they report somewhat less pessimistic views of future family life. The family related scales may be artifactually lowered by the fewer number of applicable items for these currently unmarried persons.

Cluster VI This cluster group consists of three females and one male with an average age of 67.75 years; they are a slightly younger group than the total sample. The most marked characteristics of this group

profile are the very low report of losses in physical and social areas, both more than two standard deviations below the sample average. They expect a similarly low level of losses in social and physical areas during the next 10 years. They also report work losses during the last 10 years as slightly less than the average for the total sample.

Cluster VII One 70-year old, divorced female differed sufficiently from all other subjects' profile of antecedent variables to form a separate "cluster group." Her psychological maturity score is two standard deviations below the mean for the entire sample and her tendency to portray herself in a good light is also somewhat lower than the rest of the sample. Her experience of physical losses is much lower than average, more than two standard deviations below the mean. Her experience of work losses was also somewhat less than others during the last 10 years, more than one standard deviation below the mean for the sample on this index. She has proportionately positive expectations for physical functioning in the future, more than two standard deviations below the mean. The most outstanding feature of this profile, however is an exceedingly high incidence of reported family losses during the last 10 years, over five standard deviations above the mean. Her expectations for future family losses is, however, somewhat more positive than the rest of the sample, over one standard deviation below the mean. This suggests that her very high, idiosyncratic family losses are not expected to continue.

Outcome Variable Analyses

Outcome variables of the present study were numerous, including the Expressed Interest Inventory, actual workshop attendance frequencies,

Workshop Participation Inventory, workshop evaluations, and tests of knowledge. Since the number of tests generated from this quantity of data was quite large, a hierarchy of statistical analyses was developed, based upon the priority of importance to the substantive questions of the study. The data analyses are reported in order of their importance in answering the substantive questions of the study. The first group constitutes the major statistical questions of the study, while the second group are considered more exploratory in nature (Cohen, 1968). This hierarchy is utilized to give greater weight to more substantively important statistical analyses, since the collective Type I error was quite high for this large group of analyses. Since the collective error due to chance occurrence of statistical significance among so many statistical tests is high, only the first group of analyses are considered as accurate statistical tests. The second group will be considered in a more tentative and exploratory light, due to the increased probability of a chance occurrence of statistical significance.

The following statistical analyses constitute the first group of analyses to be given priority in considerations of substantive questions.

Expressed Interest Inventory--Interest ratings

The verbal report of interest in the five workshop topics was compared between the workshop participants and all Phase I participants not involved in any workshop. Five t tests for unrelated groups with separate variance estimates were computed for each of the five items. Separate variance estimates were used, since the consequences of unequal variances might be greater with unequal sample sizes (Hays, 1963).

Degrees of freedom were calculated from the formula (Nie et al., 1975):

$$df = \frac{[(s_1^2/n_1) + (s_2^2/n_2)]^2}{[(s_1^2/n_1)^2/(n_1-1)] + [(s_2^2/n_2)^2/(n_2-1)]}$$

The workshop participants reported significantly greater interest in the first workshop, Memory and Thinking, than those subjects not participating in any workshop, $t(59) = 5.59$, $p = .00$. Workshop participants also reported significantly more interest in Workshop IV, concerning The Physical Self, than persons not participating in any workshop, $t(33) = 2.31$, $p = .03$. Among persons actually attending any workshop, the verbal report of interest was greater for Workshops I and IV than among those who did not participate in workshops. The t tests computed for interest in Workshops II, III, and V showed no significant differences between participants and non-participants. Results of these statistical comparisons of participants and non-participants on reported interest in the five workshops are reported in Table 16.

The expressed interest in workshop topics was also compared among the six clusters of persons described in the study. Five separate completely randomized analyses of variance were computed to compare the six clusters in their report of interest in the five workshop topics. A least squares analysis was used in the computation of each of these analyses. There were no significant differences among the clusters of subjects in their measured interest in each of the five workshops. The results of these statistical analyses are reported in Tables 17, 18, 19, 20 and 21.

Table 16

t tests of Differences between Participants and Non-Participants
in Expressed Interest in Workshop Topics

Variable	<u>N</u>	Mean	<u>t</u> test	df	<u>p</u>
Workshop I					
Participants	23	6.35	5.59	59	.000
Non-participants	166	4.72			
Workshop II					
Participants	23	4.00	0.87	29	.390
Non-participants	160	3.54			
Workshop III					
Participants	23	5.00	1.68	32	.103
Non-participants	161	4.27			
Workshop IV					
Participants	23	5.39	2.31	33	.027
Non-participants	157	4.36			
Workshop V					
Participants	23	5.17	1.89	32	.067
Non-participants	161	4.31			

Table 17

Completely Randomized Analysis of Variance among Cluster
Groups in Reported Interest in Workshop I

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	34.11	5	6.82	2.00	.086
Error	268.90	79	3.40		
Total	303.01	84			

Table 18

Completely Randomized Analysis of Variance among Cluster
Groups in Reported Interest in Workshop II

Source	SS	df	MS	F	<u>p</u>
Clusters	40.92	5	8.18	1.59	.170
Error	395.34	77	5.13		
Total	436.27	82			

Table 19

Completely Randomized Analysis of Variance among Cluster
Groups in Reported Interest in Workshop III

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	9.34	5	1.87	0.42	.832
Error	343.90	78	4.41		
Total	353.24	83			

Table 20

Completely Randomized Analysis of Variance among Cluster
Groups in Reported Interest in Workshop IV

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	27.75	5	5.55	1.09	.372
Error	381.10	75	5.08		
Total	408.84	80			

Table 21

Completely Randomized Analysis of Variance among Cluster
Groups in Reported Interest in Workshop V

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	29.90	5	5.98	1.26	.289
Error	370.05	78	4.74		
Total	399.95	83			

Expressed Interest Inventory--Might attend

Phase I subjects indicated whether they might attend each of the five workshops on the Expressed Interest Inventory. Workshop participants were compared with all Phase I subjects who did not attend any workshop on the verbal report they might attend each workshop. Each subject checked a blank indicating whether he/she might attend each of the five workshops. Comparisons were made between all workshop participants and non-participants in their frequency of indicating they might attend each workshop. Five $2 \times 2 \chi^2$ with Yates correction for continuity were used to compare the two groups' frequencies of reporting they might attend workshops or not. Two of these calculations, for reports that subjects might attend Workshops I and II, had cell entries less than five. These small cell entries make the χ^2 assumption of normality among observed frequencies questionable (Siegal, 1956). The approximate statistic, χ^2 was used in these cases, but must be interpreted cautiously.

There was a statistically significant relationship between participation in any workshop and the indication that subjects might attend Workshop I, $\chi^2 (1) = 10.60 \underline{p} < .01$. While one of the four cell entries in this computation was quite small, the test statistic was highly significant, in spite of the uncertainty of meeting statistical assumptions. Significance was also attained in the test of the relationship of workshop participation and indication that subjects might attend Workshop III, $\chi^2 (1) = 6.66, \underline{p} < .01$. Thus, actual attendance at any of the workshops and the verbal report that subjects might attend Workshops I and III were related.

Comparisons between all workshop participants and non-participants showed no statistically significant relationships with reports that subjects might attend Workshops II, IV, and V. Tables 22-26 report the results of the χ^2 calculations of the association of workshop participation with reports that subjects might attend Workshops I, II, III, IV, and V, respectively.

Further comparisons were made to assess the relationship between cluster group membership and the verbal reports of whether a person might attend each of the five workshops. Five χ^2 tests of significance were computed to assess the relationship of cluster group membership and the indication that persons might attend each of the workshops. A 2 x 6 contingency table was constructed for each of the statistical tests for the six cluster groups reports that they might attend each of the five workshops. Many of the cell entries were quite small in these computations and results of the tests of significance must be interpreted cautiously.

There was a significant statistical relationship between cluster membership and the verbal endorsement that subjects might attend Workshop I, reported in Table 27, $\chi^2 (5) = 11.50$, $p = .042$. Homogeneous cluster groups did report possible attendance at Workshop I, Memory and Thinking, significantly differently. The proportions of cluster group members reporting they might attend Workshop I was higher among clusters I, III, and IV than among members of clusters II, V, and VI.

The relationships between indications that subjects might attend Workshops II, III, IV, and V and their cluster memberships were not sig-

Table 22

χ^2 Test of Association of Reporting Possible Attendance at
Workshop I and Actual Workshop Participation

Reported Might Attend	Participants	Non-participants	Total
No	4	76	80
Yes	17	48	65
Total	21	124	145

$\chi^2(1)$ with Yates' correction = 10.60 $\underline{p} < .01$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 23

χ^2 Test of Association of Reporting Possible Attendance at
Workshop II and Actual Workshop Participation

Reported Might Attend	Participants	Non-participants	Total
No	18	109	127
Yes	3	15	18
Total	21	124	145

$\chi^2(1)$ with Yates' correction = 0.01 $\underline{p} > .05$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 24

χ^2 Test of Association of Reporting Possible Attendance at
Workshop III and Actual Workshop Participation

Reported Might Attend	Participants	Non-participants	Total
No	10	96	106
Yes	11	28	39
Total	21	124	145

$\chi^2(1)$ with Yates' correction = 6.67 $\underline{p} < .01$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 25

χ^2 Test of Association of Reporting Possible Attendance at
Workshop IV and Actual Workshop Participation

Reported Might Attend	Participants	Non-participants	Total
No	11	89	100
Yes	10	35	45
Total	21	124	145

$\chi^2(1)$ with Yates' correction = 2.31 $\underline{p} > .05$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 26

χ^2 Test of Association of Reporting Possible Attendance at
Workshop V and Actual Workshop Participation

Reported Might Attend	Participants	Non-participants	Total
No	10	83	93
Yes	11	41	52
Total	21	124	145

$\chi^2(1)$ with Yates' correction = 2.13 $\underline{p} > .05$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 27

χ^2 Test of Association of Reporting Possible Attendance at
Workshop I and Cluster Groupings

	Cluster Groups						Total
	I	II	III	IV	V	VI	
No	3	12	7	4	5	2	33
Yes	7	5	16	12	3	1	44
Total	10	17	23	16	8	3	77
$\chi^2(5) = 11.50$ $\underline{p} = .042$							

Note. Tabular entries indicate frequencies of persons responding to
this item.

nificant. Tables 28-31 report the χ^2 calculation results of the relationship of cluster membership and reports that subjects might attend Workshops I, II, III, IV, and V, respectively.

Actual attendance at workshops

The relationship of cluster group membership to actual attendance at workshops was assessed. The frequencies of actual attendance were grouped into two categories due to small cell sizes; no workshops attended and one or more workshops attended. Small cell sizes remain in all cells of the category of actual attendance at one or more workshops. The resulting test of significance must be interpreted with caution (Siegel, 1956). Cluster membership was not significantly related statistically to non-attendance or attendance at one or more workshops. Thus, common patterns of homogeneous life experiences, future attitudes about aging, and global personality attributes were not reflected in subsequent attendance at workshops. Small cell sizes in the row of frequencies indicating number of workshops attended may preclude an adequate test of this relationship. Table 32 reports the results of the χ^2 test of the relationship of cluster group membership and non-attendance or attendance at one or more workshops.

Workshop evaluation

The workshop evaluations were compared in two sets of statistical analyses, among cluster groupings, as well as across the five workshops of the study. A workshop evaluation consisted of the sum of the seven-point Likert ratings on the seven workshop evaluation items.

Table 28

χ^2 Test of Association of Reporting Possible Attendance at
Workshop II and Cluster Groupings

	Cluster Groups						Total
	I	II	III	IV	V	VI	
No	7	16	20	14	7	2	66
Yes	3	1	3	2	1	1	11
Total	10	17	23	16	8	3	77

$$\chi^2(5) = 3.98 \quad p = .553$$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 29

χ^2 Test of Association of Reporting Possible Attendance at
Workshop III and Cluster Groupings

	Cluster Groups						Total
	I	II	III	IV	V	VI	
No	6	12	16	11	5	1	51
Yes	4	5	7	5	3	2	26
Total	10	17	23	16	8	3	77

$$\chi^2(5) = 1.98 \quad p = .852$$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 30

χ^2 Test of Association of Reporting Possible Attendance at
Workshop IV and Cluster Groupings

	Cluster Groupings						Total
	I	II	III	IV	V	VI	
No	5	13	13	9	4	1	45
Yes	5	4	10	7	4	2	32
Total	10	17	23	16	8	3	77

$$\chi^2(5) = 3.65 \quad \underline{p} = .601$$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 31

χ^2 Test of Association of Reporting Possible Attendance at
Workshop V and Cluster Groupings

	Cluster Groups						Total
	I	II	III	IV	V	VI	
No	5	13	15	6	5	1	45
Yes	5	4	8	10	3	2	32
Total	10	17	23	16	8	3	77

$$\chi^2(5) = 6.73 \quad \underline{p} = .242$$

Note. Tabular entries indicate frequencies of persons responding to this item.

Table 32

χ^2 Test of Association of Cluster Group Membership
and Non-Attendance or Attendance at One or More Workshops

	Cluster Groups						Total
	I	II	III	IV	V	VI	
Did Not Attend	7	15	17	13	8	4	64
Attended one or more Workshops	5	3	7	5	1	0	21
Total	12	18	24	18	9	4	85
$\chi^2(5) = 4.15 \quad \underline{p} > .05$							

Note. Tabular entries indicate frequencies of persons.

In the comparisons of homogeneous cluster groups of subjects on workshop evaluation, it was necessary to use an arithmetic average of the evaluations for the 10 persons who attended more than one workshop. Among the 23 workshop participants, 2 did not have a cluster membership due to their incomplete data base. One other subject, the sole participant of cluster V, was eliminated from the statistical analyses due to the lack of within-cell variation. Four cluster groups were represented by the remaining 20 subjects.

A completely randomized analysis of variance comparing cluster groups on workshop evaluation (for any workshop) was calculated, using the least squares analysis procedure. There was no significant statistical difference among cluster groups in their evaluations for any workshops attended, $F(3,16) = 1.75$, $p = .197$. Common patterns on the variables used to form cluster groups therefore made no difference in subjective evaluation of workshops among those clusters members who attended. Table 33 reports the summary of the analysis of variance comparing cluster groups on workshop evaluations.

The workshop evaluations were also compared among the five groups of workshop participants ($N = 44$). Here, there was only one measure of workshop evaluation for each workshop attended. A completely randomized analysis of variance was computed using the least squares method. There was no statistical difference in the evaluation of the five workshops among groups attending each, $F(4,39) = 0.77$, $p = .553$. Overall, participants evaluated workshops as similarly useful and interesting, regardless of the workshop attended. The summary of the analysis of

Table 33

Completely Randomized Analysis of Variance of
Average Workshop Evaluations among Cluster Groups

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	242.38	3	80.79	1.75	.197
Error	737.86	16	46.12		
Total	980.24	19			

Note. Four homogeneous cluster groupings; N = 20.

variance comparing workshop groups on workshop evaluation is reported in Table 34.

Tests of knowledge

Pretest and posttest measures of workshop knowledge were collected for each workshop observation. Tests of knowledge were compared among cluster groups, without regard for which workshop(s) were attended. The amount learned, as measured by pre- and post-knowledge tests, was compared among the five workshop groups, as well.

In comparing cluster groups on the knowledge tests, it was necessary to use an arithmetic average for the pretest and posttests of the 10 persons who attended more than one workshop. This data set was the same in subject composition as that used for the cluster group comparisons of workshop evaluations.

Cluster groups were compared on pretest and posttest scores of knowledge using a split-plot factorial analysis of variance for repeated measures. The least squares analysis procedure was used in this computation. There were no significant differences in the interaction of pretest-posttest gains with regard to cluster membership, $F(3,16) = 0.63$, $p = .604$. The cluster groups represented among the workshop participants did not differ in the amount learned, regardless of the workshops attended. The summary of the analysis of variance of differences among cluster groups on tests of knowledge is reported in Table 35.

The pretest and posttest scores on knowledge tests for each workshop were compared across the five workshop groups ($N = 44$). A split-plot factorial analysis of variance for repeated measures was computed,

Table 34

Completely Randomized Analysis of Variance of
Workshop Evaluations among Workshop Groups

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	219.55	4	54.89	0.77	.553
Error	2788.09	39	71.49		
Total	3007.64	43			

Note. Five workshop groups; N = 44.

Table 35

Split-Plot Analysis of Variance of Average Pretest-Posttest
Measures of Knowledge among Cluster Group Workshop Participants

Source	SS	df	MS	<u>F</u>	<u>p</u>
Between Subjects	130.20	19			
A Clusters	29.92	3	9.97	1.59	.231
S(A) Subjects (Cluster)	100.28	16	6.27		
Within Subjects	37.20	20			
B Pretest-Posttest	7.19	1	7.19	4.29	.055
A x B Cluster x Pretest- Posttest	3.19	3	1.06	0.63	.604
B x S(A) Pretest-Posttest x Subjects (Cluster)	26.82	16			
Total	167.40	39			

Note. Four cluster groups represented among workshop participants; N = 20.

using the least squares method. There was no significant difference in pretest-posttest comparisons of the amount learned during each of the five workshops, $F(4,39) = 1.59$, $p = .196$. The amount learned by participants at each of the five workshops did not differ, even though the content of the workshop and knowledge tests were different. There was, however, a significant difference in the knowledge pretest-posttest factor without regard to the workshop attended, $F(1,39) = 8.14$, $p = .007$. Regardless of the workshop attended, participants did show some significant learning, as measured by the tests of knowledge constructed for the content of each workshop. Table 36 reports the summary of the analysis of variance of knowledge pretest-posttest changes among the five workshop groups.

The remainder of the statistical analyses to be reported below must be considered more tentative and exploratory due to the collective Type I error. These remaining analyses have less substantive importance to the purpose of this research. They should be considered more exploratory due to the collective Type I error accumulated in the numerous statistical analyses.

Expressed Interest Inventory--Reasons encouraging attendance

Six reasons encouraging attendance at workshops were rated by the subjects of Phase I for their importance in considerations about attendance. Persons participating in the workshops were compared with Phase I subjects not attending any workshop on each of these six reasons. Six t tests for unrelated groups with separate variance estimates were

Table 36

Split-Plot Analysis of Variance of Pretest-Posttest Measures
of Knowledge Tests among Workshop Groups

Source	SS	df	MS	<u>F</u>	<u>p</u>
Between Subjects	317.94	43			
A Workshops	17.92	4	4.48	0.58	.677
S(A) Subjects (Workshops)	300.02	39	7.69		
Within Subjects	91.49	43			
B Pretest-Posttest	13.92	1	13.92	8.14	.007
AxB Workshop x Pretest- Posttest	10.87	4	2.72	1.59	.196
B x S(A) Pretest-Posttest x Subjects (Workshops)	66.70	39	1.71		
Total	409.44	87			

Note. Five workshop groups; N = 44 observations with repeated measures.

computed for each of the six ratings, comparing all workshop participants with non-participants. Workshop participants rated reason 5, "I might find some useful information," significantly higher than non-participants, $t(37) = 3.03$, $p = .004$. Workshop participants also rated reason 6, "I might find some possible solutions to difficulties in my life," significantly higher than those persons who did not attend any workshop, $t(26) = 2.24$, $p = .034$. Workshop participants rated reasons 5 and 6 as more important in their considerations about attending workshops than those who did not attend any workshop. The remainder of the statistical tests showed no significant differences between participants and non-participants in their ratings of reasons 1, 2, 3, and 4 in considering attendance at workshops. Table 37 includes the results of the statistical comparisons of participants and non-participants for all six reasons encouraging attendance.

Cluster groups were compared for differences on these six reasons encouraging workshop attendance. Six completely randomized analyses of variance were computed, using the least squares procedure, to assess the significance of differences among cluster groups on ratings of the six reasons encouraging attendance. There were no statistically significant differences in the ratings of any of the six reasons among the cluster groups. Thus, the groups formed on the basis of a common pattern of antecedent variables showed no differences in the six reasons encouraging attendance. Summaries of the six analyses of variance for the six reasons encouraging workshop attendance are reported in Tables 38, 39, 40, 41, 42, and 43.

Table 37

t tests of Differences between Participants and Non-Participants
in Ratings of Reasons Encouraging Attendance at
Workshops--Expressed Interest Inventory

Variable	N	Mean	<u>t</u> test	df	<u>p</u>
Reason 1					
Participants	18	5.22	1.94	28	.063
Non-participants	107	4.27			
Reason 2					
Participants	17	4.47	1.10	26	.281
Non-participants	105	3.91			
Reason 3					
Participants	19	5.16	0.01	25	.996
Non-participants	116	5.16			
Reason 4					
Participants	19	4.53	.073	26	.445
Non-participants	106	4.08			
Reason 5					
Participants	18	6.22	3.03	37	.004
Non-participants	110	5.20			
Reason 6					
Participants	18	4.78	2.24	26	.034
Non-participants	103	3.66			

Table 38

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #1 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	4.70	5	0.94	0.18	.965
Error	319.91	63	5.08		
Total	324.61	68			

Note. Six cluster groups; N = 69 cluster members responding to this item.

Table 39

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #2 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	12.25	5	2.45	0.45	.811
Error	340.39	63	5.40		
Total	352.64	68			

Note. Six cluster groups; N = 69 cluster members responding to this item.

Table 40

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #3 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	28.12	5	5.62	1.53	.192
Error	239.12	65	3.68		
Total	267.24	70			

Note. Six cluster groups; N = 71 cluster members responding to this item.

Table 41

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #4 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	33.07	5	6.61	1.30	.273
Error	329.72	65	5.07		
Total	362.79	70			

Note. Six cluster groups; N = 71 cluster members responding to this item.

Table 42

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #5 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	7.03	5	1.41	0.48	.791
Error	192.96	66	2.92		
Total	199.99	71			

Note. Six cluster groups; N = 72 cluster members responding to this item.

Table 43

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #6 Encouraging Workshop
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	5.28	5	1.06	0.24	.944
Error	287.59	64	4.49		
Total	292.87	69			

Note. Six cluster groups; N = 70 cluster members responding to this item.

Workshop Participation Inventory

All workshop participants rated the importance of six reasons encouraging attendance in their considerations of whether to participate, at the beginning of each workshop session. These reasons were the same in content as those rated by all Phase I subjects on the Expressed Interest Inventory, but stated in present or past tenses. The reasons encouraging the workshop participants to attend were computed among homogeneous cluster groupings, as well as among the five workshop groups.

An arithmetic average of the ratings of the six items of the Workshop Participation Inventory was obtained for the 10 persons attending more than one workshop, in order to compare cluster groups of subjects. This data set was the same in subject composition as that used for the cluster group comparisons of workshop evaluations and tests of knowledge. Six completely randomized analyses of variance were calculated to assess differences among cluster groups of workshop participants on the six reasons encouraging attendance. The least square analysis procedure was used in each of these analyses. There were no statistically significant differences among cluster groups of workshop participants on any of the six reasons encouraging workshop attendance. Thus, there were no differences among cluster groups sharing common patterns on antecedent variables in their ratings of the reasons they actually attended workshops. Tables 44, 45, 46, 47, 48, and 49 report the summaries of the analyses of variance comparing cluster groups of workshop participants on the six items of the Workshop Participation Inventory.

Table 44

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #1 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	1.30	3	0.43	0.57	.643
Error	12.16	16			
Total	13.46	19			

Note. Four cluster groups represented among workshop participants; N = 20.

Table 45

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #2 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	5.73	3	1.91	0.89	.465
Error	34.17	16	2.14		
Total	39.90	19			

Note. Four cluster groups represented among workshop participants; N = 20.

Table 46

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #3 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	7.02	3	2.34	1.31	.304
Error	28.48	16	1.78		
Total	35.49	19			

Note. Four cluster groups represented among workshop participants; N = 20.

Table 47

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #4 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	27.44	3	9.15	3.23	0.53
Error	42.53	15	2.84		
Total	69.97	18			

Note. Four cluster groups represented among workshop participants; N = 19.

Table 48

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #5 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	0.69	3	0.23	0.37	.779
Error	10.01	16	0.63		
Total	10.70	19			

Note. Four cluster groups represented among workshop participants; N = 20.

Table 49

Completely Randomized Analysis of Variance among Cluster
Groups for Average Ratings of Reason #6 Encouraging
Attendance--Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	1.14	3	0.38	0.09	.966
Error	69.02	16	4.31		
Total	70.15	19			

Note. Four cluster groups represented among workshop participants; N = 20.

Each of the six items of the Workshop Participation inventory was also compared among the five workshop groups ($N = 44$). Six completely randomized analyses of variance were computed, comparing participants attending each workshop on the ratings of the six reasons that encouraged them to attend. The least squares analysis procedure was used for each of these analyses. There were no significant differences among the workshop groups in their ratings of the six reasons that encouraged their attendance at workshops. Thus, the attendance at a particular workshop among the five did not reflect differences in the importance of these reasons in considerations about attending. Summaries of the six analyses of variance comparing the five workshop groups on the items of the Workshop Participation Inventory are reported in Tables 50, 51, 52, 53, 54, and 55.

Expressed Interest Inventory--Reasons discouraging attendance

Phase I subjects rated six reasons discouraging possible attendance at workshops for their importance in considering attendance. Workshop participants were compared with Phase I subjects not participating in workshops on each of these six factors discouraging workshop attendance. Six t tests for unrelated groups with separate variance estimation were computed, comparing participants and non-participants on the six ratings of reasons discouraging attendance. There were no significant differences in the six reasons discouraging workshop attendance between those who actually attended workshops and non-participants. Thus, reasons that might have discouraged attendance were not rated differently in considerations about attendance by participants and non-participants. Table 56

Table 50

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #1 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	5.87	4	1.47	1.07	.383
Error	53.31	39	1.37		
Total	59.18	43			

Note. Five workshop groups; N = 44.

Table 51

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #2 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	13.41	4	3.35	1.32	.279
Error	93.66	37	2.53		
Total	107.07	41			

Note. Five workshop groups; N = 42.

Table 52

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #3 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	3.27	4	0.82	0.46	.768
Error	69.91	39	1.79		
Total	73.18	43			

Note. Five workshop groups; N = 44.

Table 53

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #4 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	4.34	4	1.09	0.26	.900
Error	156.08	38	4.11		
Total	160.42	42			

Note. Five workshop groups; N = 43.

Table 54

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #5 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	1.60	4	0.40	0.59	.670
Error	26.29	39	0.67		
Total	27.89	43			

Note. Five workshop groups; N = 44.

Table 55

Completely Randomized Analysis of Variance among Workshop
Groups for Ratings of Reason #6 Encouraging Attendance--
Workshop Participation Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Workshops	12.24	4	3.06	0.70	.599
Error	166.93	38	4.39		
Total	179.16	42			

Note. Five workshop groups; N = 43.

Table 56

t tests of Differences between Participants and Non-Participants
in Ratings of Reasons Discouraging Attendance at
Workshops--Expressed Interest Inventory

Variable	<u>N</u>	Mean	<u>t</u> test	df	<u>p</u>
Reason 1					
Participants	18	4.33	1.79	24	.086
Non-participants	97	3.26			
Reason 2					
Participants	18	3.83	0.49	23	.630
Non-participants	114	3.50			
Reason 3					
Participants	17	3.18	-0.70	22	.491
Non-participants	110	3.59			
Reason 4					
Participants	19	2.74	-.065	26	.524
Non-participants	92	3.13			
Reason 5					
Participants	19	2.05	-1.82	88	.072
Non-participants	95	3.31			
Reason 6					
Participants	17	2.59	-0.99	86	.326
Non-participants	93	3.57			

reports the t test results for the six comparisons of participants and non-participants on the six reasons discouraging workshop attendance.

Cluster groups of subjects were compared for differences in ratings on these six reasons discouraging workshop attendance. Six completely randomized analyses of variance were computed, using the least squares procedure, to assess the differences among cluster groups on the six reasons discouraging workshop attendance. Cluster groups differed significantly on their ratings of the fourth reason, "I would not like to be in a group activity with others," $F(5,53) = 3.05$, $p = .017$. Thus, groups formed on common patterns of antecedent variables did differ on this reason affecting considerations about workshop attendance. There were no statistically significant differences among cluster groups in their ratings of the remaining five reasons discouraging workshop attendance. The statistically homogeneous groups therefore showed no differences in considerations of these remaining reasons that discourage attendance. Summaries of the analyses of variance among cluster groups for the six reasons discouraging attendance are reported in Tables 57, 58, 59, 60, 61, and 62.

Post hoc comparisons between the cluster groups were made to locate specific group mean differences on the rating of the fourth reason discouraging attendance. Tukey's wholly significant difference tests with the Behrens-Fisher modification for unequal sample sizes and heterogeneous variances were computed (Keselman & Rogan, 1977). Welch's degrees of freedom were utilized with this modified t test procedure and comparisons were made against the critical value $q(.05;k,\gamma_w)/\sqrt{2}$. The

Table 57

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #1 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	9.54	5	1.91	0.33	.892
Error	323.17	57	5.77		
Total	332.71	61			

Note. Six cluster groups; N = 62.

Table 58

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #2 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	17.31	5	3.46	0.47	.901
Error	489.13	66	7.41		
Total	506.44	71			

Note. Six cluster groups; N = 72.

Table 59

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #3 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	32.90	5	6.58	1.28	.285
Error	319.73	62	5.16		
Total	352.63	67			

Note. Six cluster groups; N = 68.

Table 60

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #4 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	70.82	5	14.16	3.05	.017
Error	246.16	53	4.64		
Total	316.98	58			

Note. Six cluster groups; N = 59.

Table 61

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #5 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	29.98	5	6.00	1.39	.245
Error	243.26	56	4.34		
Total	273.24	61			

Note. Six cluster groups; N = 62.

Table 62

Completely Randomized Analysis of Variance among Cluster
Groups for Ratings of Reason #6 Discouraging
Attendance--Expressed Interest Inventory

Source	SS	df	MS	<u>F</u>	<u>p</u>
Clusters	17.83	5	3.57	0.67	.650
Error	276.94	52	5.33		
Total	294.78	57			

Note. Six cluster groups; N = 58.

modified \underline{t} tests for pairwise post hoc comparisons were computed as follows:

$$\underline{t}' = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{n_1/s_1^2}{n_1} + \frac{n_2/s_2^2}{n_2}}}$$

Welch's degrees of freedom were computed as follows and rounded to the nearest integer:

$$\gamma_w = \frac{(s_1^2/n_1 + s_2^2/n_2)^2}{\frac{(s_1^2/n_1)^2}{n_1-1} + \frac{(s_2^2/n_2)^2}{n_2-1}}$$

Pairwise comparisons of the cluster groups means were computed for differences in ratings of the fourth reason discouraging workshop attendance. These results reveal the mean of cluster group VI is higher than all other groups, but it should be noted that only two members of cluster group VI rated reason 4, both rating it as very important in considerations about attendance. Cluster group III also rated reason 4 as significantly more important in considerations about workshop attendance than cluster group IV subjects. Results of the Tukey's wholly significant difference tests comparing cluster groups on ratings of the fourth reason discouraging attendance are reported in Table 63.

Summary--Outcome variable results

The statistical analyses of substantive questions considered most important for this study were significant on the following comparisons:

Table 63

Specific Group Differences Among Clusters on Reason #4
Discouraging Attendance--Tukey's Wholly Significant
Difference Tests with Behrens Fisher Modification

		Cluster Groups					
		I	II	III	IV	V	VI ^a
Mean.		3.286	2.091	3.667	1.933	3.778	7.000
<u>n</u>		7	11	15	15	9	2
I	<u>t'</u>		1.106	-0.364	1.386	-0.362	4.164*
	γ_w		12	11	10	14	6
	<u>q</u> / $\sqrt{2}$		3.359	3.408	3.472	3.281	3.981
II	<u>t'</u>			1.920	0.217	1.415	-8.048*
	γ_w			23	19	14	10
	<u>q</u> / $\sqrt{2}$			3.118	3.161	3.281	3.472
III	<u>t'</u>				8.249*	-0.096	-6.069*
	γ_w				13	14	14
	<u>q</u> / $\sqrt{2}$				3.316	3.281	3.281
IV	<u>t'</u>					-1.649	-12.793*
	γ_w					12	14
	<u>q</u> / $\sqrt{2}$					3.359	3.281
V	<u>t'</u>						-3.078
	γ_w						9
	<u>q</u> / $\sqrt{2}$						3.550

Note. Compared against critical value $q(.05, 6, \gamma_w)/\sqrt{2}$.

^aCluster group VI has no variance.

1. Comparisons between all workshop participants and non-participants were significantly different in their report of interest in Workshop I, Memory and Thinking, and Workshop IV, the Physical Self.
2. Comparisons between all workshop participants and non-participants were significantly different in the verbal report that they might attend Workshop I, Memory and Thinking, and Workshop III, Social and Emotional Life.
3. Comparisons among homogeneous cluster groups were significantly different in the verbal report that they might attend Workshop I, Memory and Thinking. The proportions of cluster group members reporting they might attend Workshop I were much higher for clusters I, III, and IV than for clusters II, V, and VI.
4. Comparisons among workshop groups showed a significant difference for the main effect of pre-posttest gains on the tests of knowledge. While all workshop participants showed gains on the tests of knowledge, there were no differences in the amount learned in a particular workshop.

Statistical analyses for the less important substantive questions must be considered more exploratory and were significant for the following analyses:

5. Comparisons between all workshop participants and non-participants showed significant differences in the ratings of reasons 5 and 6 encouraging attendance in their considerations of atten-

dance at workshops.

6. Comparisons among homogeneous cluster groups showed significant differences in the ratings of reason 4 discouraging attendance in their considerations of attendance at workshops. Cluster VI workshop participants rated this reason as significantly more important in their considerations about workshop attendance than all other cluster group workshop participants. Cluster III workshop participants rated this reason as more important in their thoughts about attendance at workshops than cluster IV participants.

DISCUSSION

The exploration of interest in education about aging among older lay people has little precedent in psychological and other related literature. In spite of the inclusion of mental health education as a component of mental health services in the Community Mental Health Centers Act of 1963, there has been little research to explore meaningful educational content and characteristics of target groups. The present study provided some preliminary information about the verbal report of interest in education about aging and the choice to participate in such education among older lay people. It also sought to provide some information about characteristics of older people, through homogeneous cluster groupings, who might participate in these educational programs. Various factors involved in a process of deciding whether to attend such aging programs were explored and add some useful considerations to the design of mental health education about aging.

Two separate foci were involved in the investigation of verbal report of interest, actual workshop utilization, and situational factors influencing the decision-making process concerning attendance. First, workshop participants and non-participants were compared on verbal reports made during the initial presentation, Phase I of the study (Expressed Interest Inventory). The second focus of the study was to examine differences among clustered groups of persons with similar patterns of life history, attitudes about future aging, and global personality attributes. Further comment is necessary on each of these

two research foci in terms of the adequacy of the test of major substantive questions and the implications of results.

Comparisons of workshop participants with non-participants were made to examine whether differences in verbal reports were relevant in discriminating persons who actually attended workshops. Verbal reports of interest in workshop topics, possible attendance, and factors influencing the choice to attend workshops were compared between the 23 actual attenders and the 166 others providing data during the initial presentations of the study. It is important to recognize several biases of the subject sample relevant to the generalization of the research findings.

First, the 11 initial slide-talks introducing the workshops were presented to a collection of older persons active in community center, church, or retirement center groups. Since this community-active sample may be the general target of many mental health education programs, this sample bias may enhance the generalization of findings to this population. Secondly, and more importantly, a total of 467 persons were present at the initial presentations and many did not provide data for the present study. The 190 persons who did complete some portion of the Expressed Interest Inventory therefore represent a biased sample of persons willing and able to complete a verbal report. It is impossible to discern all the factors that contributed to the lack of inventory completion by the remaining 277 persons attending the initial presentations. The length of the initial report, lack of skills and abilities involved in reading and writing, and lack of interest in the entire project are possible sources of this sample bias. Comparisons

of workshop participants and non-participants are therefore biased to include only those older persons who made a verbal report.

Comparisons among homogeneous clusters of persons were made to explore differences in patterns of actual experiences of aging, attitudes about future aging, and two global aspects of personality. No specific hypotheses were proposed concerning the relationship of clusters and participation in education about aging due to the lack of substantive research in this area. Certain relationships were expected between cluster patterns and workshop participants on the basis of rational considerations. It was expected that some real life experience of aging in specific areas of functioning, as well as anticipations of certain aging processes, might lead individuals to report interest in and attend workshops about related aging processes. These comparisons of homogeneous cluster groups are influenced by the overall sampling biases. The ability of the cluster analyzed groups to represent homogeneous groups in a larger population of older persons is therefore somewhat biased.

As previously noted, the 86 persons included in the cluster analysis of homogeneous groups represent quite an educated group of older persons. The total group who were willing to complete the lengthy questionnaire packet at home was also self-selected from the various organizations allowing presentations about the study. This Phase II group therefore represents quite an able and motivated group of subjects, who participated out of intrinsic interest in the study, curiosity, the token payment to their organizations, or other factors.

The usefulness of the clusters of the present study in describing homogeneous groups within this active population of old persons is supported by the comparisons with clusters formed in the preliminary study. While there was clear support of the replicability of homogeneous cluster groupings, the relationship of these groupings to attendance at workshops about aging was largely equivocal. Configurations of common life experiences, attitudes about future aging and personality attributes were not sufficient to explain actual attendance at workshops about aging. Other situational factors have some bearing upon how different clusters of people considered attending workshops, however.

Verbal Reports of Interest and Possible Attendance

Reports of interest and possible attendance at each of the workshops of the study provided some information concerning the value of verbal reports in predicting attendance at workshops. Persons attending any of the workshops reported higher interest in Workshops I (Memory and Thinking) and IV (the Physical Self) and indicated they would be more likely to attend workshops I and III (Social/Emotional). There is no logical explanation of the difference in the two types of verbal report for workshops III and IV in comparisons of participants and non-participants.

Verbal report of interest and possible attendance at Workshop I, concerning memory and thinking, may have been influenced by the order of original presentation of workshops, so that this workshop was more interesting or desirable. Since the largest number of workshop participants actually did attend Workshop I (19 of 23), verbal reports concerning this

workshop may reflect more actual differences in participant and non-participant groups. Regardless of the consideration of order effect, there was clearly an important difference between the verbal report of interest in Workshop I, which was supported by the actual attendance of the largest group of workshop participants.

Small sample sizes precluded the statistical tests of verbal reports between persons actually participating in each rated workshop. There is some indication from the results that verbal report of interest or possible attendance is related to actual attendance at any workshops about aging. Verbal ratings of interest in education about aging may therefore be somewhat useful in the future design of educational programs.

There were no significant differences among the reported interest among cluster groups, but the verbal report of possible attendance did show significant differences for Workshop I (Memory and Thinking). There was a statistical relationship between cluster group membership and the indication that a person might attend the Memory and Thinking Workshop. An order effect is possible in the explanation of this workshop's popularity with some of the clustered types of persons, but would seem more likely to affect all clusters equally.

Clusters I, III, and IV were most likely to indicate they might attend Workshop I. There are no common aspects of these three cluster profiles which might explain a related willingness to report possible attendance at Workshop I. It is interesting to speculate about the commonalities among the three groups (clusters II, V, and VI) who indicated a proportionally lower possible attendance at Workshop I. Two of these groups,

II and VI, have common average profile high points on the personality measures of global adjustment and tendency to portray oneself in a good light. Cluster II also has a slightly lower report of actual aging experiences and anticipated aging experiences than the rest of the population of clustered subjects. Group VI has a markedly low report of actual aging experiences in social and physical spheres, as well as anticipated aging experiences in these same areas. Perhaps, these two groups represent somewhat better adjusted persons psychologically, who also have had relatively less experience with negative aspects of aging in social/intrapersonal and physical areas which relate most to the Memory and Thinking topic.

The remaining low group on report of possible attendance at Workshop I presents a different profile than Groups II and VI. Group V individuals have measured psychological adjustment and desire to make a good impression one standard deviation lower than the mean of the total clustered sample. They also report slightly higher than average social and physical experiences with aging, as well as anticipated experiences in these areas. Their somewhat lower psychological adjustment may have some contribution in their lower report of possible attendance at the Memory and Thinking workshop.

It should be taken into account, however, that the χ^2 test of association between report of willingness to attend Workshop I and cluster group is a much less reliable test, due to the very small sizes of some cells of the comparisons. Disregarding these statistical concerns, there is some suggestion that the relationship of reporting

possible attendance at the workshop concerning memory and thinking in later life might have a curvilinear relationship to adjustment and actual and anticipated losses in physical and social/intrapersonal areas. Two cluster groups, representing relatively well-adjusted persons with less actual and expected aging and one group representing relatively less adjusted persons with more actual and expected aging were both less likely to indicate they might attend the Memory and Thinking workshop.

Actual Attendance and Workshop Outcomes

Actual attendance at one or more workshops was not related to cluster group membership. Again, these statistical tests should be interpreted with caution due to the small cell sizes encountered. A much larger sample of workshop participants would have allowed a more adequate test of the substantive question of the relationship of cluster patterns and actual workshop attendance. The obtained results might be explained most simply as suggesting that reported and anticipated life experiences with aging processes and global personality have no relationship to attendance at workshops about aging. It is also possible that other situational factors, such as available transportation or general inclinations towards continuing education, are most important in participation in education about aging, as suggested by others (Hiemstra, 1976).

There were no differences found in the evaluation of workshops among the homogeneous groups of persons nor among the five groups attending the five different workshops. Since the workshop evaluations were not submitted anonymously, it is quite possible that "experimenter

demand" contributed to the generally positive evaluations. Anecdotally, workshop participants at several of the workshops asked if evaluations were important to the investigator's successful completion of the research project. While participants were assured that positive evaluations were not important to the completion of the project, there is reason to speculate that their signed workshop evaluations were influenced by the relationship with the investigator.

In addition, the comparison of workshop evaluations among the five workshops was influenced by the repeated measures of the 10 persons who attended more than one workshop. This group of participants attending two or more workshops were probably influenced in their evaluations of a single workshop by exposure to other workshops. Since they did attend several workshops, it is likely that they had positive overall workshop experiences. Since participants attending more than one workshop provided 21 of the 44 evaluations, their elimination from the comparisons of workshop evaluations would have resulted in too small a sample for adequately comparing evaluations of persons attending only one of the five content area workshops.

There were no differences among the homogeneous groups of persons in the amount learned in any workshop. Since there was no relationship found between cluster group membership and the attendance at one or more workshops, it is likely that a fair test was made of the differences in cluster membership on knowledge gained. Many other factors, such as intelligence, involvement in the workshop process, and others may account for the lack of differences in cluster membership and amount learned at

any workshop.

There was also no difference found in the amount learned at any one of the workshops. Here, all 44 observations were represented for persons who attended one or more than one workshop. There was significant evidence for an increase in amount learned across all five workshops, which was not evident for the analysis of variance by clusters where scores of individuals attending two or more workshops were averaged (see Tables 35 and 36). The tests of knowledge constructed for each workshop were crude instruments, based upon content which the investigator anticipated would be covered in each workshop. In spite of the fact that the planned curriculum for each workshop was adapted to fit the interests of the group present, it does appear that there was a significant gain in knowledge for questions formulated before each workshop. The lack of differences in knowledge gain among the workshops suggests that there was no real difference in the amount of content that was actually covered in each workshop.

Reasons Encouraging or Discouraging Attendance

Two reasons encouraging workshop attendance were rated as more important by workshop participants than non-participants in their completion of the Expressed Interest Inventory during Phase I. Participants rated "finding useful information" and "possible solutions to difficulties in life" as more important in considerations about attending workshops than those who did not participate. These findings suggest that participants value information-seeking, as well as admit to difficulties in life which need solutions, more than non-participants. Questions such as

these may be useful in further explorations of education about aging to identify those persons who might comprise a target group of participants. These attitudinal factors among people might well be explored further in developing education about aging for older lay people.

At the beginning of each workshop, all workshop participants rated the importance of the same six reasons encouraging attendance, which were rated during the initial presentations. There were no significant differences among homogeneous groups of persons with regard to the rated importance of these factors encouraging attendance during Phase I or Phase III, at workshops. These findings suggest that such attitudinal and situational factors are not differentially important in considering attendance among persons with different patterns of global personality, life experience, and expectations of aging processes. Since two of these reasons encouraging attendance were reportedly more important to those who actually attended workshops, it seems that they may have influence in decisions about attendance among heterogeneous groups of people.

Reasons discouraging attendance were also rated for importance by Phase I subjects. None of these attitudinal and situational factors were rated differently by workshop participants and non-participants. One of these, however, did prove to be different in the considerations about workshop attendance among homogeneous cluster groups. These differences occurred on the rating of importance of "not liking to participate in a group activity with others" in considering workshop attendance. Specifically, cluster group VI rated this factor significantly more

important than all other cluster groups, but only two persons were represented from this cluster in the ratings. Also, cluster group III members rated this factor more important in considerations about attendance than group IV members.

As mentioned previously, cluster VI consists of four persons who report quite limited experience with aging processes in several areas, anticipate far fewer aging processes, and have relatively better psychological adjustment and tendency to present a good impression than other clustered persons. While only two of these persons were included in the statistical test, there is a logical relationship to their response on this item. As mentioned before with regard to their lower interest in Workshop I than three other cluster groups, this appears to be a relatively psychologically adjusted group with fewer experiences with and concerns about aging. This may relate to their report of more negative attitudes about participating in any group in the context of discussion of concerns about aging. The significant differences in the profiles of group III and IV (III > IV on actual work related losses; IV > III on anticipated family losses) do not clearly explain differences between these groups in the rating of this item.

Conclusions

In conclusion, the actual attendance at workshops about aging by different types of persons, homogeneous for global personality attributes, certain experiences with aging processes, and anticipation of aging processes, was not different. The homogeneous patterns of these antecedent

variables were not sufficient to explain participation in workshops about aging processes. There were, however, some verbal reports about possible attendance at specific workshops about aging and factors involved in the process of deciding to attend workshops which differed among statistically formed cluster groups. These significant differences in verbal reports concerning workshops suggest that other moderating variables may be necessary to explain differences in participation in education about aging among types of persons with different aging experiences, attitudes, and personality attributes. Larger samples of persons, grouped into cluster types on these antecedent variables, are needed to explore these results concerning mental health education participation further.

The formation of similar cluster profile types across two sampling conditions does support the reliability of this typological grouping process. It suggests that certain common patterns of life experience, attitudes about future aging, and global personality may exist. This typological grouping process may be a useful research approach for further exploration of the behavior of older persons in many areas.

Verbal reports concerning interest and possible attendance at workshops about aging were somewhat useful in discriminating persons from the total subject sample who actually attended any workshop. Verbal reports concerning workshops may be helpful in the planning of education about aging programs. Cluster group members did differ in the verbal report of possible attendance at the first and most popular workshop, concerning memory and thinking in later life. A more complex,

curvilinear relationship between certain antecedent variables common to cluster types and this verbal report is suggested.

Reasons encouraging or discouraging possible attendance at any types of educational activities yielded some interesting findings, which must be considered exploratory. Differences in reasons encouraging workshop participation were found between those who participated in workshops and subjects of the study who did not attend workshops. Differences were found among homogeneous cluster groups for one reason discouraging attendance at workshops. Considerations of situational and attitudinal factors in the process of deciding about participation in education about aging proved useful. These process variables may be useful in the further exploration of participation in education about aging, both among heterogeneous groups of persons, and among homogeneous types.

REFERENCE NOTES

1. Hickey, T., Hultsch, D. F., Fatula, B. J., & Rakowski, W. Age effects in practitioner attitudes. Unpublished manuscript, Pennsylvania State University, 1976.
2. Owens, W. A. Background data. Unpublished manuscript, 1976. (Available from W. A. Owens, Institute for Behavioral Research, The University of Georgia, 624 Graduate Studies Research Center, Athens, Georgia 30602).
3. Randlett, M. M. Life experiences, future attitudes, and adjustment in older adults. Unpublished manuscript, 1977. (Available from M. Randlett, Department of Psychology, Iowa State University, Ames, Iowa 50010).
4. Owens, W. A. & Charles, D. C. Life history correlates of age changes in mental abilities. Cooperative Research Project #1052. Washington, D.C.: Department of Health, Education, & Welfare, 1963.
5. Holmes, T. H. & Masuda, M. Life change and illness susceptibility. In J. P. Scott & E. C. Senay (Eds.), Separation and depression: Clinical and research aspects. Washington, D.C.: Publication #94, American Association for Advancement of Science, 1973, 161-186.
6. Institute of Human Development. 1974-1975 Research Report. Berkeley, California: University of California, 1975.
7. Brooks, J. B. Personal communication, September 24, 1976.

REFERENCES

- Amster, L. A. & Krauss, H. H. The relationship between life crises and mental deterioration in old age. International Journal of Aging and Human Development, 1974, 5, 51-56.
- Anderson, J. G. Health services utilization: Framework and review. Health Services Research, 1973, 8, 184-199.
- Baekland, F. & Lundwall, L. Dropping out of treatment: A critical review. Psychological Bulletin, 1975, 82, 738-783.
- Blashfield, R. Mixture model tests of cluster analysis: Accuracy of four agglomerative hierarchical methods. Psychological Bulletin, 1976, 83, 377-388.
- Block, J. Lives through time. Berkeley, California: Bancroft Books, 1971.
- Cattell, R. D. The three basic factor-analytic research designs--their interrelations and derivatives. Psychological Bulletin, 1952, 49, 499-520.
- Cohen, G. D. Mental health services and the elderly: Needs and options. American Journal of Psychiatry, 1976, 133, 65-68.
- Cohen, J. Multiple regression as a general data-analytic system. Psychological Bulletin, 1968, 70, 426-443.
- Confer, C. E. & Lessor, L. R. Preventive mental health groups for the aged. Lutheran Social Welfare Quarterly, 1967, 1, 44-54.
- Cowen, E. L. Social and community interventions. Annual Review of Psychology, 1973, 24, 423-473.
- Cronbach, L. J. The two disciplines of scientific psychology. American Psychologist, 1957, 12, 671-684.
- Cronbach, L. J. Beyond the two disciplines of scientific psychology. American Psychologist, 1975, 30, 116-127. (a)
- Cronbach, L. J. Five decades of public controversy over mental testing. American Psychologist, 1975, 30, 1-13. (b)
- Cronbach, L. J. & Gleser, G. C. Assessing similarity between profiles. Psychological Bulletin, 1953, 50, 456-473.
- Daniels, R. S. & Kahn, R. L. Community mental health and programs for the aged. Geriatrics, 1968, 23, 121-125.

- Dennis, W. The use of biographical materials in psychological research on aging. In J. E. Anderson (Ed.), Psychological aspects of aging. Washington, D.C.: American Psychological Association, 1956.
- Edwards, A. L. The measurement of personality traits by scales and inventories. New York: Holt, Rinehart, & Winston, Inc., 1970.
- Everitt, B. Cluster analysis. London: Halstead Press, 1974.
- Gaitz, C. M. Barriers to delivery of psychiatric services to the elderly. Gerontologist, 1974, 14, 210-214.
- Garfield, S. L. Research on client variables in psychotherapy. In A. E. Bergin & S. L. Garfield (Eds.), Handbook of psychotherapy and behavior change: An empirical analysis. New York: John Wiley & Sons, Inc., 1970.
- Garfield, S. L. Further comments on "Dropping out of treatment": Reply to Baekland and Lundwall. Psychological Bulletin, 1977, 84, 306-308.
- Gough, H. G. California Psychological Inventory manual. Palo Alto, California: Consulting Psychologists Press, Inc., 1957. Revised 1964, 1969.
- Gottesman, L. E., Quarterman, C. E., & Cohn, G. M. Psychosocial treatment of the aged. In C. Eisdorfer & M. P. Lawton (Eds.), The psychology of adult development and aging. Washington, D.C.: American Psychological Association, 1973.
- Group for the Advancement of Psychiatry. Mental health needs of aged: A challenge to community centers. Geriatrics, 1972, 27, 32, 35, 39.
- Hays, W. L. Statistics for psychologists. New York: Holt, Rinehart, & Winston, 1963.
- Hickey, T. Simulating age-related sensory impairments for practitioner education. Gerontologist, 1975, 15, 457-463.
- Hiemstra, R. Lifelong learning. Lincoln, Nebraska: Professional Educators Publications, Inc., 1976.
- Jacobs, H. L. Education for aging in the elementary and secondary school system. In S. Grabowski & W. D. Mason (Eds.), Learning for aging. Washington, D.C.: Adult Education Association of the U.S.A., 1974.

- Kadushin, C. Individual decisions to undertake psychotherapy. Administrative Science Quarterly, 1958, 3, 379-411.
- Kahn, R. L. The mental health system and the future aged. Gerontologist, 1975, 15, Part II, 4-35.
- Kasl, S. V. & Cobb, S. Health behavior, illness behavior, and sick role behavior. Archives of Environmental Health, 1966, 12, 246-266.
- Kastenbaum, R. The reluctant therapist. In R. Kastenbaum (Ed.), New thoughts on old age. New York: Springer Publishing, 1964.
- Keller, J. F. & Croake, J. W. Effects of a program in rational thinking on anxieties in older persons. Journal of Counseling Psychology, 1975, 22, 54-57.
- Kelly, J. G., Snowden, L. R., & Munoz, R. F. Social and community interventions. Annual Review of Psychology, 1977, 28, 323-361.
- Keselman, H. J. & Rogan, J. C. The Tukey multiple comparison test: 1953-1976. Psychological Bulletin, 1977, 84, 1050-1056.
- Kramer, M., Taube, C. A., & Redick, R. W. Patterns of use of psychiatric facilities by the aged: Past, present, and future. In C. Eisdorfer & M. P. Lawton (Eds.), The psychology of adult development and aging. Washington, D.C.: American Psychological Association, 1973.
-
- Lawton, M. P. Clinical psychology. In C. Eisdorfer & M. P. Lawton (Eds.), The psychology of adult development and aging. Washington, D.C.: American Psychological Association, 1973.
- Lawton, M. P. & Gottesman, L. E. Psychological services to the elderly. American Psychologist, 1974, 29, 689-693.
- Lowy, L. The role of social gerontology in the development of social services for older people. In D. P. Kent, R. Kastenbaum, & S. Sherwood (Eds.), Research planning and action for the elderly: The power and potential of social science. New York: Behavioral Publications, Inc., 1972.
- Maas, H. S. & Kuypers, J. A. From thirty to seventy: A forty-year longitudinal study of adult life styles and personality. San Francisco: Jossey-Bass, Inc., 1974.
- McKinlay, J. Some approaches and problems in the study of the use of services: An overview. Journal of Health and Social Behavior, 1972, 13, 115-152.

- Megargee, I. The California Psychological Inventory handbook. San Francisco: Jossey-Bass, Inc., 1972.
- Neugarten, B. C., Havighurst, R. J., & Tobin, S. S. The measurement of life satisfaction. Journal of Gerontology, 1961, 16, 134-143.
- Nichols, R. C. & Schnell, R. R. Factor scales for the California Psychological Inventory. Journal of Consulting Psychology, 1963, 27, 228-235.
- Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. Statistical package for the social sciences. (2nd ed.). New York: McGraw-Hill Book Company, 1975.
- Nunnally, J. C. Psychometric theory. New York: McGraw-Hill Book Company, 1967.
- Owens, W. A. Toward one discipline of scientific psychology. American Psychologist, 1968, 23, 782-785.
- Owens, W. A. A quasi-actuarial basis for individual assessment. American Psychologist, 1971, 26, 992-999.
- Peterson, D. A. The role of gerontology in adult education. In S. Grabowski & W. D. Mason (Eds.), Learning for aging. Washington, D.C.: Adult Education Association of the U.S.A., 1974.
- Petty, B. J., Moeller, T. P., & Campbell, R. Z. Support groups for elderly persons in the community. Gerontologist, 1976, 15, 522-528.
- Powers, E. A. & Bultena, G. L. Correspondence between anticipated and actual uses of public services by the aged. The Social Service Review, 1974, 48, 245-254.
- Reichard, S., Livson, F., & Peterson, P. G. Aging and personality. New York: John Wiley & Sons, Inc., 1962.
- Rosenstock, I. M. Why people use health services. Milbank Memorial Fund Quarterly, 1966, 44, 94-124.
- Sarason, S. The psychological sense of community: Prospects for a community psychology. San Francisco: Jossey-Bass Publishers, 1974.
- Sauber, S. R. Preventive educational intervention for mental health. Cambridge, Mass.: Ballinger Publishing Co., 1973.
- Sheppard, N. A. & Valla, D. C. Project V-strap: An evaluation study of workshops training the aged for community service. Gerontologist, 1976, 16, 356-362.

- Siegel, S. Nonparametric statistics for the behavioral sciences. New York: McGraw-Hill Book Company, 1956.
- Tatsuoka, M. M. Multivariate analysis. New York: Wiley, 1971.
- Ward, J. Hierarchical grouping to optimize an objective function. Journal of the American Statistical Association, 1963, 58, 236-244.
- Zax, M. & Specter, G. A. An introduction to community psychology. New York: John Wiley & Sons, Inc., 1974.

APPENDIX A:
DEMOGRAPHIC DATA FORM

Demographic Data Form

Name _____

Birthdate _____

Sex ____M ____F

Marital Status Never
 ____Married ____Married ____Widowed ____DivorcedEducation: Please circle the number of years of formal education
you have completed.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Did you receive a high school diploma or G.E.D.? ____yes ____no

Please describe any type of formal education you participated
in after high school, indicating any degrees or certificates
received.

Are you currently employed?

____ Yes What is your occupation? _____

____ No What was your most recent occupation? _____

APPENDIX B:
LIFE EXPERIENCES INVENTORY

LIFE EXPERIENCES INVENTORY

Please respond to the following questions as honestly as possible. Since there are changes in the directions from section to section, you will need to pay careful attention to DIRECTIONS. You will also find that the items are phrased differently, so rating scales need to be used differently. All of these items refer to events or changes in your life during the last ten years.

DIRECTIONS:

For the items below, please circle the number in the left hand column showing how many times this experience has occurred in the past ten years. If you had the experience more than 6 times, circle "6+".

Number of Times in
the Past Ten Years

- | | | | | | | | | |
|-----|---|---|---|---|---|---|----|---|
| 1) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Change of residence within the same city/town. |
| 2) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Major change in working hours or conditions. |
| 3) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Hospitalized for any cause for a period of 3 days or more excluding childbirth. |
| 4) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Loss of ability to drive a car. |
| 5) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Change of residence from one city or town to another. |
| 6) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Death of close friend. |
| 7) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Decrease in income of 25% or more annually. |
| 8) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Forced retirement from major life work. |
| 9) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Significant financial crisis. |
| 10) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Death of close family member other than spouse or child. |
| 11) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Voluntary retirement from major life work. |
| 12) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Surgery as a hospital inpatient. |
| 13) | 0 | 1 | 2 | 3 | 4 | 5 | 6+ | Personal injury or illness resulting in convalescence longer than two weeks. |

- 14) 0 1 2 3 4 5 6+ Change of residence from home-owning to renting.
- 15) 0 1 2 3 4 5 6+ Major change in responsibilities of life work.

The following questions concerning spouse and children may or may not apply to you. Please complete any items that apply in the same manner as above.

- 16) 0 1 2 3 4 5 6+ Hospitalization of spouse for any cause for period of 3 days or more excluding childbirth.
- 17) 0 1 2 3 4 5 6+ Child left home to make permanent residence elsewhere.
- 18) 0 1 2 3 4 5 6+ Death of spouse.
- 19) 0 1 2 3 4 5 6+ Birth or adoption of child.
- 20) 0 1 2 3 4 5 6+ Marriage.
- 21) 0 1 2 3 4 5 6+ Divorce.
- 22) 0 1 2 3 4 5 6+ Birth of grandchild.
- 23) 0 1 2 3 4 5 6+ Separate dwelling from spouse due to marital problems.
- 24) 0 1 2 3 4 5 6+ Death of child.

DIRECTIONS:

On the items below, you are to answer each item concerning your life experiences during the past ten years of your life. On the rating scale below each item, you should circle the number from "1" to "7" which shows how the past ten years compare with the rest of your life for each of the experiences listed. The rating scale looks like this:

1	2	3	4	5	6	7
Much less		About the			Much More	
Than Before		Same			Than Before	

If, during the past ten years, you found the experience occurring "much more than before," circle the number "7"; if the experience during the past ten years has been "much less" than it was before, circle the number "1," if the experience during the past ten years has been "about the same" as before that time, circle the number "4." Use the numbers in between to show relative degrees of change.

Past Ten Years
Compared with Earlier

- 25) During the past ten years, I have had responsibility for an aging relative...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 26) I have been in good health during the past ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 27) My ability to hear adequately during the past ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 28) My interest in sex during the past ten years has been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 29) My thoughts of death during the past ten years have been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 30) My involvement in energetic pastimes during the past ten years has been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 31) My confidence in myself during the past ten years has been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 32) My involvement in religious activities during the past ten years has been...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 33) During the past ten years, I felt depressed...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 34) During the past ten years, my involvement and satisfaction in life work has been...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 35) During the past ten years, my physical appearance has changed...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 36) During the past ten years, I felt a sense of accomplishment of my life goals...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 37) During the past ten years, my ability to think clearly has been...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 38) During the past ten years, I have been interested in happenings of the world outside my family and friends...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 39) I have been satisfied with my social relationships of the past ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 40) During the past ten years, my leisure time has been meaningfully spent...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 41) I have been satisfied with my family relationships during the past ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 42) During the past ten years, my eyesight has been adequate for my activities...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 43) I have found it difficult to remember recent happenings during the past ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 44) During the past ten years, my sexual activity has been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 45) My energy during the past ten years has been...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 46) During the past ten years, I participated in community activities...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

The following items concerning spouse may or may not apply to you. Please complete any items that apply in the same manner as above.

- 47) During the past ten years, my spouse has been in good health...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 48) My spouse has behaved as I expected him/her to during the past ten years...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

APPENDIX C:
FUTURE LIFE EXPECTANCIES INVENTORY

FUTURE LIFE EXPECTANCIES INVENTORY**DIRECTIONS:**

Please complete the following scale concerning life experiences you expect during the next ten years of your life, by circling the number from "1" to "7" on the rating scale below each item. It looks like this:

<u>1</u>	2	3	4	5	6	<u>7</u>
Very			Might			Almost
Unlikely			Happen			Certain

Read each item and decide whether you expect that experience to happen in your next ten years. Circle the number "7" if you are "almost certain" it will happen; circle the number "1" if you think it is "very unlikely" the event or experience will happen in the next ten years; circle the number "4" if you think it might happen. Use the other numbers on the scale to indicate other amounts of likelihood.

- 1) Hospitalization for more than three days.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 2) Significant financial crisis.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 3) Forced retirement from major life work.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 4) Personal injury or illness resulting in convalescence longer than two weeks.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 5) Surgery as a hospital in-patient.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 6) Death of close family member other than spouse or child.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 7) Placement in nursing home.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 8) Death of close friend(s).

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 9) Loss of ability to drive a car.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 10) Voluntary retirement from major life work.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 11) Change of residence from home-owning to renting.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

- 12) Change of residence from one city or town to another.

<u>1</u>	2	3	4	5	6	<u>7</u>
Very						Almost
Unlikely						Certain

The following items concerning spouse and children may or may not apply to you. Please complete any items that apply in the same manner as above.

- 13) Child will leave home to make permanent residence elsewhere.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 14) Marital separation due to marital problems.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 15) Birth of grandchild.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 16) Death of child(ren).

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 17) Marriage.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 18) Death of spouse.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

- 19) Divorce.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Very						Almost
Unlikely						Certain

20) Hospitalization of spouse for more than three days.

1	2	3	4	5	6	7
Very Unlikely						Almost Certain

DIRECTIONS:

Please answer each of the following items concerning the experiences you expect during the next ten years. On the rating scale below each item, circle the number from "1" to "7" to indicate how you think your experience during the next ten years will compare with your experiences so far. The rating scale looks like this:

1	2	3	4	5	6	7
Much less than before			About the same		Much more than before	

If you think that the experience described will occur during the next ten years "much more than before," circle the number "7"; if you expect the experience will occur "much less than before," circle the number "1"; if you expect that the experience during the next ten years will be "about the same," circle the number "4." Use the other numbers on the scale to indicate other possibilities.

21) During the next ten years, my eyesight will be adequate for my activities...

1	2	3	4	5	6	7
Much less than before					Much more than before	

22) My interest in sex during the next ten years will be...

1	2	3	4	5	6	7
Much less than before					Much more than before	

23) My thoughts of death during the next ten years will be...

1	2	3	4	5	6	7
Much less than before					Much more than before	

24) During the next ten years, my sexual activity will be...

1	2	3	4	5	6	7
Much less than before					Much more than before	

- 25) My energy during the next ten years will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 26) During the next ten years, my leisure time will be meaningfully spent...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 27) During the next ten years, I will have good health...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 28) My involvement in energetic pastimes during the next ten years will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 29) During the next ten years, my physical appearance will change...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 30) During the next ten years, my physical strength will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 31) My ability to hear adequately during the next ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 32) During the next ten years, I will have responsibility for an aging relative...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

33) My confidence in myself during¹⁴⁸ the next ten years will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

34) During the next ten years, my ability to think clearly will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

35) I will find it difficult to remember recent happenings during the next ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

36) I will be satisfied with my social relationships during the next ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

37) My involvement in religious activities during the next ten years will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

38) During the next ten years, my involvement and satisfaction in life work will be...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

39) I will be mobile about the community during the next ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 40) During the next ten years, I will feel depressed...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 41) I will continue to be able to perform daily activities of caring for myself during the next ten years...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 42) I will enjoy social activities during the next ten years...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 43) During the next ten years, I will be interested in happenings of the world outside my family and friends...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 44) During the next ten years, I will feel a sense of accomplishment of my life goals...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 45) I will be satisfied with my family relationships during the next ten years...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 46) During the next ten years, I will be able to concentrate...

<u>1</u>	2	3	4	5	6	<u>7</u>
Much less					Much more	
than before					than before	

- 47) During the next ten years, I will participate in community activities...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

The following items concerning spouse may or may not apply to you. Please complete any items that apply in the same manner as above.

- 48) During the next ten years, my spouse will be in good health...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

- 49) My spouse will behave as I expect during the next ten years...

1	2	3	4	5	6	7
Much less					Much more	
than before					than before	

APPENDIX D:

VALUE ORIENTATION INVENTORY & GOOD IMPRESSIONS SCALE

VALUE-ORIENTATION INVENTORY

This booklet contains a series of statements. Read each one, decide how you feel about it, and then mark your answer in the column beside each number. If you agree with a statement, or feel that it is true about you, answer TRUE. If you disagree with a statement, or feel that it is not true about you, answer FALSE. If you find a few questions which you cannot or prefer not to answer, they may be omitted.

TRUE FALSE

- | | | |
|-------|-------|---|
| _____ | _____ | 1. Some people exaggerate their troubles in order to get sympathy. |
| _____ | _____ | 2. I always follow the rule: business before pleasure. |
| _____ | _____ | 3. I have had very peculiar and strange experiences. |
| _____ | _____ | 4. When a person "pads" his income tax report so as to get out of some of his taxes, it is just as bad as stealing money from the government. |
| _____ | _____ | 5. It's a good thing to know people in the right places so you can get traffic tags, and such things, taken care of. |
| _____ | _____ | 6. I am often said to be hotheaded. |
| _____ | _____ | 7. I gossip a little at times. |
| _____ | _____ | 8. I tend to be on my guard with people who are somewhat more friendly than I had expected. |
| _____ | _____ | 9. There are a few people who just cannot be trusted. |
| _____ | _____ | 10. I sometimes pretend to know more than I really do. |
| _____ | _____ | 11. Sometimes I feel like smashing things. |
| _____ | _____ | 12. I think I would like the work of a schoolteacher. |
| _____ | _____ | 13. Most people would tell a lie if they could gain by it. |
| _____ | _____ | 14. When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing. |

TRUE FALSE

- ___ 15. Some of my family have quick tempers.
- ___ 16. I hate to be interrupted when I am working on something.
- ___ 17. I have often met people who were supposed to be experts who were no better than I.
- ___ 18. Sometimes I feel like swearing.
- ___ 19. Sometimes I cross the street just to avoid meeting someone.
- ___ 20. I get excited very easily.
- ___ 21. When I get bored I like to stir up some excitement.
- ___ 22. I like to boast about my achievements every now and then.
- ___ 23. There have been times when I have been very angry.
- ___ 24. I must admit I often try to get my own way regardless of what others may want.
- ___ 25. Sometimes I think of things too bad to talk about.
- ___ 26. I would do almost anything on a dare.
- ___ 27. I must admit that I often do as little work as I can get by with.
- ___ 28. I like to listen to symphony orchestra concerts on the radio.
- ___ 29. I am fascinated by fire.
- ___ 30. The average person is not able to appreciate art and music very well.
- ___ 31. I get pretty discouraged sometimes.
- ___ 32. At times I feel like picking a fist fight with someone.
- ___ 33. Sometimes I have the same dream over and over.

TRUE FALSE

- ___ 34. I don't blame anyone for trying to grab all he can get in this world.
- ___ 35. Planning one's activities in advance is very likely to take most of the fun out of life.
- ___ 36. I do not always tell the truth.
- ___ 37. I always try to consider the other fellow's feelings before I do something.
- ___ 38. I fall in and out of love rather easily.
- ___ 39. I feel as good now as I ever have.
- ___ 40. I wake up fresh and rested most mornings.
- ___ 41. I seldom or never have dizzy spells.
- ___ 42. I enjoy hearing lectures on world affairs.
- ___ 43. Parents are much too easy on their children nowadays.
- ___ 44. Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.
- ___ 45. I consider a matter from every standpoint before I make a decision.
- ___ 46. Criticism makes me very uncomfortable.
- ___ 47. If I am not feeling well I am somewhat cross and grouchy.
- ___ 48. A person should adapt his ideas and his behavior to the group that happens to be with him at the time.
- ___ 49. I have the wanderlust and am never happy unless I am roaming or traveling about.
- ___ 50. I feel nervous if I have to meet a lot of people.
- ___ 51. I am sometimes cross and grouchy without any good reason.
- ___ 52. I do not mind taking orders and being told what to do.

TRUE FALSE

- ___ 53. I often act on the spur of the moment without stopping to think.
- ___ 54. I never make judgments about people until I am sure of the facts.
- ___ 55. I have had blank spells in which my activities were interrupted and I did not know what was going on around me.
- ___ 56. Most people are secretly pleased when someone else gets into trouble.
- ___ 57. I always tried to make the best school grades that I could.
- ___ 58. Sometimes I feel as if I must injure either myself or someone else.
- ___ 59. I have had more than my share of things to worry about.
- ___ 60. I often do whatever makes me feel cheerful here and now, even at the cost of some distant goal.
- ___ 61. I can remember "playing sick" to get out of something.
- ___ 62. I like to keep people guessing what I'm going to do next.
- ___ 63. The most important things to me are my duties to my job and to my fellowman.
- ___ 64. When things go wrong I sometimes blame the other fellow.
- ___ 65. I have often found people jealous of my good ideas, just because they had not thought of them first.
- ___ 66. Sometimes at elections I vote for men about whom I know very little.
- ___ 67. Most people are honest chiefly through fear of being caught.

TRUE FALSE

- ___ 68. In school I was sometimes sent to the principal for cutting up.
- ___ 69. I would like to belong to a discussion and study club.
- ___ 70. I am apt to show off in some way if I get the chance.
- ___ 71. The future is too uncertain for a person to make serious plans.
- ___ 72. Sometimes I just can't seem to get going.
- ___ 73. When a man is with a woman he is usually thinking about things related to her sex.
- ___ 74. I must admit that I have a bad temper, once I get angry.
- ___ 75. I must admit I find it very hard to work under strict rules and regulations.
- ___ 76. When prices are high you can't blame a person for getting all he can while the getting is good.
- ___ 77. I have never deliberately told a lie.
- ___ 78. I always try to do at least a little better than what is expected of me.
- ___ 79. There have been a few times when I have been very mean to another person.
- ___ 80. I think most people would lie to get ahead.
- ___ 81. At times I have been very anxious to get away from my family.
- ___ 82. I often lose my temper.
- ___ 83. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to.
- ___ 84. I have very few quarrels with members of my family.
- ___ 85. If I get too much change in a store, I always give it back.

TRUE FALSE

- ___ 86. I often get disgusted with myself.
- ___ 87. A large number of people are guilty of bad sexual conduct.
- ___ 88. There have been times when I have worried a lot about something that was not really important.
- ___ 89. Every now and then I get into a bad mood, and no one can do anything to please me.
- ___ 90. I feel that I have often been punished without cause.
- ___ 91. At times I have a strong urge to do something harmful or shocking.
- ___ 92. I often get feelings like crawling, burning, tingling, or "going to sleep" in different parts of my body.
- ___ 93. I don't seem to care what happens to me.
- ___ 94. Police cars should be especially marked so that you can always see them coming.
- ___ 95. If I am driving a car, I try to keep others from passing me.
- ___ 96. I hardly ever feel pain in the back of the neck.
- ___ 97. Sometimes I used to feel that I would like to leave home.
- ___ 98. I am made nervous by certain animals.
- ___ 99. Some of my family have habits that bother and annoy me very much.
- ___ 100. No one seems to understand me.
- ___ 101. I seldom worry about my health.
- ___ 102. I have never seen a vision.
- ___ 103. Life with my parents was always very pleasant.

TRUE FALSE

- ___ 104. I would rather be a steady and dependable worker than a brilliant but unstable one.
- ___ 105. There are certain people whom I dislike so much that I am inwardly pleased when they are catching it for something they have done.
- ___ 106. I am known as a hard and steady worker.
- ___ 107. I daydream very little.
- ___ 108. Life usually hands me a pretty raw deal.
- ___ 109. At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.
- ___ 110. I have one or more bad habits which are so strong that it is no use fighting against them.
- ___ 111. I am bothered by acid stomach several times a week.
- ___ 112. I get all the sympathy I should.
- ___ 113. It often seems that my life has no meaning.
- ___ 114. I used to steal sometimes when I was a youngster.
- ___ 115. My home as a child was less peaceful and quiet than those of most other people.
- ___ 116. As a youngster in school I used to give the teachers lots of trouble.
- ___ 117. I never cared much for school.
- ___ 118. The members of my family were always very close to each other.
- ___ 119. I set a high standard for myself and I feel others should do the same.
- ___ 120. I work under a great deal of tension.
- ___ 121. My family has objected to the kind of work I do, or plan to do.

TRUE FALSE

- ____ 122. It is hard for me just to sit still and relax.
- ____ 123. I like to eat my meals quickly and not spend a lot of time at the table visiting and talking.
- ____ 124. If a person doesn't get a few lucky breaks in life it just means that he hasn't been keeping his eyes open.
- ____ 125. I sometimes tease animals.

APPENDIX E:
EXPRESSED INTEREST INVENTORY

YOUR COMPLETION OF THIS FORM WILL BE VERY MUCH APPRECIATED AND DOES
NOT OBLIGATE YOU TO PARTICIPATE IN THIS STUDY ANY FURTHER.

Expressed Interest Inventory

Name _____ Address _____

Home Phone _____ Birthdate _____

Sex _____ M _____ F

Education: (Please circle the number of years of formal education
 you have completed.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

I. DIRECTIONS: Five topics are listed below, describing the five
 workshops available in this study. Please rate your interest in
 each topic by circling a number on the scale below it. Circle "7"
 if you are very interested; circle "1" if you are not at all inter-
 ested; circle the numbers in between to show interest at some inter-
 mediate level.

1) Memory and Thinking The processes of thinking clearly and
 remembering are important to us all. Information about cognitive
 processes and strategies for maintaining clear thinking and good
 memory will be shared.

1 2 3 4 5 6 7
 Not at all Very
 Interested Interested

2) Family Life Families in later life may have common experiences of retirement, widowhood, and changed relationships with young people. Information and discussion provide opportunities to share common experiences and ways to enjoy family life -- as married or single people.

1	2	3	4	5	6	7
Not at all			Very			
Interested			Interested			

3) Social and Emotional Life In later life, there may be some changes in social relationships and how we view ourselves. This workshop will explore suggestions for continuing satisfying friendships and self-attitudes.

1	2	3	4	5	6	7
Not at all			Very			
Interested			Interested			

4) The Physical Self The normal processes of aging include some physical changes. The nature of these changes and suggestions for coping with those which might interfere with activities will be explored.

1	2	3	4	5	6	7
Not at all			Very			
Interested			Interested			

5) Work and Leisure People need meaningful activities in their daily lives. Changes in work roles may affect a sense of fulfillment. This workshop will provide information about work and leisure and explore ways that both might be more satisfying.

1	2	3	4	5	6	7
Not at all			Very			
Interested			Interested			

II. DIRECTIONS: Please indicate below which of the workshops you might attend, by placing a checkmark in the blank at the left of each workshop name. You may attend as many workshops as you wish.

- 1) _____ Memory and Thinking
- 2) _____ Family Life
- 3) _____ Social and Emotional Life
- 4) _____ The Physical Self
- 5) _____ Work and Leisure

III. DIRECTIONS: Each item below describes a reason which might encourage your attendance at workshops. Please circle the number from "1" to "7" below each item to show how important each reason is in your consideration to attend. Circle "7" if the reason is "very important" in considering to attend. Circle "1" if the reason is "not important." Use the other numbers on the scale to indicate intermediate levels of importance.

- 1) I am interested in knowing more about a workshop topic.

1	2	3	4	5	6	7
Not Important					Very Important	

- 2) I am curious to see what will happen.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important						Very Important	

Not Important

Very Important

- 2) I am curious to see what will happen.

1 2 3 4 5 6 7
Not Important Very Important

- 3) It would be fun to get together with other people.

1 2 3 4 5 6 7
Not Important Very Important

- 4) It would provide a change of pace.

1 2 3 4 5 6 7
Not Important Very Important

- 5) I might find some useful information.

1 2 3 4 5 6 7
Not Important Very Important

- 6) I might find some possible solutions to difficulties in my life.

1 2 3 4 5 6 7
Not Important Very Important

- 7) Other, if any (Please explain) _____

1 2 3 4 5 6 7
Not Important Very Important

(PLEASE CONTINUE ON NEXT PAGE)

IV. DIRECTIONS: Each item below describes a reason which might discourage your attendance at workshops. Please circle the number from "1" to "7" below each item to show how important each reason is in your consideration to attend. Circle "7" if the reason is "very important" in considering to attend. Circle "1" if the reason is "not important." Use the other numbers on the scale to indicate intermediate levels of importance.

- 1) I am not interested in the workshop topics.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 2) Transportation problems or conflict with workshop times.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 3) Not enough time to attend.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 4) I would not like to be in a group activity with others.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 5) Not enough energy; poor health.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 6) I would not like to participate in any educational program.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

- 7) Other, if any (Please explain) _____

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important				Very Important		

APPENDIX F:
WORKSHOP PARTICIPATION INVENTORY

Workshop Participation Inventory

Name _____

DIRECTIONS:

Each item below describes a reason which might have encouraged your attendance at today's workshop. Please circle the number from "1" to "7" below each item to show how important each reason was in your consideration to attend. Circle "7" if the reason was "very important" in considering to attend. Circle "1" if the reason was "not important." Use the other numbers on the scale to indicate intermediate levels of importance.

1. I was interested in knowing more about this workshop topic.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

2. I was curious to see what would happen.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

3. It is fun to get together with other people.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

4. It provides a change of pace.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

5. I might find some useful information.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

6. I might find some possible solutions to difficulties in my own life.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

7. Other, if any (Please explain) _____

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not Important					Very Important	

APPENDIX G:
WORKSHOP EVALUATION FORM

Workshop Evaluation Form

Please circle the number on the following rating scales that best describes your evaluation of the item.

1. Overall, I found today's workshop:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Interesting						Interesting

2. Overall, I found today's workshop:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Enjoyable						Enjoyable

3. Information about aging presented today was:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Interesting						Interesting

4. Discussions and other activities with participants were:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Interesting						Interesting

5. Information about aging presented today was:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Useful						Useful

6. Suggestions for dealing effectively with changes in later life were:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Useful						Useful

7. It is likely that I might use some of the ideas presented today in my daily life:

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Not at all						Very
Likely						Likely

APPENDIX H:
TESTS OF WORKSHOP KNOWLEDGE

Knowledge Test

Name _____

Thinking & Memory--Workshop I

Multiple choice Place the letter of the correct answer in the blank to the left of each question.

- _____ 1. Intelligence tests are most useful for predicting:
A. Work performance
B. Creative thinking
C. Problem-solving
D. School performance
- _____ 2. Older people's performance on thinking tasks is often poorer when:
A. Vocabulary is involved
B. Memory for meaningful information is involved
C. Everyday learning is involved
D. Motor speed is involved
- _____ 3. In laboratory tests of learning, older people may do more poorly than younger persons due to:
A. Distractions
B. High physical arousal
C. Low energy
D. Low physical arousal
- _____ 4. What might be one way to help remember the name of a new person you have just met?
A. Make an association with his/her name
B. Stare very hard at the person
C. More easily remembered when you haven't been drinking
D. Take vitamin E
- _____ 5. A woman spends all her time alone in her home, usually sitting and staring. She eats well and occasionally watches TV. What might be an important factor in her becoming mentally confused?
A. Too much TV
B. Too little cognitive stimulation
C. Senility
D. Lack of fresh air

True or False Write "T" or "F" in the blank to indicate whether you think the statement is true or false.

- _____ 6. Intelligence stops developing in early adulthood.
- _____ 7. Most older people can expect to become senile.
- _____ 8. Continued mental activity is thought to be a major factor in mental alertness.

- ____ 9. Older people can't learn new motor tasks, like crocheting.
- ____ 10. Many people retain a sound memory in very late years.

Matching Place the letter in the blank that best fits the term or phrase in the lefthand column.

- | | |
|--|--|
| ____ 11. Interference with old skills | A. 25% |
| ____ 12. Oxygen flow to the brain | B. Permanent mental confusion; an overused term |
| ____ 13. Percentage of those 65 or over living in institutions | C. Related to heart size |
| ____ 14. Senility | D. Affects short-term memory greatly |
| ____ 15. Self-pacing | E. Frequent reason for slower learning of new tasks among older people |
| | F. 4-5% |
| | G. Quite helpful in older person's learning |

Knowledge Test

Name _____

Family Life--Workshop II

Multiple choice Place the letter of the correct answer in the blank to the left of each question.

- _____ 1. The approximate percentage of people over 65 living with their children is:
A. 80-85
B. 45-50
C. 25-30
D. 5-10
- _____ 2. Compared with fifty years ago, the number of years a married couple have together after children leave the home has:
A. Increased
B. Decreased
C. Stayed the same
D. Is unknown
- _____ 3. The percentage of persons over 65 living in all types of institutions is about:
A. 10-15%
B. 35-40%
C. 4-5%
D. 55-60%
- _____ 4. Which of the following aged women would be more likely to cope well with the death of a spouse?
A. 35
B. 45
C. 50
D. 65
- _____ 5. One suggestion made by Lopata for coping with the major changes of widowhood is:
A. Make some immediate life changes
B. Take a long trip
C. Seek out friends of the opposite sex
D. Wait a year to make important decisions
- _____ 6. Which of the following age groups are more likely to think marriage late in life is improper:
A. Children
B. Young married people
C. Retired people
D. Middle-aged

- ___ 7. In coping with the death of a loved one:
- A. Age of the loved one may be important in adjustment to the death
 - B. Psychological preparation for the death may be quite helpful in adjustment
 - C. Unexpected death may be easiest to cope with
 - D. Age of the mourner may be important in and of itself
- ___ 8. Most grandparents report:
- A. Their role as grandparent is very important
 - B. Varying importance of grandparent role
 - C. Dissatisfaction with grandparent role
 - D. Discomfort with grandparent role
- ___ 9. Men over 65, compared with women over 65 are:
- A. Half as likely to marry
 - B. Six times as likely to marry
 - C. Equally as likely to marry
 - D. Twice as likely to marry
- ___ 10. In dealing with differences in values with other generations, it may be effective to:
- A. Focus on values that are similar
 - B. Avoid other generations
 - C. Steer conversations away from differences and ignore
 - D. Accept all values different than your own
- True or False Place a "T" or "F" in the blank to indicate whether you think the statement is true or false.
- ___ 11. A majority of aged persons report feeling neglected by family.
- ___ 12. Many older persons ask for help from a daughter more often than a son.
- ___ 13. Most older people would like to live with their children or other younger family members.
- ___ 14. For the most part, grandparenthood occurs during middle aged years today.
- ___ 15. The majority of married couples whose children have grown up and left home report satisfaction with married life in research studies.

Knowledge Test

Name _____

Social & Emotional Life--Workshop III

Multiple Choice Place the letter of the correct answer in the blank to the left of each question.

- _____ 1. Which of the following explains why accepting an identification of one's self as "old" may be associated with less successful aging?
 - A. General negative stereotype of old in our society
 - B. Retirement is used to define beginning of old age
 - C. Old people are not psychologically well adjusted
 - D. High percentage of institutionalization of the old
- _____ 2. Which of the following groups has the highest rates of suicide?
 - A. Middle aged males
 - B. Middle aged females
 - C. Older females
 - D. Older males
- _____ 3. The theory that older persons are content to withdraw from the world as a part of normal aging is:
 - A. Activity theory
 - B. Disengagement theory
 - C. Morale theory
 - D. Erikson's theory
- _____ 4. Tangible social losses experienced in later life usually result in:
 - A. A proportional drop in self-esteem
 - B. No drop in self-esteem
 - C. Unknown drop in self-esteem; many factors involved
 - D. Some loss of self-esteem
- _____ 5. The most socially isolating physical disability among the following is probably:
 - A. Loss of vision
 - B. Loss of hearing
 - C. Loss of ability to move around freely
 - D. External signs of aging
- _____ 6. Which of the following reasons supports the position that aged persons are a minority group in our society?
 - A. Clear identity of the aged as a group
 - B. A separate culture from the culture at large
 - C. Organization of aged as a viable group
 - D. Exclusion from interaction in some groups

- ____ 7. Among older persons studied through research, thoughts of death:
- A. Are associated with great fear
 - B. Are usually avoided
 - C. Are common, but death is somewhat accepted
 - D. Don't lead to psychological or other preparations for death
- ____ 8. Which of the following is not true about the grief process?
- A. The most intense grief is usually over in one to two months
 - B. The use of sedatives immediately after the death aids the grief process
 - C. The grief process is healing and helps in the acceptance of the reality of the loss
 - D. The grief process may include some physical symptoms as well as emotional pain

True or False Write "T" or "F" in the blank to indicate whether you think the statement is true or false.

- ____ 9. Loneliness is a particularly acute problem of aged persons in comparison with other age groups.
- ____ 10. The loss of an intimate relationship providing someone to confide in often leads to depression.
- ____ 11. Sexual needs are a purely physiological drive.
- ____ 12. Older people in general have a poor self-concept.
- ____ 13. Depression is a more frequent occurrence among aged persons.
- ____ 14. The process of reminiscing over life experiences and their meaning may have a beneficial psychological effect.
- ____ 15. There may be a legitimate increase in need to pay attention to bodily functions in later life, which is a normal psychological process.

Knowledge Test

Name _____

The Physical Self--Workshop IV

Multiple Choice Place the letter of the correct answer in the blank to the left of each question.

- ____ 1. High blood pressure in later years:
 - A. Is less important to treat than in middle years
 - B. Has little effect on continued cognitive functioning if mild
 - C. Does not need to be treated
 - D. Needs to be carefully evaluated for treatment to maintain good functioning

- ____ 2. Which of the following will be helpful in coping with the eyes' decreased ability to adapt to the dark in later years?
 - A. Allow more time upon entering a dark room before moving around
 - B. Bifocal glasses
 - C. Avoid using red colors when marking curbs and other objects likely to be tripped on
 - D. Buy special glasses aiding dark adaptation

- ____ 3. Which of the following is not likely to be helpful in aiding the person with a high frequency hearing loss?
 - A. Sit close to source of sound
 - B. Reduce background noise
 - C. Use lower pitch in talking
 - D. Increase the base tones on the stereo

- ____ 4. A woman's menopause:
 - A. Usually results in the end of sexual desire
 - B. Is marked with severe psychological trauma
 - C. May create an enhancement of sexual desire
 - D. Changes a woman's personality

- ____ 5. Changes in sex hormones in both sexes in later years results in:
 - A. Disappearance of sex drive
 - B. Changes in body hair and skin texture
 - C. Increased psychological irritability
 - D. Acne

- ____ 6. Which of the following is not likely to be associated with decreased physical vigor in late life:
 - A. True aging
 - B. Undiagnosed and borderline physical diseases
 - C. Self-imposed inactivity and lack of exercise
 - D. Too much exercise throughout life

- _____ 7. Many older persons are not as tall as earlier in life. Which of the following reasons for this loss in stature can be modified?
- A. Younger generations are taller and make older persons seem comparatively shorter
 - B. Stooping due to muscular weakness
 - C. Changes in collagen material of the bones
 - D. Arthritic disease process
- _____ 8. High frequency hearing loss, which may be experienced during later years,
- A. Results in total deafness
 - B. Can't be corrected with a hearing aid
 - C. Results in inability to hear consonants in spoken speech
 - D. Is caused by a build up of ear wax
- _____ 9. Which of the following is not likely to be helpful in eliminating any difficulties as a result of motor slowing in later years:
- A. Avoid time-pressure activities
 - B. Physical fitness
 - C. Maintained self-confidence
 - D. Megavitamins
- _____ 10. In general, physical aging:
- A. Is due to wear and tear on the body
 - B. Begins at age 60
 - C. Is experienced differently by different persons
 - D. Produces senility

True or False Write "T" or "F" in the blank to indicate whether you think the statement is true or false.

- _____ 11. The lifespan of humans has increased significantly over the last hundred years.
- _____ 12. Sexual activity among persons over 70 years of age is unhealthy and physically damaging.
- _____ 13. There is evidence that training programs of physical exercise can increase physical vigor in many older persons.
- _____ 14. Prostatic surgery and hysterectomy result in inability to participate in sexual activity.
- _____ 15. Length of life is known to be genetically linked.

Knowledge Test

Name _____

Work & Leisure--Workshop V

Multiple Choice Place the letter of the correct answer in the blank to the left of each question.

- _____ 1. Immediately after retirement, most people experience:
 - A. Decline in feelings of usefulness
 - B. Decline in financial income
 - C. Decline in satisfaction with life
 - D. Decline in activity level
- _____ 2. Which of the following may be likely to be more satisfactory retirement pattern?
 - A. Business executive who retires to beachcomb
 - B. Professional musician takes up electronics
 - C. Government employee gets involved with political action
 - D. Salesman who takes up coin-collecting
- _____ 3. Which of the following exemplifies the "process" of retirement?
 - A. School superintendent loses social position in the community at retirement
 - B. Company retirement party
 - C. Office clerk explores RSVP activities before retiring
 - D. Married couple experiences 50% decrease in income at retirement
- _____ 4. Which one of the following patterns of retirement transition would be Least likely to lead to good "adjustment"?
 - A. Very active person who is very active in retirement
 - B. Low active person who is low active in retirement
 - C. Low active person who is moderately active in retirement
 - D. Moderately active person who is moderately active in retirement
- _____ 5. Which of the following would be a complementary leisure activity for a business person who works at a desk job?
 - A. Reading a professional journal
 - B. Hunting
 - C. Writing non-fiction
 - D. Watching TV
- _____ 6. The slowing of motor activities in later life:
 - A. Seriously handicaps office workers in their 60s
 - B. Is no handicap to assembly line workers of any age
 - C. Decreases productivity of college professor
 - D. Has unknown effect on most jobs

- ____ 7. A "career clock" is:
- A. Subjective sense of meeting career goals on time
 - B. The time clock at work
 - C. Timing of promotions
 - D. Amount of leisure time a person allows
- ____ 8. Studies of great contributions in various fields suggest:
- A. Greatest contributions in arts are in 60s
 - B. Greatest contributions in sciences are in 20s
 - C. Greatest contributions of University professors are in 50s
 - D. Greatest contributions are often in 40s

True or False Write "T" or "F" in the blank to indicate whether you think the statement is true or false.

- ____ 9. Employee turnover and absenteeism among middle aged and older workers is less than other age groups of workers.
- ____ 10. There is little evidence for a decline in mental health immediately after retirement for most people.
- ____ 11. Men are more reluctant to retire than women, on the whole.
- ____ 12. The definition of leisure depends on the definition of work.
- ____ 13. The social role ambiguity in retirement may be tolerated better by older people than other age groups tolerate role ambiguity.
- ____ 14. Most middle-aged workers asked if they would continue to work if they were financially independent say they would stop working.
- ____ 15. Today, men tend to enter the work force later and retire earlier compared with 1900.

APPENDIX I :
INFORMED CONSENT FORM

Informed Consent Form

The objective of this research project is to explore many characteristics of older adults and their choices to participate in workshops about aging processes. The attached questionnaires include questions about your life experiences as an adult, attitudes about your future, and questions which provide a self-description. The last set of questions is a research scale of a personality inventory for normal persons. The workshop activities will include brief presentations of information and group activities, such as discussion.

All information gathered for this study will be kept confidential. Information identifying individual volunteers will be destroyed when the results of the study are analyzed.

Your participation in this study is completely voluntary; you may choose not to participate at any point.

If you are willing to complete the accompanying questionnaires, please sign and date the blank spaces below.

I have read the description of the purpose and procedures of this study and understand that my participation is voluntary.

Signature

Date

APPENDIX J :
AVERAGE CLUSTER GROUP PROFILES OF PRESENT STUDY

Figure 1. Average cluster I profile--present study

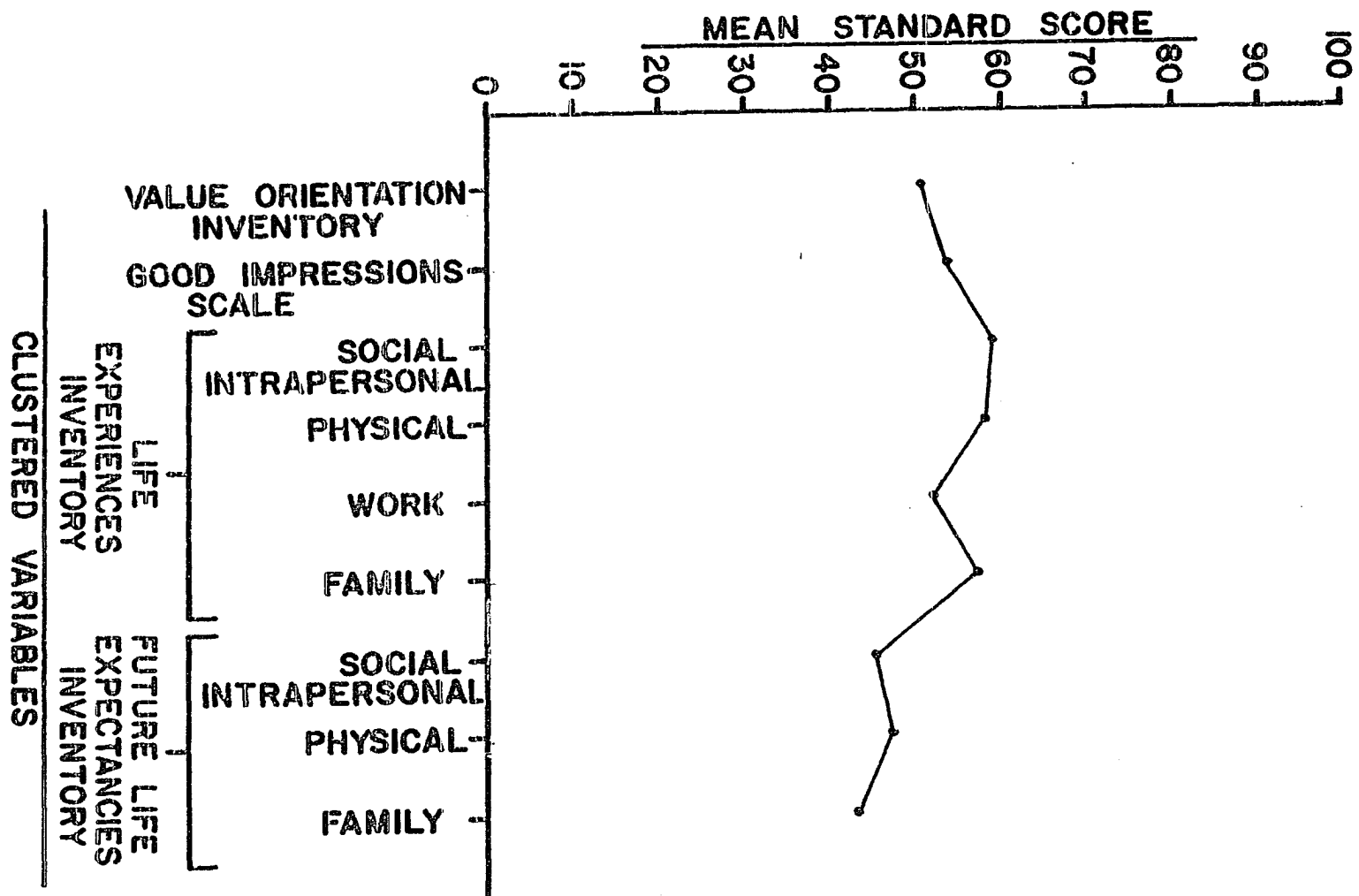


Figure 2. Average cluster II profile--present study

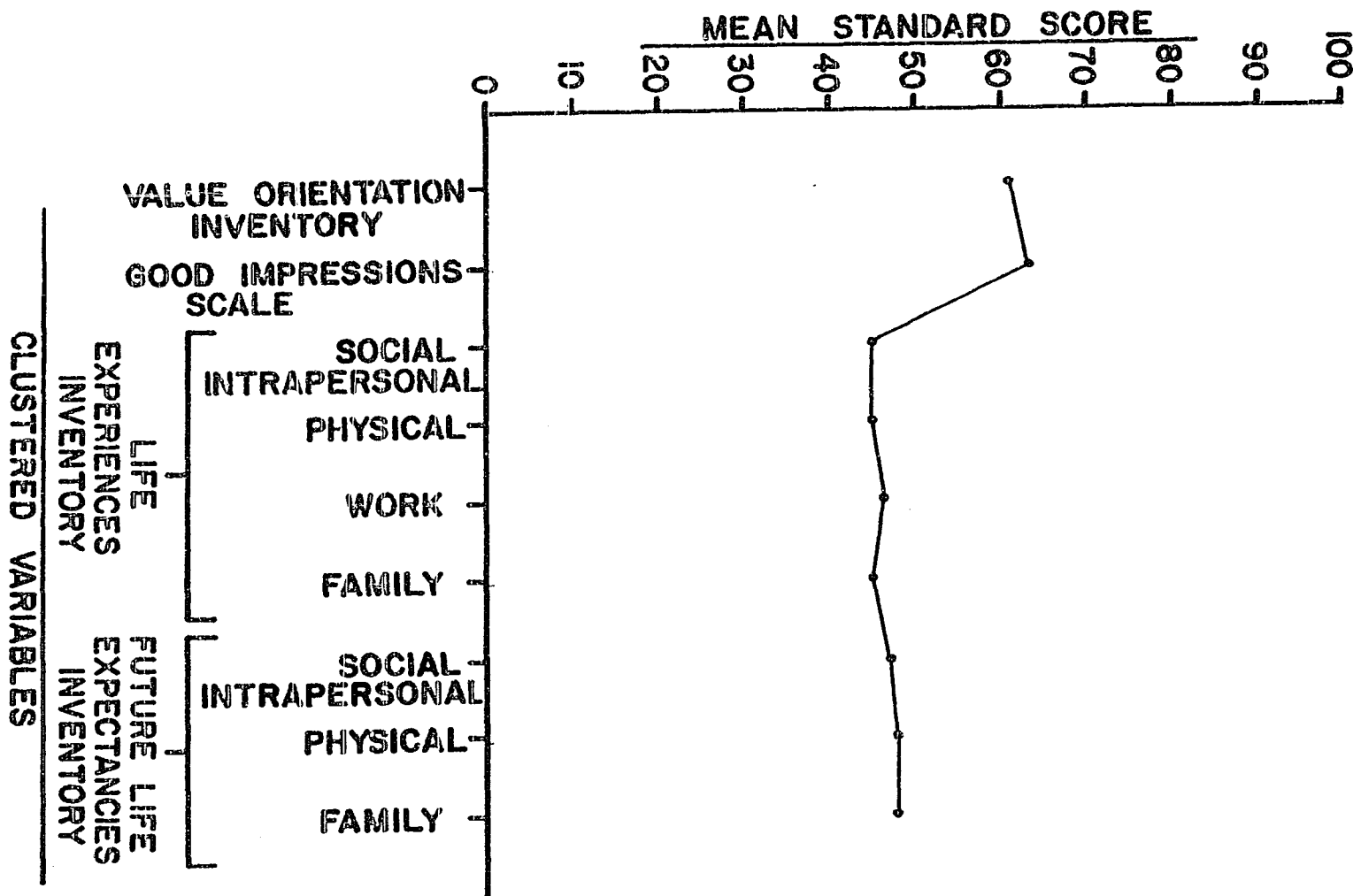


Figure 3. Average cluster III profile--present study

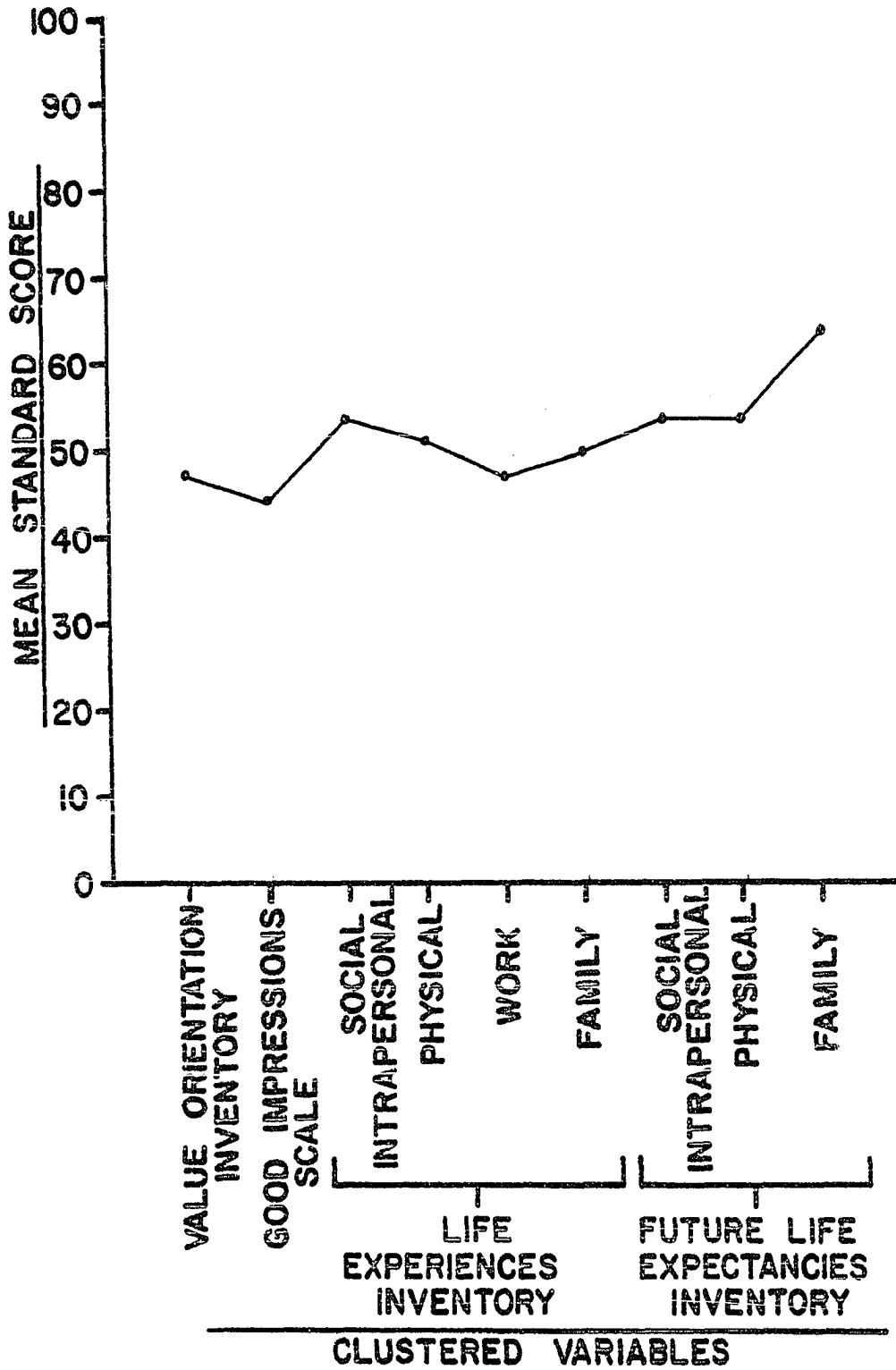


Figure 4. Average cluster IV profile--present study

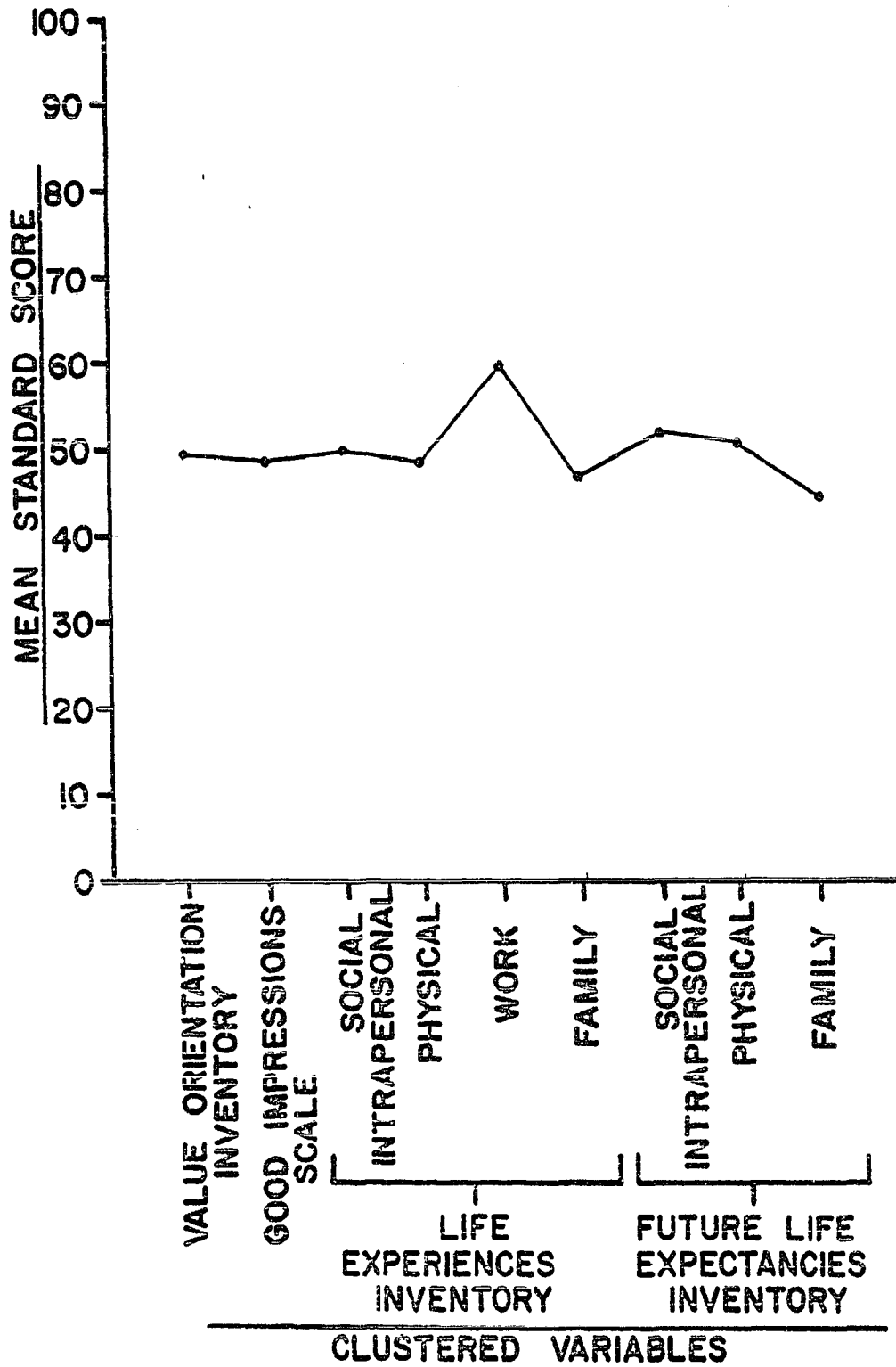


Figure 5. Average cluster V profile--present study

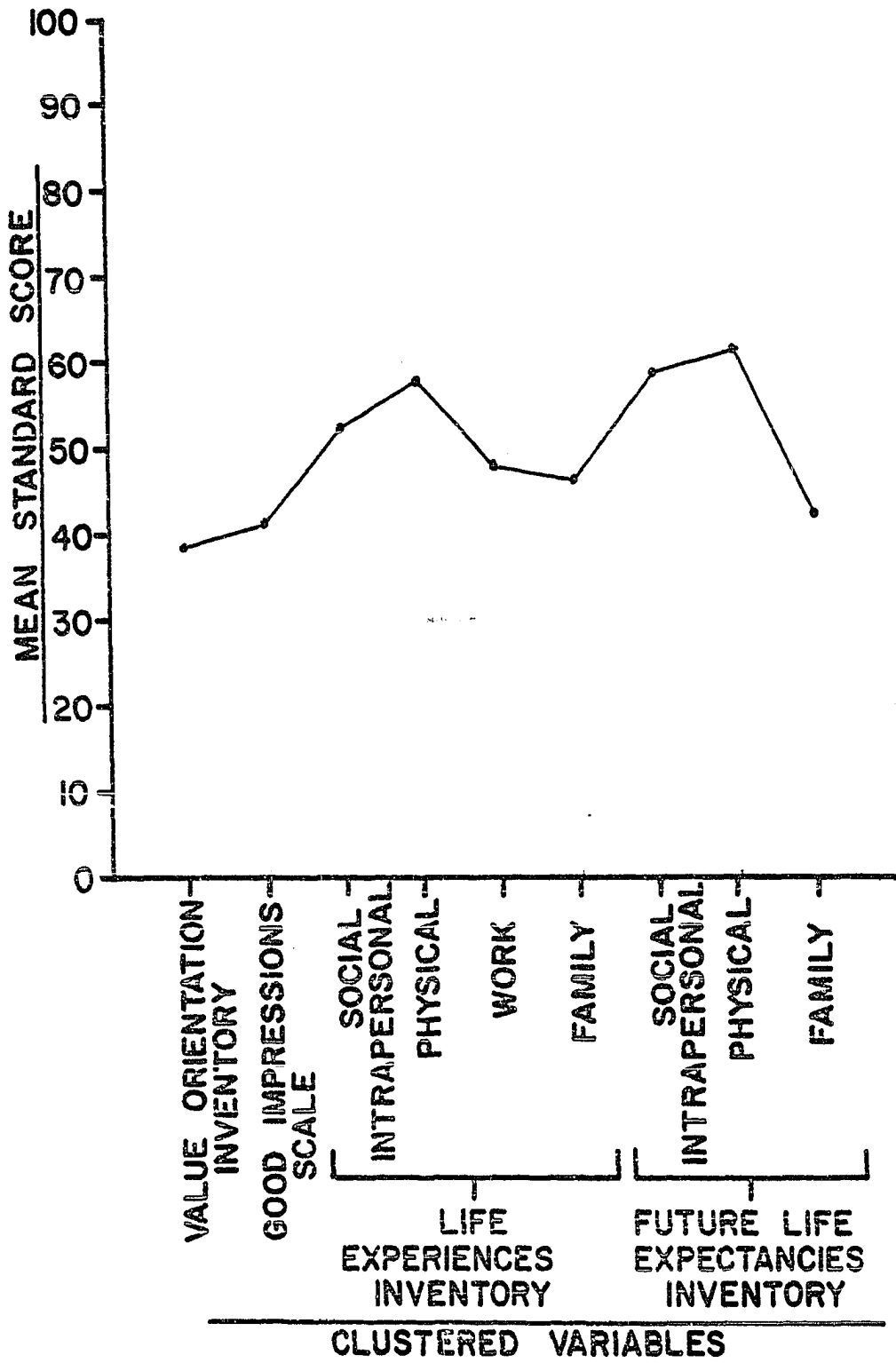


Figure 6. Average cluster VI profile--present study

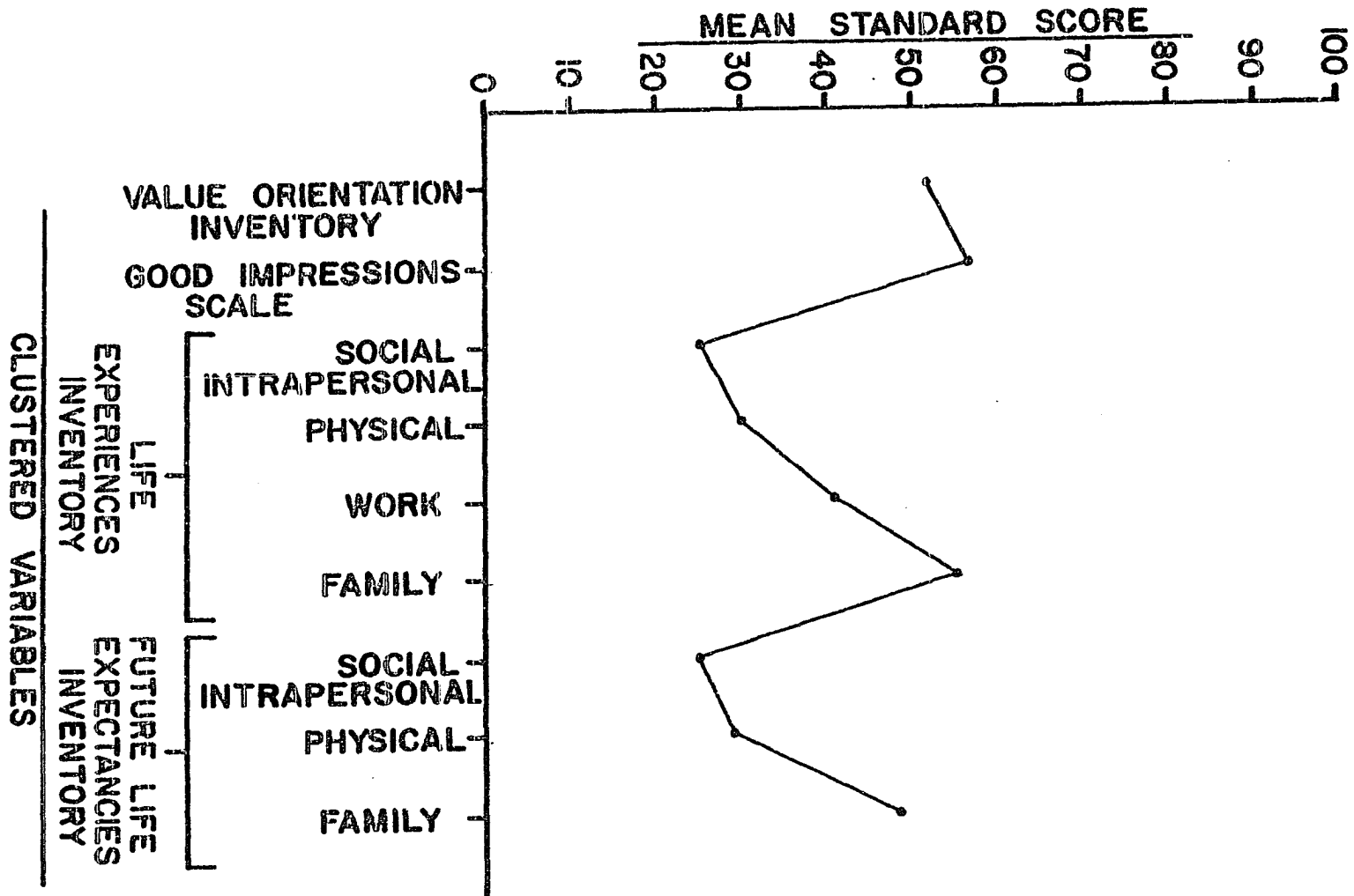
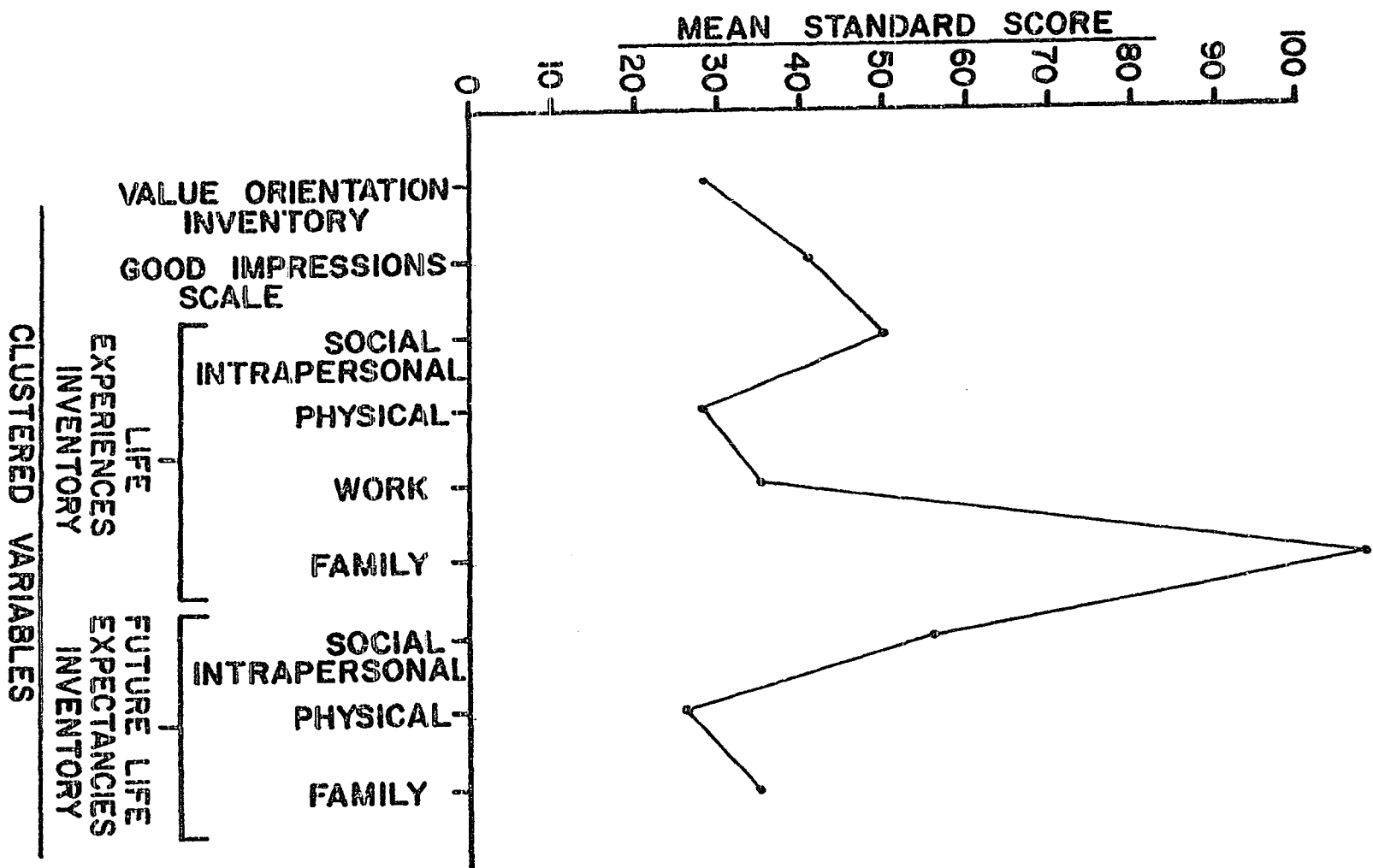


Figure 7. Average cluster VII profile--present study



APPENDIX K :

AVERAGE CLUSTER GROUP PROFILES OF PRELIMINARY STUDY

Figure 8. Average cluster 1 profile--preliminary study

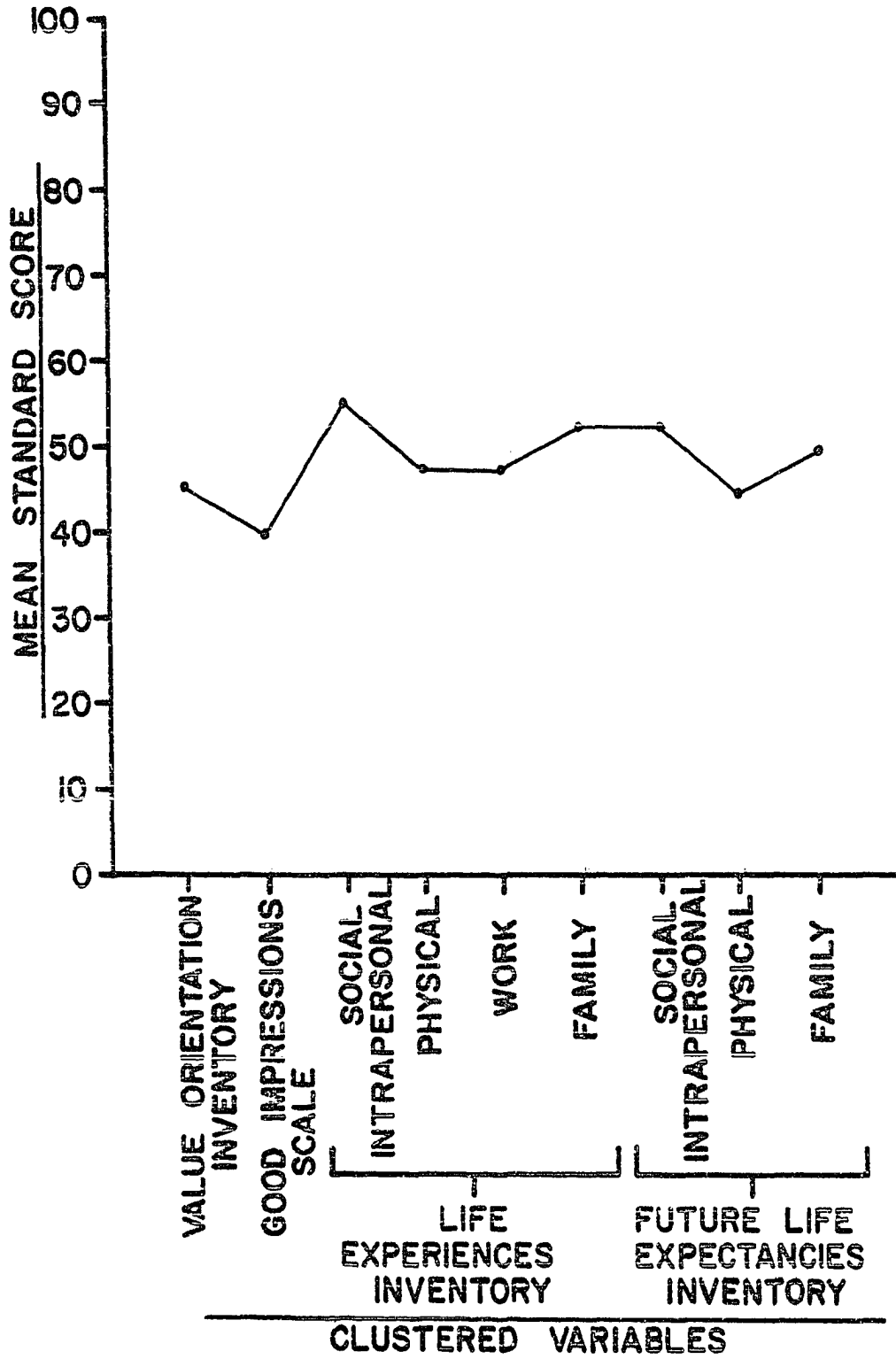


Figure 9. Average cluster 2 profile--preliminary study

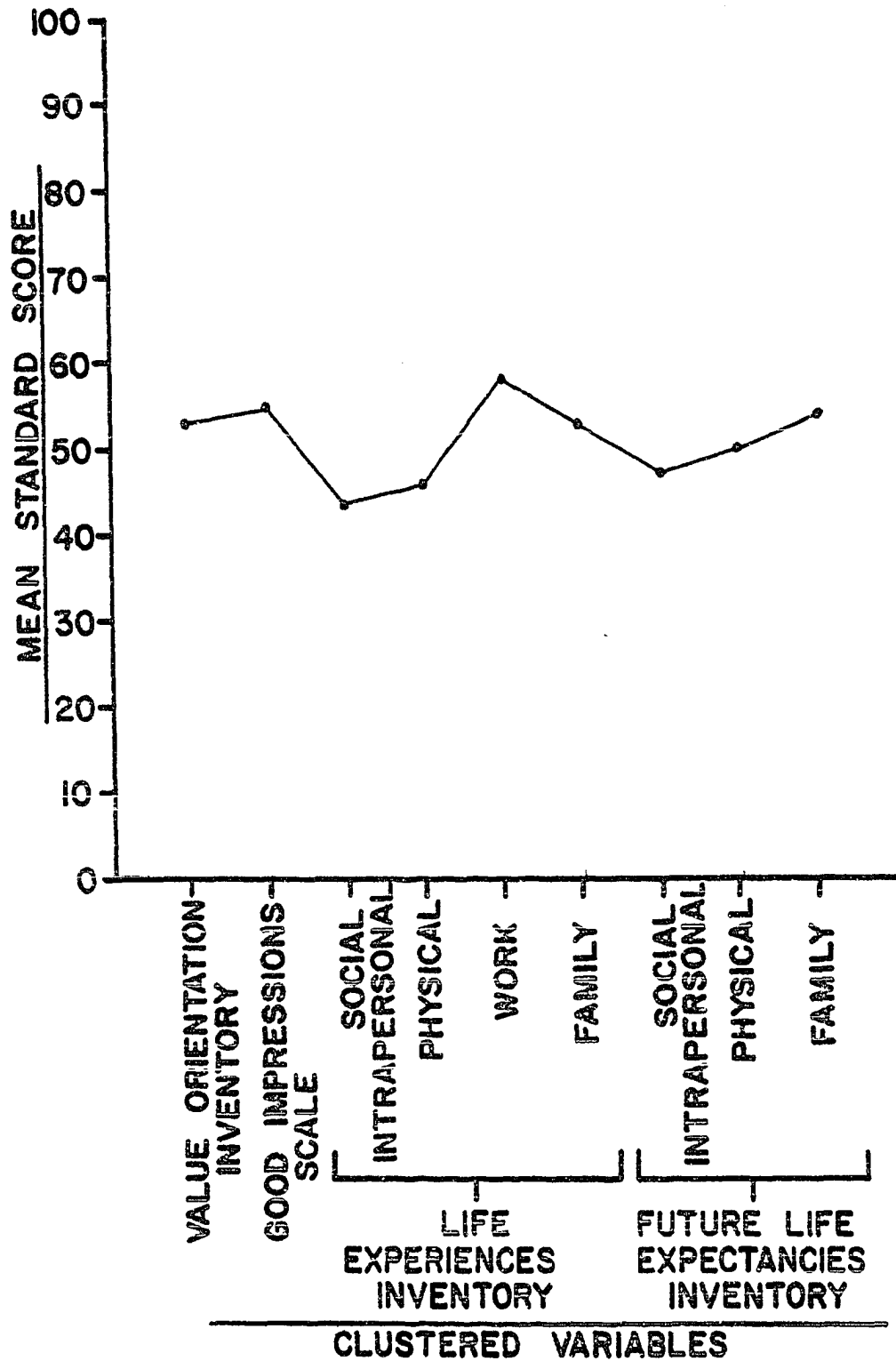


Figure 10. Average cluster 3 profile--preliminary study

6.00

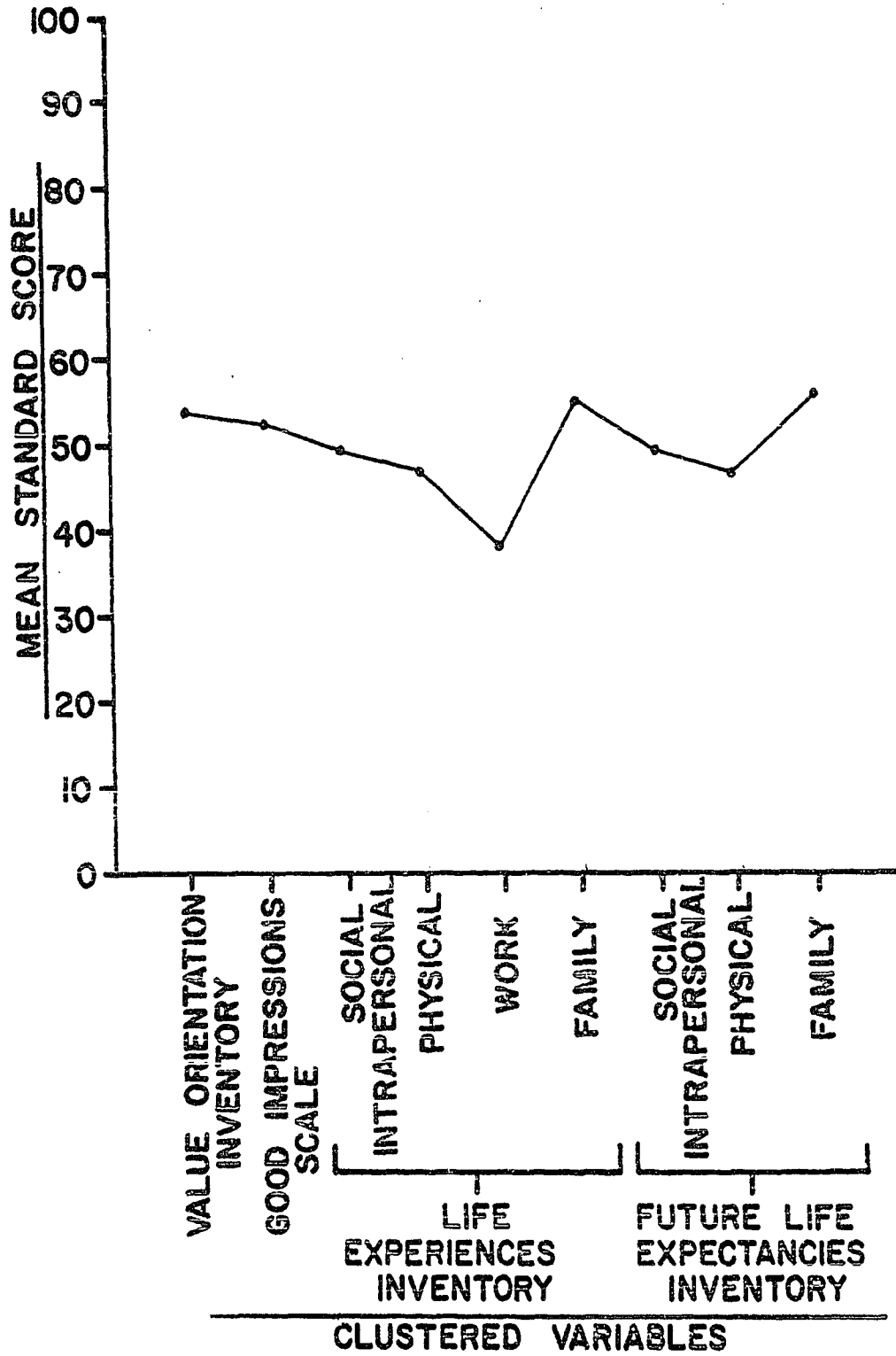


Figure 11. Average cluster 4 profile--preliminary study

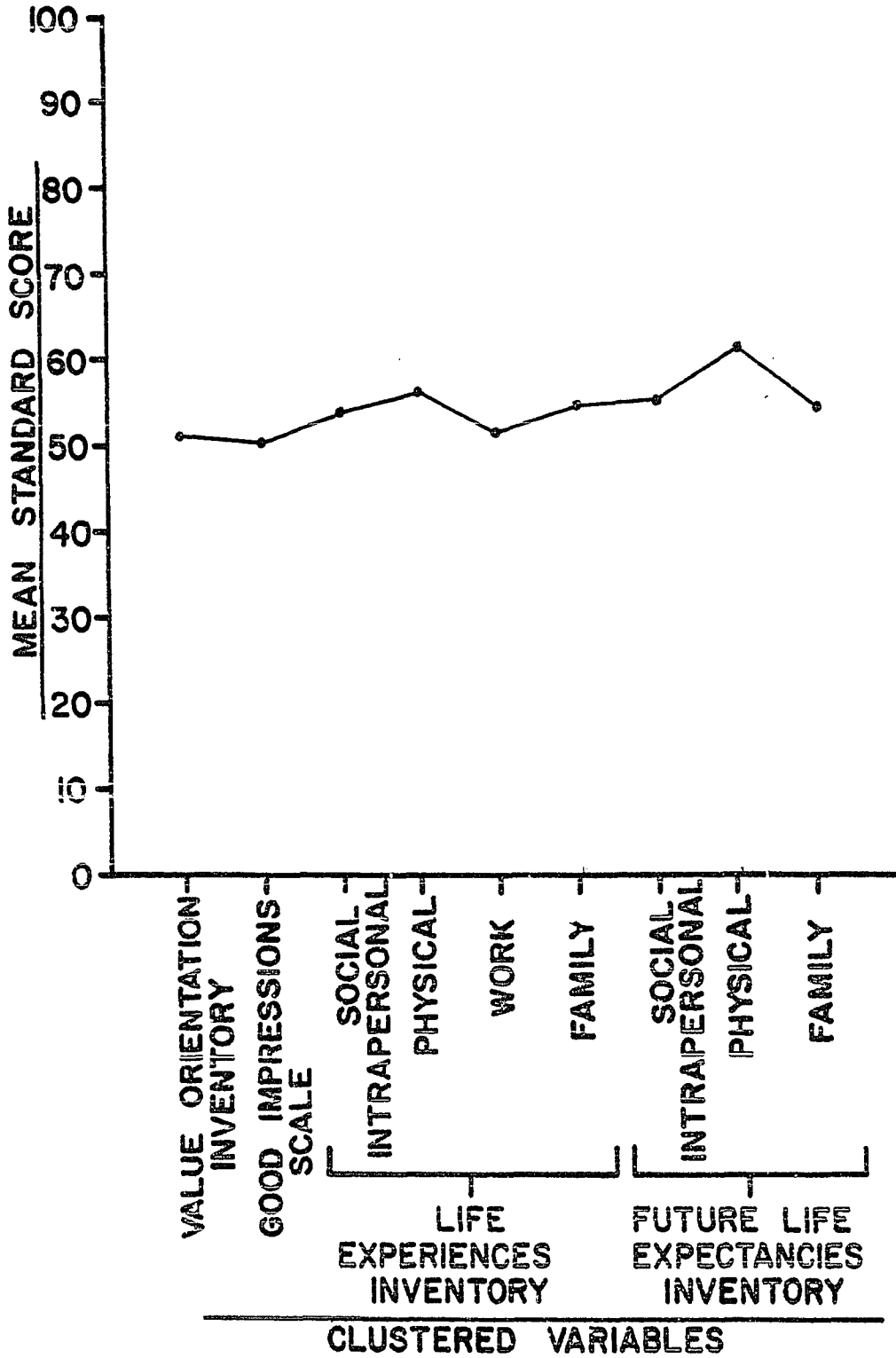


Figure 12. Average cluster 5 profile--preliminary study

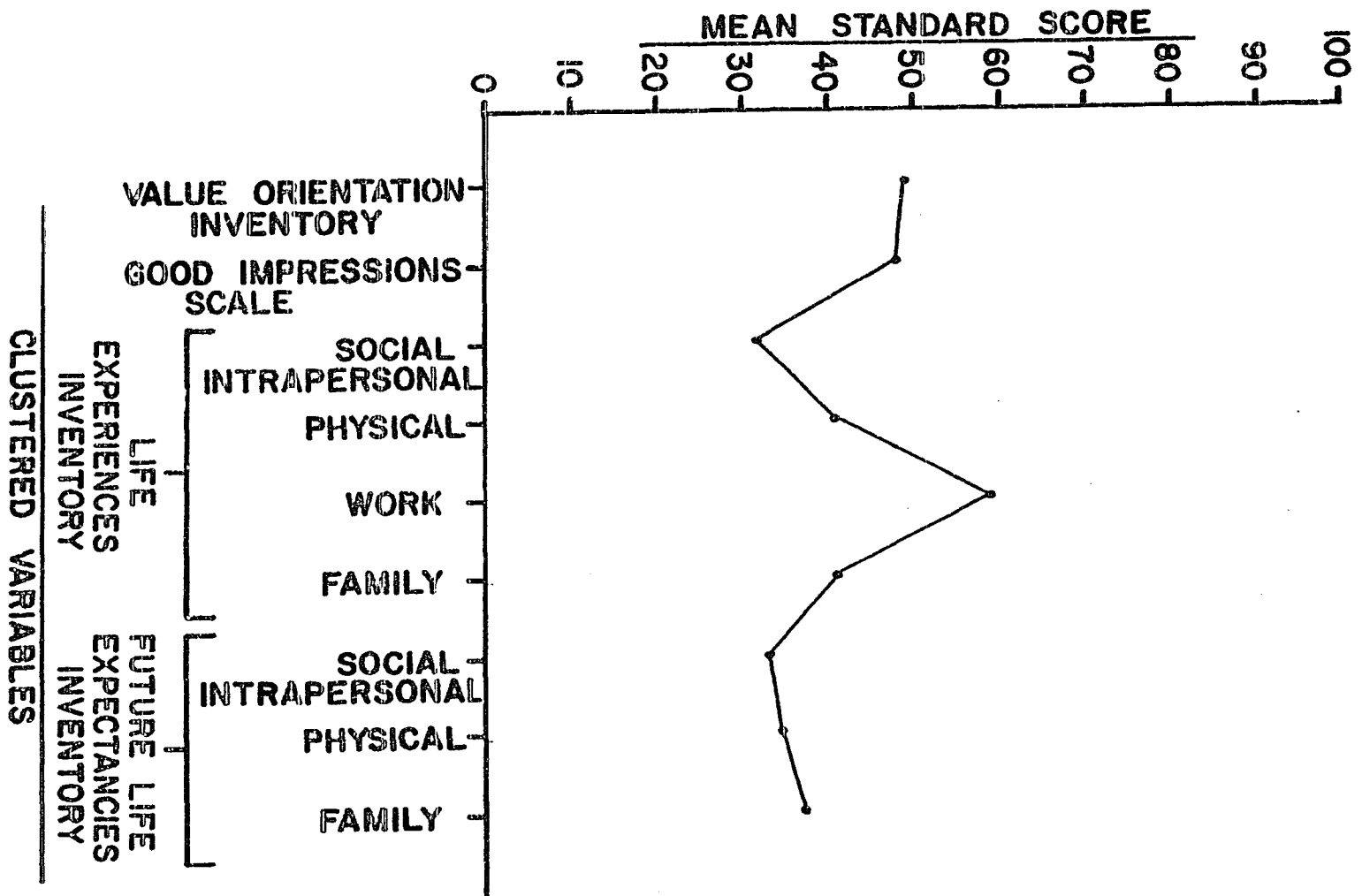


Figure 13. Average cluster 6 profile--preliminary study

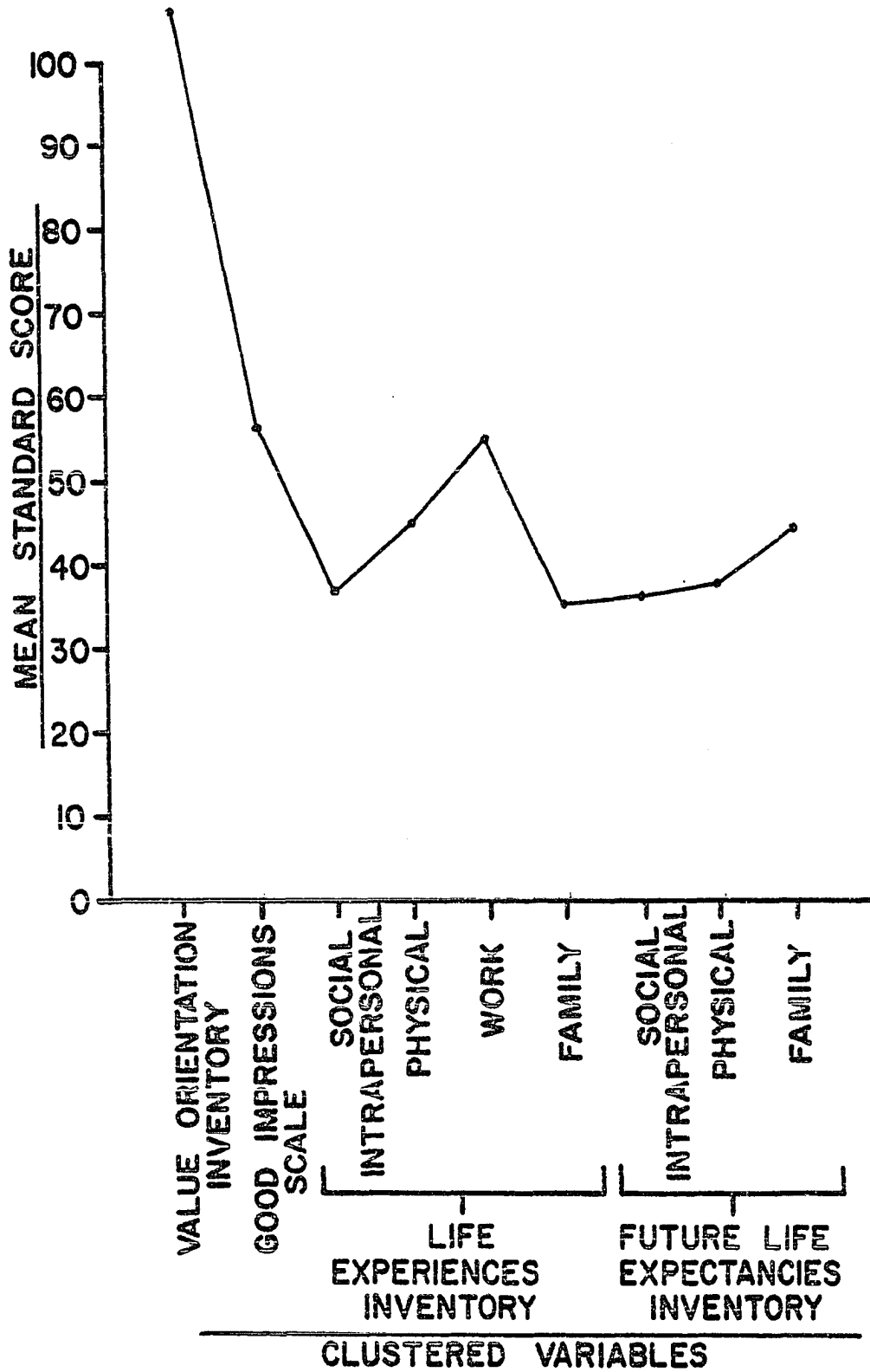


Figure 14. Average cluster 7 profile--preliminary study

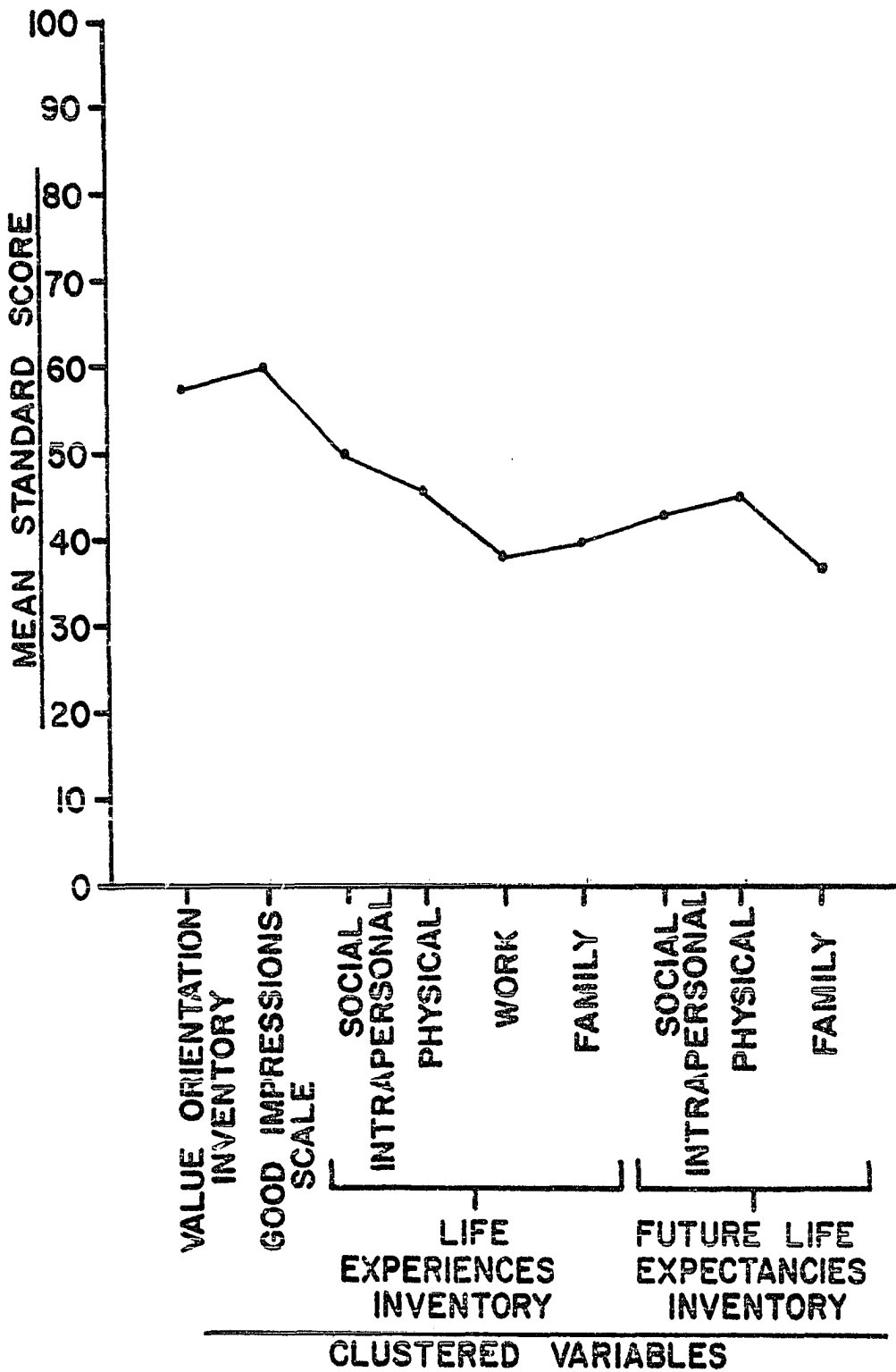


Figure 15. Average cluster 8 profile--preliminary study

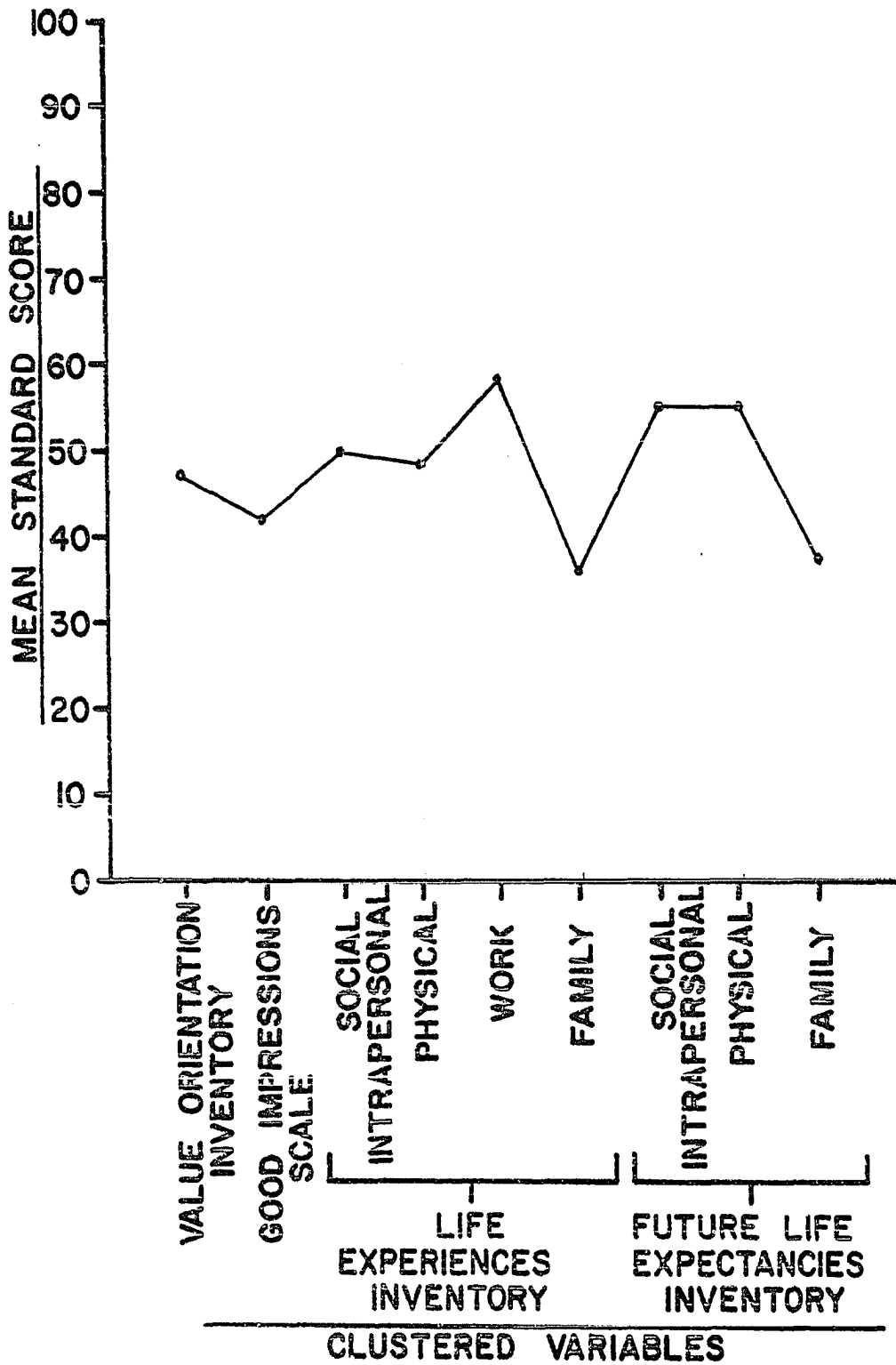


Figure 16. Average cluster 9 profile--preliminary study

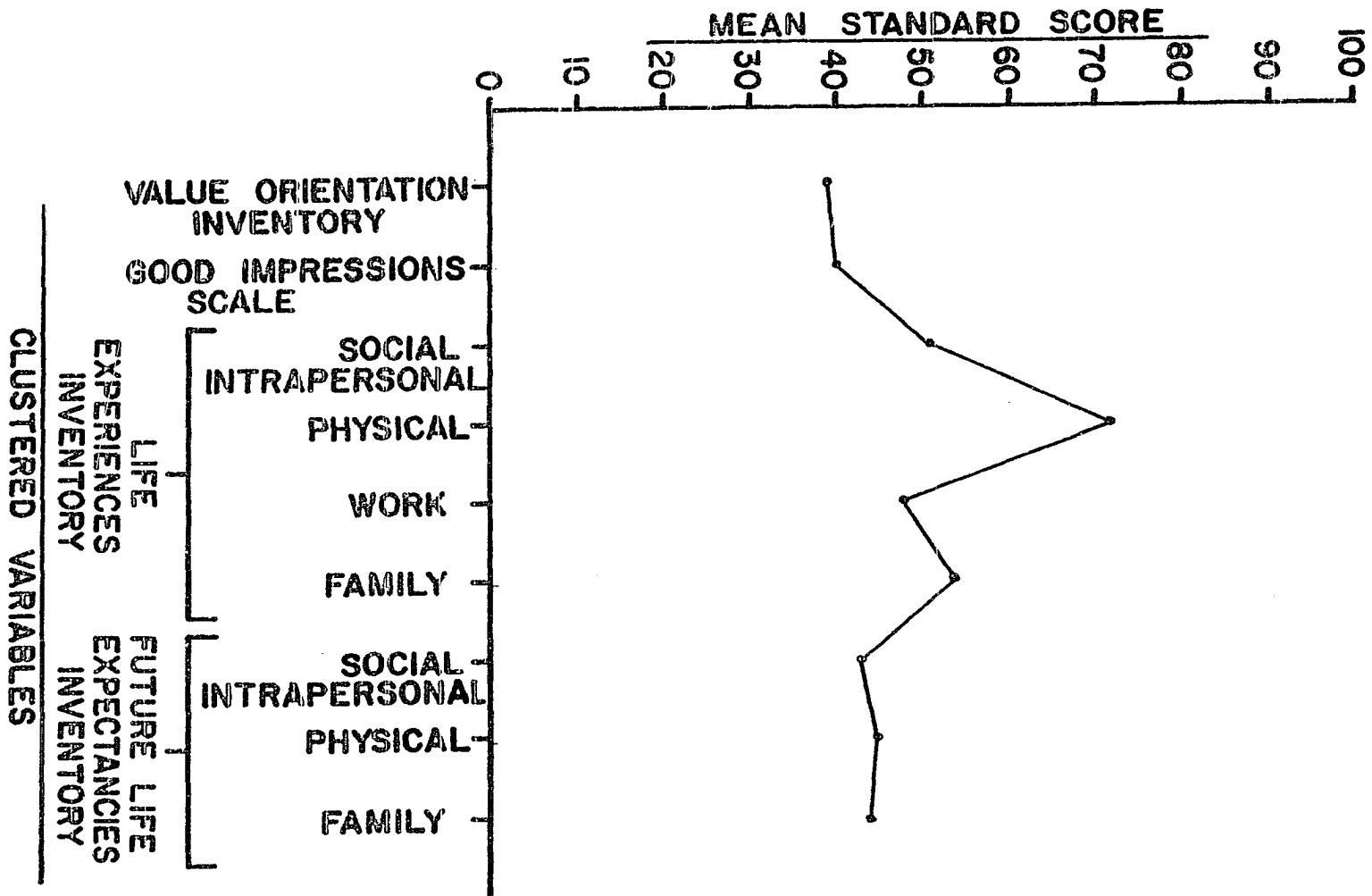


Figure 17. Average cluster 10 profile--preliminary study

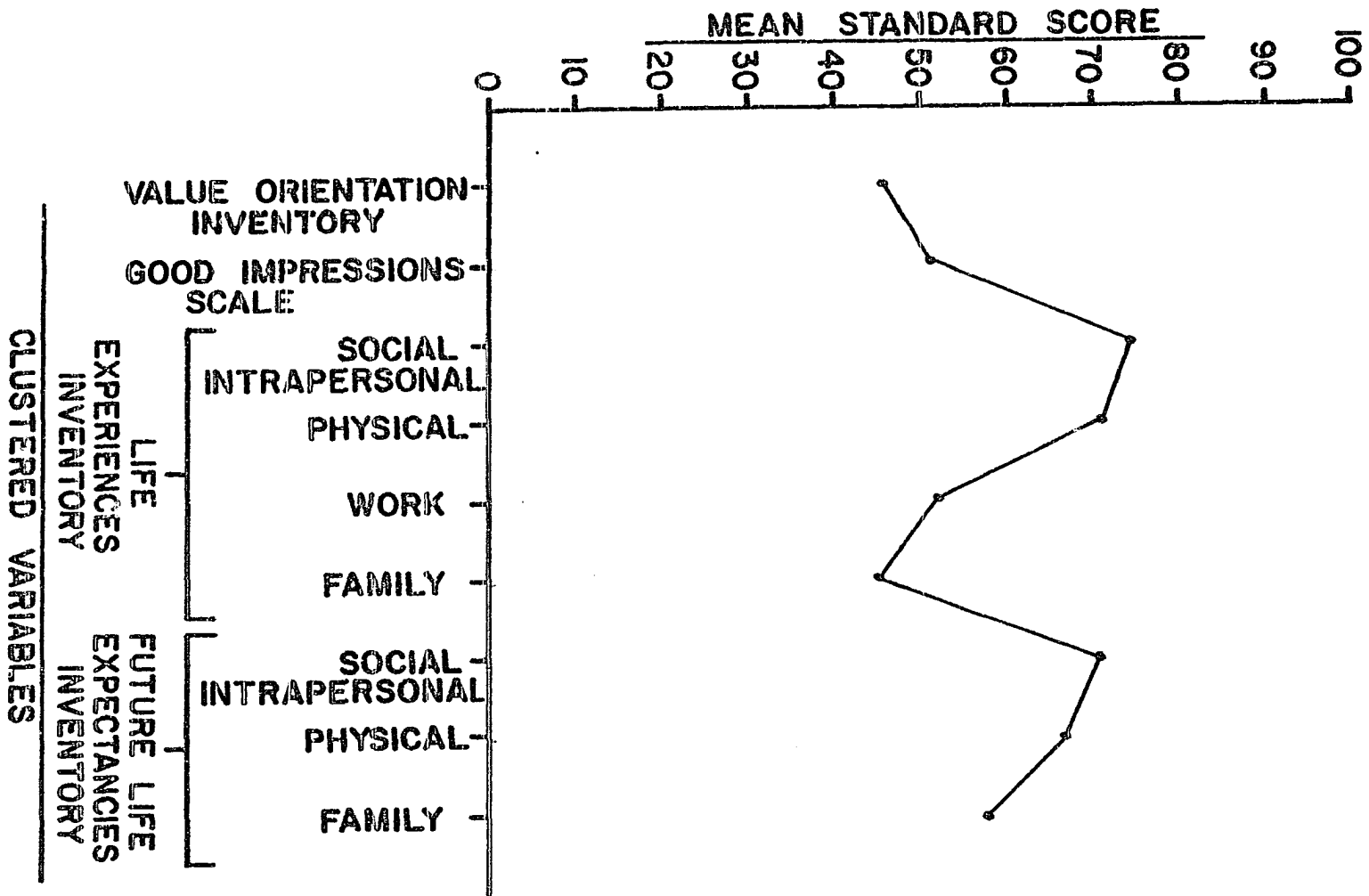


Figure 18. Average cluster 11 profile--preliminary study

