SELECTED ENVIRONMENTAL FACTORS RELATED TO LIFE SATISFACTION OF BLACK SENIOR CITIZENS

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ABSTRACT

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By

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This study was designed to answer questions relative to the degree of life satisfaction of low-income Black elderly people and their relationship to the following selected environmental factors: nutrition, activities, interpersonal relationships, income and health.

Specifically, answers to the following questions were sought:

1. What is the relationship of nutritional inputs in a typical 24 hour dietary recall to degree of life satisfaction?

2. What is the relationship of activities in which Senior Citizens are involved to life satisfaction?

3. What is the relationship of Senior Citizens' interpersonal relationships to degree of life satisfaction?

4. What is the relationship of Senior Citizens' perceptions of the adequacy of their incomes to degree of life satisfaction?

5. What is the relationship of Senior Citizens' perceptions of their health status, doctors' evaluations of their health status, and number of days in bed to degree of life satisfaction?

The purposive, urban population sample selected consisted of 100 low-income Black men and women 60 years of age or older. Each was living independently (not receiving convalescent or home care) in either general or public housing or in a Senior Citizens' Center within the city of Inkster, Michigan.

Data were collected by interviewing the Senior Citizens in their homes or in the Activities room of a Senior Citizen's Center. Life Satisfaction, the rating of individuals in terms of a general appraisal of their lives, was measured by the administration of a life satisfaction index. The five selected environmental factors were also measured and scores were tested for their relationship to reported life satisfaction. Nutrition was measured operationally through the calculation of the variety and adequacy of foods reported consumed during the past 24 hour period. Activities and interpersonal relationships were measured by the administration of a modified Interview Schedule (Activities Self-Rating Report). Income was measured by seeking respondents' perceptions of the adequacy of their incomes to meet their needs. Three operational measures of health status were obtained and consisted of respondents' perceptions of own health status, respondents' reports of doctors' opinions of their health status, and their reports of days spent in bed during the past two months.

Statistical analyses strategies employed to test for relationships between the selected environmental factors and life satisfaction scores consisted of: analysis of variance, multiple

regression analysis, Pearson Product-Moment Correlations and frequency counts. Results indicated no significant relationship between nutrition and life satisfaction. The dietary evaluation showed, however, that respondents were eating at least one good meal during the evening which was deficient only in milk. This finding suggests that the older people in the sample might benefit from a program of nutrition education.

A significant relationship was found between respondents' participation in activities and their life satisfaction scores. Watching television was found to be the activity in which the largest number participated. Eighty-nine percent reported watching television daily. This was followed closely by "listening to the radio" with 87 percent reporting radio listening daily. Most respondents described themselves as religious people and a number said that the programs they watched and heard were based upon religious themes. The magnitude and positive nature of the relationship between activity participation and life satisfaction suggests that the provision of support services to encourage older persons to maintain an active life may be important to their adjustment to the aging process. The relationship was less pronounced when only interpersonal relationships and life satisfaction were analyzed.

Perception of income adequacy was not an important factor in respondents' perceptions of life satisfaction. In spite of adverse financial situations with 63 of the 100 respondents reporting their incomes as inadequate, the majority expressed feelings of life

satisfaction. More than 70 percent were found to be within the poverty level.

Health status was a major factor related to life satisfaction. One interesting finding was that those who perceived themselves as having "good" health also indicated that their perceptions of the doctors' evaluations of their health were also "good." It was hypothesized that Senior Citizens reporting themselves to be in good health would exhibit greater life satisfaction than those expressing poor health. This proved to be the case as the correlation between life satisfaction and respondents' perceptions of their health was highly significant.

The feeling of life satisfaction among respondents was notably high in terms of scores reported on the life satisfaction index employed. Sixty percent scored three-fourths (15 or more) or more of the items positively. This finding may be interpreted to mean they were well satisfied with their lives.

Further research might deal with such topics as the delivery of nutrition and consumer education programs to low-income Black older persons. Answers might be sought to such questions as: What are the interpersonal and economic needs of low-income Black elderly? What are the special needs of those who have been widowed? What are the attitudes of younger Black family members toward older ones?

The study provided some guidelines for identifying needs and concerns of the elderly sample selected. It also gave some insights as to their attitudes, perceptions, and interests.

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By

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CHAPTER I

INTRODUCTION

The White House Conference on Aging (1971:6) session report indicated the need to recognize aged Blacks.

> The heavily jeopardizing status of being Black and old and often poor (and frequently female) deserved explicit recognition. The report also stated that there was poor representation. Blacks could not sway votes.

The conclusion was that the Blacks had insufficient resources for participating in the conference. In addition, they felt the one factor contributing to extremely low Black utilization of existing Senior Citizen Centers is the failure of those programs to meet their needs. Many Black Seniors reject such centers. Their reasons need to be sought.

At a time when the proportion of those over 65 years of age is increasing with respect to the total population, there is a growing concern about the well-being of this group. Henderson (1965:208-214) says the problems of aged Negroes are not synonymous with the problems of all aged persons, regardless of race. They are unique. The uniqueness of the problems of the aged Negro stems back to the inadequacy, irrelevancy, and demeaning educational system to which they were subjected.

The basic contention is that being poor, Black, and over 65 will have a definite bearing upon how satisfying one views life.

> If as O. Mari (1956:45-33) suggests, the length of time a migrant has lived in his new community is an important factor in his adjustment to all phases of community life, then the aged Negro should be well-adjusted to racial inequalities.

Most of the migrant Negroes from the South worked in unskilled capacities. The self-fulfilling prophecy "way of earlier life to today's aged Negroes" revolved about four factors:

1. Negro subordination to the White man.
2. Socio-economic institutions that limited the Negroes' opportunities to their preassigned social and economic status.
3. Limited economic-social mobility, despite a rise in economic status.
4. "Purely economic" discrimination primarily concerned with competition for jobs.

Cultural conditioning has been responsible for the aged Negroes' acceptance of their inferiority as a way of life. Field (1970:70) recognizing that no one method can remedy the situation suggests several approaches for the reader's consideration: mandatory retirement at a given age; guarantee of an adequate annual income for the elderly; improved medical care; more adequate living arrangements; improved care within the individual's home to lessen the need for institutional living; planning for constructive use of leisure; and again, more warmth and concern from the younger members of the family. A need for research is suggested in two areas: what the elderly need, and what the elderly want.

Calhous (1971:284) says there can be little doubt as to the importance of learning whether or not these adverse conditions have

made a negative impact upon the lives of the Black elderly. Age added dignity to their position and their regime, as Arthur Calhous says and "extended frequently through two generations, occasionally through three."

In much research on aging, however, it becomes necessary to establish some measure of success or well-being in relation to which other social and psychological variables can be studied.

According to Havighurst, Neugarten, and Tobin (1961:134) there have been various attempts to define and to measure the psychological well-being of older people usually with the goal of using such a measure as an operational definition of "successful" aging.

Life satisfaction, the rating of individuals in terms of a general appraisal of their life, is a conceptualization initially and still primarily identified with gerontology reports (Bortner, 1968:41).

Objectives

This study is designed to answer questions relative to the degree of life satisfaction of low-income Black elderly people and relationships of selected factors to this life satisfaction.

Specifically, answers to the following questions will be sought:

1. What is the relationship of nutritional imputs in a typical 24 hour recall to degree of life satisfaction?

2. What is the relationship of activities in which Senior Citizens are involved to degree of life satisfaction?

3. What is the relationship of how Senior Citizens perceive their income to degree of life satisfaction?

4. What is the relationship of how Senior Citizens perceive their health, how they report their doctor's evaluation of their health, and number of days in bed to degree of life satisfaction?

5. What is the relationship of Senior Citizens interpersonal relationships to degree of life satisfaction?

Assumption

The following assumption underlies this study:

Respondents' scores on the life satisfaction instrument will reflect their perception of satisfaction with their present life styles.

Hypothesis

It is hypothesized that Senior Citizens will demonstrate the following:

Ho 1: There will be a significantly greater degree of life satisfaction among Senior Citizens who eat nutritionally well than those that do not eat nutritionally well.

Ho 2: There will be a significantly greater degree of life satisfaction among Senior Citizens who are regularly involved in activities than those that are not regularly involved in activities.

Ho 3: There will be a significantly greater degree of life satisfaction among Senior Citizens who report a greater number of interpersonal relationships than among those who do not.

Ho 4: There will be a significantly lesser degree of life satisfaction for Senior Citizens who express their incomes to be inadequate than among those that express their incomes as adequate.

Ho 5: There will be a significantly greater degree of life satisfaction among Senior Citizens who perceive their health as good, who say their doctors evaluated their health as good, who report fewer number of days in bed, than among those who do not perceive their health as good, who say their doctors evaluated their health as poor, and who report a larger number of days in bed.

Theoretical Definitions of Terms

Life Satisfaction: R. Bortner (1968:41) defines life satisfaction as the rating of individuals in terms of a general appraisal of their life; this is a conceptualization initially and still primarily identified with gerontology.

Culture: Clyde Kluckholn (1951) refers to culture as the distinctive way of life of a group of people, their complete design for living.

Activity: William C. Martin (1973) defines activity in terms of the personal interrelational level (interaction with friends, age-oriented organizations and clubs, recreational groups, etc.).

Relationship: Robert Winch (1964:293) defines relationship as two or more persons who interact with each other in terms of a set of shared symbols and with respect to some common activity which may or may not be task-oriented and who interact with each other and react to each other in a patterned fashion.

Disengagement: Cumming and Henry (1961:211) define disengagement as "an inevitable process in which many of the relationships between a person and other members of society are severed and those remaining are altered in quality."

Operational Definitions

Life Satisfaction: The scores reported by the Senior Citizens on the Life Satisfaction Index-A will be the operational measure of their appraisals of their lives.

Nutrition: Recommended Daily Dietary Allowances for adults 55 to 75 are: 1700 calories, 55 grams protein, 018 grams calcium, 10 milligrams thiamin, 1.5 milligrams riboflavin, 13 milligrams niacin, 55 milligrams ascorbic acid. The R.D.A. are amounts of nutrients recommended by the Food and Nutrition Board of the National Research Council (1972:44). Operationally, dietary intakes reported on a 24 hour recall basis will be evaluated through the use of U.S.D.A. recommended allowances for the Four Basic Food Groups and scores will be considered to be measures of respondents' nutrition (dietary adequacy).

Activity: Scores of respondents on the Interview Schedule (activities self-rating report) for the last 17 items (numbers 6 through 22) will reflect the kinds and frequency of activities in which respondents participated.

Interpersonal Relationships: Operationally, kinds and frequency of Senior Citizens' interpersonal relationships will be measured by their responses to the first five items on the Interview Schedule (activities self-rating report).

Income: Incomes of less than $3,600 are considered to be below the poverty level by the Office of Equal Opportunity. Operationally, income was that stated by the respondents and respondents'

perceptions of the adequacy of their incomes to meet their needs which will be used to measure this variable.

Health: Health status was measured by self-reports of number of days spent in bed the previous two months, perception of own health status, and perception of doctor's opinion of health status.

Culture: For purposes of this study a group of Black Senior Citizens with similar life styles and backgrounds.

Blacks: The terms Black and Negro are used interchangeably depending on the preference of the individual. Black and Negro are defined as anyone considering herself/himself to be Black or Negro according to his heritage.

Conceptual Framework

This study focuses on the relationship between the Black Senior Citizen's perception of several aspects of the environment and perception of life satisfaction. In this study, the environment basically consists of five factors as life support systems of the Senior Citizen: nutrition, activities, health, income, and interpersonal relationships. These provide both physical and social nurturance.

This ecological approach of viewing the Senior Citizen provided a framework for examining the physical and social environment and specifically provides a conceptual orientation for studying the influence of environments upon perceived life satisfaction. Each factor is not mutually exclusive as there is continual

interdependence of individuals with individuals and with their environment. Black Senior Citizens are integral parts of the community eco-system. They influence their environment. In turn, they are influenced by their environment. They are nurtured, motivated, and influenced by the environment to be contributing and productive or noncontributing and nonproductive to the larger environment. Their perceptions of their life satisfaction are a reflection of this relationship. Conceptually, it is believed that environmental factors affect satisfactions; that is, the availability of adequate food, health, and income will help shape the degree of life satisfaction.

This study focuses only on the relationship of these factors on life satisfaction, i.e., environment on people. It does not focus on the reciprocal relationship or feedback of satisfaction of Black Senior Citizens on the environment.

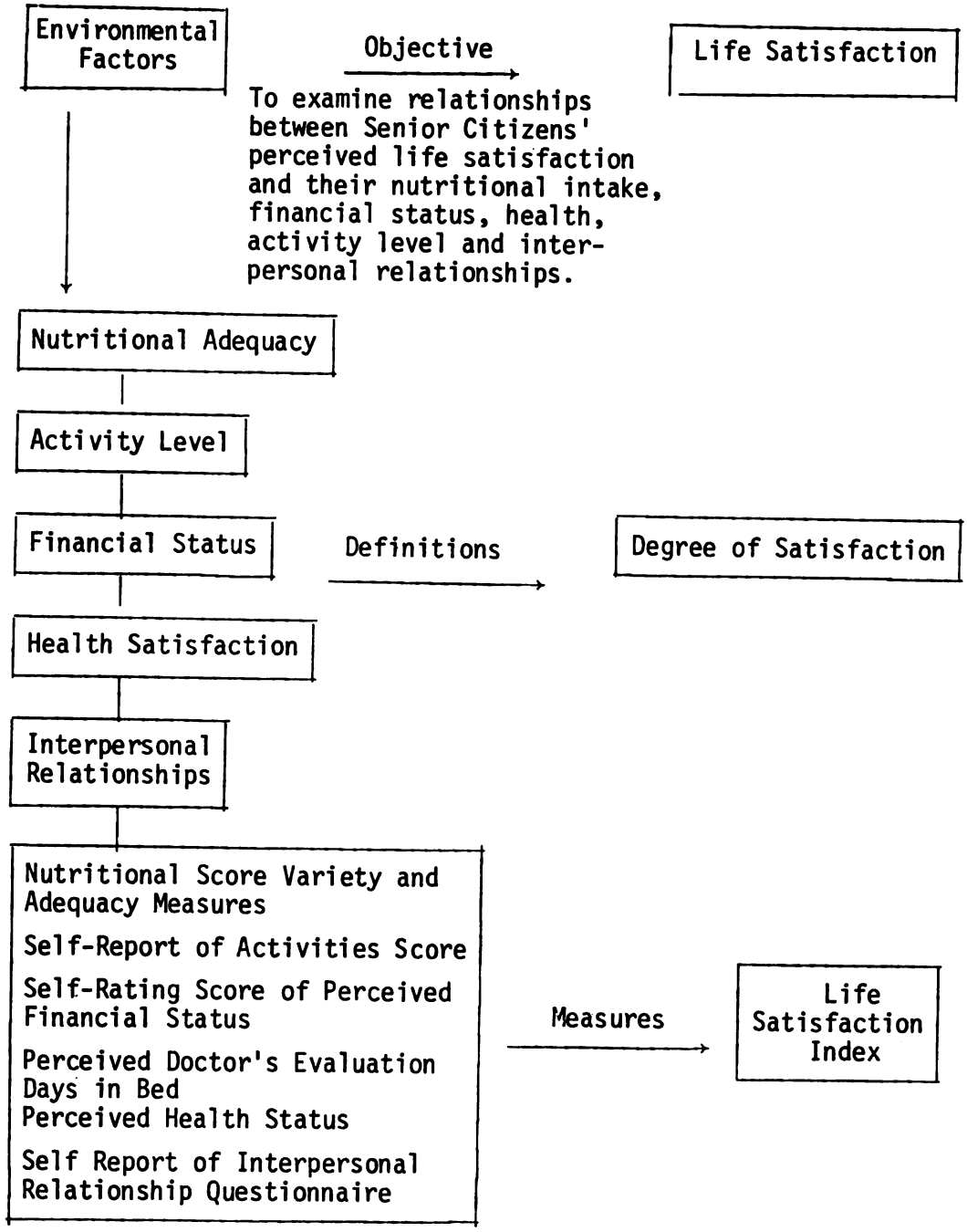

Figure 1.--Model of Method for Study of Senior Citizen's Perceived Life Satisfaction.

CHAPTER II

REVIEW OF LITERATURE

The research literature pertinent to this study is reviewed under the following general headings: research related to physical and extrinsic life situations and its effect on life satisfaction, and research related to social psychological measures related to life satisfaction and financial situations related to life satisfaction. This review of research will attempt to assess the status of the Black senior citizens in the United States over the past decade as it relates to life satisfaction.

Almost a decade ago, the National Urban League (1964:52-55) issued a report on the plight of the Black aged titled, Double Jeopardy. That study vividly described the hardship encountered by elderly Blacks because of race and age discrimination. In many ways, the elderly Blacks, perhaps more than any other age group, best exemplify the historic fortitude and resilence of Black people in America.

Daniel Rubenstein (1971:172-188) says that it can be assumed that:

> There are demographic differences between Black and White elderly; that is, when income, marital status, education, occupation, and religion are examined by sex, residential location and race are expected to differ significantly.

It is hypothesized that household situations are different for Black and White elderly. It is proposed that these differences show that the elderly Black are more likely to live alone or in household situations without spouses while White elderly are more likely to live with a spouse as a couple, or in household situations with a spouse. It is further hypothesized that Black elderly persons living alone or without a spouse have a low state or morale or well being in old age. Rubenstein breaks down the current thinking of "pitiful unhappy" Black oldster into categories of age, social composition, sex distribution, residential location, income, educational attainment, religion, marital status, occupation. After compilation of data located within 19 tables, Rubenstein feels assured enough to test his hypothesis and come up with a reversed conclusion.

It is this concept of relativism that seems to be most neglected. Rubenstein concludes by saying:

> The Black elderly are with us and living conditions are in dire need of improvement. Contrary to prevailing assumptions the Black elderly are no more alone and isolated than the general elderly population, and their emotional state of well-being is no different from that of the White elderly.

Jacquelyn Jackson (1970:140-145) says, within the social gerontology stereotypes the fallacies are: (1) the aged Negro looks to the "family" as the primary source of assistance--contrary to the belief that aged Negroes have weak family structures; (2) much literature depicts elderly Negroes with extremely high religious activity--in actuality they are no more religious than aged Whites;

(3) organizational activity has been believed to be low but has been documented to be somewhat higher; (4) supposedly poor health is a greater problem, when actually no better or worse than that of Whites.

In laymen stereotypes--the trend has been for the Negro race to emphasize "survival" of a culture--therefore the Negro aged person was favorably acceptable proof. The aged White has been less valuable in the White "youth" centering of interests. This trend is said to be shifting now. "Along the road to integration, pluralism, or separatism (or wherever we are going) is that of decreasing significance attached to Negro aged by Negroes." The change is said to be due to Economics. It is commonly believed that aged Negroes "flock" to the welfare rolls whenever they can. This has been proven false.

Nutrition

At a time when the proportion of those over 65 years of age is increasing with respect to the total population, there is a growing concern about the nutrition of this group. More research on the food behavior of senior citizens is needed to prepare effective nutrition education programs for them.

Krehl (1974) observes that there is no doubt that malnutrition is widespread among the aging population. A nutritional evaluation including a nutritional history, clinical evaluation, and appropriate laboratory studies, is highly relevant to the total evaluation of the aging person.

An adequate diet and sound nutritional practice, therefore, remain key factors not only in the prevention and limitation of the aging process but also in the maintenance of the quality of life for the aged. Krehl's results supported the hypothesis that there will be a significantly greater degree of life satisfaction among senior citizens who practice good nutrition.

Sullivan (1968:168) found that poverty is believed to contribute to malnutrition in any age group. Certainly older retired people experience financial hardship due to fixed low income with which to meet constantly rising food prices. In Ireland Sullivan (1968) found that 65 percent of lower income subjects had lower ascorbic acid intakes than the minimum daily requirement, whereas only 25 percent of upper income subjects did. Although studies in other European Countries also cited low incomes as a cause of poor diets, two U. S. studies, one by Hendel (1969) and the other reported by the Home Economics Research Report (1969) did not find poor diets to be consistently related to low income.

Ignorance of the components of a balanced diet may also be negatively related to a good diet. Another factor is the lack of interest and motivation to adopt the basic nutritional principles which are known. Hendel (1969) studied reasons for food selection and found interest and motivation were more important than knowledge in influencing dietary intake. Those who were convinced of the importance of nutrition to health were more likely to adopt the nutrition practices they knew and learned.

Watkin (1969:55) cited social isolation as a factor associated with low food intake and inadequate nutrition. Many surveys found by Guggenheim (1965:561), Scheer (1969:171) and Van Stroveren (1969:43, 263) find incidence of poor diets among persons living alone. The Home Economics Research Report (1965:25), reported women in Rochester, New York, who lived alone consumed more when they were guests than if they ate alone either at home or at a restaurant.

Krehl (1974:65-76) reports that another detriment to good diets is chronic ill health often suffered by older people. This is especially true of those with diabetes, hypertension, or intestinal disorders requiring restricted diets. Medication may also decrease appetite and cause inadequate food intake. Illness is often listed as a limitation to diet in the largest percentage of respondents. However, the Rochester study reported by Wolgamot (1973) indicated that ill health did not correlate with overall quality of diet. Mental disabilities often observed in older people which can be described as mental confusion have been cited by Watkins (1969: 548) as a cause of inadequate diets.

In the final analysis, nutritional needs, like many other needs, represent individual problems. (Nutritional characteristics of elderly people cannot be assessed along racial and economic guidelines.) Individual habits acquired throughout life constitute the only real evidence for nutritional deficiencies or requirements.

According to the Statistical Abstract of U. S. 1974 (1972:6) Census, Blacks comprise 8 percent of the 21 million persons 65 years

and over, and the elderly constitute 7 percent of the total Black population.

Hill (1971:1) reports that it should not be inferred from these increases in the number of Black elderly that Blacks, on the whole, are living longer--at least not men. Although the life expectancy of 67.5 for White men remained about the same from 1960 to 1968, the life expectancy for Black men declined a full year (from 61.1 to 60.1). On the other hand, the life expectancy for women increased about a year over the decade--to 74.9 for White women and 67.5 for Black women.

Reported in the Michigan Preparation for the White House Conference on Aging (1971), the average Black man's life expectancy is below 65, and most, therefore, may never reap the benefits of social security and medicare benefits for which they have contributed through many years of hard labor. Hill (1971:4) found the steady movement of young Black families to suburban areas had led to a sharp rise in the number of Black elderly in Central cities. In Detroit, for example, the elderly Black population almost doubled between 1960 and 1970 (from 21 to 39 thousand).

In the preparation for the White House Conference on Aging (1961:4823), it is stated most people who are not in institutions are physically able to carry on normal activities. Their health problems vary more in incidence than in kind. The rate of disabling chronic illness rises, however, when economic resources may be relatively low.

Schweitzer (1970:117-119) found that the combination and Interaction of age and illness impose increased physical, spiritual, and social disability upon the elderly individual.

The variety of illnesses that can overtake people at any age strike the elderly harder. The elderly person as a rule exhibits more fear about entering a hospital or submitting to medical or surgical care because of lack of strong support from family and friends and an intensified desire to hold on to what he has come to lean on and that which he can depend upon. The patient's mental attitude has vital influence on his physical health and this is particularly obvious in age when recuperative powers are at a low ebb. His physical deterioration, whether permanent or temporary, coupled with loneliness, too often leads to a state of depression.

Ostfield's (1966:93) study finds a good deal of hypertensive heart disease that appears to be much more prevalent in Negroes as compared to Whites. He takes the view that the very large amount of high blood pressure in the Negroes is one of the two or three most important public health problems in the United States.

Jackson (171:147-171) found from a national health survey (1960-1962) that Black aged needed far more dental care than Whites. Heart disease was more prevalent among Blacks than Whites. Diabetic conditions were more common with aged Blacks. Among males, vision and hearing of aged Blacks were better than among Whites. Black females are most susceptible to nervous breakdowns. Hill (1971) has pointed out that life expectancy for Black males has decreased.

Frazier (1968:68) reports that although the Black aged are more likely than the White to suffer from chronic illnesses and disabilities, they are less likely to visit the doctor. This is not surprising in view of the high cost of medical care and the scarcity of medical facilities in areas where the Black elderly are most likely to live.

Studies in life satisfaction have shown that decline in personal happiness usually coincides with deterioration in health, loss of key roles and reduction of activity stated by Guggenheim (1965:561) and Scheer (1969:171).

Other studies found by Krehl (1974) and Wolgamot(1974) have concentrated on how aged people manage to be happy in spite of deterioration in health, loss of role, and reduced activity. They have sought to identify what quality in aging people allows them to come to terms with objective difficulties which often overcome younger persons.

Stretch (1956:270-276) said in his study there is a positive relationship between health and life satisfaction. Medical evaluation, unless agreed with by the aged person, shows that there is little relation between health and life satisfaction in Kutner's (1956:53) study. The important factor is perceived self-health rating in Suchman's (1958:223-232) study. Morale tends to decline by age beyond 60. Morale is higher among men than among women according to Kutner (1956:48-51).

Thompson (1958), Schmitt (1951:33-42), and Canon (1949:53) all agree in their studies that decreasing life satisfaction correlates positively to males' perception of their poor health.

Interpersonal Relations

Maddox (1972:318) has defined society as a system of reciprocal influences which are patterned by the common values and beliefs of people sharing a particular social environment. These values and beliefs form a basis for the expectations which are the essence of behavioral predictability. There is no general "subculture" which applies to all people who are getting old. Each class and accompanying role definition has its own approved and accepted style of aging, largely based on early childhood programming. Attempts to break out of such socialization, when they occur in later years, are essentially perverse and unsatisfactory. An exception to this might be regression to an earlier ethnic characteristic which may have been deliberately repressed in earlier adulthood. Maddox claims that socialization goes on through life. He further believes that the process of transition in old age does not differ significantly from that experienced in earlier life stages.

Overall life satisfaction may be reduced by loss of the spouse as reported by Gurin (1960:235-237) and Morrison (1958:32). Phillips (1957:216-217) found the widowed engage more in fantasy.

Manney (1975:91) writes that most older people maintain very active relationships with their children, and, if anything, retirement seems to increase the frequency of such contacts. About 90 percent of older Americans with living children live less than an hour's trip from at least one of them. This percentage is even higher for widowed women. Contact is frequent. As noted, about 80 percent of older parents see one of their children at least weekly.

However, this contact occurs within a rather well-defined framework of mutual respect for the other party's independence. Manney concludes that a good relationship between older parents and children in America depends largely on the older persons' ability and willingness to establish their own lives.

Reynolds and McKinney (1951:42-43), reporting on the 1950 White House Conference on Aging, suggested that personal patterns of adjustment in family relationships which are characteristic of both one's youth and middle age determine the type and quality of family relations in old age. Among the characteristics they assumed to be helpful to successful aging were: a large family, strong kinship ties, a family well integrated into community life, preservation of some individual property rights and other personal privileges; opportunities to contribute to society and some stability in integration between traditional and changing values.

The conclusion is that the family is the first and most important source of comfort and psychological support. Family relationships are a vital factor in a satisfying old age.

Friendship is also a good index of the older persons' emotional and mental health. Manney reports that not a single man in his sample of older people with a history of psychiatric complaints could point to even one close relationship with a friend.

Neugarten (1969:121-230) said difficulties in marriage appear to decline by age. Gurin (1960:235-237) said older married couples may have resolved their difficulties or have minimized their difficulties because of their long term investment.

Activities

Cummings and Henry (1961:136) launched the disengagement theory in 1961 which stated (among other things) that life satisfaction or morale was the lowest when an elderly person was neither engaged or disengaged, that life satisfaction or morale were high at both ends of the continuum of disengagement. The explanation offered was on the basis of biologically determined temperaments. Henry (1964:26) stated two years later that such processes are not explainable by societal or environmental aspects and that they are intrinsically determined. This was contradicted by Neugarten and Havighurst when activity theory grew out of their research studies.

The general conclusion of Martin's (1973) research is that both activity and disengagement theories can correctly describe the social-psychological processes of aging. If disengagement is defined in terms of the social structural level (withdrawal from the extended family, withdrawal from the economy) it can be supported. If activity is defined in terms of the personal interrelational level (interaction with friends, age-oriented organizations and clubs, recreational groups, etc.,) it can be supported. Given this postulated reconciliation of the two, one would state that the coupling of structural disengagement (retire and let your family be) with age segregated interpersonal activity (stay active, do things) results in life satisfaction.

Disengagement theory and activity theory suggest that adjustment to old age can go in only one direction. The life cycle view

holds that adjustment can go in many directions, and that persons of many different personalities can effect a successful adjustment to old age in many different ways. In fact, the most successful old people Clark and Anderson (1967:70) found were those who had learned to engage and disengage continually in a rhythm that suited their desires and circumstances.

Reichard, Livson, and Peterson (1962:186) reported that high satisfaction tends to be associated with high activity. A positive relationship exists between high overall scores of activity and high satisfaction. Havighurst (1953:108) reports that pleasure in activities, optimistic attitudes, positive self-image are all positively related. Tobin and Neugarten (1961:344-346) reported that low scores on activities are associated with loneliness. Richardson and Freeman (1965:9) reported that low scores on activities are associated with loss of affection. Henry (1964:417) reports that low scores on activities are associated with feelings of uselessness.

Ostfeld's (1966:100) report relates to the complex phenomenon of disengagement. Older people may become involved in a pattern of social withdrawal which stems from limitation in physical capacity, despite the failure of the individual to identify himself as sick.

Activity theory, which states that the key to successful aging is maintaining a middle-aged level of activity as long as possible, is deficient. Obsessive, hyperactive involvement can be a characteristic of poor adjustment at any age. Some degree of disengagement in later life is desirable as physical powers decline.

Income

Life satisfaction is positively related to high economic status and high educational attainment as established by Kutner (1956:70), Suchman (1958:227) and Tissue (1972:91-94). In Kurt's (1966:296, 305) study, specific financial concerns are less important to the old than to the young.

Randall (1970:15) found elderly single women have the lowest median income in the old age population. Despite some federal and state improvements in programs of insurance and assistance, inflationary trends have dissipated the effects of these slight gains.

Tissue's (1972:331-344) study is based on data gathered from aged welfare recipients. The study deals with subjective responses to poverty in old age. It seems contrary to what many consider to be one of the aged's most pressing problems. Money was shown to be only a problem when they were younger or if they are poorer than their peers.

The findings reveal considerable dissatisfaction with the welfare standard of living and a significant relation between the perception of money problems and morale. The conclusion of this study could be just as easily applicable to life satisfaction as it is to poverty. It seems that the study of poverty at any age level must be sensitive to the importance of subjective response and the definitions of participants themselves. It must also take into account that:

> poverty depends not only on the impression of the independent viewer, but on the self image of the individual concerning his own degree of economic deprivation, and on the social and economic milieu in which this judgment is taking place (Henderson, 1965:208-218).

Henderson, in a study of aged Negroes receiving old-age assistance makes the basic assumption that aged Negroes are not a homogeneous group incorporated into an all-aged classification (1965:208-218). They view old age differently as a result of past lives and because of problems unique only to them. He found that more male respondents lived with their children. Poor health was the main reason for retiring. The main reason for working given by the majority of men and women was a combination of "to keep busy; and at the same time supplement their present income." Henderson also found for leisure time 84 percent said they had all day to do with as they pleased. Leisure for women was cleaning house, watching television, cooking, and reading the Bible. Leisure for the men was cleaning the yard, watching television, doing nothing, and going for walks.

Henderson said that on the one hand the Negro respondents stated aged Whites have a decided advantage in reference to income, job opportunity, securing bank loans, and education. And on the other hand, the respondents believed that they were as happy as the aged White.

Wolgamot (1973) reports needs of older persons may be met by programs funded through revenue sharing (State and Local Assistance Act of 1972). This law, passed in October 1972, provides for

sharing 30.2 billion dollars of Federal tax revenues with state and local governments over a five year period, beginning with 1972.

The Detroit Urban League Report (1966:2-4) states that among both races, those living in nonmetropolitan areas are about twice as likely to be poor as those in the metropolitan areas. Moreover, contrary to the popular conception of suburbia as synonymous with affluence, the Black elderly living outside the central metropolitan areas are likely to be poor in almost the same proportion (41 percent) as the aged Black in the city itself (39 percent).

The Social and Political Reaction of older Negroes to Unemployment (1970:7) reports that over half of the elderly Black married males are likely to be living with their wives, whereas only one-fifth of the elderly Black married women are likely to be living with their husbands. Because of their longer life span, elderly women are more likely to be widowed than elderly men. Two-thirds of the elderly Black women are widows compared to only one-third elderly Black males who are widowers. The situation is similar between elderly White men and women.

The U. S. Department of Commerce, Bureau of the Census (1970: 8-9) reports that one-fourth of the Black families with a man at the head had incomes under $2,000 in 1969, compared to only one-tenth of similar White families. The median income for husband-wife elderly families in 1969 was $4,884 for White, but only $3,222 for Blacks.

One important implication of this situation of the elderly Blacks is that society will need to provide housing, medical care,

nutrition programs, social services, education, and leisure activities for many of the elderly Blacks who will retire during this century. It is not enough simply to give them money and rely on the market to provide the goods and services they need.

In summary, the literature reveals the hardships encountered by elderly Blacks because of race and age discrimination. According to the assessment, it is concluded that the situation of the aged Black, on the whole, has not improved significantly since 1960. Most of the disparities between Black and White elderly in relation to work history, income, education, health, and housing conditions still remain. Moreover many of the indignities expressed by the elderly of both races are still apparent.

On the other hand, life satisfaction of the Black elderly is really an inspiring and illuminating historical picture of courage and determination against adversity.

The literature suggested the following relationships between physical and extrinsic life situations of the Black elderly and life satisfaction.

Nutrition. Research revealed that an adequate diet and sound nutritional practice, remain key factors in both the prevention and limitation of the quality of life for the aged.

Health. Researchers have suggested that there is a positive relationship between health and life satisfaction. Aged persons manage to be happy in spite of deterioration in health.

Interpersonal Relations. Researchers concluded that the family is the first and most important source of comfort and

psychological support. Relationships with family and friends are a vital factor in a satisfying old age.

Activities. A positive relationship exists between high overall scores of activity and high life satisfaction. Havighurst (1953:108) reports pleasure in activities, optimistic attitudes, positive self-image all are positively related to life satisfaction. A negative relationship exists between low scores on activities and on loneliness.

Income. Life satisfaction is positively related to high economic status. The findings reveal considerable dissatisfaction with the welfare standard of living and a significant relationship between the perception of money problems and morale.

CHAPTER III

PROCEDURE

The procedures used in the study are discussed in four parts: (1) selection and description of subjects; (2) selection and description of instruments; (3) data collection procedures; and (4) data analyses.

Selection and Description of Subjects

The sample is a purposive one selected to represent the Black urban elderly of Inkster, Michigan. Individuals were selected based on the following criteria: 60 years of age or older; members of the Black or Negro race; individuals who were living independently (not receiving convalescent or home care) in either general or public housing or in a Senior Citizens' Center; willingness to participate in the study.

As an urban sample was desired, the city of Inkster, Michigan, was chosen as the site for data collection. The city of Inkster is approximately seven miles square and located 15 miles west of Detroit. The population of Inkster is approximately 38,000. This population consisted of approximately 1800 to 2000 people who are 60 years of age or older. Forty-eight percent of this population is Black, 52 percent White. Sixty-five percent of the

population have incomes of less than $3,600 per year within the national poverty level standard.

A list of senior citizens residing in Precinct I of District 6, Inkster, Michigan, was secured from the files of the Commission of Housing and Redevelopment and the Inkster Comprehensive Service Program for the Elderly. This precinct was chosen because of its high density of low-income residents.

Two hundred and fifty names of Senior Citizens both male and female were obtained from these two Inkster area organizations. This list of names was divided according to address or location. Three individual interviewers proceeded to make home visits to those senior citizens who resided in the interviewer's assigned geographic area. When 100 senior citizens were located in Precinct I, District 6, who met the criteria and were willing to participate in the study, the sample was considered complete.

Description of Sample

The sample was comprised of 100 Black Senior Citizen respondents who lived in private housing, public housing, and in the Senior Citizen's Center. Seventy-five percent were private or public housing dwellers. This sample consisted of 16 males and 84 females. More female than male Black Senior Citizens lived in the Senior Citizen's Center.. The distribution of young, old and older, old persons in the sample was as follows: 42 percent were 75 years of age or older and 58 percent were less than 75 years of age as shown in Table 1.

TABLE 1.--Age Groups.

Age Groups	Percent
65 - 69	30
70 - 74	28
75 - 79	24
80 - 89	9
90 or more	9
TOTAL	100

The majority of the respondents had elementary school education but few had high school or college education as indicated in Table 2.

TABLE 2.--Highest Level of Education Completed.

Level of Education	Percent
No formal education	16
Elementary school	63
High School	16
College	5
TOTAL	100

TABLE 3.--Marital Status.

Marital Status	Percent
Never married	5
Divorced	3
Separated	9
Widowed	53
Married	30
TOTAL	100

The majority of the sample was widowed. The data indicated that the typical older Black Senior Citizen male was married; the typical older Black Senior Citizen female was widowed. This seems to be characteristic of the elderly population in general.

TABLE 4.--Employment Status by Sex of Senior Citizens.

Employment Status	Female	Male
Employed	5	0
Unemployed	79	16
TOTAL	84	16

Although most were unemployed as indicated in Table 4, some assumed volunteer work. One husband and wife had both attended college and were volunteer marriage counselors at their church.

TABLE 5.--Incomes of Senior Citizens.

Income	Percent
$1,500 or less	14.6
$1,500 - 1,999	11.5
$2,000 - 2,599	35.4
$2,600 - 3,999	14.6
$3,100 - 3,599	4.2
$3,600 - 4,000	7.2
More than $4,000	12.5
TOTAL	100.0

As indicated in Table 5, more than 70 percent of the sample had incomes below the poverty level of $3,600.

Selection and Description of the Instruments

Instruments and questions were developed and selected that would measure life satisfaction and the environmental factors of interest in this study. These instruments and questions were compiled into a home interview schedule to be administered by an interviewer. These instruments and questions and scoring procedures are described in the following sections.

Life Satisfaction Index-A

Data on how the respondents appraised their life; i.e., their satisfaction with life in the past and the future, were collected through the Life Satisfaction Index-A. This LSI-A consisted of 20 attitude items for which only an "agree" or "disagree" response is required. See Appendix D for the frequency distribution of positive answers.

This measurement of Life Satisfactions Index-A was developed by Neugarten, Havighurst, and Tobin (1961:134-143). Some of the original items were taken from Kutner's Morale Scale. This instrument has been tested and retested and the results have been confirmed by cross-checking with follow up interviews. The Havighurst Index is generally accepted as a useful gerontological instrument to measure life satisfaction.

For persons over 65 (N=80) it was found to correlate (r=55) with ratings made by a clinical psychologist subsequent to lengthy

personal interviews with respondents (Neugarten, Havighurst, and Tobin, 1961). Although the magnitude of this correlation is moderate, the instrument can be recognized as having a degree of validity.

A test for internal consistency was implemented using the data from the present sample. An analyses of variance form of reliability was chosen to provide an index of the relative homogeneity of the items of this instrument. This reliability coefficient for these data was .58.

Scoring.--Responses to items of the LSI-A are in the form of "agree," "disagree," or "other." The "other" category may be checked if the respondent cannot make a judgment about the item although no one in this sample used this category of response. The more positive response to each item is given a score value of "1." Thus the total score is a sum over all items of the number of positive responses. The possible range of this total score is 0 to 20. The distribution of scores from this instrument derived from this sample is available in Table 6. The mean number of positive responses on this instrument with this sample is 14.777 and the median is 15.2000. The range is 14.000

Activities Self-Rating Report

This Activities Self-Rating Report consisted of 22 questions requesting information about each respondent's family, work and social activities. The original instrument developed by Jeanette Shadko (1967) was modified to be used in this study. The modifications consisted of deleting activities deemed inappropriate for an

TABLE 6.--Frequency and Distribution Percent of Respondents' Positive Answers On LSI-A.

Life Satisfaction Index Positive Scores		
No. of Items Positively Answered	Frequency	Percent
6	2	2.0
7	2	2.0
8	1	1.0
11	6	6.1
12	4	4.0
13	11	11.1
14	13	13.1
15	15	15.2
16	16	16.2
17	18	18.2
18	8	8.1
19	1	1.0
20	2	2.0
TOTAL	99*	100.0

*One subject with missing data.

urban setting. Of the 24 original items 21 were retained and one was rewritten to be more explicit.

Scoring.--Two separate variables were derived from this instrument. The responses to the first five items of the Activities Self-Rating Report were combined and identified as an interpersonal relationship score. The remaining 17 items contributed to the activities score.

The respondents were asked to indicate the frequency to which they engaged in a variety of activities. Categories of responses were: Daily, Weekly, Monthly, Yearly, Never. Responses were later scored in the following manner:

Daily = 4
Weekly = 3
Monthly = 2
Yearly = 1
Never = 0

The total score for interpersonal relations was the sum of individual's scores for the first five items. This variable, therefore, had a range of 0 to 20. The total score for activities was the sum of individual scores for items 6 through 22. The range of this variable was potentially 0 to 132. A test for internal consistency on the total as well as sub tests of this instrument was implemented. The reliability coefficients were: total instrument ($r=.744$), first five items ($r=.482$), items 6 to 22 ($r=.678$).

Health Self-Rating Report

Three questions were asked to obtain information about the respondent's health at the time of the interview. If the respondents had stayed in bed, the number of days in bed in the past two months were sought. Questions were also asked requesting the respondent to indicate his own and his doctor's opinion of his health status.

Scoring.--The number of days spent in bed by the senior citizen was categorized as None, 1 to 5 days; 6 to 10 days, more

than 10 days. Each of these categories was given a value of 1 through 4. The highest value was given for "no days in bed." Thus this score represents the degree to which respondents were free of incapacitating illness.

The respondents' perception of own and doctor's opinion of health status were scored as follows:

Good = 4
Fair = 3
Poor = 2
Gravely Ill = 1

Thus two scores were secured concerning health status, the respondent's own perceptions of personal health status and the respondent's perceptions of the doctor's opinion of personal health status.

Income

Five income levels established by the Office of Equal Opportunity scales were used to categorize income levels. Respondents were asked to indicate what category best represented their own situation. Subsequently respondents were asked to indicate whether or not this income was adequate to take care of their needs. Only the income adequacy information was used in this variable.

Scoring.--Responses were scored: Yes, income adequate = 1; No, income not adequate = 0.

Family Record U.S.D.A.

Dietary intakes were recorded through a 24 hour recall method. With this method, respondents were asked to report all

foods eaten in the previous 24 hours. Probing questions were developed to help the respondent recall foods eaten at various times of the day. This information was used to evaluate the dietary pattern by assuming it to be representative or typical of daily intake. The adequacy of the diet was evaluated based on U.S.D.A. recommended allowances for the Four Basic Food Groups.

Scoring.--The total food intake was evaluated and the number of servings in each of the four food groups was recorded. Two scores were derived. Total 1 represented the degree to which each food group was represented in the 24 hour recall. A score of "1" was given if one or more servings of each of the four groups was present. A score of "0" indicated that at least one food group was not represented. Total 2 represented the degree of adequacy of the 24 hour recall. A score of "1" was given if the recommended allowance for each food group was present. A score of "0" was given if any one food group was inadequately represented.

Data Collection

Data were gathered by the researcher and two colleagues through a structured interview. The interviewers were all professionals involved in providing services to the elderly. The interview schedule was explained in detail to the interviewers by the researcher. All interviewers were equally familiar with the structure and objectives of the interview prior to gathering data.

Some respondents were interviewed in their homes and others in the Senior Citizen's Center Activities room. Most respondents

were alone during the interview. When husband and wife were home together, they were interviewed simultaneously. To initiate the interview the purpose of the research was explained and the senior citizens were asked to consent verbally to participate. Questions in the interview schedule were read to the senior citizens and their responses were recorded on the interview protocol. When necessary the interviewer explained the question in greater detail to the respondent.

The time required for the interviews ranged from 15 to 25 minutes. More time was required if subjects were hard of hearing or if two respondents were interviewed together. Most interviews were conducted during the morning hours of weekdays. These interviews were conducted during a two-month period from April to June, 1975.

Data Analysis

The analyses chosen to test the hypotheses in the study were Correlation Analyses, Analysis of Variance, and Multiple Regression Analysis strategies. All the analyses were implemented using the Statistical Package for Social Sciences (SPSS) program at the Wayne State Computer Program facility.

TABLE 7.--Method Used in Analysis of Data.

Purpose of Analysis	Data Used in Analysis	Analysis Strategy
Description of Senior Citizens by:		
Age, income, education, marital status, employment	Demographic Data	Frequency Counts
Test of Hypothesis 1, 2, 3, 4, 5	Scores on: Life Satisfaction Index-A, Nutrition, Activities Scale, Perceived Health Status, and Perception of Income Adequacy	Pearson Product Moment Correlation Analyses of Variance Multiple Regression Analysis

CHAPTER IV

FINDINGS

This chapter is devoted to a presentation of the results in relation to each of the five hypotheses. The results of the analyses testing each hypothesis will be presented separately.

Hypothesis 1. Nutrition

Ho 1: There will be a significantly greater degree of life satisfaction among Senior Citizens who eat nutritionally well than those that do not eat nutritionally well.

Total 1 (Variety)

The score on the family food record was tabulated by giving a total score of "1" if one serving of each of the four basic food groups was eaten the previous day. A score of "0" was given if any one food group was not represented. Thus, this variable represents the degree to which a variety of foods were consumed. A reproduction of the Family Food Record is in Appendix A.

Total 2 (Adequacy)

The second variable representing nutritional adequacy was formed by noting the number of servings recorded in each of the four food groups in the 24 hour recall and comparing this total to the USDA recommended daily allowances. If all four food groups were

adequately represented a score of "1" was recorded. If any one food group was inadequately represented a score of "0" was recorded.

The percent of respondents receiving scores of "1" or "0" for each of these two variables is reported in Table 8.

TABLE 8.--Percentage of Respondents by Scores in Total 1 and Total 2: Nutritional Variety and Adequacy.

Variable	Score Value "1"	Score Value "0"
Total 1 (Nutritional Variety)	63%	37%
Total 2 (Nutritional Adequacy)	24%	76%

As indicated in Table 8, 63 percent of the respondents had eaten at least one serving from each of the four basic food groups. However, only 24 percent of the respondents had consumed an adequate number of servings in all food groups as recommended by USDA. Thus, although the majority of the senior citizens in this sample had consumed a variety of foods, their diets could not be considered adequate. The majority of respondents (76 percent) had inadequate diets.

To test Hypothesis 1, two separate analysis of variance tests were implemented with life satisfaction as the dependent variable.

In the first analysis, respondents were grouped based on their scores "1" or "0" on total 1 (variety). Thus differences in

life satisfaction scores across the two levels of the independent variable were tested. The results of this analysis are reported in Table 9.

TABLE 9.--Nutritional Variety and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	1	3.324		
Within groups	97	745.789	.432	.519
TOTAL	98	749.113		

No significant differences in life satisfaction scores were evidenced based on the respondents' variety of dietary intake. Those respondents with at least one serving in each of the Four Basic Food Groups had a mean life satisfaction score of 14.92 (N=63) while those respondents without at least one serving per food group had a mean life satisfaction score of 14.54 (N=37).

In the second analysis, respondents were grouped based on their scores on total 2 (adequacy). The results of this analysis are reported in Table 10.

No significant differences in life satisfaction scores were evidenced based on the adequacy of respondents' diets. With this variable those respondents with less adequate diets had slightly higher mean life satisfaction scores (mean = 14.83, N=24) than respondents with adequate diets (mean = 14.61, N=76). These

TABLE 10.--Nutritional Adequacy and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	1	.856		
Within groups	97	748.258	.111	.684
TOTAL	98	749.113		

differences were not significant. Thus Hypothesis 1 cannot be supported. Based on these data, nutritional adequacy and variety do not seem to be related to perceived life satisfaction.

Hypothesis 2. Activities

Ho 2: There will be a significantly greater degree of life satisfaction among Senior Citizens who are regularly involved in activities than those that are not regularly involved in activities.

The score for activities was derived from the frequency to which respondents participated in items six through 21 of the Activities Index. This score was found to be correlated ($r=.31$; $p < .001$) slightly with life satisfaction scores (see Table 13, p. 46 for correlation matrix). As a significant positive association between activity patterns and life satisfaction were evidenced by the correlation coefficient, a second analysis was implemented to note the relative contribution of this variable along with the other independent variables in predicting life satisfaction scores. A multiple regression analysis using a step-wise procedure was implemented. Life satisfaction was the dependent variable and days in

bed, perception of doctors' evaluation of health, self-evaluation of health, total 1 (variety), total 2 (adequacy), activities, interpersonal relationships, and income adequacy were the independent variables. With the step-wise regression procedure the computer automatically selects that combination of independent variables that contribute most to predicting the dependent variable. The results of the multiple regression analysis are reported in Table 12.

TABLE 11.--Respondents' Involvement in Activities.

	Degree of Involvement				
Activities	Percent Never	Percent Yearly	Percent Monthly	Percent Weekly	Percent Daily
Attend Church	13.0	5.0	7.0	74.0	1.0
Attend Meetings*	46.0	7.0	8.0	7.0	1.0
Attend Sports	80.0	8.0	6.0	5.0	1.0
Attend Movies	77.0	11.0	11.0		1.0
Radio	5.0		1.0	7.0	87.0
Television	5.0			6.0	89.0
Walks	39.0		3.0	20.0	38.0
Work in House*	24.0	2.0		8.0	65.0
Garden	55.0		1.0	5.0	39.0
Games	75.0	3.0	8.0	11.0	3.0
Rides	29.0	3.0	28.0	35.0	5.0
Recreation	60.0	2.0	23.0	10.0	5.0
Hobby	33.0		3.0	34.0	30.0
Classes	86.0	1.0		13.0	
Library	92.0		4.0	4.0	
Help in Church*	56.0		5.0	35.0	3.0

*The following items had missing data: 1 percent - "Attend meetings," 1 percent - "Work in the house," and 2 percent - "Help in church."

Eighty-nine percent of the respondents reported watching television daily. Listening to the radio was also an activity that rated very high as 87 percent listened daily. Educational activities were rated very low. Ninety-two percent of the respondents never go to the library and 86 percent never attend classes. Also, 77 percent never attend movies. A large number of respondents attend church or help with church activities. Thus, these data suggest that senior citizens confined activities to the home or church.

TABLE 12.--Environmental Factors and Life Satisfaction.

Multiple R .474	R^2 .225	F Ratio 3.569
Step-Wise Procedure		
Variable	F Ratio	Multiple R	Additive R^2
Doctor	11.769*	.362	.131
Activities	4.424*	.413	.040
Days Bed	3.659	.440	.023
Self Health	1.960	.455	.012
Income Adequacy	1.198	.465	.010
Total 2	.701	.474	.009
Total 1	.029	.475	.000
Interpersonal	**		

*$p < .05$.

**F Statistic too small for variable to be included in equation.

The total regression equation was significant ($F=4.207$, $p < .05$) when only the first six independent variables were included of these six. Doctors and activities were the only two variables contributing to the predictions of Life Satisfaction Scores. This involvement in activities is related to perceived life satisfaction. Hypothesis 2 is supported.

The percentage of respondents' overall activity pattern is illustrated in Table 12.

Hypothesis 3. Interpersonal Relationship

Ho 3: There will be a significantly greater degree of life satisfaction among senior citizens who have a greater number of interpersonal relationships than among those who do not.

Respondent scores on the interpersonal relationships part of the activities index were separated from the total activities section and tabulated. Table 17 indicates the percentages of responses in items 1 through 5 of the Activities Index. It may be noted that the highest percentage of involvement on a weekly or daily basis was with seeing children, grandchildren, or other relatives. Thirty-five percent saw relatives daily. The least involvement was with letter writing to family and friends and entertaining relatives or friends at home. As many as 45 percent never wrote letters, and 29 percent never entertained at home.

The five interpersonal relationship scores were totaled and correlated with scores on the Life Satisfaction Index-A scale. The correlation between these two variables was .17 ($p < .05$).

TABLE 13.--Percent of Respondents Involved in Interpersonal Relationships.

Interpersonal Relationships	Degree of Involvement				
	Never	Yearly	Monthly	Weekly	Daily
Go places with someone	16.3	4.1	20.4	54.1	5.1
See children, grandchildren, or other relatives	5.0	6.0	12.0	42.0	35.0
Write letters to family or friends	45.0	21.0	22.0	8.0	4.0
Go visit friends or relatives	9.0	13.0	31.0	40.0	7.0
Entertain relatives or friends at home	29.0	16.0	36.0	16.0	3.0

Although this correlation was significant, the magnitude of the coefficient was very low. Interpersonal activities were also not predictive of life satisfaction scores in the multiple regression analysis (see Table 13). Therefore, hypothesis 3 is not supported.

Hypothesis 4. Income

Ho 4: There will be a significantly lesser degree of life satisfaction for Senior Citizens who express their incomes to be inadequate than among those that express their income as adequate.

Respondents were asked to indicate whether or not they perceived their incomes as adequate. Sixty-three percent of the respondents thought their incomes were inadequate, 35 percent thought they were adequate, and two respondents had no comment. The correlation between positive income and feelings of income adequacy was .33,

suggesting a slight relationship between amount of income and income adequacy.

To test Hypothesis 4, respondents were grouped based on their perceptions of income adequacy. The number of respondents indicating income adequacy was 35, the number indicating income inadequacy was 63. An analysis of variance was implemented with life satisfaction scores as the dependent variable and income adequacy as the independent variable. The results of the analysis are reported in Table 14.

TABLE 14.--Income Adequacy and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	1	.172		
Within groups	95	738.387	.022	.629
TOTAL	96	738.559		

No significant differences were evidenced on life satisfaction scores based on the senior citizen's perceptions of income adequacy. Thus, Hypothesis 4 is not supported. For this sample, there does not appear to be a relationship between perceptions of income adequacy and life satisfaction.

Hypothesis 5. Health

Ho 5: There will be a significantly greater degree of life satisfaction among Senior Citizens who perceive their health as good, who say their doctors evaluated their health as good, who report fewer number of days in bed, than among those who do not perceive their health as good, who say their doctors evaluated their health as poor, and who report a larger number of days in bed.

The general health of the respondents was very good. Three-fourths of the respondents had not spent any days in bed during the past two months as reported in Table 15.

TABLE 15.--Number of Days in Bed of Respondents.

Number of Days in Bed	Percent of Respondents
10 or more	4.0
6 to 10	7.0
1 to 5	13.0
none	76.0
TOTAL	100.0

TABLE 16.--Doctors' Evaluation Perceived by Respondents.

Health Status	Percent
Gravely Ill	2.0
Poor	5.0
Fair	51.0
Good	42.0
TOTAL	100.0

More than half of the respondents reported they were told by their doctors that they were in "good" health.

TABLE 17.--Health Status Perceived by Respondents.

Health Status	Percent
Gravely Ill	3.0
Poor	5.0
Fair	51.0
Good	41.0
TOTAL	100.0

The majority of the respondents viewed their state of health as being "fair" or "good." Only 3 percent assessed their health as gravely ill.

The intercorrelations among these variables and with life satisfaction scores are interesting to note as reported in Table 18.

Self-perception of doctors' evaluations of health status of the respondents was the most significant variable of the three health variables measured or reported in the multiple regression analysis. The correlation of this variable with life satisfaction was highly significant (.37). Health status determined by the individual, correlated with life satisfaction scores at (.23). The number of days spent in bed correlated with life satisfaction at (.21). Those respondents who perceived themselves to be in "good" health also indicated that their doctors' evaluations were "good." The correlation between these two variables was (.50).

TABLE 18.--Matrix of Environmental Factors and Life Satisfaction.

	Days in Bed	Doctor	Self Eval.	Act.	Int. Rels.	Life Satisfac.
Days in Bed	1.000	.093	.340	.304	.228	.206
Perceived Doctor Evaluation	0.093	1.00	.496	.216	.245	.371
Perceived Health Status	0.340	0.49	1.00	.327	.369	.228
Activities	0.304	0.216	.327	1.00	.558	.308
Inter-personal Relations	0.228	0.245	.369	.557	1.00	.167
Life Satisfac.	0.206	0.37	.228	.308	.167	1.00

Those that perceived themselves to be in "good" health were also very active and the activities score correlated with it at (.37).

Those respondents who considered themselves to be in "good" health spent less time in bed. The correlation was (.34).

Individual analysis of variance tests were also implemented with life satisfaction scores as dependent variables. Respondents were grouped into three categories on each of the three independent variables related to health.

In the first instance, for days in bed, the three levels of the independent variable were: (3) none, (2) 1 or 5 days, (1) 6 or more days. The results of this analysis are reported in Table 19.

TABLE 19.--Days in Bed and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	2	21.87	1.442	2.240
Within groups	96	727.2		
TOTAL	98	749.11		

No significant differences in life satisfaction scores were evidenced based on number of days in bed. The mean life satisfaction score for group 3 (N=76) was (mean=15.03), for group 2 (N=13, mean=14.31) and for group 1 (N=11, mean=13.64).

In the second instance, for self-perceptions of doctors' evaluations of health status, the three levels of the independent variables were (3) good, (2) fair, (1) poor or gravely ill. The results of this analysis are reported in Table 20.

TABLE 20.--Perceived Doctors' Evaluation of Health and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	2	83.699	6.038	0.004
Within groups	96	665.414		
TOTAL	98	749.113		

Significant differences across groups were noted on life satisfaction scores. Group 3, good health, had the highest mean life satisfaction scores (N=42, mean=15.83). Those respondents who indicated that their doctors judged their health to be fair had mean life satisfaction scores of (N=51, mean=14.16) while the respondents with poorest health evaluations had life satisfaction scores of (N=7, mean=13.14).

In the third instance, for self-evaluations of health status, the three levels of the independent variable were: (3) good, (2) fair, and (1) poor or gravely ill. The results of this analysis are reported in Table 21.

TABLE 21.--Perceived Health Status and Life Satisfaction.

Source of Variation	df	Sum of Squares	F Ratio	Level of Probability
Between groups	2	44.707	3.046	0.051
Within groups	96	704.406		
TOTAL	98	749.113		

Significant differences across groups were evidenced on life satisfaction scores. The mean of the life satisfaction scores for those respondents with good self-evaluations of health status was (N=41, mean=15.43). For those respondents with fair self-evaluations the mean was (N=51, mean=14.55) and for poor evaluations (N=8, mean=13.00).

In summary, perceptions of health status were significantly related to life satisfaction scores. Both perceptions of doctors' evaluations and self-evaluation of health status differentiated among respondents or life satisfaction scores. However, days in bed did not differentiate respondents' life satisfaction scores. Thus, hypothesis 5 can be supported in part.

Summary Hypotheses Testing

Nutritional variety and adequacy of senior citizens' diets was not related to life satisfaction scores.

Senior Citizens regularly involved in activities have higher life satisfaction scores.

There is no relationship between frequencies of interpersonal relationship and life satisfaction scores.

Perceptions of adequacy of income are not related to life satisfaction scores.

Senior Citizens whose perceptions of their doctors' evaluation of health as favorable have higher life satisfaction scores than whose perceptions of doctors' evaluations were poor.

Senior Citizens with favorable self-health evaluations have higher life satisfaction scores than Senior Citizens with poor health self-evaluations.

The number of days in bed (respondents are incapacitated) is not related to life satisfaction.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Discussion of Findings

Nutrition

Subjective evaluation of respondents 24 hour recall showed that the respondents were eating at least one good meal during the evening with respect to sources of meat, vegetables, and bread. Eighty percent of the diets throughout the total day were lacking in milk (see Appendix B). This finding agrees with other studies where milk and milk products providing calcium were most often neglected (Hendel, 1969:29).

This study showed 63 percent of the respondents received at least one serving from each of the Basic Four Food Guide. The National Recommended Dietary Allowances is two or more servings from each of the milk and meat groups and four or more servings from each of the vegetables and fruit and bread and cereal groups for senior citizens. Thus the respondents were receiving some of the foods from the Four Basic Food Groups, but obviously not enough according to the National Recommended Allowances.

Most of the respondents reported that they ate less than in earlier years, as also found by other researchers such as Guggehelm (1965:561). Although very few mentioned cost as a reason for their

limited amounts of food intake, income probably constrains dietary intake pattern more than is usually stated or realized by respondents.

Incomes (Table 5) were under $3,600 for 80 of the 100 respondents. Although large number of respondents had incomes below the poverty level, a high percentage received good ratings in the meat group. It would appear that people choose meat (high protein) regardless of expense and their ability to afford it. (See Appendix B for an illustration of the 24 hour responses.)

Some of the respondents stated that isolation and immobility make it less likely that they eat well. Three male respondents mentioned how badly hurt their fixed incomes were by the staggering food prices and inflation. In addition, physical disability and transportation limited shopping trips to the market, although many of the respondents are picked up and driven weekly by the Commission of Housing program for Seniors to the markets.

The evening meal showed the most foods from the Basic Four Foods Group consumed by respondents and this was largely due to the "Meals on Wheels" program sponsored by the Commission on Aging in Inkster, Michigan. This program provides a hot meal each evening in the Senior Citizen's Center where seniors living in the buildings and surrounding areas receive a well-balanced meal for a minimal cost.

More women respondents were found to eat alone than men; although most of the men in the study were married and living with

their wives. The researcher suggests that senior citizens should be encouraged to eat with others who live alone and also be encouraged to prepare balanced meals even if only for one person.

Many respondents mentioned that they had special dietary needs due to diseases and conditions often associated with aging that is, diabetes, hypertension, gastric acidity and pancreatic diseases, which affect nutrition and frequently require special diets. Successive diets restricting more and more foods may cause the senior citizen to become malnourished or unable and unwilling to follow diets prescribed. Medication is also associated with poorer diets of elderly people.

The results of the statistical analyses indicate that nutritional variety and adequacy are not related to perceptions of life satisfaction. There were no differences in life satisfaction scores between those respondents with adequate or inadequate diets and between those respondents consuming a variety of foods representing all four food groups and those with less variety.

Although in general the diets of this sample of senior citizens could be considered inadequate, the general variety of dietary intake combined with the general good health of respondents may provide a less accurate test of the relationship between nutrition and life satisfaction than would be the case with a sample with more variation in nutritional and health status.

Activities

How active the elderly are depends on many factors some of which are naturally on their educational level, cultural background, financial resources, and physical ability.

Seventy-four percent of the respondents in this study attended church weekly. Some stopped attending church because of transportation problems, but maintained involvement through watching religious broadcasts on television; 89 percent watched television daily. Eighty-seven percent listened to the radio which included some religious activity. Most respondents described themselves as religious people. Some stated that religion is more important in their lives than it used to be. Thirty-five percent helped in the church weekly. Some working in the church said the church offers a variety of programs and fellowship as well as religion to them. Many of the churches they attended offered senior citizen's programs.

These findings compared with those of Clark and Anderson (1975:96) who conclude that "what brings older members to meetings is the implicit desire to remain with the flow of humanity." It is interesting to note that 46 percent of these respondents never attended meetings and 38 percent attended meetings monthly. Most of the 38 percent said they wanted to be of use again if called upon, and still be a part of a functioning unit.

Ninety-two percent said they never go to the library and 86 percent said they never attend classes. These high percentages in these categories may be attributed to the educational background

of the respondents. Table 2 shows the number of years education for the respondents. Sixteen percent of the respondents had no formal education, 62 percent had elementary education, 16 percent had high school education and only 6 percent had some college education. Only one of the 100 respondents had completed college.

The respondents in this study did most of their own housework. Seventy-three percent worked around the house, either daily or weekly. Where there were physically handicapped respondents, they had In Home Support Care Service. This service is part of the Comprehensive Services Program in Inkster for senior citizens unable to care totally for themselves.

Other significant activities were walks taken by respondents. Thirty-eight percent took walks daily, and 20 percent took walks weekly.

Gardening was another activity that most involved themselves in during seasonal weather.

The analysis of the relationship between life satisfaction and activities indicated a significant, positive association. This relationship was more pronounced for general activities and less pronounced for activities labeled interpersonal relationships. The magnitude and positive nature of this relationship suggests that providing support services to encourage the elderly to maintain an active life may be important to the process of adjusting to aging.

Interpersonal Relations

Forty-two percent of the respondents saw their children, grandchildren, and other relatives weekly. Most of the 42 percent

maintained very active relationships with their children. For example, each week they planned visits or activities to do together. Most of their children of respondents lived in the Inkster and Romulus areas, very close to the respondents.

Thirty-five percent saw their children, grandchildren or other relatives daily. This was due to many of this group living with their relatives. Most, however, thought they had excellent relationships with their relatives.

One respondent age 70 mentioned that she accepts the responsibility of preparing meals for the family and that makes her a necessary part of the family.

Fifty-four percent were very active in going places with someone. Most mentioned going to church and shopping with a friend or relative. Some belonged to Senior Citizen's Groups that provide transportation to various functions.

As many as 45 percent of the respondents never wrote letters. This could be due to having many friends who had died before the respondents. Also it could possibly be attributed to the educational level of this group of respondents. Some of the respondents mentioned that they would rather call relatives if they lived some distance from them.

The married partners in the study were by far the major social asset in each respondent's life. Wives kept their husbands in touch with activities and husbands provided their wives with the emotional support that they needed.

Interpersonal relationships provide a good index to older persons' personal, emotional, and mental health. On the other hand, skill in sustaining relationships in adversity is an accurate indicator of the older person's success in adjusting to old age.

In this study, interpersonal relationship scores were not predictors of life satisfaction scores. The wide variety of services and group living arrangements and thus mandatory social contact of this group may have introduced variation that neutralized the relationship between these two variables.

Income

Sixty-three of the respondents thought their incomes were inadequate. Eighty respondents of the 100 were below the poverty level. The women respondents felt incomes were more inadequate than the men. This may be due primarily to the men receiving higher social security checks than the women. None of the males in the study was working while five women were working. The males were also living with their wives which provided a larger income for some.

Most stated that they had received low incomes for the greater part of their adult lives due to lack of opportunities, discrimination, inappropriate skills and poor education. The women, in particular were willing to take on jobs now if jobs were available, such as baby-sitting. Lack of transportation between the Inkster area and other parts of the county provided real problems for those seeking jobs that might be available for seniors.

These respondents have had to cope with inflation, rising living standards and diminishing assets. These factors would certainly account for the high percentage of respondents who thought their incomes inadequate.

In spite of the adverse financial situations, the majority of respondents expressed feelings of contentment and satisfaction; they felt that with more planning they could use their money more efficiently. Perception of income adequacy did not appear to be related to life satisfaction scores.

Health

The majority of the respondents viewed their state of health as being "fair" or "good." Fifty-one percent said their health was fair and 41 percent said their health was good (Table 15).

It was hypothesized that senior citizens expressing good health would exhibit greater satisfaction with life than those expressing poor health. The correlation between life satisfaction and how the respondents perceived their health was highly significant (.30).

In spite of some of the physical ailments and handicaps that some of the respondents had, they nevertheless exhibited positive attitudes toward life. For example, one female homemaker said "even though I am bedridden, I still have the desire to live as long as I can possibly live and enjoy my family and friends for as long as I can." Only three respondents out of the 100 considered

themselves to be gravely ill. All three were females, two between the ages of 65 and 69 and one between 70 and 74 years old.

The general health of the respondents was very good. Three-fourths of the respondents had not spent any days in bed ill during the past year. Of these variables related to health, the respondents' perceptions of doctor's evaluations of his health status were most highly related and predictive of life satisfaction scores. Those respondents whose doctors lead them to believe that they were in good health were more satisfied with their lives. Self-perceptions of health status were also related to life satisfaction scores but were not significant predictors. It would appear from these findings that physical health status may be related to mental health or at least mental frame of mind as reflected in life satisfaction scores.

Life Satisfaction

Life satisfaction was measured by a single index-Life Satisfaction Index-A which focused on the respondents's self-rating of his life satisfaction of his past and present stage of life.

In every instance more than half of the respondents responded positively to each question including the last question which read, "In spite of what people say, the lot of the average man is getting worse, not better." The majority felt the lot of the average man is getting worse.

Ninety-five percent of the respondents answered question 12, which read "As I look back on my life I am fairly well satisfied," positively.

Studies in life satisfaction have shown that decline in personal happiness usually coincides with deterioration in health, loss of key roles, and reduction of activity as stated by such persons as Guggenheim (1965:561) and Scheer (1969:171).

This study showed many to be happy in spite of deterioration in health, loss of roles and reduced activities. In spite of some of the physical ailments and handicaps that some of the respondents had, they nevertheless exhibited positive attitudes toward life.

Limitations of the Study

1. The sample was a purposive one and no claim is made for representation of a general population. Generalizations do not pertain beyond the survey sample.

2. Data were obtained from only the senior citizens in the family. Family members perceptions as related to senior citizens' life satisfaction were not ascertained.

3. Factors such as living arrangement and sex that may be related to life satisfaction scores were not studied.

Conclusions

Within the confines of this study which utilized a purposive sample of 100 Black Senior Citizens, the following conclusions are warranted:

1. Nutrition, measured in terms of 24-hour dietary recall, was not related to Senior Citizens' perceptions of life satisfaction. Diets of the Senior Citizens were inadequate in the amount of milk,

fruits, and vegetables they contained. Other factors that may have had a negative association with good nutrition were eating alone, being on medication, and having a limited or fixed income.

2. There was a significant relationship between perceptions of life satisfaction and the total number of activities in which respondents participated (.31). A large number of activities undoubtedly adds variety and interest to the daily round and was related to Senior Citizens' feelings of satisfaction with life. Respondents favored watching television and listening to the radio as leisure time activities. As single variables, however, neither television watching nor radio listening was significantly related to life satisfaction. Religious activity appeared to play a significant role in the lives of respondents. The literature suggests that religious activity is related to successful adjustment to aging.

3. Perceptions of income adequacy was not an important factor in the respondents' perceptions of life satisfaction. Neither was there a significant relationship between income and perceptions of income inadequacy (.007). (See Appendix C.) Senior Citizens who had incomes at or below the poverty level expressed less satisfaction with their financial status than those who were in higher income categories. Sixty-three of the 100 respondents said their incomes were inadequate.

4. Good health is a very important component of Senior Citizens' perceptions of life satisfaction. Of the five variables measured good health was the most closely related to feelings of

life satisfaction. The majority of respondents viewed their state of health as being "fair" or "good." There was a moderate correlation between life satisfaction scores and how one perceives one's own health (.22). The correlations between LSI-A and number of days in bed was also significant (.21). Of still greater significance was the relationship between life satisfaction scores and the respondent's perceptions of the doctor's evaluation of the health status of respondents (.37).

5. The interpersonal relationships measured were not significantly related to feelings of life satisfaction. There was no significant relationship between seeing children, writing letters to friends and relatives, visiting friends, and entertaining friends and life satisfaction. When all of the interpersonal relationship components were grouped together, there was no significant relationship to life satisfaction.

6. The feeling of life satisfaction among the respondents was notably high in terms of the scores reported on the LSI-A. Sixty percent of the respondents scored three-fourths (15 or more) or more of the items positively. This finding may be interpreted to mean that they were well satisfied with their lives.

Implications for Further Research

The following questions for further research concerning the Black elderly are suggested by this study: What are the general attitudes of the Black elderly towards today's society? How and to what extent can nutrition education be made available

to the Black elderly? What other variables seem to be related to interpersonal relationships of the Black elderly? What services and agencies are available to the limited income Black elderly in their communities and how are they benefited by these? What are some of the psychological factors, such as self-esteem and self-concept which effect life satisfaction. What factors are associated with poor self-esteem of the elderly Black? What is the role of the elderly in the extended family? What contributions, if any, does that elderly person make to the extended family? How do the urban Black elderly compare with the rural Black elderly both physically and psychologically? What efforts need to be made to improve the personal and social economic needs of Black elderly widowed women? Would a longitudinal study of Black adults indicate that environmental factors such as those presented in this study had improved or deteriorated after age 65 had been reached?

APPENDICES

APPENDIX A

INTERVIEW SCHEDULE

June Sears
Cooperative Extension Service
Wayne, Michigan

INTERVIEW SCHEDULE

Schedule Number

Name

Address

Sex M ____ F ____

Date of Interview

Day of Week

Length of Interview

1975

I am interested in learning about what you are doing these days.

Could I visit with you about what you are doing?

I'm going to read a lot of things people say they do. Would you tell me if you do these things--(If daily, note hours)?

	Daily	Weekly	Monthly	Yearly	Never
See your children, grandchildren or other relatives					
Write letters to family or friends					
Go visit friends or relatives					
Go places with someone					
Entertain relatives or friends in your home					
Attend church services					
Attend union, club, or lodge meetings					
Go to see sports events					
Go to the movies					
Listen to the radio					
Watch television					
Take walks					
Work in and around the house or apartment					
Work in a garden					
Play cards or other table games					
Go for rides in car					
Go to recreation room					
Work on a hobby (Specify)					
Attend classes at a school or center					
Spend time at the library					
Help in church work					
Other					

Now I need to know a little bit about you. Would you tell me:

Are you presently employed? Yes ___ No ___

AGE GROUP

What age group do you fit in?

65 - 69 _____
70 - 74 _____
75 - 79 _____
80 - 84 _____
90 - up _____

Whether or not you are

Married _____
Widowed _____
Divorced or Separated _____
Never married _____

Your schooling

Education	Years	Completed
No formal education	_____	_____
Trade school	_____	_____
Elementary school	_____	_____
High school	_____	_____
College	_____	_____
Other	_____	_____

Your monthly Income? _____

1500 - 1999 _____
2000 - 2599 _____
2600 - 3999 _____
3100 - 3599 _____
3600 - 4000 _____
greater _____

Race and Nationality _____

Black or Negro _____

Do you think your income is adequate to take care of your needs? Yes _____ No _____

Now I need to know a little bit about how you feel.

1. During the past two months, about how many days did you have to stay in bed for all or most of the day because of your health?

None _____4
1-5 days _____3
6-10 days _____2
more than 10 days _____1

2. Your health status as determined by the doctor

Good _____4
Fair _____3
Poor _____2
Gravely ill _____1
Unknown _____

3. Your health status as determined by you

Good _____4
Fair _____3
Poor _____2
Gravely Ill _____1
Unknown _____

I am interested in finding out your food habits. Please tell me what you can remember from yesterday.

	TOTAL NUMBER OF SERVINGS			
	Milk	Meat	Veg. & Fruit	Bread Cereal
1. What did you eat and drink in the last 24 hours?	____	____	_____	_____
2. What did you eat this morning?	____	____	_____	_____
3. What did you eat in the midmorning?	____	____	_____	_____
4. What did you eat at noon?	____	____	_____	_____
5. What did you eat in the afternoon?	____	____	_____	_____
6. What did you eat in the evening?	____	____	_____	_____
7. What did you eat before you went to bed?	____	____	_____	_____
8. Total I or more servings of each of four food groups.	Yes _____		No _____	
9. Total 2 or more servings milk/ meat; veg/fruit and bread/cereal	Yes _____		No _____	

---

1 ENP-USDA Family Record

Now I'd like to ask you some questions about life in general. Different people feel differently about things. I'd like to know how you feel. Will you tell me if you agree or disagree with the following ideas? If you're not sure, one way or another, tell me that too.

		AGREE	DISAGREE	OTHER
1.	As one grows older, things seem better than I thought they would be			
2.	I feel I have gotten more of the breaks in life than most of the people I know.			
3.	This is the dreariest time of my life.			
4.	I am just as happy as when I was younger.			
5.	My life could be happier than it is now.			
6.	These are the best years of my life.			
7.	Most of the things I do are boring or monotonous.			
8.	I expect some interesting and pleasant things to happen to me in the future.			
9.	The things I do are as interesting to me as they ever were.			
10.	I feel old and somewhat tired.			
11.	I feel my age, but it does not bother me.			
12.	As I look back on life, I am fairly well satisfied.			
13.	I would not change my past life even if I could.			
14.	Compared to other people my age, I've made a lot of foolish decisions in my life.			
15.	Compared to other people my age, I make a good appearance.			
16.	I have made plans for things I'll be doing a month or a year from now.			
17.	When I think back over my life, I didn't get most of the important things I wanted.			

	AGREE	DISAGREE	OTHER
18. Compared to other people, I get down in the dumps too often.			
19. I've gotten pretty much what I expected out of life.			
20. In spite of what some people say, the lot of the average man is getting worse, not better.			

APPENDIX B

DIETARY INTAKE

Specific Foods in 24 Hour Food Recall of Senior Citizens.

	Percentage No	Percentage Yes
Morning		
Milk in morning	59.0	41.0
Meat in morning	41.0	59.0
Vegetable in morning	39.0	61.0
Bread in morning	15.0	85.0
Mid Day		
Milk in Mid Day	98.0	2.0
Meat in Mid Day	97.0	3.0
Vegetable in Mid Day	92.0	8.0
Bread in Mid Day	86.0	14.0
Noon		
Milk	81.0	19.0
Meat	48.0	52.0
Vegetable	51.0	49.0
Bread	88.0	12.0
Afternoon		
Milk	96.0	4.0
Meat	90.0	10.0
Vegetable	90.0	10.0
Bread	88.0	12.0
Evening		
Milk	73.0	27.0
Meat	24.0	76.0
Vegetable	23.0	77.0
Bread	26.0	74.0
Before Bed		
Milk	83.0	17.0
Meat	90.0	10.0
Vegetable	81.0	19.0
Bread	67.0	33.0

APPENDIX C

CORRELATIONS BETWEEN LIFE SATISFACTIONS AND VARIABLES

Pearson Product-Moment Correlations Between LSI-A and Variables

LSI	1.00
Nutritional Variable	0.47
Nutritional Adequacy	.008
Activities	.308
Total Personal Relationships	.167
Income Adequacy	.007
Perceived Doctor's Evaluation	.371
Perceived Health Status	.228
Days in Bed	.206

APPENDIX D

PERCENTAGE DISTRIBUTION OF POSITIVE ANSWERS

Frequency Distribution of Positive Answers

		AGREE PERCENT	DISAGREE PERCENT	OTHER
1.	As one grows older, things seem better than I thought they would be.	76		
2.	I feel I have gotten more of the breaks in life than most of the people I know.	72		
3.	This is the dreariest time of my life.		90	
4.	I am just as happy as when I was younger.	73		
5.	My life could be happier than it is now.		53	
6.	These are the best years of my life.	67		
7.	Most of the things I do are boring or monotonous.		91	
8.	I expect some interesting and pleasant things to happen to me in the future.	66		
9.	The things I do are as interesting to me as they ever were.	88		
10.	I feel old and somewhat tired.		52	
11.	I feel my age, but it does not bother me.	79		
12.	As I look back on life, I am fairly well satisfied.	95		
13.	I would not change my past life even if I could.	83		
14.	Compared to other people my age, I've made a lot of foolish decisions in my life.		90	
15.	Compared to other people my age, I make a good appearance.	92		
16.	I have made plans for things I'll be doing a month or a year from now.	55		
17.	When I think back over my life, I didn't get most of the important things I wanted.		52	

	AGREE PERCENT	DISAGREE PERCENT	OTHER
18. Compared to other people, I get down in the dumps too often.		89	
19. I've gotten pretty much what I expected out of life.	93		
20. In spite of what some people say, the lot of the average man is getting worse, not better.	15		

NOTE: One subject with missing data.

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