THE PERCEIVED HEALTH CONDITION AND HEALTH-PROTECTIVE BEHAVIORS OF AN ELDERLY, URBAN POPULATION

by

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CHAPTER I

INTRODUCTION

It is well known that the number and proportion of elderly persons in the United States have been steadily rising. Indeed, it is predicted that by the year 2000, 28% of the population will be 50 years of age or over, and 12% will be 65 or over (Russell, 1981). It is also well known that the elderly experience more health problems than other segments of the population, and that they are disproportionately heavy users of health services. Thus, the Surgeon General has recently reported that 80% of the elderly suffer from one or more chronic diseases, and that older people account for 30% of our nation's health care expenditures (Public Health Service, 1979). As the number of elderly and their proportion in the population continue to increase, it may be anticipated that the demand for health services, and their cost, will greatly increase, unless means are found to improve the health status of older people. It is imperative, then, to analyze the reasons why the elderly use health services, both in order to develop policy for appropriate resource allocation, and to plan interventions which may decrease demand for services by preventing or managing health problems.

In undertaking such an analysis, historical assumptions about health and health services must be critically examined. Levin (1977) has noted that health professionals, researchers and planners all have tended to equate health care with professional care. They have also tended to attribute good health to the use of professional services, and to the performance of behaviors identified by health professionals as conducive to well being (Kasl & Cobb, 1966; Rosenstock, 1960). In recent years, however, a number of authors have documented the fact that by far the greatest proportion (60% to 90%) of health care is provided by lay persons outside the professional health care system (Kleinman, Eisenberg & Good, 1978; Levin, 1977). During this same period, the limitations of the medical care system for improving the health of populations have become increasingly recognized (Milio, 1976). Thus, Dowie (1975) and Haggerty (1977) have claimed that the medical scientific context for the study of preventive health behavior has been too readily accepted as the only proper one. Other critics (for example, Illich, 1975) have launched a radical attack on scientific medicine, denouncing it as iatrogenic, and insisting that the individual's health depends not on professional services but on self-awareness, self-discipline

and inner resources. In view of such attacks on the medical establishment, Levin (1977, p. 52) has declared that "the professional will have to learn the contours of an unfamiliar health-care landscape and be guided in determining appropriate supportive technology as a supplementary, not primary resource". Since the percentage of elderly in the population will be increasing, it is advisable that health care providers become more aware of what elderly persons consider to be healthy behavior.

Recognition of the importance of lay health resources prompted Harris and Guten (1979) to investigate the various behaviors engaged in by the lay public for the purpose of maintaining and improving health. To this end, Harris and Guten asked a representative sample of Americans what they believed they could do to maintain their health, and to what extent they engaged in such behaviors. The present study will attempt to further our knowledge in this area, through a partial replication of the survey by Harris and Guten, with a sample of elderly persons residing in a western, metropolitan community. With such knowledge more appropriate plans may be developed to meet the anticipated health problems.

Review of the Literature

In this review, first the concept of Health Behavior will be described, together with a brief overview of research on the phenomena to which the concept refers. Then, studies relating health status to health promotive and health protective behavior will be described. Finally, the effect of sociodemographic factors on health protective and health promotive behavior will be discussed.

Concept of Health Behavior

In 1966, Kasl and Cobb published a classical paper, in which they distinguished three classes of health-related activities--Health Behavior, Illness Behavior, and Sick Role Behavior. Their definitions follow.

> Health behavior is any activity undertaken by a person believing himself to be healthy, for the purpose of preventing disease or detecting it in an asymptomatic stage. Illness behavior is any activity undertaken by a person who feels ill, to define the state of his health and to discover a suitable remedy. The principal activities here are complaining and seeking consultation from relatives, friends, and from those trained in matters of health. Sick role behavior is the activity undertaken

> by those who consider themselves ill, for the purpose of getting well. It includes receiving treatment from appropriate therapists, generally involves a whole range of dependent behaviors, and leads to some degree of neglect of one's usual duties. (p. 246)

Kasl and Cobb then presented an extensive review of the theoretical and research literature regarding the three types of behavior. With respect to Health Behavior, they considered only that literature which sought to explain the use of medical services designed to prevent disease or detect it in an asymptomatic stage. Kasl and Cobb acknowledged that personal habits such as diet and exercise also constitute health behavior, but they did not include research on such habits in their review, perhaps because of its scarcity.

Most studies of Health Behavior have sought to explain why some persons participate in preventive health efforts such as immunizations, and in screenings for particular diseases such as cancer, hypertension, and tuberculosis. The emphasis has been on the use of professional health services for these purposes. In the effort to identify and assess the determinants of these voluntary health behaviors, a variety of conceptual approaches have

been employed--economic, sociodemographic, geographic, social-psychological, organizational (McKinlay, 1972)--and a number of elaborate models have been developed (Becker & Maiman, 1983). The best known of these models is probably the Health Belief Model which was originally constructed to explain the decision to obtain preventive care or health screening.

That component of Health Behavior which concerns persons' personal habits and practices to protect and promote their own health, without depending on contact with the professional health care system, was largely neglected until recently, when a groundswell of interest in fitness, health promotion and self-care has led to a few systematic investigations. These investigations have not emphasized the determinants of such behaviors, but rather their effects on health status. In short, these studies have attempted to test empirically the widely held assumption that certain lifestyles and certain habits, alone or in combination, influence health. These investigations are described below.

Relation of Health-Protective Behavior to Health Status

Concepts of healthful living are certainly not new. However, historically, health resources have not been allocated to promote healthful lifestyles to any great

extent. As long as infectious diseases were prevalent, most resources were used to combat, control, and cure those disorders. With the conquest of infectious diseases, chronic diseases have become our major health concerns. Now, the inability of therapeutic medicine to cure such diseases has led many Americans to believe that the answer lies in preventing such chronic conditions, and that this may best be accomplished by changing personal lifestyles and habits (Knowles, 1976; Haggerty, 1977). Thus, individuals are held responsible for their state of health.

Fuchs (1974) has forcefully presented this viewpoint. He pointed out that differences in health levels among individuals are not usually related to differences in quantity or quality of medical care, but rather to lifestyles determined by socioeconomic and cultural factors. In illustration, he contrasted the health status of the populations of Utah and Nevada. The residents of Utah are among the healthiest individuals in the nation, whereas the residents of Nevada are among the least healthy. These huge differences he attributed to the different lifestyles of the residents of the two states. He concluded:

> The greatest current potential for improving the health of the American people is to be

> found in what they do or don't do to and for themselves. Individual decisions about diet, exercise, and smoking are of critical importance and collective decisions affecting pollution and other aspects of the environment are also relevant. (p. 46)

Fuchs's thesis that common health habits affect health has been the focus of several investigations. These studies were undertaken to determine what constitutes a healthy lifestyle. It is known that specific habits are linked to specific health problems. For example:

> Many specific diseases have been linked with habits; cigarette smoking to cancer of the lung as well as emphysema. . . overweight to heart disease. . .overuse of alcohol to cirrhosis of the liver. . . nonuse of seatbelts to injuries in auto accidents. (Haggerty, 1977, p. 277)

Less is known about how these specific habits, or other habits, alone or together, affect general health status and resistance to disease. Among the more important systematic studies endeavoring to expand knowledge of these relationships are those of Palmore (1970), Pratt (1971), Pope (1982), Harris and Guten (1979), and the ongoing Alameda County studies and the National Survey

of Personal Health Practices and Consequences.

Palmore (1970) investigated the relationships of the health practices of exercise, weight control, and smoking cigarettes to subsequent illness and longevity. His data were derived from the Duke Longitudinal Study of Aging. Subjects for that Study were 268 community volunteers, from 60-94 years of age at initial examination in the period from 1955 through 1959. These subjects were followed for ten years, by which time the sample attrition had reached 46%. Data on health habits were collected at the initial examination. Data on illness and longevity were gathered at followup. Illness was measured by weeks in bed, physician visits, operations, hospitalizations, and self-evaluations of health. Of the three health practices considered, amount of exercise was most closely related to the illness indicators. Those overweight or underweight also had more illness, according to most of the illness indicators. Cigarette smoking was associated with fewer of the indicators than either exercise or weight control. Palmore noted that the relationships were not statistically significant in half of the instances, and were weak or moderate in the other half. However, he asserted:

> . . . the consistent relationship of health

> practices to less illness which was found with most of the indicators supports the conclusion that health practices did contribute to better health among this group of elderly persons. The fact that these health practices were usually most strongly related to longer life indicates that they have a long-term effect on health that is greater than the short run effect on any of the illness indicators. (p. 316)

Palmore also noted that when the health practices were combined, there tended to be an additive effect on health, with each additional health practice reducing the proportions of persons with illness and early death.

Pratt (1971) studied the effect of personal health habits on health status, in a sample of 401 mothers. She conceptualized Personal Health Care as consisting of four dimensions. First, Perceived Health Maintenance Practices included sleep, exercise, elimination, dental hygiene, smoking, alcohol consumption, and nutrition. The second dimension was the quality of the Use of Professional Health Services, including preventive, specialized, and illness services. Level of Health Knowledge was the third dimension, and covered such topics as the effect of exercise, the female fertile period, criteria for selecting a

physician, proper dental hygiene, and body temperature indicating fever. The fourth dimension was Amount of Health Equipment in the Home, including facilities for cleaning house and clothing, personal hygiene equipment, and common medical supplies.

Pratt measured the mother's Level of Health by the mother's self-rating of her health, and by the number of health problems the mother reported experiencing from a list of 22 health problems including constipation, headache, skin rash, toothache, cough, heartburn, dizziness, and stiff joints. Pratt found that mothers who scored higher on the two dimensions of Personal Health Maintenance Practices and of Use of Professional Health Services enjoyed a higher level of health and experienced fewer health problems than other mothers. However, the level of health knowledge and the amount of health equipment in the home were not related to level of health nor to extent of health problems. Pratt also noted that poor health practices were more prevalent among mothers with low socioeconomic status. However, mothers from lower socioeconomic groups who practiced good health habits were just as healthy as mothers from higher socioeconomic groups, with equivalent health habits.

In his study, Pope (1982) related three lifestyle variables--drinking, smoking, and physical activity--to

three health status measures, as well as to the use of medical care services. His sample consisted of 2,502 adults in a Health Maintenance Organization. Pope's findings were mixed, in that the relationships between the lifestyle variables and the health status variables were not statistically significant in all sex/age groups. Nevertheless, he concluded:

> Overall, the correlations between the life-style variables and the health status measures tend to support the hypothesis of a relationship between life-style and health status generally, as opposed to only specific health conditions or diseases. (p. 410)

Perhaps the best-known research on the relationship of personal health behaviors to health has been conducted by the Human Population Laboratory of the California State Department of Public Health. In 1972, Belloc and Breslow reported the results of the on-going Alameda County Study, based on the initial survey in 1965 of a probability sample of adult residents. The health habits examined were weight control, physical activity, alcohol activity, alcohol consumption, smoking habits, and two eating habits, namely, snacking between meals, and eating breakfast every day. The physical health

status of the study group was determined through questions regarding disability, the presence of chronic conditions, impairments, presence of symptoms and one's energy level. Good health habits were found to be positively related to physical health status. It was also found that "the relationship of these habits was. . . cumulative; those who reported all or many of the good health practices were in better physical health, even though older, than those who followed fewer habits". (p. 420) These relationships were found to be independent of economic status.

In 1973, Belloc reported that a 5½-year followup of the same population revealed a significant relationship between the age-standardized mortality rates and the aforementioned health habits. This association was stronger than the association between mortality and physical health status, or the association between mortality and income. The cumulative effect of health habits on health was also demonstrated: "When accumulated to form a health practice score from 0 to 7, the number of health practices showed a striking inverse relationship with mortality rates, especially for men" (Belloc, 1973, p. 67).

Belloc's finding was confirmed by the results of a subsequent followup of the Alameda sample in 1974. Breslow and Enstrom (1980) found the mortality experience of persons performing six or seven habits throughout the

9-year period was substantially better than that of other persons. "Men following seven health practices had a mortality rate only 28% that of men following zero to three health practices. Women following seven health practices had a mortality rate 43% that of women following zero to three health practices". (p. 469)

Still another finding from the Alameda Study follow-up in 1974 has been reported by Wiley and Comacho (1980). They noted that cigarette smoking, alcohol consumption, physical exercise, hours of sleep per night, and weight in relation to height were all significantly correlated with overall health outcomes, nine years later, when initial level of health was controlled. The authors claimed strong support, on this basis, for the hypothesis that routine personal habits are important in establishing the person's overall health and resistance to illness.

The Alameda County Study health practices were examined in relation to health status in the National Survey of Personal Health Practices and Consequences (Wilson & Elinson, 1981). This survey was conducted in 1979 for the National Center for Health Statistics. The target population was the U.S. population (exclusive of residents of Alaska and Hawaii) between the ages of 20 and 65 years, who resided in households with telephones. Interviews were conducted by telephone with 3,025

respondents. For this research, a physical health status variable was developed based on limitation of activity level, ability to perform activities of daily living, number of days spent in bed during the past year because of illness or injury, and energy level. The National Survey verified the relationships between certain Alameda health practices--physical activity, weight control and sleeping patterns--and current physical health status. Physical activity had the strongest association with health status. The other three Alameda health practices--never having smoked, moderate drinking or abstinence, and eating breakfast regularly--were not correlated with health status.

In general, the above studies found that regardless of age and income, the practice of personal preventive health behaviors by individuals was positively related to physical health status. Also, it was concluded in the majority of these studies that the practice of good health habits (preventive health behaviors) had an additive effect. The more good health habits practiced, the better the individual's physical health status.

All the researchers mentioned to this point have focused on personal habits believed by health professionals to be healthful or harmful. By way of contrast, Harris and Guten (1979) took the perspective of the lay person, and sought to learn what lay persons do in the belief

they are protecting and promoting their own health. To this end, they surveyed a sample of 842 adults, 18 years of age and older, in the Cleveland area.

In their exploratory study, Harris and Guten introduced the concept of Health-Protective Behavior (HPB) which they defined as "any behavior performed by a person, regardless of his or her perceived or actual health status, in order to protect, promote, or maintain his or her health, whether or not such behavior is objectively effective toward that end" (1979, p. 18). They tapped the self-defined nature of this Health-Protective Behavior in two ways: first, by asking the open-ended question, "What are the three most important things that you do to protect your health?"; and, second, by asking respondents to complete a card-sorting task indicating which of 30 specific activities they performed "always" or "almost always" in order to protect their health. Each respondent's health status was then determined by replies to questions regarding presence or absence of symptoms, number of physician visits, days of restricted activity, and self-assessed health.

Their major findings were as follows. First, most persons engaged in many diverse activities of a routine discretionary nature in order to protect and maintain health. Second, nutrition and eating habits were judged

by their respondents as the most important things to do to protect health. Third, relatively few persons considered contact with the professional health care system to be a means of protecting health. Fourth, Health-Protective Behavior did not vary with health status. Persons in poor health did not differ markedly from persons in good or moderate health in the activities they performed to maintain health. Therefore, unlike the investigators discussed earlier, Harris and Guten did not obtain support for the hypothesis that adherence to more health habits results in better health.

Socio-demographic factors affecting health-protective behavior

Sex. In her review of research on the influence of sex roles on preventive health behavior, Nathanson (1977) reported that men engaged in more risk-taking and in less preventive behavior than women. The risk-taking behavior included smoking, alcohol consumption, use of narcotics, and automobile driving. Women had more physical examinations, made more dental visits, and received more immunizations. Nathanson hypothesized that the differences in these health behaviors could be attributed to sex role norms and societal influences. She asserted that women are encouraged to use medical terms to define their problems and to pursue help within the health care system.

Research published since Nathanson's review has similarly noted the greater inclination of women to engage in health behavior. Harris and Guten's (1979) exploratory study of Health Protective Behavior found sex to be the "strongest predictor of preventive care" (p. 26). More women than men in their Cleveland sample had physical checkups. Breslow and Enstrom (1980), in their analysis of data from the Alameda County Survey, reported that more women than men claimed to perform 5 or 6 of the 7 personal health practices believed to benefit health. Wilson and Elinson's (1981) analysis of data from the National Survey of Personal Health Practices and Consequences revealed large differences between the sexes in smoking and drinking, with women indulging in these activities less than men. Finally, Verbrugge (1982) noted that women scored higher on an index of good health habits: "24 percent have five good habits compared to 15 percent of the men" (p. 429).

Sex does not appear to affect the relationship between health practices and health status, to any great extent. Thus, Belloc and Breslow (1972) found that the association between good practices and good current health held for both sexes. Belloc (1973) remarked that the inverse relation between the number of good practices adhered to and mortality rates was striking for males, and

also somewhat stronger for males than for females.

Age. The effect of age on health behavior has been a matter of interest to several researchers. Litman (1971) analyzed the health and health care of 70 three-generational families in the Minneapolis-St. Paul metropolitan area. The practices common to these families concerned exercise and fresh air, food and nutritional beliefs, and use of vitamins. The greatest difference among the generations was the faith of the grandparent generation in the efficacy of the Protestant work ethic as a means of health maintenance (14% versus 1%). The older generation also differed in their less frequent use of routine medical checkups, despite their greater proneness to chronic illnesses.

Belloc and Breslow (1972) noted a positive correlation between age and specific health practices, such as hours of sleep, regularity of meals, physical activity, smoking and drinking. Wilson and Elinson (1981) noted that the practice of eating breakfast every day significantly increased with age, but they found no other consistent differences among age groups. Finally, Harris and Guten (1979) stated that age was the strongest predictor of health practices, such as obtaining adequate sleep, exercising, eating properly, watching weight, avoiding overwork.

The association of health practices to health status does not appear to be conditional upon age. Belloc and

Breslow (1972) found that older adults who practiced all good habits were in better health than younger adults who did not adhere to good health habits. Breslow and Enstrom (1980) noted that, within the older age groups, those adhering to more health practices tended to survive longer. Pope (1982) found the relationships between three lifestyle variables--drinking, smoking, and physical activity--and three health status measures, although not statistically significant in all age groups were in the expected direction. Smoking was negatively related to all three health status measures for all sex/age groups. Drinking was positively related to general health status for males under 50 years of age. Those who drank moderately were healthier than other males. Pope also noted that men 65 years of age and above who engaged in less physical activity used medical care services more.

Socio-economic status. Most existing studies indicate that higher socioeconomic groups practice more and better health habits than lower socioeconomic groups. Thus, Pratt (1971) noted the greater prevalence of poor health habits among women of lower socioeconomic status. Wiley and Comacho (1980) also noted that those with lower incomes tended to be in a poorer state of health.

However, it appears that the practice of good personal health habits is related to good physical health status

(Belloc & Breslow, 1972), and to lower mortality (Belloc, 1973) independent of income. Pratt (1971) reported that, if women of lower socioeconomic status had good health habits, then they were at no disadvantage healthwise. Finally, in most of the studies the practice of good health habits was presumed to have an additive effect. The more good health habits adhered to, the better the individual's physical health status and the less the individual's mortality risk.

Purpose of the Study

Health behavior research has usually been concerned with medically approved behaviors and the effects of various factors on the performance of these behaviors. Despite this extensive research, we still know little about what people actually do to protect their health. A new focus in health behavior research is developing that acknowledges people as producers of their own health (Dowie, 1975), and documents lay health resources (Levin, 1977; Kleinman, et al., 1975). Prior to Harris and Guten's introduction of the concept of self-defined Health-Protective Behavior (HPB), studies did not obtain this particular type of information. Harris and Guten have recommended that further research be conducted to add to our understanding of HPB activities among different categories of people. Since the elderly constitute a growing

proportion of the population, and since a high percentage of the elderly have one or more chronic diseases, it would seem useful to study this segment of the population.

To date, few studies have examined the relationship of physical health status to health practices. Belloc and Breslow (1972) examined this relationship, but their study of health practices emphasized activities they themselves defined as health protective. The purpose of the present study will be to add to our knowledge base regarding self-defined health-protective behavior. The study will attempt to answer the following questions: What kinds of activities do elderly persons perform in the belief that they protect health? Do these activities differ between the sexes? Do these activities differ systematically among different categories of the elderly, the "young-old" (55-64 years of age), the "old" (65-74) and the "old-old" (75 years and above)? Do the activities vary systematically with health condition and with health perception?

Justification for the Study

Today, the majority of elderly persons have one or more chronic health problems. If the prevalence of chronic disease continues at present rates, and the number of elderly increases, the health care system may become overburdened. As health care providers, community health

nurses have the opportunity to reinforce positive behaviors and to discourage and alter detrimental behaviors. The nursing process which includes data collection, problem definition, planning, implementation, and evaluation is applicable in the promotion of an optimal health status for older adults. "The self-care practices of individuals must in fact be a pivotal point, and hence should be focused on a source of information for valid nursing data and medical data" (Kinlein, 1977, p. 600). Increased knowledge of effects of individual self-care practices will add much-needed data to the base of community nursing practice with elderly clients.

With decreased resources it will be necessary to set priorities and perhaps focus on sub-populations among the elderly who are at greater risk and who would thus have the potential for greater use of health resources and services. The knowledge of the health-behavior practices of these higher risk groups would assist nurses in planning interventions, health teaching and developing community programs.

CHAPTER II

METHOD

Sample and Setting

The sample consisted of members of a metropolitan senior citizen center. This center offers leisure and social activities. It also provides space for a weekly health screening clinic (Keep Well Clinic) as well as periodic referral clinics for hypertension and glaucoma. Other services available through the center are telephone reassurance, a hot noontime meal program, and classes on a wide variety of topics. To be eligible for membership, persons must be 55 years of age or over, and pay a small yearly membership fee. At the time of the study, the fee was set at $3.00 for single persons living inside the city limits, and $3.50 for those outside city limits. Couple rates were $4.00 for city residents and $5.00 for others.

The Senior Center has approximately 7,000 members, 65% of whom are female. The age range of members is from 55 to 95. Members receive a monthly activity bulletin. From the bulletin mailing list, a systematic random sample of 600 persons was drawn, starting from a random number. If the entry referred to a couple, a questionnaire was addressed to the male to maximize the number of male respondents.

Procedure

Two sections of the questionnaire were pretested. Questions concerning self-defined health protective behaviors were asked of 40 staff members at the Visiting Nurse Association and of 5 residents of a high-rise apartment owned and maintained by the Housing Authority of Portland. No difficulty was noted by either group in answering the openended questions concerning the three most important things one does to protect one's health. Several items in the section regarding performance of selected behaviors caused confusion in both groups. These items were negatively stated, such as "Don't Smoke". These items were reworded to "Avoid Smoking," "Avoid Drinking" and "Avoid letting things get me down." (See Appendix A.)

After revisions, the questionnaire was mailed to each member of the sample, together with a cover letter requesting participation and assuring members that responses would be handled confidentially and that results would be reported in the Center's bulletin. If the questionnaire was not returned in three weeks, a second questionnaire was mailed, again requesting the potential participant to respond. (See Appendix B).

Measures

Health-Protective Behavior

The dependent variable in this study is Health-Protective Behavior (HPB). To assess HPB, each respondent was first asked to state "the three most important things you do to protect health". Responses were coded into the activity categories identified by Harris and Guten (1979), such as nutrition, sleep, exercising, and contact with health care system.

Second, each respondent was asked to indicate on a checklist of 30 behaviors, those which he or she performed "never" or "sometimes" (scored 0) or "almost always/always" (scored 1). These 30 behaviors were identified by respondents to the Harris and Guten survey as important means of protecting health. The range of behaviors is much broader than that considered in previous health behavior research, and includes matters of nutrition, use of health advice, smoking habits, and so on. (See checklist in Questionnaire Item 8, Appendix A). From their responses to the checklist, individuals were assigned HPB total scores. In principle HPB scores could range from 0 (the person never performed any of 30) to 30 (the person performed all the health protective behaviors). In addition, subscores were computed for the five clusters of HPB, namely, the Health Practices Cluster, the Safety

Practices Cluster, Preventive Health Care Cluster, Environmental Hazard Avoidance Cluster, and the Harmful Substance Avoidance Cluster. (See Appendix C). The Health Practices Cluster (HPC) consists of 8 personal, daily health activities and includes getting enough sleep, relaxing, eating sensibly, moderation in all things, avoiding overwork, avoiding chills, limiting foods and watching one's weight. Scores may range from 0 (worst health practices) to 8 (best health practices). The Safety Practices Cluster (SPC) includes fixing things, checking condition of electrical appliances, purchase of a first aid kit, and listing of emergency phone numbers. Scores may vary from 0 (worst) to 4 (best). The Preventive Health Care Cluster (PHC) is represented by physical and dental checkups, and is scored from 0 to 2. The Environmental Hazard Avoidance Cluster (EHA) includes avoidance of crime and pollution areas, and is scored 0 to 2. The Harmful Substance Avoidance Cluster (HSA) includes avoiding smoking and avoiding drinking, with scores of 0 to 2. (See Appendix C).

Health Condition

Health Condition is conceptualized as an independent variable in this study. Health Condition was measured by the same items as in the Harris and Guten survey, namely by the presence or absence of symptoms (Questionnaire

Item 5a & b), perception of self as healthy or not healthy (Item 1), and by the extent of sick role activities, contact with physicians (Item 3a & b), and restriction of normal activity because of illness (Item 4). Responses to these items were used to classify respondents into "Good", "Moderate" or "Poor" Health Condition, according to the system devised by Harris and Guten.

> Respondents were classified as in "Good" health condition if they did not have any current illness or injury, perceived their health as excellent or good, and had neither contacted a physician for reasons of illness or injury in the previous two weeks, nor had seven or more days of restricted activity in the preceding six months. . . . . .respondents. . . were classified in "Poor" health condition because (1) they both perceived symptoms and evaluated their health as only fair or poor, and had performed either one or both of the sick-role activities [i.e., contacted the physician for reasons of injury or illness in the previous two weeks, or had seven or more days of restricted activity in the preceding six months]; or (2) they had

> performed both sick-role activities and either perceived symptoms or evaluated their health poorly. The remaining respondents. . . were classified as being in "Moderate" health condition. (1979, p. 21)

A second measure of perceived health was employed, namely, a Cantril ladder (1965), to serve as a validity check on the Harris and Guten measure of Health Condition. Subjects indicated on this ladder their perception of their present health. (Questionnaire Item 6). A score of 0 indicates "worst possible health" whereas a score of 10 indicates "perfect health." This second measure of health proved to be significantly correlated with the first measure of Health Condition ($r = .66$, $p = .001$).

Additional Data

Demographic and socioeconomic data were gathered on all respondents, and included age, sex, marital status, living situation, education, income and employment status (Questionnaire Items 9 through 16). Employing Neugarten's distinction (1974), persons were assigned to one of three age categories, the "young-old" (55-64 years of age), the "old" (65-74), and the "old-old" (75 years and above).

Data Analysis

This study is descriptive and exploratory. Analysis

of the data in general paralleled that of Harris and Guten. The relation of Health Condition to Health-Protective Behavior (HPB) was examined for each of the three categories of elderly (young-old, old, and old-old) and for both sexes.

CHAPTER III

RESULTS AND DISCUSSION

This chapter will focus on the data obtained from the survey questionnaire regarding the Health Condition of the respondents and the Health-Protective Behavior they practice. After the sample will be described, the findings relevant to each of the four specific research questions will be presented. The Health-Protective Behavior of the elderly sample will then be described, including its relation to sex and its relation to age. A description of the health condition of this elderly sample will follow. Finally, the relation of health condition and health perception to Health-Protective Behavior will be examined.

Description of Sample

A probability sample of 600 individuals was drawn. Questionnaires were returned by 405 persons, producing a response rate of 68%. Of the 405 returns, 386 were usable, and the analysis is based on their responses.

The sample included 248 women and 138 men. The mean age was 69.5 years. There were 106 persons in the "young-old" category (age bracket 55-64), 180 in the "old" category (age bracket 65-74), and 100 in the "old-old" category (age bracket 75+). Of the sample, 63.5% were married and 70.2% were living with another person, rather than alone.

(See Table 1). The median income for the respondents was $13,600; their mean educational level was 12.4 years. Their mean occupational status, as measured on the Duncan-Reiss Socioeconomic Index (Reiss, Duncan, Hatt & North, 1961), was 47.6 on a 100-point scale. These data are indicative of a solid working class to middle class background for the sample. Only 45 were employed at the time of data collection.

By comparison, Harris and Guten based their analysis on 842 usable interviews from a sample of 1,250. This gave them a completion rate of 67%. Fifty-four percent of their respondents were female, and 46% male. The higher proportion of females in the current study (64%) is to be expected, given the age difference in samples. There were 278 (83%) persons in the 18 to 34 years of age bracket, 295 (35%) between 35 and 54, and 269 (32%) over 55. Only one-third of their sample was "aged". The median income for their sample was $12,889; their mean educational level was 10.5 years. No separate data were available for those 55 years and over in their sample. Harris and Guten believed their sample to be broadly representative of the Cleveland area population. Their sample was quite similar to the present one in median income. Their respondents were similar to the respondents of the present study with respect to income, but they were somewhat less well educated.

Table 1. Socio-Demographic Characteristics of Sample (N=386)

Characteristic	Number	Percent
Sex		
Male	138	35.8%
Female	248	64.3%
Age (years)		
55-64	106	27.5%
65-74	180	46.6%
75+	100	25.9%
Marital Status		
Married	245	63.5%
Single	14	3.6%
Divorced, widowed, separated	127	32.9%
Living Alone		
Yes	115	29.8%
No	271	70.2%
Employed		
Yes	45	11.7%
No	341	88.3%

Health Protective Behavior of the Elderly

Data regarding the activities elderly persons performed were obtained through two sources. First, each participant was asked to respond to the open-ended question "What are the three most important things you do to protect your health?" Responses of the 362 individuals who answered that question were coded into the general categories developed by Harris and Guten. Table 2 lists these categories and compares the results of this study with those of Harris and Guten. The rankings were remarkably similar (rho = .90, $p < .01$). The top three activity categories were the same in each study. Both the elderly of this study and the general population sampled by Harris and Guten named nutrition, exercise and sleep as the three most important activities. In this study the percentages of respondents stressing nutrition and exercising were greater.

Second, each individual was asked to respond to a list of 30 health related activities by indicating how often he or she performed these activities. Table 3 lists the 30 health activities by percentages (in descending order) of the respondents who stated they performed the listed behavior "always" or "almost always". Also presented are the percentages obtained by Harris and Guten (1979). The general correspondence of the two rankings (rho = .80,

Table 2. Percentage of Respondents Performing Various Categories of Activities as One of the Three Most Important Things They Do to Protect Their Health: Present Study and Study of Harris and Guten.

Activity	Present Study (N = 362)[a]	Harris & Guten[b] (N = 842)
Nutrition; Foods; Eating Conditions	91.2	71.3
Sleep; Rest; Relaxation	42.2	46.1
Exercising; Physical Activity; Physical Recreation	68.5	35.5
Contact with Health System	16.6	18.8
Personal Hygiene or Dress	3.3	14.5
Psychological, Mental, or Emotional Well-Being	11.0	12.6
Watching One's Weight	5.9	9.7
Avoiding or Limiting Tobacco	9.7	8.8
Use of Medications	10.5	7.8
Alcohol Use	5.0	6.8
Other Physical Activity	3.3	5.6
General Environment	1.9	5.1
Home, Work, or Neighborhood Environment	0.3	3.1
Intake of Substance Other Than Food, Medicine, or Alcohol	1.1	2.4
Other	11.3	0.5

[a] 24 Subjects did not respond

[b] Harris and Guten (1979), Table 1, p. 19

Table 3. Percentage of Respondents "Always" or "Almost Always" Performing Selected Activities: Present Study and Study of Harris and Guten

Activity	Present Study (N = 386)	Harris & Guten (N = 842)
1. Eat sensibly	84.9%	66.0%
2. Get enough sleep	83.4	66.0
3. Emergency numbers near phone	82.1	65.9
4. Avoid smoking	78.5	41.1
5. Get enough relaxation	71.5	56.4
6. Avoid doctor when feeling okay	68.7	35.3
7. Avoid getting chilled	66.3	47.4
8. Avoid areas of city with a lot of crime	65.8	41.2
9. Pray or live by religious principles	65.8	47.5
10. Get enough exercise	65.0	46.0
11. See doctor for regular checkup	63.7	51.1
12. Have first aid kit in home	63.2	53.1
13. Ignore health advice from friends, relatives	61.7	29.0
14. Destroy old medicines	61.1	52.3
15. Do things in moderation	60.6	46.4
16. Watch one's weight	59.8	47.0

Table 3. Continued

Activity	Present Study	Harris & Guten
17. Avoid overworking	52.3	33.0
18. Avoid over-the-counter medicines	56.7	30.2
19. Fix broken things around home right away	53.1	39.2
20. Avoid drinking alcoholic beverages	52.3	24.0
21. Check condition electrical appliances	50.0	40.0
22. Limit foods like sugar, coffee, fats	49.0	31.9
23. Take vitamins	48.7	24.1
24. See dentist for regular checkup	46.4	36.6
25. Avoid city areas with lot of pollution	43.5	21.5
26. Avoid letting things "get me down"	43.0	39.3
27. Spend free time out of doors	42.0	33.7
28. Wear seat belt in car	36.3	22.8
29. Use dental floss	24.1	15.9
30. Discuss health with friends, neighbors, relatives	16.3	17.1

$p \leq .01$) indicates that the health behaviors of these two study populations may be quite similar. The activities most emphasized by both populations were proper nutrition and adequate sleep. In both samples, the activities least likely to be performed were discussion of health matters in informal groups, flossing of teeth, and fastening of seat belts. With respect to type of behavior performed, no clear distinction could be made between the elderly of this sample and the sample of the general population studied by Harris and Guten. The samples differed in that the percentages of respondents performing the activities were consistently higher in the present study than in Harris and Guten's. The two samples also differed in regard to the number of activities performed. The median number of activities for the elderly sample was 16.9, and only 11 for Harris and Guten's sample. The present sample also scored higher on three sub-scales or components of Health Protective Behavior, the Health Practices Cluster (HPC), the Safety Practices Cluster (SPC), and Preventive Health Care (PHC). (See Table 4).

Relation of Sex to Health Protective Behavior

It was anticipated that elderly women would exhibit more health practices than would elderly men. This was based on Nathanson's (1977) evidence and on the assumption that sex role norms and socialization patterns will continue

Table 4. Mean Scores of Respondents on Measures of Health-Protective Behavior: Present Study and Study of Harris and Guten

Measure	Range of Scores Possible	Present Study Mean Scores (N = 386)	Harris & Guten Mean Scores (N = 842)
Health Practices Cluster (HPC)	0-8	5.3	3.9
Safety Practices Cluster (SPC)	0-4	2.5	2.0
Preventive Health Care (PHC)	0-2	1.1	0.9
Environmental Hazard Avoidance (EHA)	0-2	1.1	---[a]
Harmful Substance Avoidance (HSA)	0-2	1.3	---[a]
Health Protective Behavior (HPB)	0-30	17.2	11.0

[a]No data were presented regarding mean scores on these two components of Health Protective Behavior by Harris and Guten (1979).

Note: The Health Practices Cluster (HPC) consists of 8 items (#1, 2, 5, 7, 15, 16, 17, 22).

The Safety Practices Cluster (SPC) consists of 4 items (#3, 12, 19, 21).

The Preventive Health Care (PHC) consists of 2 items (#11,24).

The Environment Hazard Avoidance Cluster (EHAC) consists of 2 items (#8, 25).

The Harmful Substance Avoidance Cluster (HSAC) consists of 2 items (#4, 20).

to influence individuals throughout their lifetime.

Some support for this expectation can be noted in Table 5. The mean score of the women on the overall Health Protective Behavior scale exceeded the mean score of the men to a small, but statistically significant extent ($t = 2.38$, $p = .001$). This finding agrees also with that of Wilson and Elinson (1981).

The women in the sample obtained higher scores on the subscale of Harmful Substance Avoidance, Environmental Hazard Avoidance and Preventive Health Care than men in the sample. No difference was noted in the extent to which men and women engaged in the Safety Practices Cluster or in the activities of the Health Practices Cluster. Nathanson also noted that women exceed men in daily health practices which do not depend on entry into the medical care system. Harris and Guten (1979) reported similar findings. They found sex to be unrelated to the Health and Safety Practices but related to Preventive Health Care.

Data are presented in Table 6 pertaining to the percentages of male and female respondents "always" or "almost always" performing each of the 30 selected activities. Significant differences were noted in 8 activities. To a significantly greater extent than men, women "always" or "almost always" ate sensibly, avoided areas of the city

Table 5. Mean Scores of Elderly Men and Women on Measures of Health-Protective Behavior

Measure	Mean Scores		Differences*
	Males (N = 128)	Females (N = 248)	
Health Practices Cluster (HPC)	5.22	5.31	n.s.
Safety Practices Cluster (SPC)	2.61	2.42	n.s.
Preventive Health Care (PHC)	1.00	1.16	t=1.96*
Environmental Hazard Avoidance (EHA)	0.87	1.22	t=3.97*
Harmful Substance Avoidance (HSA)	1.20	1.37	t=2.03*
Health Protective Behavior (HPB)	16.35	17.61	t=2.38*

* $p \leq .05$

n.s. = not significant

Table 6. Percentage of Respondents "Always" or "Almost Always" Performing Selected Activities: By Sex

Activity	Male (N - 138)	Female (N - 248)
1. Eat sensibly	80.4%*	87.5%
2. Get enough sleep	84.1	83.1
3. Emergency numbers near phone	77.5	84.7
4. Avoid smoking	79.0	78.2
5. Get enough relaxation	76.1	69.0
6. Avoid doctor when feeling okay	68.1	69.0
7. Avoid getting chilled	62.3	68.5
8. Avoid areas of city with a lot of crime	49.3*	75.0*
9. Pray or live by religious principles	53.6*	72.6*
10. Get enough exercise	68.1	63.3
11. See doctor for regular checkup	58.7	66.5
12. Have first aid kit in home	70.3*	59.3*
13. Ignore health advice from friends, relatives	59.4	62.9
14. Destroy old medicines	47.1*	69.0*
15. Do things in moderation	62.3	59.7
16. Watch one's weight	57.2	61.3
17. Avoid overworking	55.8	50.4
18. Avoid over-the-counter medicines	55.8	57.3
19. Fix broken things around home right away	58.0	50.4

Table 6. Continued

Activity	Male	Female
20. Avoid drinking alcoholic beverages	41.3*	58.5*
21. Check condition electrical appliances	55.1	47.2
22. Limit foods like sugar, coffee, fats	44.2	51.6
23. Take vitamins	41.3*	52.8*
24. See dentist for regular checkup	41.3	49.2
25. Avoid city areas with lot of pollution	37.7	46.8
26. Avoid letting things "get me down"	44.2	42.3
27. Spend free time out of doors	47.8	38.7
28. Wear seat belt in car	33.3	37.9
29. Use dental floss	10.1*	31.9*
30. Discuss health with friends, neighbors, relatives	15.2	16.9

*Significant difference, $p \leq .05$

with a lot of crime, prayed or lived by religious principles, destroyed old medicines, avoided drinking alcoholic beverages, took vitamins and used dental floss. The only activity in which men significantly out-performed women was that of having a first-aid kit in the home.

Nathanson (1977) remarked that men smoke and drink more than women, and also that women tend to seek medical help for their problems. In this study, men and women did not differ in their smoking (about 79% of both sexes did not smoke), but they did differ in their drinking behavior. Women to a significantly greater degree than men avoided the use of alcohol (58.5% versus 41.3%). A greater percentage of women than of men obtained regular medical checkups (66.5% vs. 58.7%) and dental checkups (49.2% vs. 41.3%). Although neither of these differences was statistically significant, taken separately, when the items were combined into the Preventive Health Care (PHC) subscale, the women were found to engage in prevention measures significantly more than men ($t = 1.96$, $p < .05$).

In comparing the present findings with those of Wilson and Elinson (1981), it may be noted that the latter also found the sexes differed little in their use of seat belts. In their study, also, two-thirds of their male respondents and one-half of the female respondents used dental floss or waterpicked less than once a week. In this study

only one-tenth of the men and one-third of the women "almost always" or "always" used dental floss. However, many did wear dentures. Wilson's and Elinson's study group consisted of persons 20-64 years of age, so it would be anticipated that this younger sample group would floss more often.

The differences observed between the sexes were probably not spurious in that the men and women of this sample did not differ along the socioeconomic measures of education and occupational status. The observed differences between the sexes could not be explained by the variables of income, marital status or living arrangements.

Relation of Age to Health-Protective Behavior

Table 7 presents the findings. It notes the mean scores of the elderly sample in the three age categories on measures of Health-Protective Behavior. In contrast to the findings of Belloc and Breslow (1972), and of Harris and Guten (1979), age was found to be completely unrelated to any element of health-protective behavior. A possible explanation for this difference in findings is that persons who performed few health practices in their life may not have survived to reach old age. Therefore, in the age bracket of 55 and over, the range of health behavior may be restricted and tipped in favor of high scores.

Again, data were sought pertaining to performance of

Table 7. Mean Scores of Elderly Persons in Three Age Categories on Measures of Health-Protective Behavior

Measure	Mean Scores of Age Categories[a] "Young-old" (N = 106)	"Old" (N = 180)	"Old-old" (N = 100)
Health Practices Cluster (HPC)	5.02	5.51	5.15
Safety Practices (SPC)	2.46	2.51	2.46
Preventive Health Care (PHC)	1.15	1.14	0.98
Environmental Hazard Avoidance (EHA)	1.07	1.08	1.15
Harmful Substance Avoidance (HSA)	1.25	1.32	1.35
Health Protective Behavior (HPB)	16.72	17.59	16.85

[a]"Young-old" refers to persons aged 55-64 years; "old" to 65-74 years; and "old-old" to 75 years and above.

thirty selected activities. Table 8 presents the percentage of respondents, grouped according to the three age categories, who "always" or "almost always" performed these activities. Only six activities had a percentage point spread across age categories in excess of 10 points: pray, avoid overwork, limit sugars, routine dental checks, avoid areas of pollution and floss. Praying was done by a higher percentage of "old" as was limiting sugar. Avoiding overwork and areas of pollution was done by a higher percentage of "old-old". As was anticipated, a higher percentage of "young-old" had regular dental checks and flossed.

Belloc and Breslow (1972) found a positive correlation between the variable of age and common health practices. Harris and Guten (1979) noted that age was the strongest predictor of daily health practices such as exercising, getting enough sleep, etc. Based on these previous studies it had been anticipated that some differences in the health behavior of the different age groups of this study sample (the "young-old" aged 55-64, the "old" aged 65-74, and the "old-old", aged 75 and up) would exist.

Health Condition of the Elderly

Data pertaining to this study group are presented in Table 9. As was anticipated, a somewhat larger percentage of this sample of elderly persons than that of Harris and Guten's general population sample fell into the "Poor"

Table 8. Percentage of Respondents "Always" or "Almost Always" Performing Selected Activities: By Age Categories[a]

Activity	Age Categories "Young-old" (N = 106)	"Old" (N = 180)	"Old-old" (N = 100)
1. Eat sensibly	82.1%	90.0%	79.0%
2. Get enough sleep	81.1	87.2	79.0
3. Emergency numbers near phone	84.9	79.4	84.0
4. Avoid smoking	78.3	79.4	77.0
5. Get enough relaxation	73.6	72.2	68.0
6. Avoid doctor when feeling okay	70.8	66.1	71.0
7. Avoid getting chilled	66.0	66.1	67.0
8. Avoid areas of city with a lot of crime	67.0	65.0	66.0
9. Pray or live by religious principles	59.4	70.6	64.0
10. Get enough exercise	65.1	66.1	63.0
11. See doctor for regular checkup	62.3	66.1	61.0
12. Have first aid kit in home	65.1	63.9	60.0
13. Ignore health advice from friends	67.0	59.4	60.0

Table 8. Continued

Activity	Age Categories "Young-old"	"Old"	"Old-old"
14. Destroy old medicines	59.4	61.1	63.0
15. Do things in moderation	58.5	62.8	59.0
16. Watch one's weight	53.8	62.8	61.0
17. Avoid overworking	42.5	55.0	58.0
18. Avoid over-the-counter medicines	58.5	57.2	54.0
19. Fix broken things around home right away	49.1	56.1	52.0
20. Avoid drinking alcoholic beverages	47.2	52.2	58.0
21. Check condition electrical appliances	47.2	51.2	50.0
22. Limit foods like sugar, coffee, fats	44.3	54.4	44.0
23. Take vitamins	45.3	50.6	49.0
24. See dentist for regular checkup	52.8	47.8	37.0
25. Avoid city areas with lot of pollution	39.6	42.8	49.0
26. Avoid letting things "get me down"	40.6	45.6	41.0

Table 8. Continued

Activity	Age Categories "Young-old"	"Old"	"Old-old"
27. Spend free time out of doors	38.7	45.0	40.0
28. Wear seat belt in car	31.1	40.6	34.0
29. Use dental floss	27.4	26.1	17.0
30. Discuss health with friends, neighbors	13.2	16.1	20.0

[a]"Young-old" refers to persons age 55-64 years, "Old" to 65-74 years; and "Old-old" to 75 years and above.

Table 9. Measures of Health Condition of Elderly Persons

Measure	Number[a] (N = 386)	Percent
Health Condition		
Good	152	39.4%
Moderate	177	45.9
Poor	57	14.8
Symptoms		
Yes	202	52.3
No	184	47.7
Last Contacted Physician		
In past 3 weeks	44	11.4
3 weeks and over	342	88.6
Days of Restricted Activity		
6 or less	294	82.1
7 or more	64	17.9
Perceived Health		
Excellent	63	16.4
Good	212	55.2
Fair	87	22.7
Poor	22	5.7

[a] Totals do not always equal 386 because data were missing for some respondents on some items.

health category (14.8% versus 10.7%). Also, a slightly smaller percentage of the sample was rated in "Good" health (39.4% versus 51.2%). Overall, the health condition of the majority of the elderly sample was quite adequate.

Table 9 also shows the optimistic opinion that the respondents had of their health. Even though only 16.4% believed their health to be excellent, only 5.7% believed their health to be poor. This latter is a considerably smaller proportion than that reported in an earlier study by Shanas, Friis, Milhoj, Stehauwer, Townsend, Wedderburn, (1968). They stated that 54% of their elderly subjects listed their health as good, 30% as fair and 16% as poor. However, National Health Survey data (National Center for Health Statistics, 1981) showed that, in 1979, 31.4% of the noninstitutionalized persons in the age range of 65 and above stated their health was fair or poor. The present results are very similar. Of the 280 respondents in this study, 65 years of age and up, 85 (30%) claimed fair or poor health. (These data are not shown in Table 9).

No significant differences in the Health Conditions of males and females were observed (see Table 10). This finding is at variance with that of Wilson and Elinson (1981) who classified 23.6% of the men and 35.4% of the women as having poor physical health. Fillenbaum (1979) also, found women to have poorer objectively assessed health than men

Table 10. Health Condition of Elderly: By sex

Measure	Males (N = 138)		Females (N = 248)	
Health Status				
Good	53	(38.4%)	99	(39.9%)
Moderate	59	(45.4%)	118	(47.6%)
Poor	26	(18.8%)	31	(12.5%)
Symptoms				
Yes	63	(45.7%)	121	(48.8%)
No	75	(54.3%)	127	(51.2%)
Last Contacted Physician				
In past 3 weeks	17	(12.3%)	27	(10.9%)
3 weeks and over	121	(87.7%)	221	(89.1%)
Days of Restricted Activity				
6 or less	102	(77.9%)	192	(84.6%)
7 or more	29	(22.1%)	35	(15.4%)
Perceived Health				
Excellent	20	(14.6%)	43	(17.4%)
Good	75	(54.7%)	137	(55.5%)
Fair	30	(21.9%)	57	(23.1%)
Poor	12	(8.8%)	10	(4.0%)
Perceived Health (ladder)				
Mean Score	7.20		7.42	

among noninstitutionalized respondents.

Health Condition did not differ significantly among the three age categories (see Table 11). However, a significant difference among age groups was noted in one component of the Health Condition Index, namely perceived health. A smaller percentage of each successively older group perceived their health to be either excellent or good, and a greater percentage perceived their health to be either fair or poor (Kendall's tau = .12, p = .005). Differences in health condition cannot be explained by differences in age. Linn and Linn (1980) have also noted that age by itself, is an inadequate indicator of the health condition of the elderly.

Relation of Health Condition to Health-Protective Behavior

Table 12 provides evidence that persons in the three Health Condition Categories did not differ significantly in their protective behaviors. The Safety Practices Cluster is the only subscale on which the age groups attained significantly different scores. Further data presented in Table 13 show the relationships of Health Condition, and its components, with Health-Protective Behavior, and its subscales. Three subscales--the Health Practices Cluster, Safety Practices Cluster and Preventive Health Care--correlated significantly with several components of Health Condition. However, the elderly persons' HPB scores, i.e.,

Table 11. Health Condition by Age Categories

Measure	Age Categories						Significance of Difference*
	Young-Old (N - 106)		Old (N - 180)		Old-Old (N - 100)		
Health Status							
Good	46	(43.4%)	70	(38.9%)	36	(36.0%)	
Moderate	44	(41.5%)	83	(46.1%)	50	(50.0%)	N.S.
Poor	16	(15.1%)	27	(15.0%)	14	(14.0%)	
Symptoms							
Yes	53	(50.0%)	83	(46.1%)	48	(48.0%)	N.S.
No	53	(50.0%)	97	(53.9%)	52	(52.0%)	
Contacted Physician							
In past 3 weeks	13	(12.3%)	21	(11.7%)	10	(10.0%)	N.S.
3 weeks and over	93	(87.7%)	159	(88.3%)	90	(90.0%)	
Days of Restricted Activity							
6 or less	80	(80.8%)	138	(82.6%)	76	(82.6%)	N.S.
7 or more	19	(19.2%)	29	(17.4%)	16	(17.4%)	

Table 11. Continued

Measure	Age Categories: Young-Old (N = 106)	Old (N = 180)	Old-Old (N = 100)	Significance of Difference*
Perceived Health				
Excellent	23 (21.9%)	27 (15.1%)	13 (13.0%)	Kendall's
Good	58 (55.2%)	105 (58.7%)	49 (49.0%)	tau = .12*
Fair	20 (19.0%)	35 (19.6%)	32 (32.0%)	
Poor	4 (3.8%)	12 (6.7%)	6 (6.0%)	
Perceived Health (ladder)				
Mean Score	7.6	7.3	7.1	N.S.

*$p \leq .05$

N.S. = Not Significant

Table 12. Mean Scores of Elderly in Three Health Condition Categories on Measures of Health-Protective Behavior

Measure	Health Condition Category		
	Good (N = 152)	Moderate (N = 177)	Poor (N = 57)
Health Practices Cluster (HPC)	5.2	5.4	5.1
*Safety Practices Cluster (SPC)	2.6	2.5	2.2
Preventive Health Care (PHC)	1.1	1.1	1.2
Environmental Hazard Avoidance (EHA)	1.0	1.2	1.1
Harmful Substance Avoidance (HSA)	1.3	1.3	1.4
Health Protective Behavior (HPB)	17.3	17.3	16.3

*$p \leq .05$

Table 13. Scores of Elderly Persons on the Health-Protective Behavior (HPB) Scale and Its Subscales Correlated with Scores on Health Condition and Its Components

Health Protective Behavior and Subscales	Component of Health Condition				
	Health Condition	Restricted Activity	Recency of Physician Contact	Symptoms	Perceived Health
Health Practices Cluster (HPC)	.00	.01	.04	.09*	.10*
Safety Practices Cluster (SPC)	.14*	.01	.08	-.09*	.18*
Preventive Health Care (PHC)	-.07	-.09*	-.07	-.11*	.07
Environmental Hazard Avoidance (EHA)	-.07	-.03	.00	.08	-.03
Harmful Substance Avoidance (HSA)	-.03	-.03	.03	.03	-.02
Health Protective Behavior (HPB)	.05	-.03	.07	.03	.17*

*$p \leq .05$

[a]For this variable, 0-6 days of restricted activity was scored 2; 7 days and more was scored 1.

the number of health activities they performed, were related significantly only with their perceptions of their health, and not with presence of symptoms, disability days or physician visits. This finding provides negative evidence regarding the proposition that health practices exert a cumulative or additive effect on Health Condition.

Further information regarding the lack of a cumulative effect of health practices on Health Condition is provided in Table 14, which indicates the percentages of respondents in each of the three Health Condition Categories who claimed to "always" or "almost always" perform the 30 selected health activities. The three Health groups differed significantly on nine activities, with the percent of persons performing them dropping regularly and significantly across the three categories of Health Condition, from Good to Moderate to Poor. These activities were: eat sensibly, get enough relaxation, avoid doctor when feeling okay, get enough exercise, fix broken things around home, take vitamins, and "don't let things get me down". In the performance of two activities, seeing the doctor for regular checkups, and avoiding overwork, the percent of persons in Good Health was less than the percent in Moderate Health, which in turn was less than the percent in Poor Health. This result was anticipated in view of Harris and Guten's similar findings.

Table 14. Percentage of Respondents "Always" or "Almost Always" Performing Selected Activities: By Health Condition

Activity		Health Condition		
		Good	Moderate	Poor
* 1.	Eat sensibly	89.5%	84.2%	75.4%
2.	Get enough sleep	87.5	82.5	75.4
3.	Emergency	82.2	81.9	82.5
4.	Don't smoke	78.9	78.5	77.2
* 5.	Get enough relaxation	73.7	74.0	57.9
* 6.	Avoid doctor when feeling okay	75.7	65.0	61.4
7.	Avoid getting chilled	61.2	67.8	75.4
8.	Avoid areas of city with a lot of crime	61.2	71.2	61.4
9.	Pray or live by religious principles	68.4	63.8	64.9
*10.	Get enough exercise	71.1	63.8	52.6
*11.	See doctor for regular checkup	53.9	65.0	86.0
12.	Have first aid kit in home	67.1	62.1	56.1
13.	Ignore health advice from friends/relatives	63.8	59.9	61.4
14.	Destroy old medicines	61.2	59.9	64.9
15.	Do things in moderation	56.6	65.0	57.9
16.	Watch one's weight	61.2	58.8	59.6

Table 14. Continued

Activity	Health Status		
	Good	Moderate	Poor
*17. Avoid overworking	45.4	54.8	63.2
18. Avoid over-the-counter medicines	55.9	57.6	56.1
*19. Fix broken things around home right away	61.8	49.7	40.4
20. Avoid drinking alcoholic beverages	49.3	53.1	57.9
21. Check condition electrical appliances	53.3	51.4	36.8
22. Limit foods like sugar, coffee, fats	44.7	54.8	42.1
*23. Take vitamins	44.7	57.6	31.6
24. See dentist for regular checkup	53.3	42.9	38.6
25. Avoid only areas with lot of pollution	38.8	45.2	50.9
*26. Avoid letting things "get me down"	45.4	45.8	28.1
27. Spend free time out of doors	46.1	38.4	42.1
28. Wear seat belt in car	37.5	35.0	36.8
29. Use dental floss	25.7	26.0	14.0
30. Discuss health with friends,neighbors, relatives	14.5	17.5	17.5

*significant differences

With respect to their HPB scores, the three Health Condition groups did not differ.

It should be noted that Harris and Guten (1979) found little variation among the Health Condition groups in their HPB scores, or number of activities performed. They also reported findings similar to those of the present study, with regard to avoiding doctors when feeling well, getting regular checkups, and avoiding overwork. In contrast to the present findings, Harris and Guten found that those who were in Poor Health received higher scores on the Health Practices Cluster, and on the Preventive Health Care scales.

What accounts for the discrepancy between the present results and the results of these other investigators? Why did not the present research obtain better support for the propositions that good health habits lead to better physical health, and do so in an additive fashion? Perhaps the methods were at fault, as in the selection of 30 habits believed by laypersons to be beneficial. Laypersons may be mistaken in their notions of the health benefits of certain activities; and adhering to more irrelevant practices should not be expected to result in better health than adhering to fewer. Second, lay definitions of the activities may differ from those of the experts. For example, the conception of "eating sensibly" held by this

sample may have borne little resemblance to the conception held by nutritionists. Third, the Health Condition index used in this study may not have been sensitive enough to distinguish small increments of positive fitness. However, it should be noted that the components of the index were well-accepted items, employed by the United States National Health Interview Survey.

A fourth limitation derives from the nonrepresentativeness of the sample. Drawn from the membership of a senior center, the sample overrepresents the more ambulatory and more social members of a community as against the less ambulatory and less social; middle and working class individuals as against lower and upper class individuals; and the noninstitutionalized as against the institutionalized elderly. In so doing, the sample probably overrepresents elderly persons with good health habits and good health, and underrepresents those with poor health habits and poor health. In this connection it might be noted that the other studies with which this research is being compared (e.g., the Alameda County Study and the National Survey on Health Practices and Consequences) also excluded the institutionalized from their samples. Moreover, the Alameda study sample was essentially a middleclass sample. Nevertheless, those studies still found an association between good health habits and good health status.

Limitations of method, then, may be responsible for the failure to confirm the hypothesis that health status is related to health habits. Alternatively, it may be argued that the findings in this instance are valid for elderly persons. The link between present performance of good health habits and present health status may be weak among younger adults, as indicated by the equivocal findings of the cited studies. The link may be even weaker among the elderly. In support of this view is the fact that Wilson and Elinson (1981) found the relation between health habits and physical health status to be weaker for their respondents to the National Survey, who were 45 to 64 years of age, than for those 18 to 44 years of age.

This attenuation of the relationship with age may accelerate after age 55. Such an attenuation is to be expected if, as has been claimed, "health in old age represents the cumulative effect of past behavior more than it reflects recent behavior" (Wiley & Comacho, 1980, p. 3), and if poor health practices at younger ages are associated with subsequent higher mortality rates (Breslow & Enstrom, 1980). Those with the poorest health habits in earlier lifestages tend to succumb and those with better habits survive, so that gradually there is a concentration in the older age brackets of persons with good health habits. At the same time, the health condition of persons

over 55 deteriorates, as chronic disease takes its toll. As a consequence of the restricted range of scores on both the measure of Health Condition and the measure of adherence to health habits, the magnitude of the correlation between the two variables diminishes.

This argument does not negate the possibility of a significant relationship between health habits and health status for younger adults. Rather, it attributes the failure to find a significant relationship in this instance to the nature of the population sampled, namely, the elderly.

Finally, it should be emphasized that the relationship, as demonstrated for other samples appears to be moderate or weak. Clearly, health at any stage of life is an outcome of more than personal health habits. Involved are such factors as socioeconomic status, ethnicity, religion, supportive relations with family and friends, stress and coping patterns, environmental conditions, and, of course, genetic and constitutional characteristics. Some of these factors may be more critical than health habits in determining health condition at any age, and perhaps doubly so in old age.

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The present investigation was a partial replication of a survey conducted in 1976 by Harris and Guten (1979). Those authors explored the health-protective behaviors of a representative sample of adults, 18 years of age and up, in the Cleveland area. The present study examined similar health-protective behaviors of a sample of elderly persons in a Northwest community. The following research questions were addressed. What kinds of activities do elderly persons perform in the belief that they are protecting and maintaining their health? Do elderly men and women differ in these health practices? Do different age groups within the elderly population--the young-old, aged 55-64, the old, aged 65-74, and the old-old, aged 75 and up--differ in their health behaviors? Do elderly persons who practice more health-protective activities experience better health and perceive their health as better than elderly persons practicing fewer health-protective activities?

In answer to the first question, the elderly persons in this sample performed the same type of health-protective activities as did members of the general population surveyed by Harris and Guten. They stressed proper nutrition, adequate sleep, and abstention from smoking. However, the

elderly performed more activities than members of the general public. This indicated a greater orientation on their part toward health protection than on the part of younger adults.

With respect to the second question, elderly women appeared to adhere to a slightly greater number of health practices than men, particularly preventive actions, avoiding smoking, and avoiding environmental hazards. Insofar as the third question is concerned, no differences were noted among the three age categories of elderly in their health practices.

With regard to the final question, health condition did not appear to be related to health-protective behavior. The elderly in poor health adhered to as many practices as those in moderate or good health. Clearly, the benefits of health practices for health condition were not additive. However, those individuals who reported engaging in more health behaviors perceived their health as better.

It should be noted that the elderly in this sample, generally speaking, practiced many activities to maintain their health. Generally, also, their health condition appeared quite adequate, with no significant differences between the sexes or across age groups.

This research, then, provided no support for the proposition that better health habits and better health

are associated. This lack of association did not appear to be solely the result of flaws in method. Rather, it could be interpreted as a reflection of the nature of the population under study. Inasmuch as persons with the poorest health habits in their youth and middle years, may not survive to old age, the elderly population may overrepresent individuals who have adhered to healthy life-styles throughout their lives. In short, among the elderly, the variance with respect to health habits is restricted. Moreover, since even those elderly who maintain good health habits must eventually experience some deterioration in health, the correlation between health practices and health status must inevitably shrink in old age.

To test the validity of the present findings, additional research should be conducted on segments of the elderly population not represented adequately by this sample. Thus, studies are needed on the less ambulatory members of the community, on the institutionalized aged, and on elderly members of the upper and lower social classes to check whether their health status is related to their personal health habits. Other studies might obtain information regarding what the elderly mean when they state they perform particular health behaviors such as eating sensibly or exercising. These might be followed by studies of the effects of the actual behaviors performed by elderly

persons in the name of health, and their health status. Finally, it might prove more useful to explicate the links between specific behaviors and specific health problems, rather than attempting to relate global lifestyles to overall health status. All the above research should be carried out, using experimental as well as nonexperimental designs, observational as well as interviewing techniques, and different measures of health status and the healthiness of lifestyles.

The present findings, should they be confirmed by future research, hold a number of implications for practice and policy. If, as our respondents claimed, the elderly are already subscribing to healthful ways of living, then health professionals need do little except express approbation and encouragement. If, however, on probing into the elderly persons' understanding of what constitutes good nutrition, adequate exercise, proper safety practices, etc., it appears their views differ considerably from those of nutritionists and other experts, then educational programs might be mounted to expand the knowledge and correct the misconceptions of the elderly. Such programs might be undertaken with some optimism, given the fact that the elderly appear strongly oriented to maintaining health. However, professionals should not expect such campaigns to improve the health of the elderly to any great

extent. The elderly, by virtue of having survived to old age, have probably already achieved the major benefits to be derived from healthy lifestyles. It is unrealistic to expect that aged persons discarding poor habits of a lifetime will experience marked improvement in health. It may also be unrealistic to expect that continuing the practice of good habits in old age will do more than postpone deterioration, or perhaps contribute to a sense of well-being, by affecting the individual's perception of his or her own health.

At the level of policy, in deciding on the allocation of funds and resources for various health projects, two issues must be addressed. First, with respect to health-promotion and disease-prevention projects, the target populations for whom interventions might be expected to do the most good must be identified. Clearly, such programs might be better directed toward younger segments of the population than toward the aged. For the aged, health promotion programs might emphasize those specific behaviors most likely to benefit them, such as the use of seat belts and the practice of safety precautions. However, the major proportion of the resources allocated for the elderly should probably be reserved for tertiary care, to alleviate distress, to provide social and emotional support, to minimize disablement, to provide safe environments, and to ease the

the burdens of deteriorating health.

A second issue which must be addressed concerns the importance of environmental and other factors relative to the importance of personal habits in determining health status, for individuals of all ages. Only with such information may resources be distributed in a reasonable and equitable fashion. Before putting all our hopes and many of our resources into programs to change personal lifestyles, this issue should be resolved. Without realistic expectations of what may be achieved, and what may not be achieved, as a nation we may set ourselves up for disillusionment and defeat.

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APPENDIX A

COVER LETTER

HEALTH-PROTECTIVE BEHAVIOR QUESTIONNAIRE

OREGON HEALTH SCIENCES UNIVERSITY
SCHOOL OF NURSING

May 21,1982

Dear Salem Senior Center Member,

Much of what people do to protect their health is not known. Each individual person is the best source of information about the actions used to protect his or her own health. As a graduate nursing student who is studying the Health-Protective Behavior of persons 55 years of age and over, I am requesting opinions from about 300 people. You are one of the persons who has been asked to participate. Your name was randomly selected from the Senior Center's mailing list with the approval of the Center's director.

The time required for you to complete the questionnaire is about 15 minutes. All information will be handled in confidence. The questionnaire has an identification number for mailing purposes only. This is so that I may check your name off of the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire. Your participation is voluntary. While there may not be any direct benefits to you, study results may assist nurses to increase their knowledge of health practices. Another benefit may be the provision of better health services and health education.

The results of this study will be made available to Marion County Health Department, Salem Senior Center officials and to the study participants.

I would be happy to answer any questions you might have. Please write or call collect after 6:00 P. M. (1-678-1645).

Thank you for your assistance. Please return the questionnaire to me by _____ in the enclosed stamped, addressed envelope.

Sincerely

[redacted]

Margaret McCreedy, R.N., B.S.

I would like to add my endorsement to the study described above and to urge your participation.

[redacted]

Paul Hartman, Director
Salem Senior Center

I.D. #_____

QUESTIONNAIRE

1. Please mark the one health choice that best describes yourself. (Mark with an "X").

_____ Excellent
_____ Good
_____ Fair
_____ Poor

2. Not counting any days you might have spent in the hospital, how many times in the past six months, that is starting from about last October have you talked to or seen a physician about your health?

_____

3(a) When was the last time you talked to or visited a physician? (Please mark with an "X").

_____ Yesterday or today
_____ 3 to 6 days ago
_____ 1 to 2 weeks ago
_____ 3 to 4 weeks ago
_____ 1 to 3 months ago
_____ 4 to 6 months ago
_____ 7 months to a year ago
_____ 1 to 2 years ago
_____ 3 to 4 years ago
_____ 5 years ago or more

(b) Which statement best describes the main reason you (saw/talked to) the physician? (Please mark with an "X").

_____ Illness
_____ Injury
_____ Follow-up to illness
_____ Follow-up to injury
_____ General check-up
_____ Eye examination
_____ Immunization
_____ Some other reason _____
(Specify)

_____

4. In the last six months, how many days were you unable to work or had to cut down your usual activities because of illness or injury?

_____ None

_____ Days _____
(Specify Illness or Injury)

5(a) Do you have temporary illness, chronic illness, or physical disability now? (Please mark with an "X").

_____ Yes

_____ No

(b) What is this condition? Name and describe briefly.

_____

(c) Are you currently under a physician's care for this condition? (Please mark with an "X").

_____ Yes

_____ No

Below is a picture of a ladder. Suppose we say that the top of the ladder represents perfect health, and the bottom, the worst-possible health.

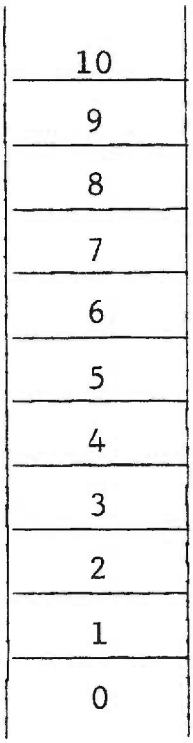
6(a) On which step would you say your health is right now?

Step #_____

(b) On which step would you say the health of the average person your age is?

Step #_____

CONTINUED ON NEXT PAGE



Perfect Health

Worst Possible Health

7. Now I am going to ask you some more questions about your health. There are a number of things which people do to protect their health. First, I'd like you to tell me what are the three most important things that you do to protect your health?

   1. _____

   2. _____

   3. _____

8. Here is a list of activities that some people may do to protect their health and that other people may not do. Please go through the list and CIRCLE the numbers which pertain to how often you perform these activities.

Activity	Never	Sometimes	Almost Always/ Always
Take vitamins	0	1	2
Eat sensibly	0	1	2
Get enough sleep	0	1	2

CONTINUED ON NEXT PAGE

8. Continued

Activity	Never	Sometimes	Almost Always/ Always
Get exercise every day	0	1	2
Get enough relaxation	0	1	2
Use dental floss	0	1	2
Pray or live by the principles of my religion	0	1	2
See a doctor for a regular checkup	0	1	2
See a dentist for a regular checkup	0	1	2
Check the condition of electrical appliances, car, etc.	0	1	2
Wear a seat belt when I'm in a car	0	1	2
Have a first-aid kit in my home	0	1	2
Keep a list of emergency phone numbers near my phone	0	1	2
Spend my free time out of doors	0	1	2
Discuss health with friends, neighbors, or relatives	0	1	2
Avoid smoking cigars, cigarettes, or pipes	0	1	2
Avoid drinking alcoholic beverages	0	1	2
Limit foods like sugar, coffee, fats, etc.	0	1	2
Avoid overworking	0	1	2
Avoid getting chilled	0	1	2
Watch my weight	0	1	2
Avoid letting things "get me down"	0	1	2
Do things in moderation	0	1	2
Avoid non-prescription medicines like aspirin, antacids, or sleeping aids	0	1	2

CONTINUED ON NEXT PAGE

8. Continued

Activity	Never	Sometimes	Almost Always/ Always
Avoid contact with doctors when I'm feeling okay	0	1	2
Destroy old or unused medicines	0	1	2
Fix broken things around my home right away	0	1	2
Avoid parts of the city that have a lot of crime	0	1	2
Avoid parts of the city that have a lot of pollution	0	1	2
Ignore health advice from friends, neighbors or relatives who are not doctors, nurses, druggists, etc.	0	1	2

9. You've seen quite a number of activities that people do to protect their health. What other activities do you do to protect your health that you haven't mentioned or that do not appear in question #8.

_____

_____

Finally, I would like to ask some questions about you to help me understand your comments.

10. Age at last birthday _____

11. Your sex. (Please mark with an "X").

_____ Male

_____ Female

12. Marital status. (Please mark with an "X").

_____ Never married

_____ Married

_____ Divorced

CONTINUED ON NEXT PAGE

13. Do you live alone? (Please mark with an "X").

_____ Yes _____ No

14. What was the last grade of school that you finished? (Please circle).

Grade School	1	2	3	4	5	6	7	8
High School	9	10	11	12				
College	13	14	15	16				
Post Graduate	17+	Highest degree attained _____						

15. Are you presently: (Please mark with an "X").

_____ Employed
_____ Unemployed
_____ Retired (Since when _____)
_____ Full time homemaker

16. Please describe your usual occupation. (If retired, describe your usual occupation before retirement).

_____

17. Would you mind estimating your total income (including spouse's if any) from all sources for the past 12 months?

1. _____ Under $1000	9. _____ $8000 to $8999
2. _____ $1000 to $1999	10. _____ $9000 to $9999
3. _____ $2000 to $2999	11. _____ $10000 to $10999
4. _____ $3000 to $3999	12. _____ $11000 to $11999
5. _____ $4000 to $4999	13. _____ $12000 to $12999
6. _____ $5000 to $5999	14. _____ $13000 to $13999
7. _____ $6000 to $6999	15. _____ $14000 to $14999
8. _____ $7000 to $7999	16. _____ $15000 or Over

PLEASE CHECK TO SEE IF YOU HAVE COMPLETED ALL THE QUESTIONS. PUT THE COMPLETED QUESTIONNAIRE IN THE ENCLOSED ADDRESSED ENVELOPE. YOUR CONTRIBUTION TO THIS EFFORT IS GREATLY APPRECIATED.

APPENDIX B

SECOND COVER LETTER

OREGON HEALTH SCIENCES UNIVERSITY
SCHOOL OF NURSING

June 25, 1982

Dear Salem Senior Center Member,

Several weeks ago I sent you a questionnaire which requested information regarding what you do to protect your health. Your name was randomly selected from the Senior Center's mailing list with the approval of the Center's director.

As stated previously, all information will be handled in confidence. The number on the questionnaire is for mailing purposes only.

A questionnaire and return envelope is enclosed should you chose to participate. Again, your participation is voluntary.

I would be happy to answer any questions you might have. Please call collect after 6:00 PM (1-678-1645).

Thank you for reconsidering. Please return the questionnaire to me by July 7th in the enclosed stamped, addressed envelope.

Sincerely,

[redacted]

Margaret McCreedy, R.N., B.S.

APPENDIX C

CODING KEY FOR HEALTH-PROTECTIVE BEHAVIOR CLUSTERS

HEALTH-PROTECTIVE BEHAVIOR CLUSTERS

HEALTH PRACTICES CLUSTER	Never	Sometimes	Almost always/ Always
Get enough sleep	0	1	2
Get enough relaxation	0	1	2
Eat sensibly	0	1	2
Do things in moderation	0	1	2
Avoid overworking	0	1	2
Avoid getting chilled	0	1	2
Limit foods like sugar, coffee, etc.	0	1	2
Watch my weight	0	1	2

Scoring

Worst health practices = 0
Best health practices = 16

SAFETY PRACTICES CLUSTER	Never	Sometimes	Almost always/ Always
Fix things around my home	0	1	2
Check the condition of electrical appliances	0	1	2
Have a first-aid kit in my home	0	1	2
Keep a list of emergency phone numbers	0	1	2

Scoring

Worst safety practices = 0
Best safety practices = 8

PREVENTIVE HEALTH CARE CLUSTER	Never	Sometimes	Almost always/ Always
Sees a doctor for a regular checkup	0	1	2
See a dentist for a regular checkup	0	1	2

Scoring

Worst preventive health care practice = 0
Best preventive health care practice = 4

ENVIRONMENTAL HEALTH	Never	Sometimes	Almost always/ Always
Avoid parts of the city that have a lot of crime	0	1	2
Avoid parts of the city that have a lot of pollution	0	1	2

Scoring

Worst environmental health care practice = 0
Best environmental health care practice = 4

HARMFUL SUBSTANCE AVOIDANCE CLUSTER	Never	Sometimes	Almost always/ Always
Don't smoke cigars, cigarettes, or pipes	0	1	2
Don't drink alcoholic beverages	0	1	2

Scoring

Worst harmful substance avoidance practice = 0
Best harmful substance avoidance practice = 4

APPENDIX D

Salem Area Seniors, Inc.

A Non-Profit Corporation for Senior Citizens

1055 Erixon Street N.E.
Salem, Oregon 97303
Telephone 588-6303

April 9, 1982

School of Nursing Research Committee,
Oregon Health Sciences University

Dear Committee Members,

This letter acknowledges our support of the study to be undertaken by Margaret McCreedy entitled "The Perceived Health Condition and Health Protective Behaviors of an Elderly, Urban Population". She has been given permission to use our maling list to obtain names for her random sample.

Yours truly,

[redacted]

Paul Hartman, Director,
Salem Senior Center

AN ABSTRACT OF THE THESIS OF

Margaret R. Passek McCreedy

For the MASTER OF NURSING

Date of Receiving this Degree: June 8, 1984

Title: THE PERCEIVED HEALTH CONDITION AND HEALTH-PROTECTIVE BEHAVIORS OF AN ELDERLY, URBAN POPULATION

Approved: [redacted]

Julia S. Brown, Ph.D., Professor, Thesis Advisor

This partial replication of a study of health-protective behavior by Harris and Guten was conducted on a sample of elderly persons in a Northwest community. Four research questions were posed. What kinds of activities do elderly persons perform in the belief that they protect their health? Do these activities differ systematically between the sexes? Do these activities differ systematically among three categories of the elderly, namely, the "young-old" (55-64 years of age), the "old" (65-74 years of age), and the "old-old" (75 years of age and over)? Do the activities vary systematically with health condition, and with health perceptions of the elderly?

A sample of 600 individuals was randomly selected from a metropolitan senior center with approximately 7000 members, 55 years of age and up. Questionnaires were mailed

to this sample, and complete and usable returns were received from 386 persons, 138 men and 248 women. Each respondent received a Health-Protective Behavior score equal to the number of health behaviors, from a list of 30, that he or she "always" or "almost always" performed. Each respondent was classified as in Good, Moderate, or Poor Health Condition, on the basis of responses to questions regarding the presence or absence of symptoms, recency of contact with physician for reasons of illness or injury, number of days of restricted activity due to illness or injury, and perception of self as in excellent, good, fair, or poor health. The Health-Protective Behavior of the two sexes, and of the three age categories were then compared; and the relation of Health-Protective Behavior to Health Condition examined.

Findings indicated that the elderly performed a variety of Health-Protective Behaviors, prominent among which were eating properly, exercising, and getting adequate sleep. They also tended to perform more activities than younger adults. Elderly women engaged in slightly more activities than elderly men, but there were no significant differences among the three age categories either in type of behavior performed or in number. Finally, Health-Protective Behavior was not found to be related to the Health Condition of the respondents. However, those who practiced more behaviors

perceived their own health to be better.

The lack of association between Health-Protective Behavior and Health Condition was interpreted in terms of the nature of the population under study. It was argued that whereas a relationship between these variables may hold for younger adults, this relationship attenuates with age. Increasingly, the survivors are those who have practiced good health habits through life, but who now face inevitable deterioration in physical condition.

Directions for future research are suggested, and implications for policy and practice discussed.