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Perceptions of Health Status of Rural Elderly

Colleen Miller

South Dakota State University

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PERCEPTIONS OF HEALTH STATUS OF RURAL ELDERLY

by

Colleen Miller

A thesis
submitted in partial fulfillment
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__patient care management
__other

Abstract (approximately 150 words)

Questionnaires were designed and administered to a nonrandom sample of 18 rural elderly residents in a midwestern state. The questionnaires obtained information which attempted to describe perceptions of current health status and self-care capability, to determine the relationship between perceptions of health status and type of residence or senior citizen center attendance. The dependent variables were definitions of perceived health status as derived from the Health Perceptions Questionnaire. Health status included factors of current health, prior health, health outlook, resistance to illness, health worry/concern and sickness orientation. The independent variables were selected personal factors, self-care capability, desire for self-care and social, economic and environmental factors.

Six null hypotheses were generated. The major finding at the 0.05 level of significance was that there was no relationship between the six factors of health status and type of residence or senior citizen center attendance of rural elderly.

I give my permission to the College of Nursing, SDSU to publish this abstract in a collection of abstracts from master's projects and theses.
This thesis is approved as a credible and independent investigation by a candidate for the degree, Master of Science, and is acceptable for meeting thesis requirements for this degree. Acceptance of this thesis does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.
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Chapter 1

Statement of the Problem
and Objectives of the Study

Introduction to the Problem

The number of older adults is rapidly increasing. The 1980 national census reported 11.3 percent of people 65 years of age and older by percentage of population. In a 1983 revision of the census, it was projected that by the year 2000, the percentage of people 65 years of age and older would be 13.1 percent (Department of Commerce, U.S. Bureau of Census, 1983). Even though improved trends in the health of the elderly have been reported, increased needs for health care services will continue as the numbers of elderly increase (Palmore, 1986). Escalating health care costs, inadequate numbers of rural providers, negative attitudes of health professionals toward the elderly, and lack of provider skills and knowledge to give the care needed are some of the factors which inhibit the elderly from obtaining full benefit from the health care system (Butler, 1979). In addition, rural elderly are reported to be less healthy, to get sick more often, to report more chronic illness and to rate their perceived health status more poorly than urban elderly (Youmans, 1974 and Talbot, 1985). Because health care professionals will be dealing with more elderly suffering from a variety of chronic health problems, it is important to obtain the perceptions of the elderly about their own health status.
Statement of the Problem

The problem under investigation in this study is:

What are the perceptions of health status of rural elderly and to what extent do these perceptions vary when controlling for selected personal factors?

Significance of the Problem

Perception of health status of rural elderly may provide important information for health care professionals because the perception of health status seems to be an important indicator of the manner in which the elderly relate to their world (Cockerham, Sharp and Wilcox, 1983), and the relationship of perceived health status and environment seems to relate to the degree of life satisfaction experienced by the elderly (Palmore and Luikart, 1972). McCracken-Knights (1985) reported the importance of nursing to establish health practices for the elderly by increasing knowledge and skills to compensate for health losses and by accenting remaining health strengths.

Dorothea Orem's (1971) conceptual framework focuses on each individual's ability to perform self-care, defined as "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being." Elipoulos (1984) defined self-care as "the deliberate action and contribution to health by building on practices and supplementing them with new skills."

The elderly's perception of health status may be influenced by appropriate interventions by health care professionals because a
relationship exists with the focus of nursing being health, and the focus of self-care being a method to attain and ensure health.

Objectives of the Study

1. To describe the perception of current health status and self-care capability of rural elderly by selected personal characteristics.

2. To describe the relationship of perception of health status and type of residence or senior citizen center attendance.

3. To describe the relationship between perception of current health status, desire for self-care and social, economic and environmental factors.

Definition of Terms

1. Perception of health status. Information about self health state as reflected by responses to the Health Perceptions Questionnaire (Davis and Ware, 1981). Perceived health status relates to the following six concepts:

   a. Current health. The extent to which the respondent presently viewed himself/herself as healthy or ill measured by responses to Questions 4, 7, 12, 15, 20, 25, 29, 33 and 35 (Appendix A).

   b. Prior health. The extent to which the respondent perceived he/she had a healthy or unhealthy prior health history measured by responses to Questions 14, 22 and 31 (Appendix A).
c. **Health outlook.** The extent to which the respondent predicted future health measured by responses to Questions 8, 13, 21 and 26 (Appendix A).

d. **Health worry/concern.** The extent to which the respondent was worried or concerned about his/her health measured by responses to Questions 9, 16, 23 and 27 (Appendix A).

e. **Resistance to illness.** The extent to which the respondent perceived ability to resist illness measured by responses to Questions 6, 10, 18 and 32 (Appendix A).

f. **Sickness orientation.** The extent to which the respondent reacted to illness and accepted the sick role measured by responses to Questions 19 and 28 (Appendix A).

2. **Elderly.** A male or female, 65 years of age or older, which is the accepted age for social security eligibility or retirement pension (Pegals, 1981). In this study, the subjects were male or female, 65 years of age or older, residents of a small, agriculturally-based midwestern community, and may have had a diagnosis of chronic illness or disability requiring outpatient treatment. The subjects were categorized into three groups: Group 1 consisted of elderly living in a low-income housing unit and not attending the senior citizen center regularly; Group 2 consisted of elderly living in their own homes and not attending the senior citizen center regularly; and Group 3 consisted of elderly living in their own homes and attending the senior citizen center regularly.

3. **Health care service.** Hospital care, nursing home care, physicians' services, or home health care services attributed to
perceived or evaluated need factors (Kart, 1985). In this study, health care services consisted of the availability of a physician's assistant and a community health nurse and the nonavailability of a hospital, nursing home, or physician within 100 miles distance or two hours time measured by responses to Question 39 (Appendix A).

4. Desire for self-care. The desire to perform and control health practices based upon knowledge, skills and attitudes (Orem, 1971). In this study, desire for self-care consisted of readiness to learn and perform health activities for oneself through health education and services measured by responses to Questions 56, 57, 58, 59, 60 and 61 (Appendix A).

Organization of the Thesis

The remainder of the thesis will be organized as follows:

1. Chapter 2 will be the review of literature, the conceptual framework, and the research hypotheses.

2. Chapter 3 will present the research design and methodology.

3. Chapter 4 will report the analysis of the research data; and

4. Chapter 5 will include a summary of the thesis, conclusions and implications of the findings, limitations of the study, and recommendations for future research.
Chapter 2

Review of the Literature

Conceptual Framework and Hypotheses

This chapter will present a review of the literature pertinent to the perception of health status. For purposes of clarity, the literature review will be presented in five sections related to health status: subjective and objective perceptions; optimistic and pessimistic perceptions; social, economic and environmental factors; rural versus urban comparisons and self-care characteristics. The review of literature will conclude with a discussion of health status relative to the five sections. This chapter will also present the conceptual framework and the hypotheses for the study.

Review of Literature

Health Status: Subjective and Objective Perceptions

One might expect to find many studies addressing the issues of perception of health status because it has been explored among the general population (Brook, Ware, Davies, Stewart, Donald, Roger, Williams and Johnston, 1979, Wolinsky and Zusman, 1980, and Goldstein, Seigel and Boyer, 1984), but there seems to be a paucity of literature on the perceived health status of the elderly, especially among the rural elderly.

Subjective health is the individual's perception of overall health in comparison to personal norms of well-being and role performance. Such evaluations are often made in reference to the perceived
health status of others and/or previous health conditions. Perceived health status is believed to be an indicator of the manner in which the elderly relate to their world, evidenced by the belief that subjective well-being appears to be related to perceived health as the strongest predictor of life satisfaction (Palmore and Luikart, 1972) and that this association seems to increase with age (Laing and Warfel, 1983).

Other studies have found health status among the elderly to be perceived more objectively, or according to physical function or symptoms of chronic illness (Tissue, 1972, LaRue, 1979 and Ferraro, 1980). Since physical function gradually diminishes over time, it might be presumed that the elderly report poor health in general. However, this may not be the case, as the elderly usually tend to see their own health as better than others their age because they are not required to maintain a highly active level of function and thus find it easier to perceive their health as good (Cockerham, Sharp and Wilcox, 1983).

Although Linn and Linn (1980) have suggested that subjective or perceived questions of health may be a better indicator of actual health status than objective or clinical questions; Wolinsky, Coe, Miller and Prendergast (1984) concluded that global (perceived health status, nutritional risk, sensory function and mental health) questions and functional (activities of daily living and mental orientation measures) questions of health status, in combination, may more accurately reflect actual health in the elderly.
Tissue (1972) and Brook et al. (1979) also concluded that self-rated health represented a summary statement of the way subjective and objective health status was combined within the conceptual framework of the elderly in association with feelings of well-being and stability, of superior health compared to peers and of a worry-free state.

Health Status: Optimistic or Pessimistic Perceptions

It is not clear how the elderly differ from younger persons in their health perceptions. Several alternatives exist concerning the elderly's self-perception of health. They may be relatively accurate with their ratings. They may be relatively optimistic by ignoring illness, or they may be relatively pessimistic because they are preoccupied with bodily sensations or dysfunctions (Levcoff, Cleary and Wetle, 1987).

Some studies suggest that elderly are overly optimistic when evaluating their health. Ferraro (1980) found that older persons tended to rate their health in positive terms, and the old-old, or those over age 75, were more positive in their health self-assessments than the young-old (Ferraro, 1980 and Linn and Linn, 1980). These findings suggested that although most elderly have impaired health, they do not allow it to influence their self-ratings of health as strongly as younger persons do.

Cockerham, Sharp and Wilcox (1983) found that, when asked to compare themselves to others their own age, the elderly reported more positive assessments of health than younger individuals, even after
controlling for number of symptoms. The best explanation appeared to be that judgments concerning the health of the elderly may often be relative. Perceived health may be based upon comparisons with peers of the same age and sex, and the expectations others have of their health. The tendency of the elderly to rate their health relatively may be due to two types of rationalization: 1) surviving to old age in a reasonably free state of illness or disability may be evidence of good health, and 2) subjective responses to health tend to be a result of how much the life of the elderly person is disrupted by a condition. Usually, the elderly are not required to maintain a highly active level of functioning and find it easier to perceive their health as good enough to meet the needs of the environment.

Similarly, Weinberger, Darnell, Martz, Hines, Neill and Tierney (1986) also found that old-old elderly reported better health than young elderly, despite living alone. They had experienced positive life changes during the past year, which indicated support was a type of protection against negative health outcomes.

Melanson and Wamboldt (1987), nursing educators, conducted a descriptive survey of 889 community residents, ranging in ages from 50 to 85, to determine if they perceived their health positively or negatively, and how they perceived the future. The majority of respondents perceived their health as good or excellent with 58 percent of the respondents reporting positive feelings about their future also. Perceived health status was found to be the principal contributor to variance in feelings about the future.
Some elderly perceived their health in negative terms. Several cross-sectional studies of adults found that age was not associated with positive health perceptions (Goldstein, Seigel and Boyer, 1984) even after controlling for severity of conditions (Palmore and Luikart, 1972).

Levcoff, Cleary and Wetle (1987), physician researchers, compared 460 semi-rural, elderly and middle-aged adults to determine who reported more optimistic or pessimistic health self-ratings and under what circumstances they evaluated their health more positively or negatively. They found the elderly were less positive in their health ratings than middle-aged adults after controlling for physical health, psychological distress, sex and education. They also found that when comparing themselves with their peers, the elderly did not rate their health or well-being as better. In fact, old-elderly were least positive in their health ratings, which was inconsistent with past research of Ferraro (1980) and Linn and Linn, (1980).

**Health Status: Social, Economic and Environmental Factors**

Krause (1987) studied a random community sample of 351 elderly to determine whether perceived adequacy of social support was related to self-rated health. This study suggested that the frequency of support failed to exert a direct effect on self-rated health whereas significant results were observed for satisfaction with social support. This study also found that both frequency of and satisfaction with support had a greater effect on depressive symptoms than on self-rated health, which was interpreted as meaning that inadequate
support promoted psychological distress, but not physical health problems.

In a descriptive survey, Hubbard, Mullenkamp and Brown (1984), nursing education researchers, studied 97 elderly volunteers at a senior center and 133 volunteers of all ages at a health fair. They found a strong, positive association between social support and health practices in both groups, suggesting that interventions aimed at one may also affect the other.

Arling (1987), a social worker, examined the relationship between life-strain (physical health problems, economic deprivation and impairment of activities of daily living) and psychosomatic and emotional distress in old age by a household survey of 2,146 non-institutionalized elderly. Using multiple regression analysis, the findings suggested that women, whites, those living alone and those with less education had more sources of life-strain; but they were also more likely to receive social support even though they had smaller support networks and less social contacts. Ill health and impairments of activities of daily living interacting with economic deprivation were the strongest predictors of life-strain and distress.

Community support programs are designed to help the elderly remain in their own homes and neighborhoods and thereby minimize their chances of relocation, dependency and institutionalization for as long as possible. The senior citizen center provides a setting for organized activities and recreation. It usually offers services of nutrition, transportation, health screening and personal and legal counseling on aging and civil rights (Pegals, 1981).
In a national survey, Schick (1986) found that 25 percent of white elderly would like to attend a senior citizen center, 67 percent would not, and 8 percent were not sure.

Ralston (1984), a home economist, examined factors affecting utilization of senior centers by three groups of black elderly. They found that attenders were primarily female, widowed, young-old, and from lower socioeconomic backgrounds. Those who had more frequent social contact were less likely to need or use senior citizen centers. Health status did not have a significant effect on senior center utilization. Low participation of senior citizen centers by black elderly was attributed to lack of access, lack of ethnic/cultural considerations in programming, and lack of perceived need for programs due to informal support networks.

Schneider, Chapman and Voth (1985) examined the effects of participation in senior center programs by studying 500 rural elderly in Arkansas. They found senior programs tended to reach socially active, "average" elderly who were not at high risk for institutionalization, rather than the more needy elderly. Participation failed to lower institutionalization rates or to improve health or life outlook. Females and those who attended church weekly were more likely to become regular senior center program participants, supporting the supposition that persons who were more active in community life may be more likely to become senior center program participants.

McCracken-Knights (1985), a nursing instructor, compared current health perceptions of the elderly in a senior center, in a Retired Senior Volunteer Program (RSVP), and at large in the community.
She found that a low current health perception was associated with the inability to perform activities of daily living, interference with outside activities, increased incidence of health problems and feelings of uselessness. These findings suggested that when elderly could no longer interact with their environment, they labeled themselves as "sick" in justifying their inactive status. The RSVP group reported better health, more usefulness and less limitations due to chronic illness; and they carried out the activities of daily living more easily. The senior center group had slightly more health problems affecting their daily activities than the RSVP group but fewer health problems than the elderly at large in the community. The relationship of improved current health status correlated with life satisfaction and achievement of health.

The relationship of health care and retirement income may be one of the most critical issues facing the elderly. Poverty is often the result of loss of earned income at retirement (Pegals, 1981). Although poverty is common among the urban elderly, it is a severe problem for those who live in rural areas. Among the white rural population, 39 percent of those over age 72 live in poverty (Talbot, 1985). While life expectancy has increased, labor force participation has decreased. The average elderly man now spends about one-fifth of his life in retirement. While elderly generally have less cash income, they have noncash assets of tax treatment, reduced family size, paid up mortgages, Medicare, Medicaid, group health insurance and food stamps. Among their cash assets are savings accounts, personal property, and home and real estate equity and annuities. However, the
elderly in general tend to be poorer than other adults and poverty tends to increase with age, especially after age 84 (Schick, 1986).

Labor force participation by the elderly has declined throughout the twentieth century. Currently, less than one-fourth of elderly males and about 10 percent of elderly females are in the labor force. Factors that have contributed to this include health status, new pension systems, changes in the population age structure, changes in the economy, and age discrimination in employment (Kart, 1985).

Poverty and physical disability may impact on the choice of living arrangements for the elderly. Determining how many elderly live in inadequate housing is problematical because there is no consensus on what measures should be included to define inadequate housing. A problem for the elderly is that a large proportion of their income is used to meet housing expense (Kart, 1985).

Home ownership is high, with between 80 to 90 percent of the elderly owning their own homes; but if elderly live alone they are more likely to rent than live in their own home. There has been an increase in the number of elderly, especially widows with longevity, who maintain their own households. Independent living is preferred by the elderly (Schick, 1986).

Major federal involvement in public housing began with the Housing and Urban Development (HUD) Housing Act of 1959, which has been the main program for subsidized rental housing for the elderly and handicapped. It offers frail but mobile elderly an alternative to institutionalization. Tenants usually pay rent on a sliding fee scale to a maximum of 25 or 30 percent of income (Kart, 1985).
Health Status: Rural versus Urban Comparisons

Compared to urban elderly, the rural elderly worry more about their financial conditions, reveal less satisfaction with their housing, maintain they have a greater need for money, report a more negative view of themselves, report a poorer self evaluation of their health, find their lives more dreary, rate their communities less favorably in terms of visiting and neighborliness, and report greater alienation and worry. In contrast, they also reveal a greater sense of happiness, a greater family pride, a stronger family support, and a stronger feeling of personal gratification (Youmans, 1974).

Data from regional and national sources, surveying average rural elderly in North Carolina, was profiled by Talbot (1985). In that state, 10.3 percent of the population was 65 years of age or over. Not surprisingly, there were more women than men. Insufficient transportation was the greatest problem. Many rural elderly had an automobile, but were unable to drive. Others relied on friends or relatives to chauffeur them. Because of the distances separating them from external activities, they were often confined to their homes. Rural elderly were 27 percent more likely to have experienced hospitalization than urban elderly, although they saw their physician less. In terms of perceived health, 37 percent of rural elderly reported their health as poor. Social support resources dwindled with age, but friendship and morale remained high. Rural elderly stated that much of their life satisfaction depended on their ability to live
independently, a sense of being cared for and wanted by loved ones, meaningful work and a few small luxuries.

Simon (1987) stated that a subgroup in the United States with specialized needs was the rural elderly. She examined the impact of culture on health of the elderly in Appalachia. Specific problems were attributed to environment, inadequate medical care, and values and behavioral systems of the mountaineers. On almost every indicator of well-being, the rural elderly were more disadvantaged than their urban counterparts. Isolators of these rural elderly were identified as poorer physical and mental health, smaller incomes, more deteriorated housing, fewer opportunities for social relationships, more transportation difficulties, and fewer medical services. Economic isolators were fixed incomes and pensions and fewer assistance programs, since there is reduced federal aid to rural areas. Psychoemotional isolators were elderly having difficulty accepting help from anyone but family or feeling they were a burden on family. Social isolators included few available services for the elderly. Simon concluded that any services designed to meet the needs of the elderly Appalachian had to utilize a personal approach because the culture stressed the intimate and personal aspect. If a service was organized around familiar caregivers in a familiar setting, the services would more likely reach larger numbers of rural, elderly Appalachians.

Health Status and Self-Care Characteristics

Self-care may be a contributor to the solution for inadequate medical care, it may be an economic contribution to rising health care
well-being provided insights for interventions to enhance independence and self-reliance among the elderly.

Chronic and disabling conditions may also pose special problems for the elderly because they affect their self-care capabilities, and the loss of the ability to function strikes at what the elderly value most, which is independent living (Pegals, 1981).

In a survey of elderly west Texans in 1985, Lantz profiled the elderly client with the highest potential for self-care as female with a good health perception, an active self-identification, a sense of worthiness, a lack of self-weakness, a high level of awareness, present-oriented, rigid and compulsive. Persons who did not display these characteristics were less likely to exhibit the desire or ability to carry out self-care.

Summary of the Review of Literature

1. A combination of subjective and objective questions of perception of health status seem to provide the most accurate reflection of health because they represent a summary statement of combined actual health perceptions within the conceptual framework of the elderly.

2. There is disagreement concerning optimistic and pessimistic perceptions of health status in the elderly, because recent studies have suggested age is not associated with positive health perceptions even after controlling for education, sex, symptomology, and physical and psychological health.
3. There is no consensus in the literature concerning the effect of social support on perception of health status because frequency of social support failed to influence health status whereas satisfaction with social support contributed significantly to health status.

4. Senior citizen center utilization and participation failed to lower institutionalization rates or improve health status because the centers tended to reach only the socially active, "average" elderly.

5. Poverty is a common problem among the urban elderly, but it is an even greater problem for the rural elderly. Thirty-nine percent of rural elderly over age 72 are at poverty levels.

6. Although determining substandard housing is difficult, because there are no measures to define inadequacy, rural housing may be substandard because the elements of successful housing consist of close proximity to facilities to satisfy needs and accessibility within a matrix of social support systems.

7. Culture impacts health of rural elderly creating problems attributed to environment, inadequate medical care, values, and behavioral systems. Therefore, a personal approach needs to be utilized with familiar caregivers in familiar setting.

8. There is potential for self-care in all stages of the health/illness continuum of the elderly.

9. Elderly who perceived themselves as healthier, more competent, more self-determined and more motivated showed higher potential for interventions of self-care.
10. Elderly with the highest potential for self-care were found to be female, rated their perceived health status good, had a high level of awareness, were present-oriented, rigid, compulsive, and unable to identify weakness.

Conceptual Framework

The conceptual framework for describing and analyzing perception of health status and self-care in this study is a Self-Care model developed by Elipoulos (1984). Elipoulos' Self-Care Model is based on Dorothea Orem's (1971) conceptual framework of self-care. This conceptual framework lends itself well to the nursing care of the elderly because self-care is an issue of the elderly. In a society where the elderly struggle against stereotyping that depicts them as nonproductive, dependent and frail, the Self-Care Model focuses on enhancing the strengths and capabilities for health and independence (Elipoulos, 1984).

According to Orem (1971), there are three self-care requisites: universal requirements that are basic to all support of human life processes and integrities; developmental requirements that are basic to the fulfillment of age-related developmental tasks; and health deviation requirements that are imposed on an individual as the result of deficits in health and well-being. Nursing care is warranted when an individual's capacity for self-care diminishes, or when self-care demands overwhelm the existing pool of resources or abilities. By emphasizing the individual as the active agent in control of his/her life, with attention to universal and therapeutic demands,
the self-care conceptual framework supports the concern of nursing for the elderly in health and illness.

As Figure 1 depicts, the elderly must be able to meet the universal life and therapeutic demands to maintain life and health. Requisites to meet those demands include: physical, mental and socioeconomic abilities to take action to meet the life demands; knowledge, experience and skill to perform the action; and desire and decision to take the action. Fulfilling life and therapeutic demands is the goal of the elderly. The goal of the nurse is to enable the elderly to meet these demands independently by strengthening self-care capacity, compensating for or minimizing self-care limitations, or acting for or partially assisting with self-care. This is different than performing self-care activities that the elderly cannot do for themselves. Elderly have the same right to and responsibility for self-care as all other individuals. They have the same life demands and may have therapeutic demands created by illness or disability associated with aging. The selection of nursing action depends on the ability of the elderly, either alone or with the assistance of the health professional, to identify which factors are responsible for limitations of self-care (Elipoulos, 1984).
Self-Care Model

UNIVERSAL LIFE DEMANDS
- Food
- Excretion
- Activity
- Solitude and Social Interaction
- Safety
- Normality

THERAPEUTIC DEMANDS
- Medications
- Dressings
- Prostheses
- Special Therapies

REQUISITES TO MEET DEMANDS
- Physical, mental and socioeconomic abilities
- Knowledge, experience, and skill
- Desire and decision to take action

Able to meet demands independently
- Self-care capacity

Unable to meet demands independently
- Self-care limitation
  - Need for nursing
  - Strengthen self-care capacity
  - Compensate for or minimize self-care limitation
  - Act for, do for, partially assist

Chapter 3
Methodology

The research methodology used for this study is reviewed in this chapter. The research approach, sample, survey tool, variables, method of data collection and procedures for analyses of data are discussed.

Research Design

This study used a nonexperimental approach with a descriptive survey. A questionnaire developed by Davies and Ware (1981) was used to examine the self-perception of health status of rural elderly by describing relationships between perceived current health status, self-care and selected factors. This questionnaire reflects the literature review and conceptual framework of this study.

Research Sample

The accessible population from which the sample was derived consisted of male and female subjects, aged 65 or over, living in a rural community 100 miles or two hours time from health care services. The non-probability, purposive sample consisted of three groups of six subjects each. The subjects were grouped according to type of residence or senior citizen center attendance. Group 1 lived in a low-income housing unit and did not attend the senior citizen center. Group 2 lived in their own home and did not attend the senior citizen center. Group 3 lived in their own home and did attend the senior
citizen center daily. Data were collected during April and May of 1987 via face-to-face interviews with consenting subjects.

Research Tool

The research tool was the Health Perceptions Questionnaire (Appendix A) developed by Davies and Ware (1981) to measure six general health perception concepts: current health, prior health, health outlook, resistance to illness, health worry/concern, and sickness orientation. Reliability estimates obtained by Davies and Ware (1981) for all scales ranged from 0.45 to 0.92. Reliabilities for the current health concept were 0.90 or above. Total reliability in the general population by test-retest correlation was 0.63. Reliabilities were not tested with the elderly but were recommended. Validity was supported by interrelationships between subscales and correlations with other health related variables of functional status, physical health, social circumstances, and physician assessments. Positive mental health definitions were positively associated, whereas negative definitions were negatively associated. Mortality, illness behavior and age were negatively associated with health ratings. Rejection of sick role showed an inconsistent relationship with general health ratings and was deleted from the scoring of the questionnaire in this study. From their findings, Davies and Ware supported the validity of the research tool. The summation of the questionnaire responses were scored so that endorsement of positively-worded statements and nonendorsement of negatively-worded statements were assigned a higher score. This reversal was necessary in order for a high score to consistently reflect positive attitudes toward health status.
Demographic data were obtained to provide additional information about self-care capability and desire; selected personal factors of age, sex, source of transportation, the presence of chronic illness or disability, marital status, and social, economic and environmental factors (Appendix A).

A face sheet accompanied each questionnaire (Appendix A) which identified the researcher, explained the purpose of the study and assured the participant of confidentiality and anonymity. Verbal agreement to answer the questions indicated agreement to participate in the study.

Research Variables

**Dependent Variables.** The dependent variables \( (Y_x) \) were the participants' responses to questions of perception of health status and were defined as:

\[
\begin{align*}
Y_1 &= \text{Current Health} \\
Y_2 &= \text{Prior Health} \\
Y_3 &= \text{Health Outlook} \\
Y_4 &= \text{Resistance to Illness} \\
Y_5 &= \text{Health Worry/Concern} \\
Y_6 &= \text{Sickness Orientation}
\end{align*}
\]

**Independent Variables.** The independent variables \( (X_x) \) were defined as:

\[
\begin{align*}
X_1 &= \text{Self-Care Capabilities} \\
X_2 &= \text{Age} \\
X_3 &= \text{Sex}
\end{align*}
\]
\(X_4\) = Source of Transportation

\(X_5\) = Presence of Chronic Illness or Disability

\(X_6\) = Marital Status

\(X_7\) = Self-Care Desire

\(X_8\) = Social, Economic and Environmental Factors

\(X_9\) = Type of Residence

\(X_{10}\) = Senior Citizen Center Attendance

**Method of Data Collection**

The following data collection process was used:

1. The investigator called on each participant in their place of residence after their name was selected from a participation/nonparticipation list obtained from the senior citizen center. The face sheet was read to each participant before the questionnaire was administered, stating the purpose of the study and insuring participant confidentiality and anonymity. The number coding system for computer purposes was explained to each participant.

2. Twenty participants chose to participate in the study by free will and were given the opportunity to stop at any time or refuse to answer any specific question. Upon agreement to participate in the study, each participant was given a questionnaire to read as the researcher asked the questions. Three groups of six participants each answered the questionnaire. Two participants did not meet eligibility criteria and were deleted from the study. Upon completion of the questionnaire, it was returned to the researcher for analysis.
Analysis of Data

The surveys were prepared for computer analysis by categorization and numerical coding to reflect the goals of the research. A fixed format was used to specify the columns of items entered. Each questionnaire was identified with a number and entered with the data coded to indicate type of residence. To facilitate the process, the data were cleaned and edited for errors.

The data were analyzed to provide an inferential analysis of self-perception of health status of rural elderly. A descriptive analysis based on frequency and percentage listings described other factors.

The hypotheses were tested using analysis of variance (ANOVA).
This chapter presents a descriptive analysis of the data (Objectives I and III) and the results of the inferential testing (Objective II). The results of the data recorded on the questionnaire generated the following analyses:

I. A descriptive analysis of the extent of perception of current health status and self-care capability by selected personal characteristics of rural elderly participants.

II. An inferential analysis of the relationship between perceptions of health status and type of residence or senior citizen center attendance of rural elderly participants.

III. A descriptive analysis of the relationship between perception of current health status, desire for self-care and social, economic and environmental factors of rural elderly participants.

**Objective I. Perceptions of current health status and self-care capability by selected personal characteristics**

Frequency and percentage listings of the data from the 18 rural elderly participants who completed the questionnaire were calculated. The data generated the following:

Perception of current health status. For purposes of discussion, the "definitely true" and "mostly true" responses from the Health Perceptions Questionnaire were recorded as "agree" responses. Table 1 provides the numbers and percentages of agreement with
<table>
<thead>
<tr>
<th>Current Health Statement</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>According to the doctors I've seen, my health is now excellent.</td>
<td>3 50.0</td>
<td>1 16.6</td>
<td>5 83.3</td>
</tr>
<tr>
<td>I feel better now than I ever have before.</td>
<td>2 33.3</td>
<td>2 33.3</td>
<td>1 16.6</td>
</tr>
<tr>
<td>I am somewhat ill.</td>
<td>3 50.0</td>
<td>5 83.3</td>
<td>3 50.0</td>
</tr>
<tr>
<td>I'm not as healthy now as I used to be.</td>
<td>6 100.0</td>
<td>6 100.0</td>
<td>5 83.3</td>
</tr>
<tr>
<td>I'm as healthy as anybody I know.</td>
<td>5 83.3</td>
<td>2 33.3</td>
<td>5 83.3</td>
</tr>
<tr>
<td>My health is now excellent.</td>
<td>4 66.6</td>
<td>2 33.3</td>
<td>5 83.3</td>
</tr>
<tr>
<td>I have been feeling bad lately.</td>
<td>2 33.3</td>
<td>3 50.0</td>
<td>3 50.0</td>
</tr>
<tr>
<td>Doctors say I am now in poor health.</td>
<td>0 00.0</td>
<td>1 16.6</td>
<td>1 16.6</td>
</tr>
<tr>
<td>I feel about as good now as I ever have.</td>
<td>4 66.6</td>
<td>3 50.0</td>
<td>2 33.3</td>
</tr>
</tbody>
</table>

a: Percentages will equal more than 100% because subjects could agree with more than one statement.
the statements of the current health variable according to group. In general, responses to the four negatively-worded statements: "I am somewhat ill.", "I'm not as healthy now as I used to be.", "I have been feeling bad lately." and "Doctors say I am now in poor health." were responded to with the most agreement by Group 2 and with the least agreement in Group 1. Responses to the five positively-worded statements: "According to the doctors I've seen, my health is now excellent.", "I feel better now than I ever have before.", "I'm as healthy as anybody I know.", "My health is now excellent." and "I feel about as good now as I ever have." were responded to with the most agreement by Groups 1 and 3, and with the least agreement by Group 2. Five (83.3 percent) participants in Group 3 responded with the most agreement that their health was now excellent, whereas two (33.3 percent) participants in Group 2 agreed with the statement. Five (83.3 percent) participants in Group 2 responded with the most agreement that they were somewhat ill. Four (66.6 percent) participants in Group 1 responded with the most agreement that they felt about as good now as they ever had.

Extent of present self-care capability. As indicated in Table 2 five (83.3 percent) participants in Group 1 reported the capability to do their own laundry and three (50.0 percent) participants in each of Groups 2 and 3 reported the capability to do laundry. Five (83.3 percent) participants in Group 2 reported the capability to cook and four (66.6 percent) participants in Groups 1 and 3 reported the capability to cook. Capability to clean was reported by two (33.3 percent) participants in each of the three groups. Capability to shop
### Table 2

#### Extent of Present Self-Care Capability by Number and Percent

<table>
<thead>
<tr>
<th>Self-Care Capability</th>
<th>Group 1</th>
<th></th>
<th>Group 2</th>
<th></th>
<th>Group 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%(^{a})</td>
<td>N</td>
<td>%(^{a})</td>
<td>N</td>
<td>%(^{a})</td>
</tr>
<tr>
<td>Laundry</td>
<td>5</td>
<td>83.3</td>
<td>3</td>
<td>50.0</td>
<td>3</td>
<td>50.0</td>
</tr>
<tr>
<td>Cooking</td>
<td>4</td>
<td>66.6</td>
<td>5</td>
<td>83.3</td>
<td>4</td>
<td>66.6</td>
</tr>
<tr>
<td>Cleaning</td>
<td>2</td>
<td>33.3</td>
<td>2</td>
<td>33.3</td>
<td>2</td>
<td>33.3</td>
</tr>
<tr>
<td>Shopping</td>
<td>3</td>
<td>50.0</td>
<td>2</td>
<td>33.3</td>
<td>2</td>
<td>33.3</td>
</tr>
<tr>
<td>Bathing</td>
<td>5</td>
<td>83.3</td>
<td>5</td>
<td>83.3</td>
<td>5</td>
<td>83.3</td>
</tr>
<tr>
<td>Decision to see Physician</td>
<td>2</td>
<td>33.3</td>
<td>4</td>
<td>66.6</td>
<td>3</td>
<td>50.0</td>
</tr>
</tbody>
</table>

\(^{a}\): Percentages will equal more than 100% because subjects could agree with more than one statement.
for food and supplies was reported by three (50.0 percent) participants in Group 1 and two (33.3 percent) participants in Groups 2 and 3. Capability to bathe was reported by five (83.3 percent) participants in each of the three groups. Making the self-decision to see their physician was reported by four (66.6 percent) participants in Group 2, three (50.0 percent) participants in Group 3 and two (33.3 percent) participants in Group 1. In general, Groups 1 and 2 reported more present self-care capability than Group 3. The areas of most self-care capability were reported in laundry, cooking and bathing. The areas of least self-care capability were reported in cleaning, shopping and ability to decide when to see the physician.

**Age.** The mean age of the 18 participants was 78.8 years. The reported ages ranged from 67 to 94 years. Group 1 reported the oldest mean age of 82.6 years. Group 2 reported the youngest mean age of 75.0 years. Group 3 reported the mean age of 78.8 years.

**Sex.** The sample consisted of twelve (66.6 percent) females and six (33.3 percent) males. Group 1 consisted of five (83.3 percent) females and one (16.6 percent) male. Group 2 consisted of four (66.6 percent) females and two (33.3 percent) males. Group 3 consisted of three (50.0 percent) females and three (50.0 percent) males. Groups 1 and 2 were predominantly females and Group 3 was split evenly for sex.

**Transportation to health care services.** Group 1 reported eighty-three percent dependence on family and friends for transportation to health care. Group 2 reported the most dependence for transportation to health care at one hundred percent. Group 3 reported the
least dependence for transportation to health care at thirty-three percent.

Presence of chronic illness or disability. Group 1 reported the presence of the most chronic illness or disability with six (100.0 percent) participants indicating "Yes" on the questionnaire. Four (66.6 percent) participants in Group 2 reported the presence of chronic illness or disability. The elderly in Group 3 reported the least chronic illness or disability with two (33.3 percent) participants indicating "No" on the questionnaire.

Marital status. One hundred percent of Group 1 reported living alone. Fifty percent of Group 2 lived alone. Sixty-six percent of Group 3 lived alone.

Objective II. Extent of relationship of perception of health status and type of residence or senior citizen center attendance

The statistical test used to analyze Objective II was analysis of variance (ANOVA). The significance level for the purpose of this study was 0.05. The ANOVA Tables are in Appendix B.

Null Hypothesis 1. There is no relationship between participants' perception of current health and type of residence or senior citizen center attendance.

The level of probability obtained by ANOVA for this variable ($Y_1$) was 0.1296, therefore $p > 0.05$ and the null hypothesis was not rejected (Table 3, Appendix B).
Null Hypothesis 2. There is no relationship between participants' perception of prior health and type of residence or senior citizen center attendance.

The level of probability obtained by ANOVA for this variable \( Y_2 \) was 0.8223, therefore \( p > 0.05 \) and the null hypothesis was not rejected (Table 3, Appendix B).

Null Hypothesis 3. There is no relationship between participants' perception of health outlook and type of residence or senior citizen center attendance.

The level of probability obtained by ANOVA for this variable \( Y_3 \) was 0.6156, therefore \( p > 0.05 \) and the null hypothesis was not rejected (Table 3, Appendix B).

Null Hypothesis 4. There is no relationship between participants' perception of resistance to illness and type of residence or senior citizen center attendance.

The level of probability obtained by ANOVA for this variable \( Y_4 \) was 0.7244, therefore \( p > 0.05 \) and the null hypothesis was not rejected (Table 3, Appendix B).

Null Hypothesis 5. There is no relationship between participants' perception of health worry/concern and type of residence or senior citizen center attendance.

The level of probability obtained by ANOVA for this variable \( Y_5 \) was 0.6668, therefore \( p > 0.05 \) and the null hypotheses was not rejected (Table 3, Appendix B).
Null Hypothesis 6. There is no relationship between participants' perception of sickness orientation and type of residence or senior center attendance.

The level of probability obtained by ANOVA for this variable ($\chi^2_6$) was 0.3025, therefore $p > 0.05$ and the null hypothesis was not rejected (Table 3, Appendix B).

Summary of the Statistical Testing

Based on the statistical analysis, there were no significant differences between or within groups for the six variables of perception of health status, when controlling for type of residence or senior citizen center attendance.

Objective III. Extent of relationship between perception of current health status, desire for self-care and social, economic and environmental factors.

Frequency and percentage listings of the data from the 18 rural elderly participants who completed the questionnaire were calculated. The data generated the following:

Self-care desire. Table 4 presents the numbers and percentages of responses by group. In general, Group 2 reported the least desire for self-care education or services and Group 1 reported the most desire for self-care education or services. All six (100.0 percent) participants in Group 1 reported desire for safety/prevention education and health/screening services, whereas three (50.0 percent) participants in Group 2 reported desire for this education or service. One (16.6 percent) participant in Group 2 reported desire for
exercise/diet, health/wellness or stress/management education, whereas four (66.6 percent) to five (83.3 percent) participants in Group 1 reported a desire for education in those areas. Group 3 also responded positively to desire for self-care education or services.
<table>
<thead>
<tr>
<th>Desire for Self-Care Education and Services</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Exercise/Diet Education</td>
<td>5</td>
<td>83.3</td>
<td>1</td>
</tr>
<tr>
<td>Health/Wellness Education</td>
<td>5</td>
<td>83.3</td>
<td>1</td>
</tr>
<tr>
<td>Safety/Prevention Education</td>
<td>6</td>
<td>100.0</td>
<td>3</td>
</tr>
<tr>
<td>Health/Screening Services</td>
<td>6</td>
<td>100.0</td>
<td>3</td>
</tr>
<tr>
<td>Stress Management Education</td>
<td>4</td>
<td>66.6</td>
<td>1</td>
</tr>
</tbody>
</table>

*a: Percentages will equal more than 100% because subjects could agree with more than one statement.
Social factors. Table 5 presents the numbers and percentages of group participant response to social factor questions. Six (100.0 percent) participants in Group 3 reported participation in activities outside the home and one (16.6 percent) participant in Group 1 reported outside activities. Five (83.3 percent) participants in Group 3 reported church attendance. Three (50.0 percent) participants in each of Groups 2 and 3 reported participation in social clubs. Three (50.0 percent) participants in each of Groups 2 and 3 reported participation in local meetings. Group 1 reported the least social activity and Group 3 the most. Of those in Groups 1 and 2 who did not attend the senior citizen center, two (33.3 percent) participants in Group 1 and one (16.6 percent) participant in Group 2 reported a desire to attend. Three (50.0 percent) participants in Group 1 reported lack of interest, one (16.6 percent) participant reported unfriendly people, and two (33.3 percent) of the participants reported lack of transportation as reasons for nonattendance at the senior citizen center. Three (50.0 percent) participants in Group 2 reported lack of interest and unfriendly people as reasons for non-attendance.

Economic factors. In lieu of requesting income information, a question about health care coverage was asked. Table 5 presents the numbers and percentages or responses to the economic factor question. Five (83.3 percent) participants in Group 1 reported private insurance and six (100.0 percent) participants reported Medicare to cover health care costs. One (16.6 percent) participant reported Medicaid and none (0.0 percent) reported self-coverage for health care costs.
<table>
<thead>
<tr>
<th>Factors</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities outside the home</td>
<td>1 16.6</td>
<td>3 50.0</td>
<td>6 100.0</td>
</tr>
<tr>
<td>Church Attendance</td>
<td>3 50.0</td>
<td>3 50.0</td>
<td>5 83.3</td>
</tr>
<tr>
<td>Social Club Attendance</td>
<td>2 33.3</td>
<td>3 50.0</td>
<td>3 50.0</td>
</tr>
<tr>
<td>Local Meeting Attendance</td>
<td>1 16.6</td>
<td>3 50.0</td>
<td>3 50.0</td>
</tr>
<tr>
<td>Regular Senior Citizen Center Attendance (Group 3 only)</td>
<td>0 00.0</td>
<td>0 00.0</td>
<td>6 100.0</td>
</tr>
<tr>
<td>Desire of Nonattenders to attend Senior Citizen Center (Groups 1 and 2 only)</td>
<td>2 33.3</td>
<td>1 16.6</td>
<td>0 00.0</td>
</tr>
<tr>
<td>Reasons for nonattendance at Senior Citizen Center:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Interested</td>
<td>3 50.0</td>
<td>3 50.0</td>
<td>0 00.0</td>
</tr>
<tr>
<td>Unfriendly People</td>
<td>1 16.6</td>
<td>3 50.0</td>
<td>0 00.0</td>
</tr>
<tr>
<td>Lack of transportation</td>
<td>2 33.3</td>
<td>0 00.0</td>
<td>0 00.0</td>
</tr>
<tr>
<td>(Groups 1 and 2 only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Care Coverage:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Insurance</td>
<td>5 83.3</td>
<td>5 83.3</td>
<td>6 100.0</td>
</tr>
<tr>
<td>Medicare</td>
<td>6 100.0</td>
<td>5 83.3</td>
<td>6 100.0</td>
</tr>
<tr>
<td>Medicaid</td>
<td>1 16.6</td>
<td>1 16.6</td>
<td>1 16.6</td>
</tr>
<tr>
<td>Self</td>
<td>0 00.0</td>
<td>2 33.3</td>
<td>2 33.3</td>
</tr>
<tr>
<td>Residence:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-income housing</td>
<td>6 100.0</td>
<td>0 00.0</td>
<td>0 00.0</td>
</tr>
<tr>
<td>Own home</td>
<td>0 00.0</td>
<td>6 100.0</td>
<td>6 100.0</td>
</tr>
</tbody>
</table>

\[a: \text{Percentages will equal more than 100\% because subjects could agree with more than one statement.}\]
Six (100.0 percent) participants in Group 3 reported private insurance and Medicare to cover health care costs. One (16.6 percent) participant reported Medicaid and two (33.3 percent) participants reported self-coverage ability. Group 1 reported the least ability and Group 3 reported the most ability in economic factors for health care costs. Group 2 responded similarly to Group 3 with five (83.3 percent) participants reporting private insurance and Medicare coverage.

Environmental factors. Table 16 presents the numbers and percentages of environmental factors. Six (33.3 percent) participants lived in the low-income housing unit with all utilities, maintenance and taxes provided for in the minimal rent fee. Twelve (66.6 percent) participants owned their own homes and had the responsibility for utilities, maintenance and taxes.
This chapter presents the following:

1. A summary of the research problem and design;
2. A summary of the major findings and conclusions related to objectives of the study;
3. A statement of the implications derived from the research findings and conclusions;
4. A statement of the limitations of the study; and
5. Recommendations for future research.

Summary of the Research Problem and Design

Although research supports consistent and substantial improvements in the health of the majority of the elderly (Palmore, 1986), many continue to have multiple factors which inhibit their benefit from the health care system (Butler, 1979). Rural elderly report poorer health, more sickness, more chronic illness and poorer perceived health status than urban elderly (Youmans, 1974 and Talbot, 1985). The Orem Self-Care Theory, adapted by Elipoulos (1984) supports the concept of nursing for the elderly in health and illness through emphasis on the individual as an active agent in control of his/her life. Deficit life demands may be easily identified, but it is more difficult to identify the causes of the deficit. Elderly may be less able to fulfill life or therapeutic demands if they lack knowledge or skills, or if a debilitated state of health prevents them
from doing so independently. For the current study, the requisites to meet the demands were described in order to identify factors that may support self-care. The problem under investigation was to determine the perception of health status of rural elderly and to describe the extent these perceptions varied when controlling for self-care and social, economic and environmental factors.

A questionnaire was designed and administered to a nonrandom, purposive sample consisting of 18 rural elderly in a midwestern state. The sample consisted of three groups of elderly and the questionnaire obtained information which, through statistical testing with ANOVA and descriptive analysis, attempted to define the relationship of the type of residence and senior citizen center attendance on perceived health status, self-care and social, economic and environmental factors.

**Major Findings and Conclusions**

The summary of major findings and conclusions related to the three objectives were as follows:

**Objective I. Major Findings and Conclusions.** Objective I of this study was to describe the extent of perceptions of current health status and self-care capability by selected personal characteristics.

In general, major findings related to Objective I were as follows:

1. Approximately two-thirds of Group I reported they were now in excellent health. Over three-fourths reported they were as healthy as anybody they knew, but all agreed they were not as healthy as they used to be.
2. Group 2 reported the least agreement with positively worded statements and the most agreement with negatively worded statements from the current health variable of the Health Perceptions Questionnaire. One-third of Group 2 reported their health as now excellent and that they were as healthy as anybody they knew. All agreed they were not as healthy as they used to be. Group 2 reported the least positive perception of current health status of the three groups.

3. Over three-fourths of Group 3 reported they were now in excellent health and that they were as healthy as anybody they knew, but not as healthy as they used to be. Group 3 reported the most positive perception of current health status of the three groups.

4. Over three-fourths of Group 1 reported self-care capability to bathe and do laundry themselves. Two-thirds reported the capability to cook and one-half reported capability to shop for food and supplies. One-third were capable of cleaning and making the decision to consult their physician.

5. Over three-fourths of Group 2 reported self-care capability to bathe and cook for themselves. One-half reported they could do their own laundry. Two-thirds were capable of making the decision as to when to consult their physician. One-third were capable of cleaning and shopping.

6. Over three-fourths of Group 3 reported self-care capability to bathe. Two-thirds reported they could cook for themselves. One-half reported they were capable of making the decision to consult their physician. One-third were capable of cleaning and shopping.
7. Group 1 reported the oldest mean age of 82.6 years. Group 2 reported the youngest mean age of 75.0 years. Group 3 reported the mean age of 78.8 years.

8. Group 1 was over three-fourths female. Group 2 was two-thirds female and Group 3 was one-half female.

9. One hundred percent of Group 2 reported dependency on family or friends for transportation to health care services. Two-thirds of Group 3 provided their own source of transportation to health care. Over three-fourths of Group 1 reported dependency on family or friends for transportation to health care. Group 2 was the most dependent for transportation to health care and Group 3 was the most independent.

10. One hundred percent of Group 1 reported the presence of chronic illness or disability and two-thirds of Group 2 reported the presence of chronic illness or disability. One-third of Group 3 reported the presence of chronic illness or disability.

11. One hundred percent of Group 1 lived alone as widow or widower and one-half of Group 2 lived alone. Two-thirds of Group 3 lived alone. One-third of Groups 2 and 3 lived with a spouse.

In conclusion, Group 1 reported a positive perception of current health status, although not as positive as Group 3, but more positive than Group 2. This group reported capability for self-care, especially with bathing and laundry. This group was the oldest, consisted of the most females, and was dependent on family or friends for transportation to health care. One hundred percent of the participants in Group 1 reported the presence of a chronic illness or
disability. All lived alone as widow or widower. Group 2 reported the least positive perception of current health status and reported self-care capability in cooking and bathing. This group was the youngest, consisted of two-thirds females, was dependent on family and friends for transportation to health care and two-thirds reported presence of chronic illness or disability. Over one-half lived alone as a widow or widower. Group 3 reported the most positive perception of current health and the least capability for self-care, especially in cleaning, shopping and decision-making ability to consult their physician. This group had the mean sample age of 78.8 years and consisted of one-half females. Two-thirds of the participants reported they provided their own transportation to health care and two-thirds reported presence of a chronic illness or disability. Two-thirds lived alone and one-third lived with a spouse.

These findings may support those of Levcoff, Cleary and Wetle (1987), suggesting that elderly rate their health status positively by ignoring illness, or pessimistically because they are preoccupied with bodily sensations or dysfunctions; that elderly report good health, despite living alone (Weinberger, 1986); and that elderly tend to see their own health as better than others their age because they are not required to maintain a highly active level of function (Cockerham, Sharp and Wilcox, 1983).

Objective II. Major Findings and Conclusions. Objective II of this study was to determine the relationship of perception of health status and type of residence or senior citizen center attendance.
The major findings related to Objective II were that there was no relationship between perception of health status (Y), type of residence (X_9) or senior citizen center attendance (X_10) at the 0.05 level of significance.

In conclusion, the analysis of data indicated that type of residence and senior citizen center attendance may not affect perception of health status in the rural elderly, supporting studies of McCracken-Knights (1985), Ralson (1984), and Schneider, Chapman and Voth (1985).

Objective III. Major Findings and Conclusions. Objective III of this study was to describe the relationship between perception of current health status, desire for self-care education and services and social, economic and environmental factors.

In general, major findings related to Objective III were as follows:

1. Group 1 reported the most desire for self-care education and services with all participants reporting interest in safety/prevention education and health screening services. Over three-fourths of the group reported desire for exercise/diet and health/wellness education. Two-thirds of the group reported desire for stress management education.

2. Group 2 reported the least desire for self-care education and services with fifty percent of the participants reporting interest in safety/prevention education and health/screening services. Lack of interest in exercise/diet, health/wellness and stress management education was expressed by over three-fourths of the group.
3. Group 3 reported desire for self-care education and services with all of the participants reporting interest in health/screening services and over three-fourths of the participants reporting desire for safety/prevention and stress management education. Two-thirds of the group reported desire for exercise/diet and health/wellness education.

4. One-sixth of Group 1 reported interest in activities outside the home and local meeting attendance. One-half of the group reported church attendance and one-third of the group reported social club attendance. One-third of the participants in this group desired to attend the senior citizen center, and they stated lack of transportation as the reason for nonattendance. They reported the least health care coverage and none of the participants reported a means to cover health care costs themselves. This group lived in the low-income housing unit with minimal rent, maintenance and taxes.

5. One-half of Group 2 reported interest in activities outside the home, church attendance, social club and local meeting attendance. One-sixth of the participants in this group desired to attend the senior citizen center and they reported lack of interest and the unfriendliness of the people who did attend as the reasons for nonattendance. They reported more health care coverage than Group 1 and one-third of the participants reported means to cover health care costs themselves.

6. All of Group 3 reported interest in activities outside of the home. Over three-fourths of the participants reported church attendance and one-half reported social club and local meeting
attendance. This group reported the most health care coverage with one-third of the participants reporting means to cover their own health care costs.

In conclusion, Group 1 reported a positive perception of current health status, the greatest desire for self-care education and services and the poorest social, economic and environmental factors. Group 2 reported the least positive perception of current health status, the least desire for self-care education and services and moderate social, economic and environmental factors. Group 3 reported the most positive perception of current health status, a strong desire for self-care education and services and the most favorable social, economic and environmental factors. These findings may lend support to Krause's (1987) suggestion that satisfaction with social support directly affects self-rated health whereas frequency of support exerts no significant effect, or that persons more active in community life may be more likely to become senior citizen center attenders (Schneider, Chapman and Voth, 1985).

In view of the nonrandom nature and smallness of the sample, generalizations must be tentative. However, Group 1 may have reported more positive results in the descriptive survey because they consisted mostly of females, were white, exhibited a high level of independence, were present-oriented, held a balance of past experience and future expectations and perceived their health as good. Despite reporting the oldest age, the most presence of chronic illness or disability, and the most living alone, the results of the survey from Group 1 may support the suggestion by Lantz (1985) that persons who did not
reflect certain characteristics would be less likely to exhibit the desire or ability to carry out self-care to maintain maximum levels of health.

**Implications of the Research**

Implications were generated from an analysis of the data. Some major implications may be as follows:

1. Positive perceptions of current health status, along with desire for self-care education or services, may imply a need for further identification and advertisement of existing resources, implementation of new resources or sharing of other communities' resources for the elderly.

2. Negative perceptions of current health status may disguise present self-care capability, skill or knowledge and discourage self-care desire or motivation. Thus, rural elderly may benefit from a plan of nursing care that would maintain existing strengths and minimize weaknesses through education in the community emphasizing the individual as an active agent in control of his/her life.

3. State, local or volunteer services may need to be initiated to provide assistance with cleaning and shopping, because these were the areas of greatest self-care deficits reported by the rural elderly.

4. Since senior citizen centers seem to attract the socially active, "average" elderly, reasons given for attendance should be investigated and communicated to target the more needy elderly.
5. Health care providers may develop learning activities and teaching strategies to enhance self-care characteristics and behaviors.

Limitations

The limitations of the study were as follows:

1. The sample size was small and restricted in number of participants, which led to low statistical power.

2. A purposive, nonrandom sample was utilized, causing the generalizations of findings and conclusions to be restricted to the sample.

3. The participants' awareness that the researchers was a nurse within the small community may have influenced their responses.

4. The participants may have differed in their interpretation of the similarly-worded statements on the research tool.

5. Earlier or similar questions or responses may have influenced responses to later questions.

6. The questionnaires were administered to three small groups of rural elderly, whose characteristics may have been homogeneous.

7. Extraneous variables, such as availability of homemaker service, educational background, or reasons for senior citizen center attendance may have influenced the research outcome.
Recommendations for Future Study

On the basis of the findings of this study, the following is recommended:

1. The study should be replicated, using a large, nonrandom sample from a variety of rural settings.

2. The research tool should be refined to include a general health status rating (Poor, Fair, Good, Excellent) and to delete questions that do not measure perception of health status.

3. Studies should be conducted to develop and test nursing interventions and health education in relation to perception of health status of rural elderly.

4. A comparison study should be designed to measure perception of health status in rural elderly after self-care education has been presented by health care professionals.
Bibliography


Appendix A
I will read each of the following statements to you. For each statement read to you, you decide whether it is true or false for you. There is no right or wrong answer.

If a statement is definitely true (DT) for you, choose 5.
If it is mostly true (MT) for you, choose 4.
If you don't know (DK) whether it is true or false for you, choose 3.
If a statement is mostly false (MF) for you, choose 2.
If a statement is definitely false (DF) for you, choose 1.

(4) According to the doctors I've seen, my health is excellent. 5 4 3 2 1
(5) I try to avoid letting illness interfere with my life. 5 4 3 2 1
(6) I seem to get sick a little easier than other people. 5 4 3 2 1
(7) I feel better now than I ever have before. 5 4 3 2 1
(8) I will probably be sick a lot in the future. 5 4 3 2 1
(9) I never worry about my health. 5 4 3 2 1
(10) Most people get sick a little easier than I do. 5 4 3 2 1
(11) I don't like to go to the doctor. 5 4 3 2 1
(12) I am somewhat ill. 5 4 3 2 1
(13) In the future, I expect to have better health than other people I know. 5 4 3 2 1
(14) I was so sick once I thought I might die. 5 4 3 2 1
<p>| | | | | | |</p>
<table>
<thead>
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<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>I'm not as healthy now as I use to be.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>16</td>
<td>I worry about my health more than other people worry about their health.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>17</td>
<td>When I'm sick, I just try to keep going as usual.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>18</td>
<td>My body seems to resist illness very well.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>19</td>
<td>Getting sick once in awhile is a part of my life.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>20</td>
<td>I'm as healthy as anybody I know.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>21</td>
<td>I think my health will be worse in the future than it is now.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td>22</td>
<td>I've never had an illness that lasted a long time.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td>23</td>
<td>Others seem more concerned about their health than I am about mine.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td>24</td>
<td>When I'm sick I try to keep it to myself.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>25</td>
<td>My health is excellent.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td>26</td>
<td>I expect to have health for the rest of my life.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td>27</td>
<td>My health is a concern in my life.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>28</td>
<td>I accept that sometimes I'm just going to be sick.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
</tr>
<tr>
<td>29</td>
<td>I have been feeling bad lately.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<td>30</td>
<td>It doesn't bother me to go to the doctor.</td>
<td>DT</td>
<td>MT</td>
<td>DK</td>
<td>MF</td>
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<tr>
<td></td>
<td>Statement</td>
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<td>MT</td>
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<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
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<tr>
<td>31</td>
<td>I have never been seriously ill.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>32</td>
<td>When there is something going around, I usually catch it.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>33</td>
<td>Doctors say that I am now in poor health.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>34</td>
<td>When I think I am getting sick, I fight it.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>35</td>
<td>I feel about as good now as I ever have.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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</table>
DEMOGRAPHIC QUESTIONNAIRE

(36) What year were you born? _____________

(37) What is your sex? 1. Male 2. Female

(38) What is your source of transportation to health care?
   1. Self 2. Family 3. Other ________________

(39) Do you travel at least 100 miles to health care services?
   1. Yes 2. No _____________________________

(40) Do you have an illness or disease diagnosed by your doctor?
   1. Yes 2. No _____________________________

(41) Who decides when you see your doctor?
   1. Self 2. Doctor 3. Other _______________

(42) Do you live: 1. Alone 2. With Spouse 3. With Other

(43) Residence: 1. Own home 2. Low income housing unit

(44) Do you do your own laundry? 1. Yes 2. No

(45) Do you do your own cooking? 1. Yes 2. No

(46) Do you do your own cleaning? 1. Yes 2. No

(47) Do you do your own shopping for food and supplies?
   1. Yes 2. No

(48) Do you need help with your bath or shower?
   1. Yes 2. No

(49) Do you participate in activities outside your home?
   1. Yes 2. No

(50) Do you go to church? 1. Yes 2. No

(51) Do you attend the senior center? 1. Yes 2. No

(52) If you do not attend, would you like to? 1. Yes 2. No
(53) Reasons for not attending the senior center:
   1. Not interested
   2. Unfriendly people
   3. Lack of transportation
   4. Nonapplicable for Group 3

(54) Do you belong to social clubs such as extension or ladies aid?
   1. Yes  2. No

(55) Do you attend local meetings such as town council, school board, chamber of commerce, VFW or Auxiliary, or agricultural seminars?
   1. Yes  2. No

(56) Would you attend a health program especially for people your age if it was offered here?  1. Yes  2. No

Interest in health programs or activities:

(57) Would you attend an exercise/diet educational program?
   1. Yes  2. No

(58) Would you attend a health/wellness activity?
   1. Yes  2. No

(59) Would you attend a safety/prevention program?
   1. Yes  2. No

(60) Would you attend a health/screening program?
   1. Yes  2. No

(61) Would you attend a stress management/coping program?
   1. Yes  2. No

(62) Is your health care cost covered by:
AS A GRADUATE STUDENT IN THE MASTER OF SCIENCE IN NURSING PROGRAM AT SOUTH DAKOTA STATE UNIVERSITY, I AM CONDUCTING A STUDY ON THE HEALTH STATUS OF RURAL PEOPLE IN SOUTH DAKOTA. THE RESULTS OF THIS STUDY WILL HELP IN THE DEVELOPMENT OF NURSING KNOWLEDGE WITH PEOPLE OF YOUR AGE GROUP.

PARTICIPATION IN THIS STUDY IS VOLUNTARY AND CONFIDENTIALITY WILL BE MAINTAINED. THE NUMBER AT THE TOP OF THE PAGE IS FOR COMPUTER PURPOSES ONLY. NO NAMES WILL BE MATCHED WITH NUMBERS OR INFORMATION. YOU MAY REFUSE TO ANSWER QUESTIONS AT ANY TIME DURING THE INTERVIEW.

THE QUESTIONNAIRE TAKE ABOUT TEN MINUTES AND IS MADE UP OF QUESTIONS ABOUT HOW YOU THINK YOUR HEALTH IS RIGHT NOW. THE THIRD PAGE IS MADE UP OF QUESTIONS SPECIFICALLY FOR PEOPLE OF YOUR AGE AND WHERE YOU LIVE.

PARTICIPATION IN THIS SURVEY WOULD BE APPRECIATED AND THE RESULTS WILL BE SHARED WITH YOU WHEN THE STUDY IS COMPLETED.

THANK YOU FOR YOUR PARTICIPATION.

Colleen Miller, SDSU Graduate Nursing Student 1987
Appendix B
### Table 3
**ANOVA TABLES**

Analysis of Variance of the Relationship Between Current Health and Place of Residence and Senior Center Attendance

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<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
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<tbody>
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<td>303.44444444</td>
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p > 0.05

Analysis of Variance of the Relationship Between Prior Health and Place of Residence and Senior Center Attendance

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p > 0.05
### Analysis of Variance of the Relationship Between Health Outlook and Place of Residence and Senior Center Attendance

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<td>19.11111111</td>
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<td>Within Groups</td>
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<td>286.00000000</td>
<td>19.06666667</td>
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<td>305.11111111</td>
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*p > 0.05

### Analysis of Variance of the Relationship Between Resistance to Illness and Place of Residence and Senior Center Attendance

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<tbody>
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<td>2</td>
<td>7.44444444</td>
<td>3.72222222</td>
<td>0.33</td>
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<td>Within Groups</td>
<td>15</td>
<td>169.50000000</td>
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<td>176.94444444</td>
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*p > 0.05
### Analysis of Variance of the Relationship Between Health Worry/Concern and Place of Residence and Senior Center Attendance

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<td>Within Groups</td>
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p > 0.05

### Analysis of Variance of the Relationship Between Sickness Orientation and Place of Residence and Senior Center Attendance

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<td>Within Groups</td>
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<td>5.70000000</td>
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p > 0.05