

RELATIONSHIPS BETWEEN BIOPSYCHOSOCIAL CHARACTERISTICS  
AND ADAPTIVE HEALTH PATTERNS IN ELDER WOMEN

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A DISSERTATION  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTORATE OF PHILOSOPHY  
IN THE GRADUATE SCHOOL OF THE  
TEXAS WOMAN'S UNIVERSITY

COLLEGE OF NURSING

BY  
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DENTON, TEXAS

DECEMBER, 1992

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December 14, 1992  
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To the Associate Vice President for Research and Dean of the  
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I am submitting herewith a dissertation written by

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entitled Relationships Between Biopsychosocial Characteristics  
and Adaptive Health Patterns in Elder Women

I have examined the final copy of this dissertation for form and  
content and recommend that it be accepted in partial fulfillment  
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Accepted.

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Research and Dean of the Graduate  
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## DEDICATION

This dissertation is dedicated to my husband, Jim, for his patience, kindness, faith in our ability to succeed, and most of all his enduring love, support and humor.

## ACKNOWLEDGEMENTS

An endeavor of this magnitude could not have been completed without the support and concerns of many individuals. My deepest appreciation is extended to Dr. John Fehir who served as the chair of my committee. I will be forever indebted to him for his constructive guidance and his wise counsel throughout this dissertation process. I am indeed grateful for the time he spent in sharing with me just a fraction of his vast knowledge of the intricacies of research.

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hard work ethics, confidence and love have encouraged me during weak moments and inspired me to complete this endeavor. I am grateful.

RELATIONSHIPS BETWEEN BIOPSYCHOSOCIAL CHARACTERISTICS  
AND ADAPTIVE HEALTH PATTERNS IN ELDER WOMEN

ABSTRACT

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DECEMBER 1992

The purpose of the study was to describe the relationship between biopsychosocial characteristics, health patterns, and ethnicity in aging females. The variables of physical health, mobility, emotional and cognitive status, ability to trust, social support, economic characteristics, and ethnicity were explored in relation to adaptive health patterns along with certain demographic variables. The sample consisted of ninety subjects between the ages of 60 to 85 years from a large southwestern city. The Iowa Self-Assessment Inventory and the Demographic Data Sheet were the instruments used in the study.

A systems approach was employed based on Roy's Adaptation Model. The findings support the conceptual framework. This study viewed the elder woman as a whole that functions by virtue of the interdependence of her biopsychosocial characteristics. Many of the subjects did not attain adaptive subscale scores in the seven

biopsychosocial variables, however the majority of women did attain cumulative adaptive scores. These findings suggest that elder women are holistic adaptive systems.

The following findings were derived from statistical analysis of the three research questions. The majority (58.9%,  $n=53$ ) of elder females reported adaptive health patterns. African-American elder women had the largest percentage (21.1%,  $n=19$ ) of women achieving adaptive health. Hispanic elder women had the least (12.1%,  $n=11$ ) number of women achieving adaptive health patterns. Married women attained a higher percentage (34.4%,  $n=31$ ) of adaptive health patterns than their single, widowed, divorced, or separated counterparts. A significant inverse relationship was found between age and adaptive health patterns ( $r=-.32$ ,  $p=.00$ ,  $n=90$ ). A significant positive relationship was found between years of education and adaptive health patterns ( $r=.23$ ,  $p=.02$ ,  $n=90$ ). A strong relationship was noted between ethnicity ( $\phi=0.74$ ) and adaptive health patterns. Ethnicity accounted for fifty-five percent of the shared variance.



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**AGENCY PERMISSION FOR CONDUCTING STUDY\***

THE \_\_\_\_\_

**GRANTS TO** Kathleen Pace Murphy

a student enrolled in a program of nursing leading to a Ph.D. in nursing at Texas Woman's University, the privilege of its facilities in order to study the following problem:

The purpose of the study is to describe the following characteristics: physical health, mobility, emotional state, cognitive status, ability to trust, social support, and economic characteristics of multi-ethnic women and to explore the relationships among these characteristics as they relate to health patterns.

The following is the research question for this study:

What are the relationships among physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, adaptive health patterns, and ethnicity in elder women?

The conditions mutually agreed upon are as follows:

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## CHAPTER 1

### INTRODUCTION

In this century, life expectancy for the average American person has doubled as society continues to evolve into a highly mixed ethnic and racial population. In 1900, people over 65 constituted 4 percent of the population. Today, 29.5 percent of our nation's total population is 65 and older (U.S. Bureau of the Census, 1991a). Projected demographic trends in the elderly population demonstrate the white "majority" will soon become one of several "minority" groups (American Association of Retired Persons, 1987c; Stanford & Yee, 1991). In 1989, thirteen percent of the over 65 population were elders of color (U.S. Bureau of the Census, 1991a). By 2025, 15% of the elderly population are projected to be nonwhite, and by 2050, 20% are likely to be nonwhite (American Association of Retired Persons, 1987c).

The graying of America is predominantly composed of women; in 1989, there were 18.3 million older women and 12.6 million older men, or a sex ratio of 145 women for every 100 men (American Association of Retired Persons,



1990). This aging population, although gender dominated, will become increasingly diverse by race, income, ethnicity, immigration, and language (Stanford & Yee, 1991). This diversity raises issues of how nurses can best respond to different biopsychosocial needs, understand and incorporate the effects of ethnicity, gender, and historical experiences on the aging process; and in turn make health care responsive to that diversity.

Despite the preponderance of elder women of diverse ethnicity, little research has been done to investigate health and biopsychosocial issues (Stanford & Yee, 1991). Studies conducted on aging in the elderly have used predominately white male samples. Research findings are frequently generalized to include all elderly individuals (Hernandez, 1991). In many respects, research findings that apply to this "majority" population are not useful when nursing professionals are trying to understand biopsychosocial characteristics and their effects on this target population. Thus, little is known about elder women of diverse ethnic backgrounds who are the elder majority, and much is assumed.

Nursing proposes a health focus and nurses are encouraged to generate new knowledge for health-seeking behaviors that enhance quality of life (Edleman & Milio, 1986; Hall & Allan, 1986). Diversity in the older population will require nurses to distinguish between that which is common to all older people irrespective of gender and ethnicity, and those unique factors that necessitate gender and ethnic specific responses (Stevenson, 1981). Therefore, the purpose of this study was to examine the following biopsychosocial characteristics of elder women: physical health, mobility, emotional and cognitive status, ability to trust, social support, economic characteristics, health patterns, and ethnicity. Identification and understanding of these biopsychosocial characteristics specific to elder women need to precede research on the effects of nursing intervention.

#### Problem of Study

Nursing has a distinct role in shaping the pursuit of gerontological knowledge and in applying this knowledge to improve health care services that enhance the quality of life of elder females. It is proposed

that if identified biopsychosocial characteristics were examined and their relationships explored, unique ethnically-oriented strategies could be developed and implemented which would improve the health patterns of elder women of diverse ethnic backgrounds.

The wide disparity among older persons based on gender and the paucity of research on ethnicity in elder women lend credibility to the study of health issues in elderly women. To this end, the purpose of the study was to describe the following biopsychosocial characteristics: physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, and ethnicity in elder females and to explore the relationships among these characteristics as they relate to health patterns.

#### Rationale for Study

The U.S. Department of Health and Human Services, Public Health Service (1990) published the Healthy People 2000: National Health Promotion and Disease Prevention Objectives report, whose stated goals are twofold: 1) to increase the proportion of Americans who live long and healthy lives and (2) to reduce of health disparities among Americans. The growth of the

elderly population has been extensively documented in the literature. Recent data from the U.S. Bureau of the Census (1991a) indicate that 29.5 percent of our nation's total population is 65 or over. Of the total 65-and-over population, 13 percent are elders of color (U.S. Bureau of the Census, 1991a). Today, persons over 65 years of age make up approximately 8 percent of the African-American population, 5 percent of Hispanics, and approximately 14 percent of the Caucasian population (Taeuber, 1989). Currently, 58 percent of the elderly are female, thus the problems of old age in this country are largely the problem of elder women of diverse ethnic backgrounds (Kleyman, 1992).

Women's health literature has criticized gerontological research for considering the experience of the aging male to the exclusion of the experience of the aging female (Matteson & McConnell, 1988). Congress's General Accounting Office released a report in June of 1990 criticizing the National Institutes of Health for failing to promote studies that took adequate account of the differences between the sexes (Purvis, 1990). Beeson (1975) noted that this bias in research stems from two major sources: (1) the predominately male

frame of reference that identifies salient research topics and (2) the fact that the earliest gerontological longitudinal studies did not include women as subjects. Belenky, Clinchy, Goldberger, and Tarule (1986) stress the need to reexamine scientific findings and theory "through the lens of women's perspectives" so that "new conclusions can be drawn and new directions can be forged that have implications for the lives of both men and women" (p. 8,9).

Benoliel (1975) described the formal health care system in the United States as a "masculine-oriented, male-dominated system organized around the medical imperative to diagnose and treat disease and disability" (p. 35). For example, in terms of underdiagnosis and undertreatment, women in a comparison study (Packard, 1988) received less timely diagnoses and less vigorous treatments for lung cancer than did men. Lack of knowledge and insufficient research regarding female elders may explain in part why women are significantly more likely than men to die after undergoing heart-bypass surgery and why breast cancer has doubled in incidence since 1960 and is now killing 44,000 women each year (Purvis, 1990). Also, while

rates of morbidity and mortality seem to have improved for the aged in general over the last 10 years, and as more elders are able to adopt healthier lifestyles that result in fewer days with disabilities, these trends are not persistently true in African Americans and Hispanics (U.S. Department of Health and Human Services, Public Health Services, 1990).

It is crucial for the nursing profession to participate in gerontological research that explores elder women of diverse ethnic backgrounds. Health professionals have received limited education about the ways in which ethnically diverse elder women adapt to the problems associated with aging and chronic illness (Almquist, Stein, Weiner, & Linn, 1981; Baker, 1984; Coccaro & Miles, 1984; Olsen, 1982). Current literature on aging in women of color is inadequate. Certain research suggests that the majority of older persons have life satisfaction (Laborda & Powers, 1980, 1985; Neugarten, Havighurst, & Tobin, 1961), well-being (Diener, 1984; Larson, 1976), and positive self-rated or subjective health (Ferraro, 1980; Maddox & Douglas, 1973). However, studies conducted on aging in the elderly have used predominately male samples, and these

findings are frequently generalized to include all elderly individuals, both male and female (McElmurry & LiBrizzi, 1986). Thus, little is known about older women who are the elderly majority, and much is assumed. As has been the case, much of what is believed about women is not predicated on fact but on culturally imposed myths (Matteson & McConnell, 1988). The inaccurate images of the elderly woman as unattractive, dependent, and physically ill have significant biological, psychological and social repercussions (Brubaker & Powers, 1976; McTavish, 1971; McElmurry & LiBrizzi, 1986).

Healthy People 2000: National Health Promotion and Disease Prevention Objectives (1991) stated: "The greatest opportunities for improvement and the greatest threats to the future health status of the Nation reside in population groups that have historically been disadvantaged economically, educationally, and politically" (p.48). The unique biopsychosocial characteristics of the well elder female of various ethnic backgrounds have not been identified. It is not known if these characteristics enhance or detract from health patterns in this aging population. Considering

the fact that women comprise a majority of the older population and given that older women have to date been greatly under-represented in research, it was the purpose of this investigation to describe the physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, adaptive health patterns, and ethnicity of the aging female, and to explore these relationships.

#### Conceptual Framework

Roy's (1984) adaptation model provides the conceptual framework for this study. The scientific assumptions of Roy's adaptation model reflect von Bertalanffy's (1968) general systems theory and Helson's (1964) adaptation-level theory; the philosophic assumptions on which the model is based are associated with humanism and veritativity (Roy & Andrew, 1991).

Roy (1988) identified eight specific assumptions associated with the two philosophic principles of humanism and veritativity. Humanism is defined by Roy (1988) as the broad movement in philosophy and psychology that recognizes the person and subjective dimensions of the human experience as central to knowing and valuing. Veritativity pertains to the principle of



human nature that affirms a common purposefulness of human existence (Roy, 1988).

Roy (1984) views the person as a system whose purpose is survival, growth, reproduction, and mastery which are the goals of adaptation. A system is a whole that functions as a whole by virtue of the interdependence of its parts (von Bertalanffy, 1968). In addition to having wholeness and related parts, systems have inputs (stimuli), outputs (behaviors), controls (central function of the system) and feedback processes (Figure 1) (Appendix A) (Roy & Andrew, 1991).

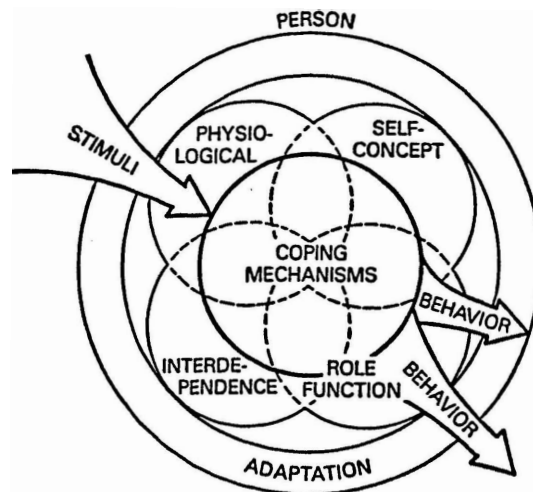


FIGURE 1

PERSON AS AN ADAPTIVE SYSTEM  
(Roy, C., & Andrew, H.A.(1991), The Roy Adaptation Model:  
The Definitive Statement. Norwalk, CT.: Appleton & Lange.)

Inputs for the person as an open system come both externally from outside the person and internally from the self (Roy, 1984). Focal stimuli are internal or external stimulus most immediately confronting a person (Roy, 1984). Contextual stimuli are stimuli present in a situation that contribute to the effect of the focal stimuli (Roy & Andrew, 1991). Residual stimuli are the "environmental factors within or without the person whose effects in the current situation are unclear (Roy & Andrew, 1991, p. 4). These inputs are adaptation level stimuli. It is the pooling of these stimuli (focal, contextual, residual) that make up the adaptation level or the ability of the person to cope with a changing environment (Roy & Andrew, 1991). The adaptation level is a constantly changing point which represents the person's own ability to respond positively in a situation (Roy & Andrew, 1991). Responses can be adaptive or ineffective.

The adaptive system has two control processes: the regulator and the cognator subsystems (Roy, 1984). These subsystems are viewed as innate and acquired coping mechanisms used by the adaptive system to respond to dynamic internal and external stressors (Roy, 1984).

The regulator subsystem receives input from the external environment and from changes in the person's internal state (Roy, 1984). It then processes the changes through neural-chemical-endocrine channels to produce a response. The cognator subsystem receives input from psychological and social factors as well as physical and physiological ones, including those that are output of the regulator mechanism (Roy, 1984). These inputs are processed through four cognitive-emotive channels: perceptual/information, learning, judgement and emotion (Roy & Andrew, 1991). The behaviors that result from the regulator and cognator mechanisms can be observed in biopsychosocial characteristics in the four adaptive modes developed by Roy to serve as a framework for nursing assessment (Roy & Andrew, 1991).

The biopsychosocial characteristics may be demonstrated in the following modes: physiologic, self-concept, role function, and interdependence mode. The physiologic mode is associated with the way the person responds as a physical being to stimuli from the environment. Physiologic behavior in this mode is the manifestation of the physiologic activities of all the cells, tissues, organs and systems comprising the human

body (Roy & Andrew, 1991). The self-concept mode focuses specifically on the psychological and spiritual aspects of a person (Roy & Andrew, 1991). The role function mode describes the roles the person occupies in society (Roy & Andrew, 1991). The interdependence mode focuses on interactions related to the giving and receiving of love, respect and value (Roy & Andrew, 1991). Each person's biopsychosocial characteristics are viewed in relation to the four adaptive modes, which provide a particular manifestation of cognator and regulator activity within the adaptation process (Roy & Andrew, 1991).

Roy (Personal Communication, November 12, 1990) defined aging as a natural phase of living that acts as one of the stimuli or antecedent factors to cognator or regulator processes for bringing about effective or ineffective adaptation. The elder female has many challenging tasks including: accepting help from others as the body ages, facing loss of spouse or significant others, finding or maintaining satisfying relationships beside one's partner, learning new affectionate roles with one's children and grandchildren, adjusting to retirement and a reduced

income, establishing living arrangements, and beginning to anticipate death (Havigurst, 1973). Roy's (1984) Adaptation Model asserts that the choices older women make and the opinions held about becoming elderly are shaped not only by personal experiences and expectations, but also by the social, cultural, economic, and political conditions in society and attitudes toward older people (Roy & Andrew, 1991). Therefore, this study examined the biopsychosocial characteristics of the four adaptive modes.

The physiologic mode is the elder females' need for physiologic integrity (Roy, 1984). The physiologic mode was measured by the Iowa Self-Assessment Inventory's (Morris, Buckwalter, Cleary, Gilmer, Hatz, and Studer, 1990) Physical Health Status Scale, the Mobility Status Scale, and the demographic data sheet. The elder female described self health, number of physician visits in the past year, and number of prescribed medications. The elder female also reported if mobility was sufficient to carry on the usual activities of daily living and participate in social activities.

The self-concept mode is indicative of psychologic

health. Andrew and Roy (1986) defined psychologic health as a "composite of beliefs and feelings that a person holds about herself at a given time" (p. 42). The elder female was asked if she is relatively worry free, more or less calm, sleeps well, enjoys a tranquil life, possesses good memory skills, orientation, and a continued ability to learn as measured by the Cognitive Status Scale and the Emotional Balance Scale of the Iowa Self-Assessment Inventory (Morris et. al, 1990).

The interdependence mode emphasizes the need for social integrity. Roy (1984) describes this mode as the individuals ability to love, respect, and value others as well as respond to reciprocated love and valuing. The Trusting Others Scale and the Social Support Scale of the Iowa's Self-Assessment Scale (Morris et. al, 1990) examined the elder females' belief that they have good, trustworthy friends, are friendly toward others, and generally amiable in interpersonal relationships. The elder female reported on social environment, as well as friends and relatives with whom she reports enjoying close relationships.

Andrew and Roy (1986) describe the role function

mode as performance of duties based on given positions in society. The demographic data sheet, the Economic Resource Scale and the Cognitive Status Scale of the Iowa Self-Assessment Inventory (Morris et. al, 1990) examined the elder females perceptions of income and assets, and need for outside financial help. The previously described four adaptive modes provided a manifestation of cognator and regulator activity within the adaptation process in females.

Nursing's goal is to promote adaptation in each of the four adaptive modes, thereby contributing to the person's health, quality of life and dying with dignity (Roy & Andrew, 1991). It is the nurse's role to promote adaptation in situations of health and illness; to enhance the interaction of the person with the environment, thereby promoting health (Roy & Andrew, 1991). Adaptive health patterns are the result of harmonious or positive interactions of the biopsychosocial processes characterized by homeostatsis or adaptation to change (Roy, 1984). Ineffective health patterns are a state of maladaptation which occurs when basic needs are not met, or when the person fails to adapt successfully to change or to cope with stress.

The four adaptive modes are reflective of the person's need for biopsychosocial integrity. Scientific inquiries regarding biopsychosocial integrity of the elder female are limited. Therefore, this study will describe the biopsychosocial characteristics of the elder female and the relationships between the biopsychosocial characteristics, health patterns, and ethnicity.

#### Assumptions

The following assumptions are directly derived from Roy's (1984) adaptation model:

1. The elder female is a biopsychosocial being.
2. The elder female is in constant interaction with a changing environment.
3. To cope with a changing world, the elder female uses both innate and acquired mechanisms which are biological, psychological, and social in origin.
4. Health and illness are one inevitable dimension of the elder's life.
5. To respond positively to environmental changes, the elder female must adapt.
6. The elder female is conceptualized as having four modes of adaptation: physiologic needs, self-concept, role function, and interdependent relations.



### Research Questions

The purpose of this study was to identify and describe relationships between the major variables of the study: physical health, mobility, emotional and cognitive status, ability to trust, social support, economic characteristics, adaptive health patterns, and ethnicity. The following research questions were explored: R1. What are the physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, and adaptive health patterns of elder women who live in a southwestern metropolitan area? R2. What are the relationships among the biopsychosocial characteristics and adaptive health patterns in elder women? R3. What is the relationship between ethnicity and adaptive health patterns in elder women?

### Definition of Terms

#### **Physical Health:**

**Theoretical Definition:** Physical health is a person's response as a physical being to stimuli from the environment (Roy & Andrew, 1991).

**Operational Definition:** For the purpose of this study, physical health was operationalized to be a subject's

self-report of health, number of physician visits in the past year, and number of prescribed medications as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Mobility:**

Theoretical Definition: Mobility is a person's ability to move about freely (Kozier and Erb, 1987).

Operational Definition: For this study, mobility was a subject's self-report of the ability to be mobile enough to carry on the usual activities of daily living, to visit friends and family, and to participate in social activities as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Emotional State:**

Theoretical Definition: Emotional state is the tone of one's reaction to persons and events (Wilson & Kneisl, 1979).

Operational Definition: Emotional state was a subject's self-report of living a relatively worry-free existence, sleeping well, and enjoying a tranquil life as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Cognitive Status:**

Theoretical Definition: Cognitive status describes a person's mental processes, including perception, memory, and reasoning, by which one acquires knowledge, solves problems, and makes plans (Coleman, 1976).

Operational Definition: Cognitive status was operationalized as a subject who perceive herself as intellectually intact, possessing a good memory, orientated, and have a continued ability to learn as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Ability to Trust:**

Theoretical Definition: Ability to trust is one's firm belief in the honesty and reliability of another (Webster's New World Dictionary, 1987).

Operational Definition: Ability to trust was a subject's self-report of having good trustworthy friends and possessing amiable interpersonal relationships as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Social Support:**

Theoretical Definition: Social support provides personal contact, affirmation of personhood, strength,

encouragement, assistance in times of crisis, feedback, and opportunities for reciprocal intimacy and affection (Phillips, 1991).

**Operational Definition:** Social support was operationalized as a subject's self-report of living in a comfortable social environment peopled with friends and relatives with whom they enjoy close relationships as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990).

**Economic characteristics:**

**Theoretical Definition:** Economic characteristics are a persons' financial resources.

**Operational Definition:** Economic characteristics for the purpose of this study was operationalized as the subject's report of income and assets, need for outside financial help, and participation in programs designed to supplement one's income as measured by the Iowa Self-Assessment Inventory (Morris et al., 1990) and the demographic data sheet.

**Adaptive health patterns:**

**Theoretical Definition:** Adaptive health patterns are viewed as a dynamic process representing the person's own ability to respond positively in a situation (Roy & Andrew, 1991).

**Operational Definition:** Adaptive health patterns were operationalized as a report of excellent self-health, mobility to carry on the usual activities of daily living, the ability to participate in social activities, satisfactory sleep patterns, a relatively worry free existence, a continued ability to learn, having good, trustworthy friends, friendliness towards others and general amiability in interpersonal relationships as measured by the cumulative scores of the seven scales of the Iowa Self-Assessment Inventory (Morris, et al., 1990) and the demographic data sheet.

**Ineffective health patterns:**

**Theoretical Definition:** Ineffective health patterns are considered a dynamic process of maladaptation in which the potential of an individual is not realized to the fullest extent possible (Roy, 1984).

**Operational Definition:** Ineffective health patterns were operationalized as a report of physical illness, mobility impairments necessitating limitation of usual activities of daily living, anxiety, worry, poor sleep patterns, trouble with remembering things, forgetting appointments and suffering a low attention span which impedes new learning, perception of a less supportive

social environment, and questioning the motives of others as measured by the cumulative scores of the seven scales of the Iowa Self-Assessment Inventory (Morris et al., 1990) and the demographic data sheet.

**Elder women:**

Theoretical Definition: Elder women are women 60 years of age and over (Gelfand & Yee, 1991; Somers & Fabian, 1981).

Operational Definition: In this study, young-old were consider persons from 60 to 64 years of age. Middle-old were women, aged 65 to 74 years. Old-old were considered those persons over 75 years of age (U.S. Bureau of the Census, 1982).

**Ethnicity:**

Theoretical Definition: Groups of persons differentiated by a sense of peoplehood that can be based on race or national origin (Gordon, 1964).

Operational Definition: In this study, ethnicity refers to a subjects self-selection as a member of the Caucasian, African-American, or Hispanic ethnic group.

**Limitations**

Limitations of this study resulted primarily from factors related to the sample itself. A convenience

sample was used, therefore, the risk of bias is great. For this reason, the results of this study may not be generalizable to other elder females (LoBiondo-Wood & Haber, 1990). Data collection utilizing a self report instrument increases the possibility that subjects may give what they perceive to be the socially desirable response rather than a true response (Campbell & Stanley, 1966).

#### Summary

The fastest growth in the number of persons over 65 is occurring in nonwhite populations (Stanford & Yee, 1991). This population is primarily composed of women. Health professionals are no longer able to assume that the gerontological population in the United States is an essentially white male, homogeneous population. The increasing number of elder females of diverse ethnic backgrounds makes understanding their biopsychosocial needs a national health imperative.

The purpose of this study was to describe the biopsychosocial characteristics that may be demonstrated in the following modes: physiologic, self-concept, role function and interdependence modes among elder females and to explore the relationships among these

characteristics. An adaptation model was chosen to guide this study with emphasis being on positive interactions of the biopsychosocial processes characterized by adaptation to change. Terms were defined within the context of the study. The Iowa Self-Assessment Inventory (Morris et al., 1990) and the demographic data sheet were used to measure these biopsychosocial characteristics and health patterns of the subjects. The limitations presented set boundaries for the potential generalization of these findings.



## CHAPTER 2

### INTRODUCTION

Women comprise fifty-eight percent of the population over the age of 65 in the United States (Kleyman, 1992). Women's life expectancy has increased rapidly since the turn of the century. In 1900, women could expect to live 35 years (National Center for Health Statistics, 1981). By 1920, this figure had increased to 47 years (National Center for Health Statistics, 1981), and in 1984 to 78.8 years (National Center for Health Statistics, 1985). It is projected that, by the year 2000, life expectancy for women will extend to approximately 83 years (National Center for Health Statistics, 1983).

The aging process consists of many biopsychosocial changes and stressors. Change, even when positive, is a form of stress to which people must adapt physically and psychologically (Dohrenwend & Dohrenwend, 1974). Some changes are more intense and more difficult to adapt to than other changes. Havigurst (1963) identified the following age-specific tasks for the elderly: adapting to diminishing health, adjusting to retirement and reduced income, reconciling the death of

a spouse, seeking friendships with members of one's own age group, participating in social and civic obligations, and establishing acceptable living arrangements. The manner in which these stressors are handled or resolved will influence entry into old age.

Schorr, Farnham, and Ervin (1991) reported elder persons tend to have fewer biopsychosocial, economic, and environmental resources due to losses and stressors inherent in the aging process. Holmes and Rahe (1967) used systems theory to explain the phenomena of adaptation to life changes. Adaptation to change requires expenditure of energy over and above that required for the maintenance of homeostasis. Thus, if a person is required to cope with many significant changes within a short period of time, the individual will likely expend too much adaptive energy and, consequently, become ill (Roy & Andrew, 1991).

As the field of women's gerontological health expands and receives more emphasis, the data reflecting the experience of large groups of women will have to be collected and analyzed. Information collected should include biopsychosocial characteristics that together

affect the overall health of the elderly women. These data may then be used to guide health policy decision making, as well as to provide a basis for health promotion and disease prevention with elder women.

A review of the pertinent literature concerning elder women, biopsychosocial characteristics, and ethnicity revealed a number of inconsistencies in findings and theories due to the lack of a sufficient number of studies in this area. The literature review also found that there was, in general, a dearth of studies in the specific characteristics examined in this study. This review will first examine studies of elder women, then studies of women of color, specifically African-American and Hispanic elder women.

#### Elder Women

##### Physical Health

Health is typically defined as positive well-being, both physical and psychological, and is conceived as being more than absence of disease. Physical health is a person's response as a physical being to stimuli from the environment (Roy & Andrew, 1991).

Among all the elements of an older person's life situation, health is strongly related to subjective

well-being. Individuals who are sick or physically disabled are much less likely to express contentment about their lives (Larson, 1978). Perceived health has consistently emerged as being directly associated with life satisfaction (Gibson, 1986-1987; Laborda & Powers, 1985; Lowry, 1984; Martinson, Wildening, & Linn, 1985; Wamboldt & Tamlyn, 1986).

Each decade of life after 65 increases the probability of health problems, hospitalization, dependency, and institutionalization (Filner & Williams, 1981; Ries & Brown, 1991). Thirty-five percent of older women report limitations in a major activity due to a chronic condition (Burglass, 1989; Verbrugge, 1985). The chronic conditions most prevalent in elder women are arthritis (53%), hypertension (24-35%), heart conditions (20%), musculoskeletal and neurocirculatory problems (8-14%), sensory problems (22-26%), diabetes (9%), and chronic respiratory conditions (Heidrich, 1989).

The Older Women's League reported 3.7 million American women over age 45 have no health insurance (Bauer, 1992). Further, Brody (1977) reported the number of elderly in need of home health care services ranged from 24 to 41 percent. Elder women's inferior

wages and lack of benefits and pensions contribute to their having less access to health care and health insurance (Kleiman, 1992). Consequently, these financial constraints limit elder women's abilities to acquire resources for home health care services (Leslie & Swider, 1986). Limited health care access increases the risks of dependency and leads to institutionalization for financial rather than for medical reasons (Kahana & Kiyak, 1980; Markides, 1989).

#### Psychological Health

Henderson (1986) analyzed the extent to which psychologists specializing in the psychology of women included elder women in research studies. Henderson (1986) noted that women, aged 55 years and older were more distinct by their absence in the research than by their presence. Additionally, the psychological health care of all older adults has largely been overlooked (Fink, Siu, Brook, Park, & Solomon, 1987). Therefore, specific information regarding elder women's psychological health is limited.

The ability to trust is one's firm belief in the honesty and reliability of another (Webster's New World Dictionary, 1987). Beard (1982) found a significant

difference in trust between young subjects (20-35 years old) and older subjects (50-65 years old) ( $t=2.68$ ,  $p<.01$ ). Beard concluded that older people were at risk for mistrust. Butler and Lewis (1982) stated paranoia is related to lack of trust and is common in the elderly. Busse and Pfeiffer (1977) attributed paranoia in the elderly population to social isolation, widowhood, retirement, loss of income, and poor health. Cameron (1967) stated that paranoia can exist throughout life but exacerbates in later years as the person ages and experiences multiple losses.

Depression in the elderly has been significantly underestimated (Nolem-Hoeksema, 1988; Smallegan, 1989). Gurland and Cross (1981) reported incidences of clinical depressions as high as thirteen percent in community-based elderly. Meeham, Saltzman, Sattin (1991) reported suicide rates were the highest among the elderly. Explanations offered for higher rates of suicide/depression among the elderly include: bereavement and living alone (Blazer, Hughes, & George, 1987), poor socio-economic status (Goldsmith, Kranner, Brenner, 1986), poor physical health (Dohrenwend & Dohrenwend, 1981; Epstein, 1976; Gurland, Golden,

Lantagua, 1984), and organic mental dysfunction (Frierson, 1991; Koenig & Brietner, 1990).

Studies identifying the correlation of health and psycho-social well-being have been made in the area of bereavement. Effective coping resources included social support, strong religious beliefs, positive thinking, participation in volunteer activities, and belief in control over bereavement (Brown & McCreedy, 1986; Fengler, 1984; Glass, 1987; Hunter & Linn, 1981; Rigdon, Clayton, Dimond, 1987). Good prior mental health related positively to less psychosocial or physical dysfunction (Farnsworth, 1988). Ineffective coping responses included overt anger, self-blame, increased sleeping, use of fantasy, avoidance of people, taking antidepressants, tranquilizers, sedatives, and alcoholic beverages (Gass, 1987; Reed, 1988, Thompson, Breckenridge, Gallagher, & Peterson, 1984).

#### Social Aspects of Aging

Disengagement theory states that "aging is an inevitable, mutual withdrawal or disengagement, resulting in decreased interaction between the aging person and others in the social system she belongs to" (Cummings and Henry, 1961, p.14). According to the

disengagement theory, elderly people withdraw from society and experience a decrease in social skills (Cummings and Henry, 1961). This theory was supported by Havighurst, Neugarten, and Tobin (1968); Mindel and Vaughn (1978), Ehrlich (1972), Schiff (1974). Others postulate that disengagement results from a lack of opportunities for continued involvement and failed to support this theory (Atchley, 1971; Carp, 1968; Roman & Taiety, 1967; Tallmer and Kutner, 1970; and Zborowski and Eyde, 1962).

The literature review produced several studies examining the relationships between social activity and happiness. Findings have supported a positive relationship between happiness with life and social participation (Hargrove-Huttel, 1986; Lowry, 1984; Riddick, 1985; Soumerai & Avorn, 1983). Criticisms have been raised concerning this research and its lack of conceptual models and theoretical frameworks guiding these studies (Horley, 1984; Sauer & Warland, 1982).

Other studies have focused on the factors associated with aging successfully (Larson, 1978). Lebo (1953) studied seven factors stated to be important



in achieving old age successfully: good health, financial security, hobbies and interests, friends and acquaintances, living with one's spouse, age, and sex. Lebo's (1953) study ( $n = 383$ ) concluded that the happier group had more close friends than did the unhappy old people. The happier group also attended a larger number of club meetings and were members of volunteer organizations. Lebo's findings support the activity theory of aging (Havighurst, 1961) that two of the strongest explanatory predictors of successful aging were group activities and physical activity.

The primary source of social support for the elderly in this society continues to be the family (Brody, 1985; Lieberman, 1982). Religion is a secondary source of social support for the elderly. The church represents a center for social activity and assistance in times of need (Heisel & Faulkner, 1982). Mindel and Vaughan (1978) noted that elderly individuals retain significant meaningful relationships with religious institutions despite lack of participation due to physical limitations. Atchley (1977) noted an increase in personal prayer and private rituals after the age of 65 years.

### Economic Characteristics

Participation in the labor force by women aged 65 years and older has dropped from 10 percent in 1965 to 8.7 percent in 1990 (Colby, 1991). However, the job participation rate for women aged 55-64 has risen from 41.1 percent 25 years ago to 45.3 percent in 1990 (Colby, 1991). Women of color continue to occupy low paying or part time jobs in disproportionate numbers compared to white women (U.S. Department of Labor, 1979; Leslie & Swider, 1986). Differences among the ethnic groups are attributed to the larger proportion of nonwhite women who did not finish high school (U.S. Department of Labor, 1979). Estes, Gerald, and Clarke (1981) noted lack of education contributes to more than 80 percent of all retiring women workers not having pension benefits.

Approximately eighty percent of the nearly nine million Americans over the age of 65 living alone are females (American Association of Retired Persons, 1987b). One-third of older single women rely on Social Security for at least 90 percent of their income (American Association of Retired Persons, 1987b). Single women form an even greater percentage of the poor

since they are less likely to have income other than social security (American Association of Retired Persons, 1987b).

Women not only enter old age poorer than men, but continue to grow poorer as a consequence of widowhood, inadequate retirement income, inequalities in social security, and higher health care expenditures (Estes, Gerald, & Clarke, 1981; Hooyman & Kiyak, 1988). Statistics for 1989 reveal that 9.7 percent of older adults aged 65-74 are impoverished. The poverty rate is 14.9 percent for those 75-84 and climbs to 20 percent for persons 85 and older (Kleyman, 1992). Women constitute fifty-eight percent of all persons 65 or older, and comprise seventy-four percent of the elderly poor (Kleyman, 1992). Poverty rates are even higher for African-American and Hispanic elderly women. Kleyman (1992) reported economic racial disparities among elders, with official poverty levels for whites at 10.1 percent, Hispanic at 22.5 percent, and African-Americans at 33.8 percent. The poverty rate of African-American and Hispanic older women is more than double that of white older women, and is even greater for those living alone (Hooyman & Kiyak, 1988).

### Elder Women of Color

Approximately 14% of the population 65 and over is made up of persons of color (Spencer, 1988). By 2020, 21% of the population is projected to be non-white and by 2050, 33% (Spencer, 1988). A multi-cultural approach to nursing is only now attracting broad attention in the care of the aged. Appreciation and recognition of diversity from the perspective of ethnicity and gender is beginning to be seen in nursing literature. Ethnic groups are differentiated by a sense of peoplehood that can be based on race, religion, or national origin (Gordon, 1964).

Biopsychosocial ethnic-specific characteristics and ethnic values may affect an elder woman's perspective on the process of aging as well as influence the manner in which she adapts to the aging process. A patient's compliance to health regimes and communication with health care professionals have been shown to be related to their ethnic backgrounds and the backgrounds of the health professionals who work with them (Gelfand, 1982; Hull, 1979; Jackson, 1980; Kasel & Berkman, 1983; Meleis, Lipson, & Paul, 1992).

### African-American Elderly

In 1989, approximately 8.3% of the population 65 and over were persons of African-American descent (McConnell & Beitler, 1991). African-American elderly constitute the fastest growing segment of the African-American population (McGadney, Goldberg-Glen, & Pinkston, 1987).

### Physical Health

In American society, many health care inequalities exist along racial lines. African-American elderly are more likely than Caucasian elderly to be sick and disabled, and to view themselves as being in poor health (American Association of Retired Persons, 1987a). Fifty-seven percent of older black Americans report limitations in activities of daily living due to a chronic health conditions, compared to forty-four percent of older whites (National Health Center for Health Statistics, 1984). African-Americans are 1.3 times as likely to die of heart disease, 2 times as likely to die of stroke, 2.2 times as likely to die of diabetes, 3.2 times likely to die of kidney disease as are their white counterparts (Funkhouser & Moser, 1990). Hypertension afflicts 25 percent of the African-American

population while affecting only one tenth of the Caucasian population (Anderson, 1988; Funkhouser & Moser, 1990). Cancer is detected later and has a higher mortality rate in blacks than in whites (Funkhouser & Moser, 1990). Black elders have a fifty-five percent higher rate of Type II diabetes than do white elders (Lieberman, 1988).

At age 65 to 76, mortality of African-American is higher than that of Caucasians (McGadney, Goldberg-Glen, Pinkston, 1989). African-Americans aged 75 years and older have lower mortality rates but higher rates of poverty and illness (McGadney et. al, 1989). African-Americans in the United States have increased mortality and morbidity for a number of diseases and illnesses (Foley, 1988). The lower life expectancy of persons of color in the United States results in excess mortality of 60,000 lives per year. Life-style risk factors such as infant mortality, lack of access to preventive health care or advanced medical interventions, exposure to excessive health risks, inadequate living conditions, poor nutrition and stress are suspected to be contributing to these statistics (Foley, 1988; Gordon-Bradshaw, 1987; Mechanic, 1986).

### Psychological Health

Jackson, Chatters, and Neighbors (1985) reported different patterns in the distribution of life satisfaction and happiness by age and race. African-Americans showed an increase in happiness and satisfaction with life in older age (Jackson, Chatters, and Neighbors, 1985). In contrast, Richardson, Lowenstein, and Weissberg (1989) reported a seventy-one percent increase in the suicide rate among elder black women since 1986.

### Social Aspects of Aging

The African-American social support system exists due to cultural, racial, historical, political and economic reasons (Angel & Tienda, 1982; Manson, 1989; Murtran, 1985). Recent research emphasizes the role of the African-American family and the elderly.

Murtan (1985) reported that African-American families are involved in intergenerational support activities and treat the elders with respect. Mitchell and Register (1984) demonstrated that African-American children and grandchildren assist older family members despite socioeconomic status. Taylor (1986) validated the importance of available children to compensate for the negative association between age and the receipt of

social support from extended family members. Gibson and Jackson (1987) examined stress and social supports among older adults of color and found that adequate social support systems among black elders appears to reduce negative effects on physical limitations.

Additionally, research has demonstrated a reciprocal relationship between elders and younger generations. Mitchell and Register (1984) reported older African-Americans were more likely to take younger family members into their homes. The more common types of reciprocal support received were advice, economic support, acting as a surrogate parent, transportation, and homemaker services (Martin & Martin, 1978; Mindel, Wright, & Starrett, 1986; Murtran, 1985; Taylor & Chatters, 1987).

#### Living Arrangements

Sixty-nine percent of older African-American household heads living alone are women (Herbert, 1983). According to the American Housing Survey (1988), approximately 61 percent of African-Americans as compared to 75 percent of white elderly heads of households owned their homes.

Three percent of black elderly over the age of 65



years are institutionalized, whereas five percent of white elderly are (American Association of Retired Persons, 1987c). Among the oldest-old (85 and over) 12 percent of blacks live in nursing homes, while 23% of whites do (American Association of Retired Persons, 1987c).

#### Education

In 1990, only 17% of African-American elderly had completed high school with a median attainment level of eighth grade (U.S. Bureau of Census, 1991a). Statistics comparing African-American elderly with Caucasian elderly demonstrated nearly three times as many elderly black individuals failed to complete elementary school (American Association of Retired Persons, 1987c). Six percent of the black elderly have no formal education compared to less than 2 percent of white elderly (American Association of Retired Persons, 1987c). The proportion of older white individuals completing college was also significantly greater than the proportion of older black persons (American Association of Retired Persons, 1987c).

#### Economic Characteristics

Morgan and Duncan (1968 - 1991) conducted a

longitudinal analysis of work patterns over a 6 year period. They concluded the following: (1) African-American women were found to be the likeliest of four racial and gender groups to have disadvantaged work patterns, (2) black women had been with their present employers the shortest time and had worked the fewest years, weeks, and hours per week, (3) African-American women who were better educated, who received transfer income, who were older and lived in areas of high unemployment, experienced the most discontinuous work patterns (Gibson & Burns, 1991).

Jackson and Gibson (1985) speculated that the entire retirement process viewed within a life span context may be very different for blacks. Blacks often have long histories of dead-end jobs with poor benefits. Faced with limited retirement resources, many blacks may continue working past customary retirement ages out of necessity. Jackson and Gibson (1985) research indicates that these individuals are physically, psychologically, and socially worse off than their retired black counterparts. Jackson and Gibson (1985) suggest that even the relatively poor but stable government retirement support blacks may receive, may in contrast

be better than sporadic and poor jobs in the regular labor market (Jackson, 1967). Thus, retirement may provide a small but secure government income, leading to increased psychological and social well-being.

Social security comprises forty percent of the total income package of older white Americans. By contrast, social security constitutes fifty-seven percent of older African-Americans total income (Bureau of the Census, 1991a; U.S. Congress, 1988). Private retirement pensions were received by 33% of whites, and 21% of blacks (U.S. Congress, 1988). Twenty-six percent of whites and seven percent of blacks receive income from dividends, rents, or estates (U.S. Congress, 1988). Twenty-seven percent of African-Americans receive interest income in contrast to the seventy percent of whites (U.S. Congress, 1988). In 1990, 34% of African-Americans elderly were classified as poor compared to 10% of white elderly (Bureau of the Census, 1991).

#### Hispanic-American Elders

Elder Hispanics represent approximately 5 percent (673,000) of the entire Hispanic population and 3.6 percent of those over 65 years of age (American

Association of Retired Persons, 1987, McConnell and Beitler, 1991). Hispanics comprise America's second largest ethnic minority. The percentage of Hispanic Americans in the United States grew from 6.4 percent in 1980 to 9 percent in 1990 (Gelfand and Yee, 1991). Research on the Hispanic elderly has been limited and much of the research has been conducted on Mexican Americans in the Southwest.

#### Physical Health

Limited knowledge exists regarding the health of Hispanic elderly, especially Hispanic women (Markides, 1987). Several authors have written about the health needs of Hispanic elderly (Newton, 1980), but few systematic studies of this population's health exist.

The 1989 Commonwealth Fund survey revealed that fifty-four percent of elderly Hispanics are in fair or poor health, compared with thirty-five percent of all older persons. Dowd and Bengston (1978) reported low socio-economic status and strenuous work history contribute to poor health, and at an earlier age in Hispanics than in their white counterparts. Krause (1990) contends minority elders are at a greater risk for developing physical health problems because they are

exposed to a greater number of stressful experiences (cultural and language barriers) than are white elders.

Eighty-five percent of community-living Hispanic elders report at least one chronic ailment (American Association of Retired Persons, 1987c). Fifty-two percent of elder Mexican Americans report limitations in activities of daily living secondary to chronic health conditions, compared to 44% of older white Americans (American Association of Retired Persons, 1987c; National Health Center for Health Statistics, 1984). Hispanics are generally more obese, less physically active than whites, less likely to participate in life styles that promote cardiovascular health, and are twenty times more likely to have diabetes than the general United States population (Hanis, Ferrell, and Schull, 1985; National Center for Health Statistics, 1990).

Hispanics living in the Southwestern United States have lower age-adjusted mortality rates from cardiac disease and malignant neoplasms than do whites (Markides & Coreil, 1986; National Center for Health Statistics, 1990). However, when compared to both blacks and whites, the Hispanic population has higher mortality

rates from infectious and parasitic diseases as well as diabetes (Markides & Coreil, 1986; National Center for Health Statistics, 1990). In addition, deaths from AIDS and hypertension disproportionately affect both Hispanics and blacks relative to whites (National Center for Health Statistics, 1990).

#### Martial Status

Two times as many Hispanic men as women age 65 and older are married and living with their spouses (American Association of Retired Persons, 1987c). Research demonstrates that older African-Americans and Hispanics of both sexes are more likely to have had a marriage disrupted by separation or divorce (Markson, 1987).

#### Living Arrangements

Approximately ninety-seven percent of the Hispanic elderly live in the community (American Association of Retired Persons, 1987c). Ten percent of Hispanic elderly live with family members (Lacayo, 1980), forty-nine percent live with their spouse only, and twenty-two percent live alone (Commonwealth Fund Commission on Elderly People Living Alone, 1989). The remainder live in nursing homes. Among elderly 85 and older, 10% of

Hispanics are in nursing homes, as compared to 23% of whites (American Association of Retired Persons, 1987c).

Fewer Hispanic elderly live in houses (68%) and more reside in apartments (29%) than is common among the total aged population, where comparable figures are 77% and 16% respectively (Commonwealth Fund Commission on Elderly People Living Alone, 1989). Among older Hispanics 41.9 percent rent their homes versus a rate of 36.0 percent of older African-Americans and only 21.1 percent of older whites (Mikelson & Turner, 1990). Martinez (1979) notes that minority elders face housing problems because of decreased income at retirement, which affects ability to pay property taxes, mortgage or rent payments.

#### Education

Sixteen percent of Hispanic elderly have no formal education, compared to less than 2% of white elderly, (American Association of Retired Persons, 1987c). In 1990, only 16% of Hispanic elderly had completed high school with a median attainment of eighth grade (U.S. Bureau of the Census, 1991). Twenty-five percent of older whites versus 11.5% of Hispanics have at least one year of college (U.S. Bureau of the Census, 1991).

Studies of elder Hispanics identify educational inequalities as the underlying cause of many of the socioeconomic problems (Lacayao, 1984). Lower levels of educational attainment (U.S. Bureau of the Census, 1990a, 1990b) and language and cultural barriers (Bastida, 1984; Becerra, 1983) are believed to contribute to minority workers prevalence in the lower occupational strata (Torres-Gil, 1986).

#### Social Support

Becerra (1983) reported that certain studies of older Mexican Americans (Bengtson & Burton, 1980; Carp, 1968; Miranda, 1975) portray a strong commitment to extended family ties. Traditionally, the Hispanic elderly are held in a respected, privileged position in the family, expecting the family to assist them in their later years (Carp, 1968; Cuellar, 1990; Delgado, 1982; Markides & Krause, 1985). Other researchers (Cuellar, 1978; Laurel, 1976; Maldonado, 1975; Moore, 1971; Solis, 1975) have produced studies with a conflicting portrayal of the elderly in the extended Hispanic family. Korte (1981) alleges industrialization and urbanization have weakened the Hispanic family. Markides, Martin, and Gomez (1983) studied older



Hispanics in San Antonio and found evidence to support Korte's (1981) conclusions.

Social support research (Antonucci, 1985; Markides and Mindel, 1987) proposes that ethnic minority elders may have stronger social support systems, especially with respect to kinship ties, than do older Caucasian. Hispanic elderly appear to have good relationships with their children (Becerra, 1983) and exhibit high levels of contact and reciprocity in helping patterns with them than do whites (Becerra, 1983; Markides and Kraus, 1986). Conflicting studies exist regarding the Hispanic elderly and the "double jeopardy" perspective. Dowd and Bengtson (1978) characterize "double jeopardy" as the double burden of aging and being a member of a disadvantaged minority group. Research has demonstrated that elderly Hispanics are disadvantaged, particularly in the socioeconomic areas (Bureau of the Census, 1991). However, research is unclear as to whether the elderly Hispanic population experience "double jeopardy" when measured by quality of life indicators such as family relations, morale, and life satisfaction (Dowd & Bengtson, 1978; Markides, 1983).

### Economic Characteristics

The percentage of Hispanic elderly in the labor force is the same as that in the white population (13%) (American Association of Retired Persons, 1987c). Hispanic elder Americans depend on social security for fifty-one percent of their total income (U.S. Congress, 1988). By contrast, older white Americans relied on social security for approximately 40% of the total income package (U.S. Congress, 1988). Private retirement pensions were received by 33% of whites, and only 16% of Hispanic Americans (U.S. Congress, 1988). Ten percent of Hispanics receive income from dividends, rents or estates, while 31% of whites receive income from these sources (U.S. Congress, 1988).

In 1990, twenty-two percent of Hispanic elderly were poor, compared to ten percent of the white elderly (Bureau of the Census, 1991). Among rural Hispanic elderly, 38% have a below poverty income, as compared to 21% of white rural elders (American Association for Retired Persons, 1987c).

### Adaptive Health Patterns

Roy (1984) defines adaptive health patterns as behaviors "that promote integrity of the person in terms

of survival, growth, mastery, and reproduction" (p. 28). Adaptive health patterns are a dynamic process representing the person's own ability to respond positively in a situation (Roy & Andrew, 1991). For this study, several biopsychosocial variables were selected to explore the aging females response to the aging process. Elder women possessing adaptive health patterns reported excellent physical health, mobility to participate in activities of daily living and social activities, having a relatively worry free existence, a continued ability to learn, good trustworthy friends, and amiability in interpersonal relationships (Morris, et al., 1990). These adaptive health behaviors promote the goals of adaptation and promote the integrity of the person (Roy & Andrew, 1991). Adaptive health patterns are the person's behavior as an adaptive system (Roy & Andrew, 1991). These behaviors can be assessed by nurses through observation, measurement and subjective data (Roy & Andrew, 1991).

#### Ineffective Health Patterns

Roy (1984) defines ineffective health patterns as behaviors "that do not contribute to adaptive goals, that is, survival, growth, mastery, and reproduction"

(p.28). Ineffective health patterns are a dynamic process of maladaptation in which the potential of an individual is not realized to the fullest extent possible (Roy, 1984). Ineffective health behaviors neither promote integrity nor contribute to the goals of adaptation (Roy & Andrew, 1991). For this study, elder women possessing ineffective health patterns reported physical illnesses, mobility impairments, anxiety, worry, poor sleeping patterns, trouble remembering things, low attention span, and a less supportive social environments (Morris et. al, 1990). Recognition of ineffective health patterns will allow the nurse to intervene in behaviors that are disrupting the person's integrity and not promoting adaptation.

### **Summary**

There are numerous sources of reliable demographic data on the elderly although fewer studies specifically on elder females, and even fewer on elder women of color. There is a lack of information specific to the biopsychosocial characteristics and adaptive health patterns of elder women of color. While reviewing psychological, sociological, gerontological, and nursing literature the researcher found each study tended to

adapt the writer's perspective, thus providing many conflicting viewpoints. This literature review provides a background against which specific biopsychosocial characteristics of ethnically diverse elder women can be explored and their relationship to adaptive health patterns described.

### CHAPTER 3

#### PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

A descriptive correlational research design was used to describe the relationship between biopsychosocial characteristics, health patterns, and ethnicity in aging females. The research design was selected to quantify the magnitude of the relationship among the variables of physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, health patterns, and ethnicity as measured by the demographic data sheet (DDS), and the Iowa Self-Assessment Inventory (ISAI) (Bush, 1985; Morris et al., 1990). Because of the self-report nature of the ISAI, variables such as reading level may influence the person's scores (Morris et al., 1990), representing a threat to the external validity of the study. Reading levels were not assessed.

Groups of women aged 60 or older, from community organizational settings, were asked to complete two instruments. A threat to internal validity in this study was the convenience sampling method (Campbell & Stanley, 1966). Random selection of participants was

not used, increasing the possibility of nonequivalent ethnic groups. Therefore, a quota sampling technique which is a nonprobability sampling of subjects with pre-specified characteristics was utilized (Polit & Hungler, 1983). The characteristic chosen to ensure representation is ethnicity, specifically, Caucasian, African-American, and Hispanic elder women (Woods & Catanzaro, 1988). Pearson product moment correlations, contingency coefficient, and multiple regression were done between scores on the instrument measuring biopsychosocial characteristics, health patterns, and ethnicity.

#### Setting

The study was conducted in a large southwestern metropolitan city in the United States. The settings included: two religious centers and a women's organization (Appendix B). These community organizations were selected in an effort to obtain women aged 60 years or older who were Caucasian, African-American, and Hispanic with varied economic status. The physical settings were conference rooms available in each of the community organizational settings.

### Population and Sample

The population was any female who was the chronological age of 60 years or older, with diverse educational, employment, and marital status. The target population consisted of elder women who also met the following criteria: (a) able to read, write, and understand English, (b) living independently, outside an institutional setting, and (c) ethnicity of Caucasian, African-American or Hispanic.

The sample for the investigation was chosen using a quota sampling technique to evenly distribute all three ethnic groups (LoBiondo-Wood & Haber, 1990; Polit & Hungler, 1983). This technique was utilized to avoid the potential for oversampling or undersampling of the population sector which could occur with a convenience sampling technique (Polit & Hungler, 1983). The variable selected for the strata was ethnicity.

Ninety-nine elder women met the criteria for the study. The sample was divided into ethnic representation: Caucasian, African-American, and Hispanic.

### Protection of Human Subjects

Procedures established by the Texas Woman's University Human Subject Review Board were followed for



the protection of the rights of the participants. The Texas Woman's University Human Subjects Review Board was petitioned to exempt the study from formal review according to the criteria in the Human Subjects Program Guidelines (Texas Woman's University, 1991). Data about the participants were collected and reported in a manner which prevented identification of any specific individual with the information provided. Protection of the welfare and rights of the subjects included:

1. Provision of information in the verbal and written explanations of the study (Appendix C) about the voluntary nature of participation and the right to withdraw at any time.
2. Assurance of anonymity through use of only codes for identification of questionnaires. Only the participant knew her code number which was randomly assigned to the questionnaire packet.
3. Inclusion of the expectations and time requirements in the written explanation.
4. Provision of a means for contacting the researcher if participants had questions about the study.

The following were potential benefits and risks outlined in the verbal and written explanation of the study. Knowledge gained from participating in the study may have no direct benefit to the participant, however, the information obtained will help nursing learn more about the health needs of aging women. No financial incentives were offered for participation in the investigation. Possible risks of study participation include anxiety while answering the self-report questionnaire. To alleviate any possible anxiety, adequate time was allowed for the participant to ask questions or to discuss any concerns. Loss of anonymity was a second risk of study participation. The self-report questionnaire was anonymous and identified by number only. Access to the number was available only to the participant. All data collection instruments were kept in a locked cabinet and then destroyed upon completion of the investigation. No individual participant information was shared or reported, only summarized group data will be discussed or published.

#### Instruments

The demographic data sheet (DDS) (Appendix D) and the Iowa Self-Assessment Inventory (ISAI) (Appendix E)

were the instruments utilized in this study. Written permission for use of the ISAI in the adapted version was obtained from Dr. Woodrow W. Wilson, Professor and Associate Dean Emeritus from the University of Iowa (Appendix F).

The demographic data sheet obtained descriptive information about the sample. Nominal level data included: ethnicity, marital status, occupation, and retirement status. Highest educational level, age, and monthly income represent interval/ratio level data.

The ISAI (Morris & Buckwalter, 1988) was developed to provide a psychometrically sound inventory that: (a) is a self-administered assessment, (b) is easily and quickly scored, and (c) provides information basic to understanding the needs and status of the elderly. Recently revised, the ISAI (Morris, Buckwalter, Cleary, Gilmer, Hatz, & Studer, 1990) is a 56-item, self-report inventory designed to assess how elder persons perceive their resources, status, and abilities on seven scales. Although administration time varies with each individual, the average elder person completes the inventory in about 20 minutes.

The subject is asked to indicate the degree to

which each statement is true based on a 4-point scale ranging from "true", "more often true", "more often false", and "false". The subject indicates the rating by encircling the appropriate corresponding numbers (1, 2, 3, or 4). The Iowa Self-Assessment Inventory is composed of seven scales with a cyclic arrangement of items (Table 1). Each scale is scored by adding up the values for the items comprising the particular scale being scored. Since there are eight statements in each scale, the maximum scale score possible is 32, and the lowest score possible is 8. Thus, the maximum cumulative score possible is 224 and the lowest score possible is 56. Both cumulative and individual subscale scores represent interval level data. Scoring of the ISAI reflects adaptive health patterns in high scores, and ineffective health patterns in low scores (Morris and Buckwalter, 1990; Morris et al., 1990).

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Table 1 : Cyclic arrangement of items comprising the seven scales.

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<u>SCALE</u>	<u>ITEM NUMBERS</u>							
Economic Resources	1	8	15	22	29	36	43	50
Emotional Balance	2	9	16	23	30	37	44	51
Physical Health	3	10	17	24	31	38	45	52
Trusting Others	4	11	18	25	32	39	46	53
Mobility	5	12	19	26	33	40	47	54
Cognitive Status	6	13	20	27	34	41	48	55
Social Support	7	14	21	28	35	42	49	56

---

Morris et al. (1990) described the seven scales as follows:

The Economic Resource Scale (ER): High scores on this scale are obtained by those who perceive their income and assets as adequate and, therefore, have no need for outside financial help and do not participate in programs designed to supplement one's income. Those who perceive their economic status to be inadequate or impaired would obtain low scores on this scale.

The Emotional Balance Scale (EB): Those with high scores on this scale are relatively worry free, calm, sleep well, and enjoy tranquil lives. Low scores indicate an inclination towards anxious states and/or depression.

The Physical Health Status Scale (PH): High scores on this scale are obtained by the individual who professes excellent health, seldom sees a doctor, and takes few prescribed medications. Low scores indicate subjects who have physical illnesses or disabilities, who have more health problems than others, and whose ability to carry on daily activities has declined over recent years.

The Trusting Others Scale (TO): Individuals scoring high on this scale are those who believe that they have good,

trustworthy friends; are friendly toward others, and generally are amiable and affable in their interpersonal relationships. Low scores indicate that they question the motives of others and believe others are against them; they believe that they are alienated from others.

The Mobility Scale (MO): High scores on this scale are obtained by those who are mobile enough to carry on the usual activities of daily living and are able to get out to visit friends and relatives and participate in other social activities. Low scores represent lack of or diminished mobility.

The Cognitive Status Scale (CS): Those who score high on this scale perceive themselves as intellectually intact and possessing good memory, orientation, and a continued ability to learn. Individuals with low scores tend to have trouble remembering things, forget appointments, and suffer a short attention span.

The Social Support Scale (SS): High scores on this scale are obtained from subjects who believe they live in a comfortable social environment peopled with friends and relatives with whom they enjoy close relationships. Low scores indicate perception of a less supportive social environment.

Instrument reliability was established using Cronbach's alpha (Morris et al., 1990). The reliabilities for the seven scales of the revised ISAI ranged from  $\underline{r} = 0.74$  ( $\underline{n}=420$ ) for Trusting Other Scale to  $\underline{r} = 0.86$  for Economic Resource Scale (Morris et al., 1990). Cronbach's alpha for the revised instrument was  $\underline{r} = 0.79$ . Cronbach's alpha coefficients for the scales comprising the ISAI were computed for the pilot study ( $\underline{n} = 30$ ). The Iowa Self-Assessment Inventory was found to have an alpha coefficient of  $\underline{r} = 0.86$ . The seven subscales were found to have the following alpha coefficients: economic status scale ( $\underline{r} = 0.85$ ); emotional balance scale ( $\underline{r} = 0.88$ ); physical health status scale ( $\underline{r} = 0.84$ ); trusting other scale ( $\underline{r} = 0.88$ ); mobility status scale ( $\underline{r} = 0.85$ ); cognitive status scale ( $\underline{r} = 0.90$ ); and social status scale ( $\underline{r} = 0.86$ ). Nunnally (1978) recommends that reliability coefficients in group level comparisons exceed 0.70 for new scales. The ISAI has acceptable reliability for use in this study.

Sources of measurement error that may affect scores of the ISAI in this study include: situational contaminants, transitory personal factors, instrument clarity, and response set biases (Polit & Hungler,

1983). Situational contaminants were minimized by anonymity of the response situation. However, environmental factors such as temperature, time of day, and facility conditions were not controllable and therefore, represent a source of error measurement.

Transitory personal factors (Polit & Hungler, 1983) such as mood, fatigue, and hunger cannot be controlled and represent a potential source of error. Instrument clarity is an important concept in self-report instruments. Morris and Boutelle (1985) examined the feasibility of self-report questionnaires for the independent elderly using the double-blind method. The results showed that the data obtained were as reliable as results obtained from the interview format. Individual respondent interpretation of questionnaire items does pose a potential error source.

The revised ISAI (1990) is a self-report questionnaire. The inventory borrowed items from the Social Provisions Scale (Russel, 1986; Russel, 1987), Manifest Anxiety Scale (Taylor, 1953), and the Geriatric Depression Scale (Yesavage, Rose & Lapp, 1981). Psychological measurement can lend itself to response set biases, specifically, social desirability responses,



extreme responses, and acquiescence response which can lead to error (Morris et al., 1990; Polit & Hungler, 1983).

Construct validity was established by factor analysis. Morris et al. (1990) applied a factor analysis technique on data from a 1989 study of 1153 subjects and an additional sample of 420 subjects. The analysis was based on an experimental version of the ISAI which included items assessing the degree to which respondents reported feelings of anxiety, depression, alienation, a sense of social support, mobility status, available economic resources, physical health status, and cognitive status.

To determine the factorial structure of the inventories, the responses were analyzed by using the Statistical Analysis System's (SAS) unweighted least squares factor analysis followed by a varimax rotation (SAS Institute, 1985). Scree plots of eigenvalues and the interpretability of the rotated factors were used to select the final numbers of factors (Morris et al., 1990).

The initial factor analysis revealed four interpretable factors from the one hundred and twenty

item inventory. The first six eigenvalues ranged from 16.9 to 2.3 and trailed off gradually for subsequent eigenvalues. The scree plot suggested the existence of four meaningful factors. The four factors, Economic Resource Scale, Physical Health Status Scale, the Cognitive Status Scale and the Mobility Status scale accounted for approximately 52% of the variance (Morris et al., 1990).

Morris and colleagues (1990) discovered differences did exist between factor structures and the hypothesized scales. Social resources, mental health status, and activities of daily living scales did not present as viable factors. Mobility emerged as a strong factor in association with the social resources and activities of daily living scales. The economic resource, physical health status, and cognitive status scales were all retained in the factor structure (Morris et al., 1990). Morris and colleagues (1990) successfully used this factor analysis to reduce the one hundred twenty item scale to a fifty-six item scale.

#### Data Collection

After obtaining written permission for exemption from the Human Subjects Review Committee at Texas

Woman's University, the researcher contacted two religious centers and a women's organization for permission to gain access to elder females. The investigator explained the purpose of the study and sought permission to organize an information meeting in order to obtain volunteers to participate in the study. An offer was made to present a program on women's health issues and to report the results of the study to each participating group after completion of the study.

At the meeting, following an explanation of the study, volunteers consenting to participate were given a packet of materials containing the demographic data sheet, the Iowa Self-Assessment Inventory, and a pencil. Participants were reminded that withdrawal from the study could occur at any time without penalty. The researcher remained in the room during completion of the self-report questionnaire to answer questions or to discuss any other concerns. The self-report questionnaire was anonymous and identified by number only. Completion of the instrument by subjects during the pilot study took approximately 20 minutes; however, administration of the instrument was not timed, and participants took as long as necessary. It was stressed

that the instrument was not a test and that there were no right or wrong answers. All data collection instruments were kept in a locked cabinet and upon completion of the investigation were destroyed.

A pilot study was completed utilizing the described data collection procedures. Evaluation of the data collection procedure revealed an effective methodology requiring no revisions.

#### Treatment of Data

Data were analyzed with descriptive statistics, Pearson product moment correlations, contingency coefficient, and multiple regression. The sample was described with means and standard deviations for age, education, years widowed, separated or divorced, and income. Frequencies and percentages were calculated for marital status. Hollingshead's Two Factor Index of Social Position was used to classify the subjects' occupation (1977). Each occupation was placed in a group on Hollingshead's occupational scale. The seven categories include: (1) higher executives of large concerns, proprietors, and major professionals; (2) business managers, proprietors of medium sized businesses, and lesser professionals; (3) administrative

personnel, owners of small businesses, and minor professionals; (4) clerical and sales workers, technicians, and owners of small business; (5) skilled manual employees; (6) machine operators and semi-skilled employees; and (7) unskilled employees and the unemployed.

Description of the biopsychosocial characteristics of women aged 60 years of older living in a southwestern metropolitan setting were achieved utilizing means and standard deviations. The cumulative scores for each of the seven subscales were descriptively analyzed, and means and standard deviations reported for those interval level data.

Pearson product moment correlations, contingency coefficient, and multiple regression were employed to analyze the relationships among physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, health patterns, and ethnicity in elder females. The purpose of Pearson product moment correlations was to describe the extent, direction, and strength of the relationship between these biopsychosocial characteristics and health patterns (LoBiondo-Wood & Haber, 1990). The contingency

coefficient analyzed the relationship between the variable ethnicity, and the continuous variable of health patterns (Roscoe, 1975). Multiple regression analyzed the extent of interrelationships between a single dependent variable (health patterns, ethnicity) and the seven independent biopsychosocial variables (Hair, Anderson, Tatham, & Grablowsky, 1979; Woods & Catanzaro, 1988).

#### Summary

A descriptive correlational design was used to examine the relationships of physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, health patterns, and ethnicity in elder females. Women, aged 60 or over, were recruited from naturally assembled community organizations in a metropolitan area of a large city in the Southwest. After verbal and written explanations of the study were provided, voluntary participation was requested and the women were asked to complete a demographic data sheet and the Iowa Self-Assessment Inventory. The ISAI measures biopsychosocial characteristics and health patterns. The instrument has established reliability and validity. Demographic data

was analyzed with descriptive statistics. The relationship of physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, health patterns, and ethnicity were analyzed with Pearson's product moment correlations, contingency coefficient, and multiple regression.

## Chapter 4

### ANALYSIS OF DATA

A descriptive correlational study was conducted to describe the relationship between biopsychosocial characteristics, health patterns, and ethnicity in elder females. Data were collected as previously described. Analysis of the data included the use of descriptive statistics for the demographic data and the use of inferential statistics to address the research questions. Results from reliability testing for the ISAI was also examined.

#### Variability of Sample

Ninety-nine elder women of diverse ethnic backgrounds (Caucasian, African-American, Hispanic) selected conveniently from two church settings and a women's club completed the questionnaire. To avoid oversampling or undersampling of the three ethnic groups, quota sampling technique was utilized. The table of random digits was utilized to select thirty women per the Caucasian, African-American and Hispanic groups. Analysis of variance was conducted examining the total mean scores of the ISAI and the variability among the three ethnic group means.



Analysis of variance revealed a significant difference among the three ethnic means (Table 2) ( $F(2,87) = 4.329, p = 0.01$ ) was obtained. Post hoc testing utilizing the Tukey HSD noted African-American elder women ( $M=178.56$ ) had a greater mean than the Hispanic ( $M=159.10$ ) elder women. Elderly Caucasian women ( $M=173.30$ ) did not significantly differ from the other two groups.

Table 2

ANOVA Summary Table for Ethnicity and the  
IOWA Self-Assessment Inventory (Cumulative Scores)

Source	df	SS	MS	F	p
Between groups	2	6083.28	3041.64	4.32	.01
Within groups	87	61194.35	703.38		
Total	89	67277.65			
<hr/> n=90 <hr/>					

Tukey HSD Post-hoc Procedure

	Caucasian	Hispanic	African-American
Hispanic ( $M=159.10$ )			
Caucasian ( $M=173.30$ )			
African-American ( $M=178.56$ )		**	

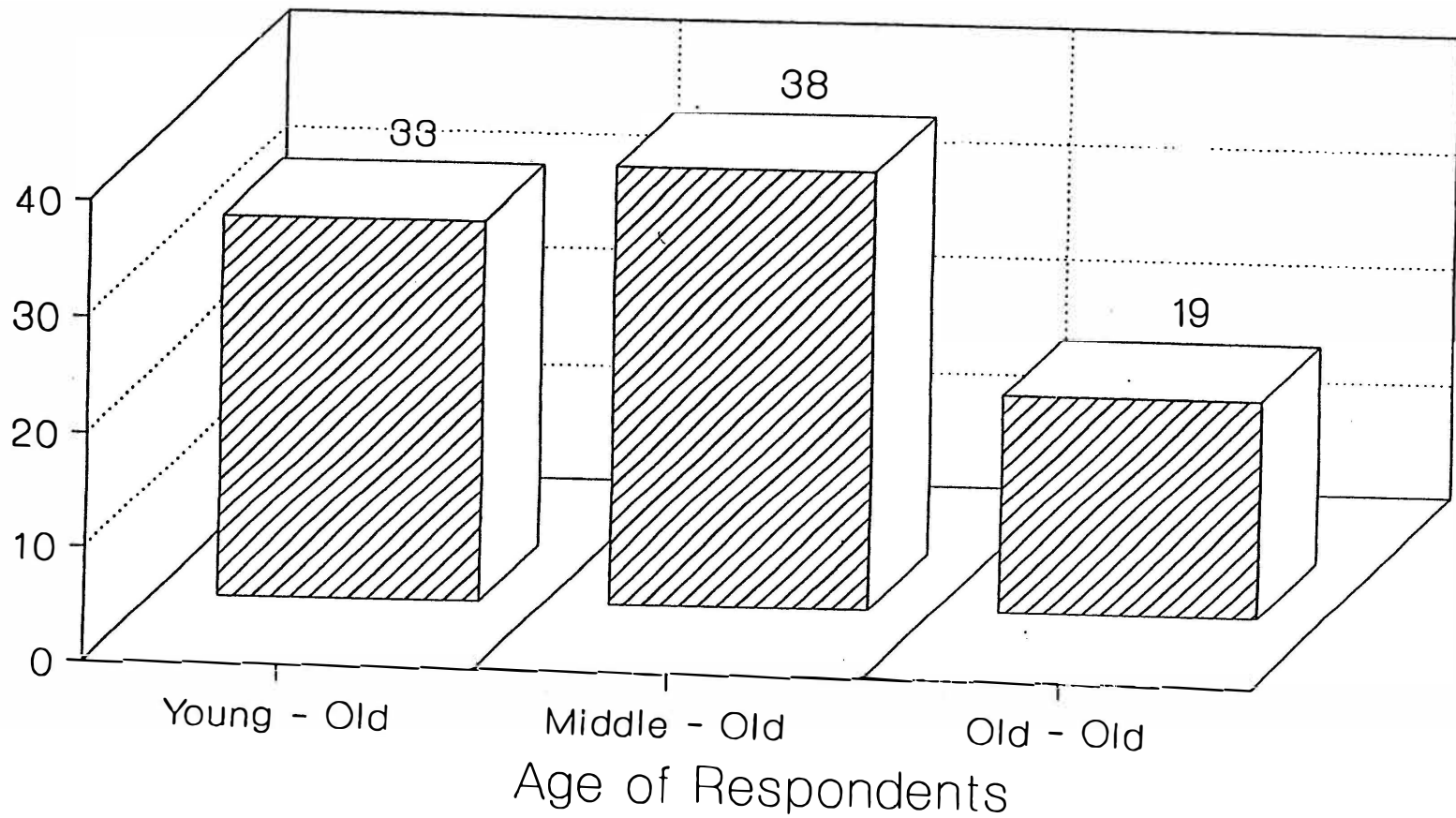
### Description of the Sample

The sample for data analysis consisted of 90 elder women. Demographic information regarding the study sample was obtained from the Demographic Data Sheet (Appendix D). The subjects ranged in age from 60 to 85 years with a mean age of 68.6 (SD=6.6) years. As seen in Figure 2, thirty-three subjects comprised the young-old range (60-64), 38 the middle-old range (65-74), and 19 subjects formed the old-old range group (>74).

Forty-five (50.0%) of the subjects were married; 35 (38.9%) were widowed; six (6.7%) were divorced; three (3.3%) were single; and one (1.1%) subjected reported being separated from her spouse (Figure 3). Forty-five respondents (50%) indicated marital status of widowed, divorced, or separated for a number of years.

Levels of education were assessed by asking the respondents for the number of years of formal education (Table 3). Years of formal education ranged from zero to twenty (M=11.2, SD=3.7). Thirty-five subjects (38.9%) indicated they had completed 0-11 years of education; 34 subjects (37.8%) had graduated from high school; 21 (23.3%) had attended college and graduate education programs.

**Figure 2**  
**Age Groups of Sample**



Young - old = 60-64  
Middle - old = 65-74  
Old - old = >74

# Figure 3

## Marital Status of the Sample

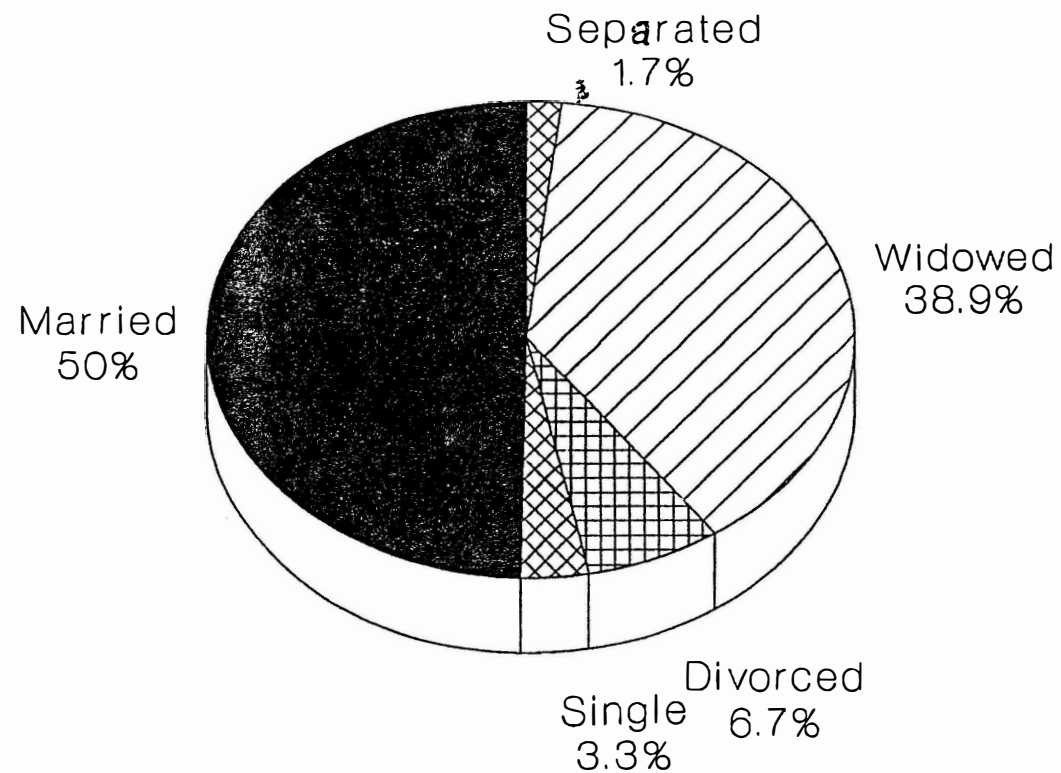


Table 3  
Education Level of Respondents

Years of formal education	Frequency	Cumulative Percent
0	1	1.1
2	1	2.2
3	3	5.6
4	1	6.7
5	3	10.0
6	1	11.1
7	3	14.4
8	1	15.6
9	9	25.6
10	8	34.5
11	4	38.9
12	34	76.7
13	6	83.3
14	2	85.6
15	2	87.8
16	3	91.1
17	3	94.4
18	3	97.8
19	1	98.9
20	1	100.0

M=11.3, SD=3.6

The subjects' occupations were categorized using Hollingshead's (1977) classifications as described previously. Using this classification system, nine women (10.0%) stated occupations which were classified as Level 1 (Major Professionals); one woman (1.1%) was Level 2 (business manager); six women (6.6%) stated occupations which were classified as Level 3 (Administrative Personnel, Owners of Small Businesses,

and Minor Professionals); nine women's occupations (10.0%) were classified as Level 4 (Clerical and Sales Workers, Technicians, and owners of Little Businesses); no subject was classified as Level 5 occupation (Skilled Manual Employees); two women's occupations (2.2%) were classified as Level 6 (Machine Operators and Semiskilled Employees; and sixty-three respondents (70%) were classified as Level 7 (Unskilled Employees, Retired and Unemployed). The majority of subjects ( $n=65$ , 72.2%) were semi-skilled or unskilled occupations, retired or were unemployed.

Forty-eight (53.3%) of the subjects reported retirement from a job. Years retired ranged from one to thirty-three years ( $M=5.51$ ,  $SD=8.15$ ). The respondents were asked to state their monthly income (Table 4). Reported monthly income ranged from one hundred to four thousand dollars with seven subjects declining to disclose ( $M=1130.3$ ,  $SD=921.7$ ). Thirty-five subjects (38.8%) reported incomes below the poverty level (\$7200.00).

Table 4  
Income of Respondents

Dollars per Month	Frequency	Cumulative Percent
100.00 - 500.00	23	25.5%
501.00 - 1000.00	34	37.7%
1001.00 - 1500.00	6	6.6%
1501.00 - 2000.00	8	8.8%
2001.00 - 2500.00	4	4.4%
2501.00 - 3000.00	3	3.3%
3001.00 - 3500.00	3	3.3%
3501.00 - 4000.00	2	2.2%
No response	7	7.7%
Total	90	100.0%
<u>M=1130.3, SD=921.7</u>		

White elder females ranged in age from 60 to 85 years ( $\underline{M}=63.6$ ,  $\underline{SD}=7.92$ ). Forty-six percent ( $\underline{n}=14$ ) were young-old, thirty percent ( $\underline{n}=9$ ) middle-old, and 23.3 ( $\underline{n}=7$ ) percent were old-old (Table 5). The majority of white elder females were married (53.3%), thirty-three percent widowed, ten percent single and one (1.1%) divorce was reported. This ethnic group had the highest level of education. Less than ten percent ( $\underline{n}=3$ ) did not have a high school diploma. Thirty-three percent ( $\underline{n}=10$ )

were either college graduates or had one to three years of college education. Twenty-six percent ( $n=8$ ) had post-college education. Income levels reflected the educational accomplishments of this ethnic group. Eleven participants reported incomes greater than twenty thousands dollars per year (7 subjects did not disclose incomes). Only 2.2 percent reported incomes below the poverty level. Sixty percent of the white elder females were retired (Table 5).

The African-American sample consisted of elder females ranging in age from 60 to 79 years ( $M=64.2$ ,  $SD=7.46$ ). Thirty-six percent ( $n=11$ ) were young-old, forty-three percent ( $n=13$ ) were middle-old, and twenty-percent ( $n=6$ ) were old-old. The majority ( $n=17$ ) of black females were married (56.5%), twelve (40%) were widowed, and one (3.3%) subject reported being divorced (Table 5). Greater than thirteen percent ( $n=4$ ) of the black women had less than an eighth grade education. Forty-six percent ( $n=14$ ) had a high school education. Only 6.6 percent ( $n=2$ ) had some college or graduated with a college degree. Fifty-three percent ( $n=16$ ) stated retirement from a job. Eleven black women (36.6%) reported incomes below the poverty level. The



remaining women (63.3%) all reported incomes below thirty thousand dollars per year.

The Hispanic elder women sample's mean age was 69.8 years ( $SD=6.46$ ), ranging from 62 to 83 years. Eight (26.6%) women were young-old, sixteen (53.3%) were middle-old, and six (20.0%) were old-old. The majority of Hispanic women were widowed ( $n=13$ , 43.3%), twelve (40%) were married, and five (16.6%) reported being either divorced or separated from their spouse. Educational disparity was evident. Approximately sixty percent ( $n=18$ ) of the elder Hispanic women had less than an eleventh grade education. Only one subject reported having attended college, but did not graduate. Income levels reflect poverty, seventy percent ( $n=21$ ) of this sample report incomes less than \$7200.00 per year. No elder Hispanic women reported an income greater than \$18,000.00 per year. The Hispanic elder women were the only group whose majority ( $n=16$ ) were continuing to work (53.3%) (Table 5).

This sample of older women from two churches and a women's club were distributed over three age ranges for elderly people. Heterogeneity of the group was established and reflected in the ethnic distribution,

wide range of educational preparation, and socioeconomic status.

Table 5  
Distribution of Age, Marital Status,  
Education by Ethnic Groups

<u>Variables</u>	<u>Caucasian</u>		<u>African-American</u>		<u>Hispanic</u>	
	f	%	f	%	f	%
<b>Age</b>						
Young-old	14	46.6	11	36.6	8	26.6
Middle-old	9	30.0	13	43.3	16	53.3
Old-old	7	23.3	6	20.0	6	20.0
<b>Marital Status</b>						
Single	3	10.0	0	0.0	0	0.0
Married	16	53.3	17	56.6	12	40.0
Widowed	10	33.3	12	40.0	13	43.3
Divorced	1	3.3	1	3.3	4	13.3
Separated	0	0.0	0	0.0	0	0.0
<b>Education</b>						
> 8th Grade	1	3.3	4	13.3	8	26.6
9-11th Grade	2	6.6	10	33.3	10	33.3
12th Grade	9	30.0	14	46.4	11	36.6
1-3 yrs College	8	26.6	1	3.3	1	3.3
College	2	6.6	1	3.3	0	0.0
Graduate						
Graduate School	8	26.6	0	0.0	0	0.0

#### Additional Findings

Several significant relationships were demonstrated between the demographic variables. Significant relationships were demonstrated between income and years of education ( $r=.65$ ,  $p=.00$ ,  $n=90$ ) and years of retirement and age ( $r=.54$ ,  $p=.00$ ,  $n=90$ ). Significant

inverse relationships were noted between years of education and age ( $r=-.34$ ,  $p=.00$ ,  $n=90$ ) and income and age ( $r=-.45$ ,  $p=.00$ ,  $n=90$ ).

### Findings

The dependent variable of this study, health patterns, was measured by the ISAI (Appendix E). The independent variables were measured by the demographic data sheet (DDS) (Appendix D) and the seven scales of the ISAI. The maximum scale score possible is 32, and the lowest scale score possible is 8. The maximum cumulative score possible is 224 and the lowest score possible is 56, with higher scores reflecting adaptive health patterns. Administrative time for the self-report questionnaire and demographic data sheet was twenty-five minutes.

Cronbach's coefficient alpha was used to measure the reliability of the ISAI. The ISAI was found to have a Cronbach's alpha of 0.76 for this group of subjects. The seven subscales were found to have the following Cronbach's alpha: economic status scale (0.70); emotional balance scale (0.74); physical health status scale (0.72); trusting other scale (0.88); mobility scale (0.83); cognitive status scale (0.77); and social

support scale (0.64). Nunnally (1978) recommends that reliability coefficients in group level comparisons exceed 0.70 for new scales. The social support scale reliability coefficient did not exceed the 0.70 level. All other scales had an acceptable Cronbach's alpha according to Nunnally's (1978) recommendations.

The ISAI and the demographic data sheet were completed by each of the 90 subjects. Responses from these instruments were analyzed and used for answering the research question of this study.

#### Research Question #1

The first research question asked: What are the physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, and adaptive health patterns of elder women living in a southwestern metropolitan area. A frequency distribution was used to describe these biopsychosocial characteristics.

#### Physical Health Status Scale

Fourteen women (15.5%) reported poor physical health, thirty-eight women (45.5%) did not classify themselves in either category, and thirty-five (38.8%) women reported excellent self-health (Table 6).

### Mobility Scale

The majority of the sample (78.8%) reported having the mobility to carry on the usual activities of daily living. Seven women (7.7%) reported ineffective mobility status. Twelve women (13.3%) were not classified in either category (Table 6).

### Emotional Balance Scale

Twelve women (13.3%) reported ineffective emotional status. Forty-eight (53.3%) were not classified in either category. Thirty women (33.3%) described themselves as living a relatively worry-free existence, sleeping well, and enjoying a tranquil life, thus attaining adaptation (Table 6).

### Cognitive Status Scale

The majority of the sample (53.3%,  $n=48$ ) perceived themselves as being intellectually intact, possessing a good memory, oriented, and having a continued ability to learn. Eight women (8.8%) reported trouble with remembering things, forgetting appointments and suffering a low attention span which impeded new learning (Table 6). Thirty-four women (37.7%) did not classify in either category.

### Trusting Others Scale

The majority of the sample (76.6%,  $n=69$ ) achieved adaptive status in the trusting others scale. Eight women (8.8%) stated they did not have good trustworthy friends or amiable interpersonal relationships. Twelve women (13.3%) did not categorize as adaptive or ineffective (Table 6).

### Social Support Scale

Sixty-seven women (74.4%) reported a comfortable social environment peopled with friends and relative with whom they enjoy close relationships. Two women (2.2%) reported ineffective social support systems. Twenty-one women (23.3%) did not categorize as adaptive or ineffective (Table 6).

### Economic Resource Scale

Five women (5.5%) reported ineffective economic resources. Fifty-one (56.6%) did not categorize as adaptive or ineffective scores. Thirty-four women (37.7%) were classified as possessing adaptive economic characteristics (Table 6).

Table 6			
Subscale Scores for Research Question #1			
Subscale	Score	n	%
PHYSICAL HEALTH	Maladaptive	14	15.5
	Neutral	41	45.5
	Adaptive	35	38.8
MOBILITY	Maladaptive	7	7.7
	Neutral	12	13.3
	Adaptive	71	78.8
EMOTIONAL STATE	Maladaptive	12	13.3
	Neutral	48	53.3
	Adaptive	30	33.3
COGNITIVE STATUS	Maladaptive	8	8.8
	Neutral	34	37.7
	Adaptive	48	53.3
ABILITY TO TRUST	Maladaptive	8	8.8
	Neutral	12	13.3
	Adaptive	69	76.6
SOCIAL SUPPORT	Maladaptive	2	2.2
	Neutral	21	23.3
	Adaptive	67	74.4
ECONOMIC	Maladaptive	5	5.5
	Neutral	51	56.6
	Adaptive	34	37.7

#### Cumulative Scores of Elder Women

The cumulative scores of the ISAI demonstrated scores ranging from 90 to 204, with the possible range being 56 to 224. Three women (3.3%) reported ineffective adaptive health in all seven scales. Thirty four women (37.7%) did not classify as having

ineffective or adaptive health patterns. The majority, fifty-three women (58.9%), reported adaptive health behaviors.

#### Cumulative Scores and Ethnic Distribution

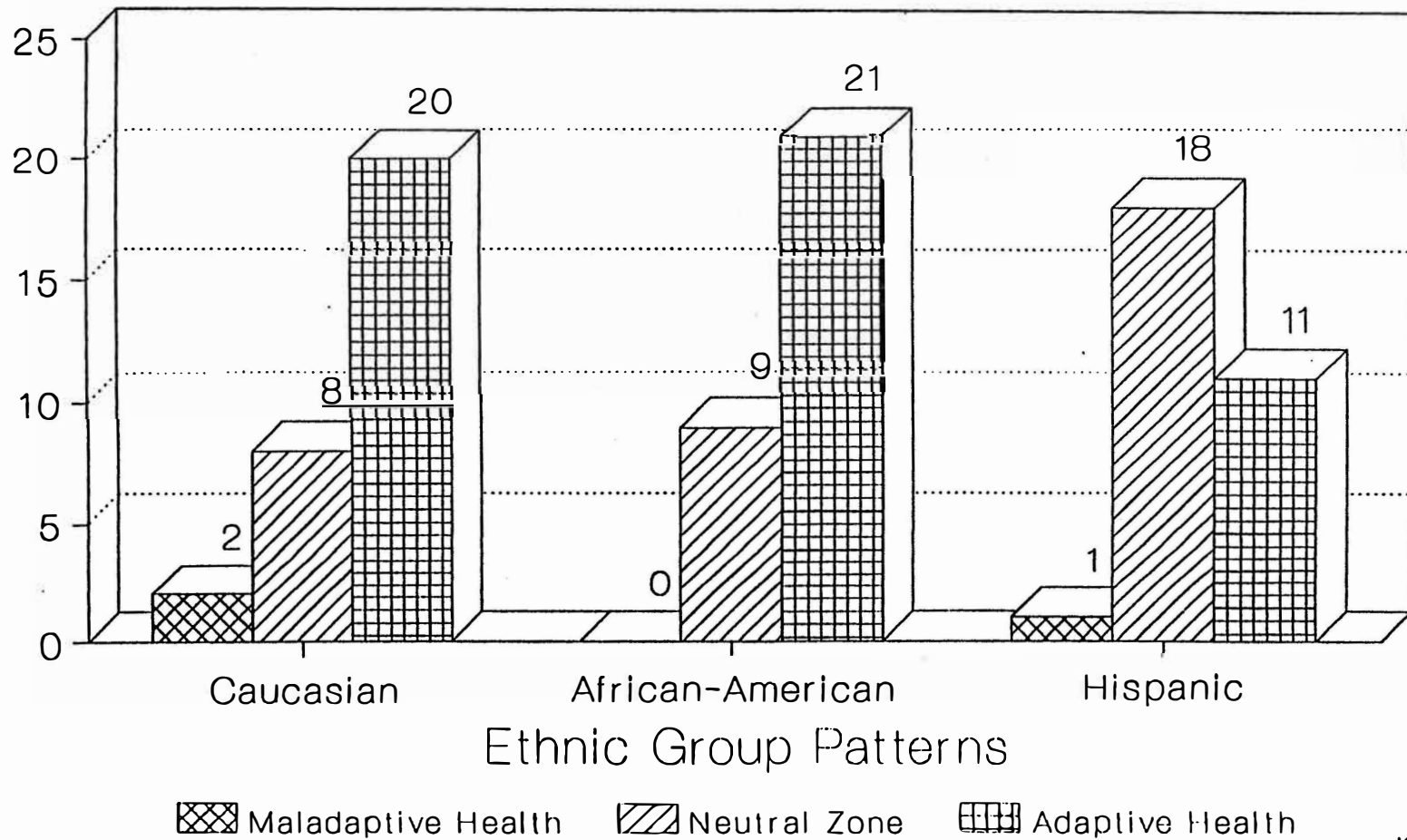
The range of cumulative scores by ethnic distribution were Caucasians (98-204), African-Americans (139-203), and Hispanics (90-198). Hispanic elder women had the largest percentage (21.1%,  $n=19$ ) of non-adaptive health patterns (ineffective health patterns or inability to achieve adaptive health patterns). African-American women reported the most adaptive health patterns (23.3%,  $n=21$ ), followed by twenty Caucasian women (22.2%), and eleven (12.2%) Hispanic women (Figure 4).

#### Cumulative Scores and Marital Status

Married women achieved better cumulative ISAI scores than did their single counterparts. Thirty-one (34.4%) married women reported adaptive health patterns as compared to twenty-one (23.3%) single women. Three women (3.3%) who classified themselves as single reported ineffective health patterns and twenty-one (23.3%) did not achieve adaptive health patterns. Comparatively, one (1.1%) married woman reported



**Figure 4**  
**Cumulative IOWA Scores by Ethnicity**



ineffective health patterns, and thirteen (14.4%) did not achieve adaptive health pattern status.

Table 7  
Cumulative ISAI Scores and Marital Status

	Single	Married	Widowed	Divorced	Separated
Ineffective	3	1	0	0	0
Neutral	0	13	17	4	1
Adaptive	0	31	18	2	0

#### Research Question #2

The second research question explored the relationships among biopsychosocial characteristics and adaptive health patterns. Pearson Product Moment Correlations and regression were utilized for analysis.

#### Demographic Variables and Adaptive Health Patterns

Pearson product moment correlations were utilized to examine selected demographic variables and the cumulative scores of the ISAI. A significant inverse relationship was demonstrated between age and adaptive health patterns ( $r = -.32$ ,  $p = .002$ ,  $n = 90$ ). A significant relationship was demonstrated between years of education and adaptive health patterns ( $r = .23$ ,  $p = .02$ ,  $n = 90$ ) (Table 8). There were no relationships between years of marriage, years of retirement, income, and adaptive health patterns.

Table 8  
Pearson Product Moment Correlation Coefficients  
of Age, Years of Education (EDUC), Years of Marriage  
(YRSMAR), Years of Retirement (YRSRET), Income, with  
the Iowa Self-Assessment Inventory (ISAI)

	AGE	EDUC	YRSMAR	YRSRET	INCOME
<u>r</u>	-.32	.23	.02	-.06	.19
<u>p</u>	.002	.02	.82	.57	.08
<u>n</u>	90	90	90	90	90

A multiple regression analysis was used to determine which of the demographic variables, age, years of education, years of retirement, and income was a predictor of adaptive health patterns for elder women. The results of the multiple regression yielded the following results; two of the variables were significant in predicting adaptive health patterns for the elder woman. The analysis indicated that 15% of the variance in the adaptive health patterns of elder women was accounted for by age ( $F=10.02$ ,  $p=.00$ ,  $n=90$ ) and 5% of the variance was accounted for by years of education ( $F=4.937$ ,  $p=.02$ ,  $n=90$ ). In the step-wise multiple regression, age and years of education together accounted for 11.8% of the variance in the adaptive health patterns of elder women ( $F=5.87$ ,  $p=.00$ ,  $n=90$ ).

### Demographic Variables and Subscale Scores

Pearson's product moment correlations were performed among the individual scales of the ISAI and the demographic variables age, years of education, years of marriage and retirement, and income. Significant inverse relationships were observed between age and the emotional balance scale ( $r = -.26$ ,  $p = .01$ ,  $n = 90$ ), physical health scale ( $r = -.33$ ,  $p = .00$ ,  $n = 90$ ), mobility status scale ( $r = -.30$ ,  $p = .00$ ,  $n = 90$ ), and the cognitive status scale ( $r = -.24$ ,  $p = .02$ ,  $n = 90$ ).

Significant relationships were demonstrated between years of education and economic resource scale ( $r = .31$ ,  $p = .00$ ,  $n = 90$ ), emotional balance scale ( $r = .34$ ,  $p = .00$ ,  $n = 90$ ), physical health scale ( $r = .22$ ,  $p = .03$ ,  $n = 90$ ), and the cognitive status scale ( $r = .21$ ,  $p = .04$ ,  $n = 90$ ). A significant inverse relationship between years of retirement and the mobility scale ( $r = -.21$ ,  $p = .04$ ,  $n = 90$ ) was also observed. There were no other relationships of significance identified from the demographic data and the subscales of the ISAI (Table 9).

Table 9  
Pearson Product Moment Correlation Coefficients of  
Age, Education (EDUC), Years Retired (YRET), Income  
(INC), and the Economic Resource Scale (ER), Emotional  
Balance Scale (EB), Physical Health Scale (PH),  
Mobility Scale (MO), and Cognitive Status Scale (CO)

	ER	EB	PH	MO	CO
AGE	-.1536	-.2659**	-.3310**	-.3099**	-.2407*
EDUC	.3162**	.3450**	.2202*	.1236	.2146*
YRET	.1165	.0287	-.0417	-.2136*	-.0677
INC	.1930	.2106	.2345*	.0899	.0947
<u>n=90, * <math>p \leq .05</math>, ** <math>p \leq .01</math></u>					

### Research Question #3

The third research question explored the relationship between ethnicity and adaptive health patterns in elder women. The contingency coefficient was done to explore the relationship between cumulative ISAI scores and ethnicity (Roscoe, 1975). A significant relationship was demonstrated between ethnicity and adaptive health patterns ( $r = .74$ ,  $n=90$ ) in elder women. Ethnicity accounted for fifty-five percent of the shared variance of adaptive health patterns. ANOVA demonstrated a significant difference among the three ethnic means ( $F(2,87) = 4.329$ ,  $p=0.01$ ). Tukey HSD noted African-American elder women ( $M=178.56$ ) with a higher mean than Hispanic elder women ( $M=159.10$ ).

Elderly Caucasian women ( $M=173.30$ ) did not significantly differ from the other two groups (Table 2).

### Summary of Findings

The study was conducted to investigate the relationships among identified biopsychosocial characteristics, adaptive health patterns, and ethnicity in elder women. The results of the statistical analyses are summarized in the following statements:

#### Research Question 1

1. Adaptive health patterns were obtained by the majority of elder women for the following scales: Mobility Scale, Trusting Others Scale, Cognitive Status Scale, and the Social Support Scale.

2. Inability to attain adaptive health pattern scores or ineffective health patterns were reported by the majority for the following scales: Physical Health Status Scale, Economic Resource Scale, and the Emotional Balance Scale.

3. Ineffective health patterns of greater than ten percent of the sample were reported for the following scales; Physical Health Status Scale and the Emotional Balance Scale.

4. The majority of elder females reported cumulative adaptive health patterns.

5. African-American elder women had the largest percentage of women achieving adaptive health patterns.

6. Hispanic elder women had the least number of women obtaining adaptive health patterns.

7. Married elder women achieved a higher percentage of adaptive health patterns than did their single counterparts.

#### Research Question 2

1. A significant negative relationship was found between age and adaptive health patterns.

2. A significant relationship was found between years of education and adaptive health patterns.

3. No significant relationships were found between years of marriage, years of retirement, income, and adaptive health patterns.

4. Age and years of education accounted for 11.8% of variance in the adaptive health patterns of elder women.

5. A significant inverse relationship was found between age and the Emotional Balance Scale, Physical

Health Status Scale, Mobility Scale, and the Cognitive Status Scale.

6. A significant relationship was found between years of education and the Economic Resource Scale, Emotional Balance Scale, Physical Health Status Scale, and the Cognitive Status Scale.

7. A significant negative relationship was found between years of retirement and the mobility scale.

### Research Question 3

1. A significant relationship exists between ethnicity and adaptive health patterns in elder women. Ethnicity accounted for fifty-five percent of the shared variance.



## Chapter 5

The purpose of this study was to determine which biopsychosocial factors contribute to adaptive health patterns of elder women. The variables of physical health, mobility, emotional and cognitive status, ability to trust, social support, economic characteristics, and ethnicity were explored as possible contributors to adaptive health patterns along with certain demographic variables. A systems approach was employed based on Roy's Adaptation Model. The conceptual framework proposed that an elder woman is a biopsychosocial being who is in constant interaction with a changing environment. To cope with a changing world, the elder woman uses both innate and acquired mechanisms which are biological, psychological and sociological in nature. To respond positively to environmental changes the elder female must learn to adapt. Adaptation is comprised of the physiologic, self-concept, interdependence and role function modes. Based on these assumptions, the study describes several biopsychosocial variables which are assumed to influence the four adaptation modes.

This study was conducted to examine relationships

between biopsychosocial variables and adaptive health patterns in elder women. This chapter explored the findings, offered conclusions, and proposed areas for future research in this area.

#### Summary

The purpose of this study was to determine and describe relationships between the following biopsychosocial variables: physical health, mobility, emotional and cognitive status, ability to trust, social support, economic characteristics, adaptive health patterns, and ethnicity. Research question one described the biopsychosocial variables among the elder women in the sample. Descriptive statistics described subscale and cumulative scores of the ISAI.

Research question two examined the relationships among biopsychosocial variables and adaptive health patterns. Pearson product moment correlations were utilized to examine selected demographic variables and the cumulative scores of the ISAI. Multiple regression analysis were used to determine predictors for adaptive health patterns.

The relationship between ethnicity and adaptive health patterns was explored in research question

three. The contingency coefficient was used to answer the question.

The findings of the study are summarized as follows:

Research Question #1

1. Adaptive health patterns were obtained by the majority of elder women in the following scales: Mobility Scale, Trusting Others Scale, Cognitive Status Scale, and the Social Support Scale.
2. Inability to attain adaptive health pattern scores were reported by the majority for the following scales: Physical Health Status Scale, Economic Resource Scale, and the Emotional Balance Scale.
3. Ineffective health patterns of greater than ten percent of the sample were reported for the following scales: Physical Health Status Scale and the Emotional Balance Scale.
4. The majority of elder females reported adaptive health patterns.
5. African-American elder women had the greatest number of women reporting adaptive health patterns.
6. Hispanic elder women had the least number of women reporting adaptive health patterns.
7. A greater number of married women reported

adaptive health patterns than did their single counterparts.

Research Question #2

8. A significant negative relationship was found between age and adaptive health patterns.

9. A significant relationship was found between years of education and adaptive health patterns.

10. No significant relationships were found between years of marriage, years of retirement, income and adaptive health patterns.

11. Age and years of education accounted for 11.8% percent of the variance in the adaptive health patterns of elder women.

12. A significant inverse relationship was found between age and the subscale scores of the Emotional Balance Scale, Physical Health Status Scale, Mobility Scale and the Cognitive Status Scale.

13. A significant relationship was found between years of education and the Economic Resource Scale, Emotional Balance Scale, Physical Health Status Scale, and the Cognitive Status Scale.

14. A significant negative relationship was found between years of retirement and the Mobility Scale.

### Research Question #3

15. A significant relationship exists between ethnicity and adaptive health patterns in elder women. Ethnicity accounted for fifty-five percent of the shared variance.

### Discussion of the Findings

Three research questions guided this study of adaptive health patterns in elder women. These research questions are discussed in relation to this study and with regard to current practice in the health care community.

### Research Question #1

Research question one describes the biopsychosocial profile of the sample and examines individual subscales scores as well as cumulative ISAI scores. The findings regarding physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics, and adaptive health patterns will be interpreted based on the literature reviewed in Chapter 2.

### Physical Health

Roy and Andrew (1991) defined physical health as a person's response as a physical being to stimuli from

the environment. For the purpose of this study, physical health was operationalized to be a subject's self-report of health, number of physician visits in the past year, and number of prescribed medications.

Johnson (1985) stated "aging, physiologically speaking, is the decline and fall of practically everything.... [that] must eventually produce some sort of clinical debility" (p. vii). The majority of elder women did not report adaptive physical health status and ten percent reported ineffective physical health patterns. This finding supports the premise of diminishing health as one ages (Filner & Williams, 1981; Ries & Brown, 1991).

### Mobility

Mobility is a person's ability to move about freely (Kozier & Erb, 1987). For this study, mobility was a subject's self-report of the ability to be mobile enough to carry on the usual activities of daily living, to visit family and friends, and to participate in social activities. The majority of elder women reported adaptive mobility status. This finding is consistent with the McElmurry and LiBrizzi (1986) study which noted most elder women denied impairment of mobility and activities of daily living even in the presence of

health problems. The study's findings contradicted the work of Burglass (1989) and Verbrugge (1985), who reported high rates of impairment in physical activities, mobility, and the ability to perform basic physical care activities in elder women.

#### Emotional State

Emotional state is the tone of one's reaction to persons and events (Wilson & Kneisl, 1979). For this study, emotional state was a subject's self-report of living a worry-free existence, sleeping well, and enjoying a tranquil life. Sixty women did not achieve adaptive emotional status in this study. These findings support Nolem-Hoeksema (1988) and Smallegan (1989) studies regarding the underestimation of depression and emotional turmoil in the elderly. Contributing factors to this finding may be widowhood (Blazer, Hughes, & George, 1987; Kahana & Kahana, 1983), poor socio-economic status (Goldsmith, Krammer, Brenner, 1986; Pearlin, Lieberman, Menaghan, & Mullan, 1981), poor physical health (Dohrenwend & Dohrenwend, 1981; Epstein, 1976; Gurland, Golden, & Lantagua, 1984), and cognitive impairment (Richardson, Lowenstein, Weissberg, 1989; Koenig & Brietner, 1990; Frierson, 1991).

### Cognitive Status

Cognitive status describes a person's mental processes, including perception, memory, and reasoning, by which one acquires knowledge, solves problems, and makes plans (Coleman, 1976). Forty-eight women reported intact intellect, good memory and the ability to learn, thus attaining adaptive cognitive status. Presently, the only factor consistently negatively correlated with cognitive impairment is age (Gurland, Copeland, Kuriansky, Kelleher, Sharpe & Dean, 1983; Kay & Bergman, 1980). This finding was supported in research question two. Several authors have addressed the difficulty of differentiating a diagnosis of cognitive impairment, dementia, and depression in older adults (Gallager & Thompson, 1983; Post, 1976; Wells, 1977; Zarit & Zarit, 1983). This literature suggest that the Cognitive Status Scale may not be evaluating true cognitive functioning, but possibly depression or early dementia.

### Ability to Trust

Ability to trust is one's firm belief in the honesty and reliability of another (Webster's New World Dictionary, 1987). In this study, ability to trust was a subject's self-report of having good trustworthy



friends and possessing amiable interpersonal relationships. The majority of elder females in this study possessed adaptive abilities to trust others. This finding is not consistent with the literature. Beard (1982) found significantly lower trust scores in older subjects (50-65 years old) compared to younger subjects (20-35 years old). Butler and Lewis (1982) described paranoia as being related to lack of trust and fairly common in the elderly. According to Busse and Pfeiffer (1977), paranoia is found more frequently in elder persons. The study did not support these findings.

#### Social Support

Social support provides personal contact, affirmation of personhood, strength, encouragement, assistance in times of crisis, feedback, and opportunities for reciprocal intimacy and affection (Phillips, 1991). For this study, social support was measured as a subject's self-report of living in a comfortable social environment peopled with friends and relatives with whom they enjoy close relationships. Seventy-four percent of the women reported comfortable social environments with close relationships. This

finding does not support Cummings and Henry's (1961) disengagement theory. The disengagement theory stated that there is a withdrawal initiated by an elder person, between herself and others in the social system to which she belongs (Cummings and Henry, 1961). These findings suggest that elder women do continue to possess social skills and seek relationships outside their immediate environment (Atchley, 1971; Carp, 1968; Roman & Taiezt, 1967).

#### Economic Characteristics

Economic characteristics for the purpose of this study were operationalized as the subject's report of income and assets, need for outside financial help, and participation in programs designed to supplement one's income. Sixty-two percent of the sample did not achieve adaptive economic scores. This finding supports the premise that women enter old age in financial distress and need outside financial support (Estes, Gerald, & Clarke, 1981; Hooyman & Kiyak, 1988). Comparatively, elder African-American and Hispanic women were two to three times poorer than their white counterparts. Contributing factors to poor economic status may be attributed to a continuation of a life-long economic

deprivation (Dressel, 1984), widowhood or single status (Forman, 1983; Hess, 1984, Muller, 1983), poor educational background (Estes, Gerald, & Clarke, 1981; U.S. Department of Labor, 1979), and poor employment status (Kleiman, 1992; Leslie & Swider, 1986).

#### Adaptive Health Patterns

Adaptive health patterns are viewed as a dynamic process representing the person's own ability to respond positively in a situation (Roy & Andrew, 1991). For this study, adaptive health patterns were operationalized as a report of excellent self-health, mobility to carry on the usual activities of daily living, the ability to participate in social activities, satisfactory sleep patterns, a relatively worry free existence, a continued ability to learn, having good, trustworthy friends, friendliness towards others and general amiability in interpersonal relationships.

The majority of elder females reported adaptive health patterns. Contrary to common myths (Brubaker & Powers, 1976; McTavish, 1971), the elder female is independent, active, and capable of self care.

African-American women had the greatest number of women achieving adaptive health patterns scores despite

lower reported economic and educational levels. No African-American elder women reported ineffective health patterns. This finding contradicts Foley (1988), Gordon-Bradshaw (1987), and Mechanic (1986) studies which suggested life style risk factors such as exposure to health risks (hypertension, diabetes), poor nutrition, and ethnically-induced stressors contributed to poor physical health and disabilities. This finding supports Jackson, Chatters, and Neighbors (1985) study which stated black elderly have increased happiness and life satisfaction. Additionally, this finding supported Murtran (1985), Taylor and Chatters, (1991) research that aged blacks do have strong social support systems. Despite reported deprivation in economic and educational status, more elder African-American women were able to attain adaptive health patterns than any other ethnic groups in the study. This finding reflects behavioral adaptation to internal and external stressors and supports Roy's Adaptation Model.

Elder Hispanic women had the least number of women achieving adaptive health patterns scores. This suggests that Hispanic elder women's basic needs are not being met, or that these women are failing to adapt

successfully to change and stress. Self-reports of physical illness (Commonwealth Fund Survey, 1989; Dowd & Bengston, 1978; Krause, 1990), mobility impairment necessitating limitations of usual activities of daily living (American Association of Retired Persons, 1987c; National Health Center for Health Statistics, 1984), anxiety (Markson, 1987), less supportive social environment (Cuellar, 1978; Korte, 1989; Laruel, 1976; Maldonado, 1978), and poor socioeconomic status (U.S. Congress, 1988) by Hispanic elder women support other findings in the literature.

A greater number of married women achieved adaptive health patterns scores than did their single counterparts. This finding supports Uhlenberg and Myers (1981) research which showed that single, widowed, and divorced individuals are less satisfied with life and friendships when compared to married women. Other studies have demonstrated that widowed females report poor perceived health, new or worsened physical illnesses, and depression (Sanders, 1981; Lund, Caserta, & Dimond, 1985; Thompson, Breckenridge, Gallagher, & Peterson, 1987).

Research Question #2

Schorr, Farnham, and Ervin (1991) reported elder persons tend to have fewer biopsychosocial, economic, and environmental resources due to losses and stressors inherent in the aging process. This premise was supported by the significant inverse relationship found between age and adaptive health patterns. This finding supports the conceptual framework of Roy's Adaptation Model. Adaptation to change requires expenditure of energy to maintain homeostasis. Thus, as the findings show, as an aging women attempts to adapt to the physical, emotional, and cognitive stressors associated with the aging process, the individual will likely expend too much energy and consequently have ineffective adaptive health patterns (Roy, 1984, 1988; Roy & Andrew, 1991).

This study revealed a positive correlation between years of education and the adaptive health patterns of elder women. Filner & Williams (1981) identified three etiological factors affecting the functional independence of the elder person: physical, mental and socioeconomic. Correlations revealed that elder women who had a higher level of education achieved adaptive

subscale scores in the following areas: physical health, emotional state, cognitive status, and economic characteristics. These findings suggest that better educated elder females are more likely to be functionally independent than less educated women (American Association of Retired Persons, 1987c; Eisdorfer, 1977; Jarvik & Russell, 1979; Kahana & Kiyak, 1980; Markides, 1989).

A significant inverse relationship was found between years of retirement and mobility. This finding suggest that women who are retired for longer periods of time are less able to carry on activities of daily living. This inverse relationship could be explained by length of time only, but types of occupations held by these women may be an influence. In this study, sixty-five women were classified as semi-skilled or unskilled occupations, retired or unemployed. Bergman (1974) and Oppenheimer (1970) have reported a number of occupational hazards and diseases prevalent in female-dominated jobs. Stellman (1978) noted occupational stress adversely affects one's health. Stellman (1978) identified physical stressors of excessive sitting among clericals, operators, dress makers, and excessive

standing among waitresses, nurses, clerks and teachers as detrimental to one's health. These studies may help explain this inverse relationship.

### Research Question #3

Research question three explored the differences between ethnicity and adaptive health patterns in elder women. The contingency coefficient demonstrated a significant relationship between ethnicity and adaptive health patterns. This finding suggest that elder women of color possess unique biopsychosocial characteristics that influence adaptive health patterns. This finding supports limited information available stating that elder women of color are more likely to report physical illnesses (Dowd & Bengston, 1978; Foley, 1988; Markides & Coreil, 1986), mobility impairments necessitating limitations of usual activities of daily living (Krause, 1990; Trevino & Moss, 1984), anxiety, worry, poor sleep patterns (Weisberg, 1989), trouble remembering things, forgetting appointments and suffering low attention span which impedes new learning (Jackson & Gibson, 1985); perception of a less supportive social environment, and questioning the motives of others (Bastida, 1984; Chatters, Taylor, & Jackson, 1985; Korte, 1981), and



generally low socioeconomic standings (Jackson & Gibson, 1985; Lacayo, 1984).

Analysis of variance noted a significant difference between the means of the cumulative ISAI scores among African-American elder women and Hispanic elder women. African-American women had the greatest number of women ( $n=21$ ) achieving adaptive health pattern status, while Hispanic women achieved the lowest number ( $n=11$ ). This finding could suggest that although African-American elder women in this study had lower educational and socioeconomic status than did their white counterparts, they have developed adaptation skills to promote homeostasis. The findings suggest that Hispanic women's basic biopsychosocial needs are not being met or that these women are failing to adapt successfully to internal or external stressors. Bastida (1984), Becerra (1983), and Gelfand (1987) reported ethnic culture, norms, and linguistic barriers may affect psychological and social adaptation.

#### Conclusions and Implications

Based on the study findings, the following conclusions are offered. These conclusions relate to elder women aged 60 years and older.

### Biopsychosocial Characteristics of Elder Women

1. The study confirmed that as one ages there is a decline in physical health. Ironically, elder women reported declining physical health but adaptive mobility status. These findings suggest that aging necessitates adaptations to both internal and external stimuli. As physical functioning becomes diminished, the elder female adapts her mobility functions to carry on the usual activities of daily living, and regulates physiological functioning to maintain homeostasis within her physical limitations. Years of education positively influenced the physical health and mobility status of elder women.

2. Elder women do not experience a worry-free existence. Elder women describe themselves as intellectually intact, possessing a good memory, having a continued ability to learn, and possessing an ability to trust. As a women ages, her cognitive abilities diminish as does her emotional reaction to persons and events. Women who reported higher levels of education demonstrated stronger cognitive status.

3. Elder women are active participants in a social environment. Elder women report enjoying friendships

and close family relationships. Social support did not diminish with the aging process, nor was it related to the level of education the elder women possessed. Elder women do face financial burdens. These burdens are lessened if women possess higher levels of education. Women of color are more financially distressed than their white counterparts.

#### Adaptive Health Patterns

4. Ethnicity does affect adaptive health patterns of elder women.

5. African-American elder women report achieving adaptive health patterns more than their white and Hispanic counterparts.

6. As a woman ages, her ability to possess adaptive health patterns diminishes.

7. Women who possess higher levels of education appear to achieve adaptive health patterns more than women with lesser educational backgrounds.

8. There is a tendency for married elder women to report adaptive health patterns more than their single counterparts.

#### Roy's Adaptation Model

9. The results support the conceptual framework of

Roy's Adaptation Model. Roy (Personal Communication, November 12, 1990) described aging as a natural phase of living that acts as one of the stimuli or antecedent factors to cognator or regulator processes for bringing about effective or ineffective adaptation. Cognator/regulator processes are viewed as innate and acquired coping mechanisms used by the adaptive system to respond to dynamic internal and external stressors (Roy, 1984).

This study viewed the elder woman as an open system that functions by virtue of the interdependence of her biopsychosocial characteristics. Many of the subjects did not attain adaptive subscale scores, however, through the process of adaptation, the majority of women did attain cumulative adaptive health patterns. These findings suggest that elder women are holistic adaptive systems. Findings demonstrated that aging is a highly individualized process which affects each person in unique ways. Aging is the result of the interaction between inputs (stimuli), outputs (behaviors), controls (central function of the system), and feedback processes (Roy & Andrew, 1991). Therefore, elder women become increasingly diverse as they age, and it is difficult to predict with certainty a woman's biopsychosocial health

status or functioning level based on chronological age or ethnicity alone.

Based on the study findings, the following implications for elder women and nurses are offered:

Nursing Practice and Education

1. It is not possible to accurately assess elder women by separately examining their biopsychosocial components. It is essential that the nursing professional assess the elder female as an integrated adaptive holistic system.
2. Nurses should anticipate a diminishing of physiological functioning in their elder female clients. Subsequently, nursing actions should focus on encouraging elder females to maintain activities and responsibilities within the limits of their present functioning. Utilization of adaptive equipment and environmental aides will assist elder women in maintaining independence within their environment. Nursing goals should be aimed at prolonging the period of effective activity and ability to live independently while providing emotional support.
3. Nurses must recognize the relatively poor economic status of elder women. Nurses need to play key roles in

coordinating services and as advocates for elder women as they seek to obtain services appropriate to their level of functioning and economic disability.

4. The norms and values of the predominant cultural group of the elder women should be considered by the nurse when working with the elderly.

5. Membership in an ethnic group may represent unique biopsychosocial problems for that group of aged women. However, it is likely that membership in that ethnic group also brings important resources in adaptation with age-related adjustments (Bengston, 1979).

6. Nurses must develop educational tools and programs to meet the identified biopsychosocial needs of ethnically diverse groups. Preventive health programs which emphasize cultural differences in the curriculum should be promoted.

7. Nursing orientation programs should be established which address the unique ethnic, cultural, and gender needs of elder women. These should then be incorporated into nursing practice.

#### Nursing Theory

1. Nursing's goal is to promote adaptation in each of the four adaptive modes: physiologic, self-concept, role

function, and interdependence modes, thereby contributing to the woman's health, quality of life and dying with dignity (Roy & Andrew, 1991).

2. It is the nurse's role to promote adaptation in situations of health and illness; to enhance the interaction of the woman with the environment, thereby promoting health (Roy & Andrew, 1991).

3. Adaptive health patterns are the result of harmonious or positive interactions of the biopsychosocial processes characterized by homeostasis or adaptation to change (Roy, 1984).

4. Ineffective health patterns are a state of maladaptation which occurs when basic needs are not met, or when the persons fails to adapt successfully to change or to cope with stress.

#### Recommendations for Further Study

The following recommendations for further study are proposed based on the findings of this study:

1. Conduct a qualitative study to identify other biopsychosocial variables which elder women perceive as important contributors to adaptive health patterns. Utilizing the findings from the qualitative study, develop a questionnaire which will quantify the

biopsychosocial variables identified. Data collected from the questionnaire can then be used to assess the perceived value and the relationships of the variables.

2. While the ISAI was shown to have reliability and validity, further testing and refinement particularly regarding the Social Support Scale is recommended.

3. Although this study highlighted adaptive health patterns in elderly women at a specific time, a longitudinal study should be conducted. Nursing studies identifying conditions and variables that lead to adaptive health patterns would aid in predicting those most susceptible to ineffective health behaviors. Possible areas for intervention include the development of educational tools and programs to meet identified needs and the planning of health promoting activities which emphasize maintaining present states of wellness.

4. Further ethnically oriented studies aimed at developing health care delivery programs should be conducted to explore the similarities and differences of the groups.



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## APPENDIX A

### Permission to Reproduce Roy's Adaptation Model

August 1, 1992

Appleton & Lange  
25 Van Zant Street  
East Norwalk, Connecticut 06855

Dear Sirs,

I am seeking permission to reproduce a figure from Sister Callista Roy and Heather A. Andrew's book, **The Roy Adaptation Mode**. I am a doctoral candidate at Texas Woman's University in Houston, Texas. I am utilizing Roy's Adaptation Model as the conceptual framework for my dissertation.

I would like to reproduce Figure 1-3, page 17, The person as an adaptive system. Thank you for your time and consideration in this matter. The reply can be mailed to: 9023 Gaylord #98, Houston, Texas.

Sincerely,

*Kathleen Pace Murphy*

Kathleen Pace Murphy, R.N., M.S.

**PERMISSION GRANTED**; *please fully credit the work as:  
author, title, appleton & lange,  
Norwalk, CT, 1991.*

BY

DATE

*Jan B. Wilson*  
*8/10/92*

APPLETON & LANGE



APPENDIX B  
Agency Permission To Conduct Study

TEXAS WOMAN'S UNIVERSITY  
COLLEGE OF NURSING  
1130 M.D. ANDERSON BLVD.  
HOUSTON, TEXAS 77030-2897

**AGENCY PERMISSION FOR CONDUCTING STUDY\***

THE \_\_\_\_\_

**GRANTS TO** Kathleen Pace Murphy  
a student enrolled in a program of nursing leading to a Ph.D. in nursing at Texas Woman's University, the privilege of its facilities in order to study the following problem:

The purpose of the study is to describe the following characteristics: physical health, mobility, emotional state, cognitive status, ability to trust, social support, and economic characteristics of multi-ethnic women and to explore the relationships among these characteristics as they relate to health patterns.

The following is the research question for this study:

What are the relationships among physical health, mobility, emotional state, cognitive status, ability to trust, social support, economic characteristics adaptive health patterns, and ethnicity in elder women?

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. The agency is (willing) (unwilling) to allow the completed report to be circulated through interlibrary loan.
5. Other \_\_\_\_\_

Date: July 6, 1992

Barbara Selman

Signature of Student  
Signature of Agency Personnel

Kathleen Pace Murphy  
Signature of Agency Personnel Student

John Fehrer  
Signature of Faculty Advisor

\*Fill out and sign three copies to be distributed as follows: Original-Student; First copy - agency; Second copy - TWU College of Nursing.

DR:k  
1/13/92

TEXAS WOMAN'S UNIVERSITY  
COLLEGE OF NURSING  
1130 M.D. ANDERSON BLVD.  
HOUSTON, TEXAS 77030-2897

**AGENCY PERMISSION FOR CONDUCTING STUDY\***

THE \_\_\_\_\_

**GRANTS TO** Kathleen Pace Murphy

a student enrolled in a program of nursing leading to a Ph.D. in nursing at Texas Woman's University, the privilege of its facilities in order to study the following problem:

The purpose of the study is to describe the following characteristics: physical health, mobility, emotional state, cognitive status, ability to trust, social support, and economic characteristics of multi-ethnic women and to explore the relationships among these characteristics as they relate to health patterns.

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4. The agency is (willing) (unwilling) to allow the completed report to be circulated through interlibrary loan.
5. Other \_\_\_\_\_

Date: July 6, 1992

Kathleen Pace Murphy  
Signature of Student

Rosetta Thompson  
Signature of Agency Personnel

John Fehin  
Signature of Faculty Advisor

\*Fill out and sign three copies to be distributed as follows: Original-Student; First copy - agency; Second copy - TWU College of Nursing.

DR:J  
1/13/92

TEXAS WOMAN'S UNIVERSITY  
COLLEGE OF NURSING  
1130 M.D. ANDERSON BLVD.  
HOUSTON, TEXAS 77030-2897

**AGENCY PERMISSION FOR CONDUCTING STUDY\***

THE \_\_\_\_\_

**GRANTS TO** Kathleen Pace Murphy

a student enrolled in a program of nursing leading to a Ph.D. in nursing at Texas Woman's University, the privilege of its facilities in order to study the following problem:

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5. Other \_\_\_\_\_

Date: 7-5-92

Kathleen Pace Murphy  
Signature of Student

John Fehin  
Signature of Agency Personnel  
John Fehin  
Signature of Faculty Advisor

\*Fill out and sign three copies to be distributed as follows: Original-Student; First copy agency; Second copy - TWU College of Nursing.

DR:1  
1/13/92

APPENDIX C  
Explanation of the Study

ID\_\_\_\_\_

DIRECTIONS: As you read through the following items, please enter the appropriate information in the spaces provided.

Date of Birth:\_\_\_\_\_

Ethnic Group (check one): Caucasian \_\_\_\_\_  
Afro-American \_\_\_\_\_  
Hispanic \_\_\_\_\_

Years of formal education in school:\_\_\_\_\_(years)

Marital Status (check one): Single \_\_\_\_\_  
Married \_\_\_\_\_  
Widowed \_\_\_\_\_  
Divorced \_\_\_\_\_  
Separated \_\_\_\_\_

If widowed, divorced, or separated: How long:\_\_\_\_\_years

Occupation (or former occupation)\_\_\_\_\_

Are you retired? yes\_\_\_\_\_ no\_\_\_\_\_

If yes, how many years have you been retired? \_\_\_\_\_years

What is your monthly income? \$\_\_\_\_\_

APPENDIX D  
Demographic Data Sheet

## Verbal Description

You are being asked to participate in a study conducted by a doctoral student in the School of Nursing at Texas Woman's University. This study is designed to explore the physical, psychological and social well-being of women age 60 years and older. The results of this study will contribute to the knowledge about biological, psychological and social functioning during the later years and about how aging women adapt with changes in their lifestyle as they get older.

If you agree to participate, you will be asked to complete a self-report questionnaire and a demographic data sheet. The questionnaire will take approximately 20 minutes to complete.

A possible risk is that you may experience some anxiety or have questions while completing the self-report questionnaire. You will be asked various questions about your health, events in your life, how you feel about being older, and how you feel about yourself at the present time. To alleviate any possible anxiety, adequate time will be allowed for you to ask questions, or to discuss any concerns. You are free to participate or not to participate. The choice is yours. If you choose to join the study, you may withdraw at any time without penalty. The researcher will remain in the room during completion of the questionnaire to answer questions or to discuss any other concerns. Additionally, if you have any questions, please call Kathleen Pace Murphy at 780-9434 during business hours. I will be happy to answer your questions.

While your participation in the research may have no direct benefit to you, by participating you will help nursing learn more about the health needs of aging women.

All of your responses will be confidential. The questionnaire will be completely anonymous and will be identified by number only. Findings from this study will be published in scientific and medical journals and presented at professional meetings.

No injury is anticipated as a result of your participation in this study. However, Texas Woman's University is not able to offer financial compensation nor to absorb costs of medical treatment. First aid care will be provided as necessary.

Thank you for your participation.

Kathleen Pace Murphy, R.N., M.S.  
Doctoral Student



APPENDIX E  
Iowa Self-Assessment Inventory

### **DIRECTIONS**

The statements on the following pages are about things that can affect our lives in one way or another. We ask you to describe your own situation using these statements. In this way we hope to understand some of your problems and needs.

Please use the following key in rating each statement:

- 1 - True
- 2 - More often true than not
- 3 - More often false than not
- 4 - False

Please read each statement carefully and then encircle the number corresponding to the answer that *best* applies to you. We realize that some of the statements may not apply directly to you all the time, but try to do the best you can. Do not worry about giving exactly the right answer; your answer may simply mean the statement is true or false to some degree.

Please try to make an answer to every statement.

1 = TRUE  
 2 = MORE OFTEN TRUE THAN NOT  
 3 = MORE OFTEN FALSE THAN NOT  
 4 = FALSE

- |  | 1 | 2 | 3 | 4 |
|--|---|---|---|---|
| 1. I have enough money to meet unexpected emergencies. . . . .           | 1 | 2 | 3 | 4 |
| 2. I sometimes get tense as I think of the day's happenings. . . . .     | 1 | 2 | 3 | 4 |
| 3. I have no physical disabilities or illnesses at this time. . . . .    | 1 | 2 | 3 | 4 |
| 4. People secretly say bad things about me. . . .                        | 1 | 2 | 3 | 4 |
| 5. I need a cane, crutches, walker, or wheelchair to get around. . . . . | 1 | 2 | 3 | 4 |
| 6. I have trouble remembering things that happened recently. . . . .     | 1 | 2 | 3 | 4 |
| 7. There is no one I can turn to in times of stress. . . . .             | 1 | 2 | 3 | 4 |
| 8. I have enough money to buy those little extras. . . . .               | 1 | 2 | 3 | 4 |
| 9. I frequently find myself worrying. . . . .                            | 1 | 2 | 3 | 4 |
| 10. I take 3 or more medicines each day. . . . .                         | 1 | 2 | 3 | 4 |
| 11. Friends are disloyal to me behind my back. . .                       | 1 | 2 | 3 | 4 |
| 12. I do my own shopping without help. . . . .                           | 1 | 2 | 3 | 4 |
| 13. I forget where I put things. . . . .                                 | 1 | 2 | 3 | 4 |

1 = TRUE  
 2 = MORE OFTEN TRUE THAN NOT  
 3 = MORE OFTEN FALSE THAN NOT  
 4 = FALSE

- |   | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 14. There is no one I can depend on for aid if I really need it. .... | 1 | 2 | 3 | 4 |
| 15. I have enough money to meet my regular daily expenses. ....       | 1 | 2 | 3 | 4 |
| 16. I lose sleep over worry. ....                                     | 1 | 2 | 3 | 4 |
| 17. My overall health is excellent. ....                              | 1 | 2 | 3 | 4 |
| 18. I believe I am being plotted against. ....                        | 1 | 2 | 3 | 4 |
| 19. I do my own laundry. ....   | 1 | 2 | 3 | 4 |
| 20. I have trouble remembering the names of people I know. ....       | 1 | 2 | 3 | 4 |
| 21. There is someone I can talk to about important decisions. ....    | 1 | 2 | 3 | 4 |
| 22. I need financial help. ....                                       | 1 | 2 | 3 | 4 |
| 23. I am bothered by thoughts I can't get out of my head. ....        | 1 | 2 | 3 | 4 |
| 24. My health is better than it was 5 years ago. . .                  | 1 | 2 | 3 | 4 |
| 25. Someone has it in for me. ....                                    | 1 | 2 | 3 | 4 |
| 26. Getting around town is a problem for me. ....                     | 1 | 2 | 3 | 4 |
| 27. I lose my train of thought in the middle of a conversation. ....  | 1 | 2 | 3 | 4 |

1 = TRUE  
 2 = MORE OFTEN TRUE THAN NOT  
 3 = MORE OFTEN FALSE THAN NOT  
 4 = FALSE

- |  | 1 | 2 | 3 | 4 |
|--|---|---|---|---|
| 28. There is no one I feel comfortable talking about problems with. . . . .              | 1 | 2 | 3 | 4 |
| 29. My finances at the present time are excellent. . . . .                               | 1 | 2 | 3 | 4 |
| 30. I am a very nervous person. . . . .  | 1 | 2 | 3 | 4 |
| 31. My ability to carry on my daily activities is worse than it was 5 years ago. . . . . | 1 | 2 | 3 | 4 |
| 32. I am sure I am being talked about. . . . .   | 1 | 2 | 3 | 4 |
| 33. I am not able to prepare my own meals. . . . .                                       | 1 | 2 | 3 | 4 |
| 34. Learning new things is harder for me than it used to be. . . . .                     | 1 | 2 | 3 | 4 |
| 35. No one shares my concerns. . . . .   | 1 | 2 | 3 | 4 |
| 36. My monthly expenses are so high I cannot always pay my bills . . . . .               | 1 | 2 | 3 | 4 |
| 37. I get upset over things. . . . .   | 1 | 2 | 3 | 4 |
| 38. I have fewer health problems than most older people I know. . . . .                  | 1 | 2 | 3 | 4 |
| 39. Someone is controlling my thoughts. . . . .  | 1 | 2 | 3 | 4 |
| 40. I walk without help. . . . .   | 1 | 2 | 3 | 4 |
| 41. I forget appointments. . . . .   | 1 | 2 | 3 | 4 |
| 42. I know people I can depend on to help me if I really need it. . . . .                | 1 | 2 | 3 | 4 |

1 = TRUE  
 2 = MORE OFTEN TRUE THAN NOT  
 3 = MORE OFTEN FALSE THAN NOT  
 4 = FALSE

- |   | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 43. I have some savings and/or investments. . . . .   | 1 | 2 | 3 | 4 |
| 44. I worry over past mistakes. . . . .   | 1 | 2 | 3 | 4 |
| 45. During the past year I have been so sick I<br>was unable to carry on my usual activities. . . . | 1 | 2 | 3 | 4 |
| 46. Strangers look at me critically. . . . .  | 1 | 2 | 3 | 4 |
| 47. I can visit a friend or relative who lives out of<br>town for overnight or longer. . . . .      | 1 | 2 | 3 | 4 |
| 48. My mind is just as sharp as ever. . . . .   | 1 | 2 | 3 | 4 |
| 49. If something went wrong, no one would<br>come to my assistance. . . . .                         | 1 | 2 | 3 | 4 |
| 50. I use food stamps. . . . .  | 1 | 2 | 3 | 4 |
| 51. I have more ups and downs than most<br>people. . . . .  | 1 | 2 | 3 | 4 |
| 52. During the past year I have been to a doctor<br>fewer than 4 times. . . . .                     | 1 | 2 | 3 | 4 |
| 53. I see things when others do not. . . . .  | 1 | 2 | 3 | 4 |
| 54. I visit friends in their homes. . . . .   | 1 | 2 | 3 | 4 |
| 55. I forget to take medicine when I am<br>supposed to. . . . .                                     | 1 | 2 | 3 | 4 |
| 56. I do not have close relationships with other<br>people. . . . .                                 | 1 | 2 | 3 | 4 |

## APPENDIX F

### Permission to Use Iowa Self-Assessment Inventory

## The University of Iowa

Iowa City Iowa 52242

College of Medicine  
Office of the Dean

319-335-8050



1847

November 19, 1990

Kathleen Pace Murphy, R.N., M.S.  
9023 Gaylord #98  
Houston, Texas 77024

Dear Ms. Murphy:

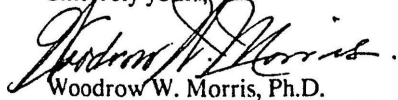
Thank you for your inquiry about the Iowa Self Assessment Inventory (*ISAI*) to which Kitty Buckwalter has asked me to reply. I am enclosing a copy of the inventory, a draft copy of a *User's Manual*, a copy of the manual scoring and profile form, and a reprint of the paper in *The Gerontologist*, Vol. 30, No.2, April 1990

Two points on page 246 of the reprint need clarification: the definitions of "The Anxiety/Depression Scale" and of "The Alienation Scale." These definitions are confusing since the titles are "negative" but the definitions are "positive." We have corrected this by changing the names of these two scales to "The Emotional Balance Scale" and "The Trusting Others Scale", respectively. Also, we have changed the orientation of the ratings from "4-3-2-1" to the reverse, "1-2-3-4." This was done after a brief format study indicated that our respondents were more comfortable with the latter. It does not change any of the data, nor does it change the scoring.

You have our permission to copy the materials and to use the *ISAI* in your research on multidimensional adaptation health patterns of older women. Our only requirement for use of the tool is that you share your findings with our research team as we continue to build our *ISAI* data base.

With our best wishes, I am

Sincerely yours,

  
Woodrow W. Morris, Ph.D.  
Professor and Associate Dean Emeritus

Enclosures (4)