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THE EFFECT OF SEX DIFFERENCES ON THE
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THE EFFECT OF SEX DIFFERENCES ON THE SUBJECTIVE WELL-BEING
OF OLDER WIDOWS AND WIDOWERS

by

Jean Pearson Scott

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the Faculty of the Graduate School at
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Approved by

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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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This investigation examined the relationship between sex and the subjective well-being of older widows and widowers. The main purpose of the study was to determine the effect of sex differences on the subjective well-being of the widowed. A second objective was to determine if some factors were of differential importance to the subjective well-being of the widowed according to sex.

Drawing upon role theory propositions and propositions from social exchange theory, it was hypothesized that sex would have a significant effect on the subjective well-being of older widowed adults and that men would express lower subjective well-being. A second set of hypotheses stated that income adequacy would have a greater effect on the subjective well-being of the widower in comparison to the widow and that the frequency of social participation would affect the well-being of widows more so than widowers.

The sample for the study ($N = 332$) included all widowed persons from two existing data bases. The original data bases included older adults selected by a compact cluster sampling technique from two counties in Piedmont North Carolina: one a rural county and the other a predominantly urban county. The sample was composed of 261 widows and 71 widowers 65 years of age or older. The data were collected

via personal interviews that were administered by trained interviewers.

The hypotheses were tested through two theoretical models that were constructed on the basis of the research literature. Path analytic procedures were used in the analysis of the data. The first path model included five exogenous variables (age, sex, rural-urban residence, SES, and race) and three intervening variables (self-rated health, income adequacy, and frequency of social participation). The dependent variable, subjective well-being, was operationalized as the extent of unhappiness that respondents experienced. The second path model which contained the same variables as the first with the exception of sex was analyzed separately for widows and widowers.

The first path model failed to show that sex had a significant effect on the subjective well-being of the widowed (\underline{P} [path coefficient] = .08, n.s.). Income adequacy, as hypothesized, had a stronger effect on the subjective well-being of widowers (\underline{P} = -.27) than widows (\underline{P} = -.17) when the results were compared (path model II). Due to the nonsignificance of the path model for widowers this finding was only suggestive of a differential effect by sex. Social participation failed to have a significant direct effect on subjective well-being for either sex and therefore there was no support for the greater effect of social participation on widows' subjective well-being. Income adequacy and residence

had significant direct effects on the subjective well-being of the widowed.

Based upon the results of this study it was concluded that sex is not a critical factor in determining the subjective well-being of the widowed. Rural residents indicate greater problems of adjustment to widowhood by lower well-being scores than urban residents. Perceived income adequacy has an important influence on the subjective well-being of the widowed with lower well-being resulting from perceived inadequate income. Income adequacy also acts as a channel through which several factors (socioeconomic status, residence, age) indirectly influence the subjective well-being of the widowed. Economic resources along with environmental constraints appear to be more influential determinants of the widowed older adults' subjective well-being than sex differences.

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CHAPTER I

INTRODUCTION

The importance of health, socioeconomic status, and social activity to the subjective well-being of older adults is well documented (Larson, 1978). The literature is less consistent in its findings on the impact that sex differences have on the well-being of persons in late life, and consequently, this phenomenon is less clearly understood (Pepe & Wyly, 1977).

Sex differences have been studied extensively in the early developmental stages of life (Maccoby & Jacklin, 1974), a time when sex roles are thought to become well integrated into the personality structure (Kagan, 1964). Differences by sex in adulthood have been explained largely in terms of the different social positions that men and women occupy (Frieze, Parsons, Johnson, Ruble, & Zellman, 1978; Holter, 1970; Lowenthal, Thurnher, & Chiriboga, 1975; Maas & Kuypers, 1974). The learning of gender roles defines for most persons the kinds of social positions they will hold over the life course. Traditionally, girls have been subjected to wife and mother role models and, in turn, carry out these roles over much of their lives. Boys, on the other hand, identify with masculine models of which the provider role is central. The examination of sex roles across the life cycle

remains unexplored with the exception of investigations of personality and lifestyle changes (Lowenthal et al., 1975; Maas & Kuypers, 1974; Neugarten, 1972). Evidence suggests that sex differences account for more variation in individuals than life stage (Lowenthal et al., 1975). This finding has important implications for the role that sex differentiation may play in the ease of role transitions in adulthood, and the subsequent psychological well-being of older adults. One such transition that appears to have major importance to subjective well-being is change in marital status--especially that precipitated by the loss of a mate.

The literature is unclear about the effect of sex differences in the social and psychological adaptation to the widowed status. Since Berardo's (1967) study of widowhood over a decade ago, there has been little empirical research to verify his conclusion that widowhood is more stressful for men than for women. In recent months, Barrett (1978) and Elwell and Maltbie (1978) have corroborated Berardo's findings. The more disadvantaged position of the widower is also reflected in the finding of higher suicide rates among widowers (Bock & Webber, 1972; MacMahon & Pugh, 1965), greater problems with alcoholism (Bailey, Haberman, & Alksne, 1965), and a greater increase in the rate of mortality in comparison to widows (Parkes, Benjamin, & Fitzgerald, 1969; Rees & Lutkins, 1967; Young, Benjamin, & Wallis, 1963). There is also

evidence indicating that widows experience greater social and psychological problems than widowers (Carey, 1977; Lewis & Berns, 1975). On the other hand, Petrowsky (1976) found few differences in social interaction by sex and the social psychological differences that Atchley (1975) found were attributed to demographic characteristics. Thus, the literature indicates, though not conclusively, that widows and widowers each have unique problems affecting their subjective evaluation of well-being. There is somewhat more support for the greater problems of the widower than for those of the widow. Further research is needed to ascertain more precisely the effect sex differences have on the subjective well-being of the widowed. The purpose of the present study was to determine the effect of sex differences on the subjective well-being of the widowed. More specifically, the research questions that were addressed were these: What are the differential effects, if any, that sex has on the subjective well-being of widows and widowers? And, are some factors more salient for widows or for widowers in explaining their subjective well-being?

Historical Background for the Study

From the earliest descriptive studies to present-day multivariate research, interest in the factors that contribute to "successful aging" has dominated the gerontological literature. Research into the adjustment of older adults to late life began to appear in the 1930's. There was an

increasing awareness at this time of the problems that could occur in a society where a growing segment of the population was elderly. Active research programs in gerontology did not get underway until the late 1940's. The research literature burgeoned in the 1950's and 1960's and has continued to grow at a rapid rate.

Studies directed specifically at the adjustment of widowed older adults did not emerge until the 1960's. Previous attention had been given in the anthropological literature to widowhood as it related to inheritance, death, and bereavement customs. Psychological studies on bereavement and grief have been numerous (Berardo, 1968). The first major study directed specifically to the social adjustment of the elderly widowed population was that of Berardo in 1967. Berardo's investigation was followed in the early seventies with Lopata's (1973) monumental investigation of role involvements of widows in an American city. Many recent studies have added to an understanding of the social psychological characteristics of the widowed and of the factors affecting adjustment. Whether sex (being male or female) is influential in adjustment to widowhood is currently unresolved.

Theoretical Framework and Hypotheses

The following section presents some theoretical propositions that seem to aid in the understanding of the influence of sex differences on subjective well-being in late

life. Role theory (Biddle & Thomas, 1966; Cottrell, 1942; Sarbin, 1954; Turner, 1978) and social exchange theory (Blau, 1964; Homans, 1961; Thibaut & Kelley, 1959) provide particularly useful frameworks and are described more fully in Chapter II. In the first subsection, several relevant propositions from a role perspective have been employed as a basis for deriving hypotheses for the present study. The next subsection presents social exchange propositions and role theory generalizations on which to base two additional hypotheses concerning the relative influence of variables in a proposed path model of subjective well-being for widowers and in an identical model for widows.

Role Theory Propositions

Role theory has been used either implicitly or explicitly as a perspective from which to account for differences in the transition into and out of roles. Cottrell's important paper in 1942 delineated several propositions for the explanation of adjustment to age-sex roles and the ease of transition into roles. Some of these propositions are presented below with a discussion of their relevance for men and women who are widowed, older adults.

Proposition 1 The degree of adjustment to roles which society assigns to its age-sex categories varies directly with the clarity with which such roles are defined (Cottrell, 1942, p. 618).

The ambiguity with which the aged status is defined in our society is compounded by widowhood. The role of the widowed

in some countries is defined largely by social customs and tradition, but in the United States this role has few prescriptions. For many of the widowed, especially men, remarriage provides a solution, but for an increasing number of widows and widowers role prescriptions are not available. Gerontologists have called widowhood an essentially "roleless role" (Cavan, 1969; Lopata, 1973). They have posited that individuals are integrated into society through role involvement and therefore widowhood may contribute to less meaningful interaction with others and to a sense of meaninglessness in general when no clear roles are provided.

The literature suggests that role clarity is a greater problem for men than for women (Troll, Miller, & Atchley, 1979). The greater number of widows than widowers provides new widows with a larger reference group from whom to learn new roles and to feel some sense of solidarity. Men, on the other hand, have few widowed peers until after age 75 and consequently a vaguer idea of what is expected in the widowed status.

Proposition 2 When a society assigns or permits more than one role to a given age-sex category, the degree of adjustment to the role varies directly with the compatibility of the roles (Cottrell, 1942, p. 619).

The literature suggests that men experience greater role incompatibility than women in widowhood (Berardo, 1970; Pleck, 1976). The traditional sex-role of men dictates independence and self-sufficiency, yet often the need for

household help, assistance with meal preparation, and help with cleaning and mending clothes conflicts with these behavioral norms. Berardo (1967) posited that self-sufficiency as a behavioral norm for men may be one reason widowers are more hesitant to ask for help. On the other hand, the prescribed dependent role for women is not inconsistent with the widowed woman's possible need for financial advice, home repairs, or yardwork.

Proposition 3 The degree of adjustment varies indirectly with the discrepancy between the abilities of the individual and those required in the roles of the given age-sex category (Cottrell, 1942, p. 619).

The literature indicates that both men and women have difficulties in the widowed role and that these difficulties are different according to prior sex role socialization. The day-to-day activities of housekeeping and preparing meals require abilities that many men have not acquired. On the other hand, women must acquire financial and legal skills, maintain the car and perhaps learn assertive skills necessary for business negotiation. The widow may have to learn for the first time to be the breadwinner for herself if her income is inadequate or if she wants to assume an occupational role as a means of reintegration into society.

Proposition 4 The degree of adjustment to a future role varies directly with the amount of opportunity for imaginal or incipient role rehearsal in the future role (Cottrell, 1942, p. 619).

The taboo surrounding the discussion of death or the experience of grief or loss prohibits any advance preparation

for the widowed role. Generally, the literature indicates that women rehearse the role of widow more than men. Demographic figures show that women exceed men in life expectancy by approximately 8 years (U. S. Bureau of the Census, 1977). Men, therefore, do not expect to outlive their wives and consequently do not anticipate or mentally rehearse the widowed role. Women suspect, however, that they will outlive their husbands and tend to mentally rehearse the loss of a spouse (Deutscher, 1968; Neugarten, 1972). Based upon the preceding propositions from role theory and support from the literature, the present study examined the following two hypotheses:

- H₁ Sex will have a significant direct effect on the subjective well-being of widowed older adults.
- H₂ Older widowers will experience significantly lower subjective well-being in comparison to older widows.

Exchange Theory Propositions

The relation of sex roles to the subjective well-being of the widowed can be further examined in terms of the relative rewards and costs entailed by each sex. Holter (1970) notes that sex differentiation is essentially a differential ordering of norms and values for the two sexes or of the "different intensities" with which given norms are applied to each sex, not the application of different norms to the two sexes. All individuals, for example, are expected to

support themselves, but a man's unemployment is perceived as more deviant than a woman's unemployment. Similarly, women are valued and rewarded more for their homemaking abilities than for professional pursuits. Because of differential reinforcement, behaviors, attitudes, and values associated with sex roles take on different reward values for men and women. The following proposition from social exchange theory states the relationship of value and impact on social processes:

Proposition 1 The value of a phenomenon influences the amount of effect this phenomenon has in social processes and this is a positive, monotonic relationship (Burr, 1973, p. 48).

Both social exchange and role perspectives posit that conformity to role expectations is rewarding in and of itself, and therefore, the same factors may be of varying importance to the subjective well-being of widowers and to that of widows. Men for instance have been rewarded more highly than women for their earning potential and have generally had more direct access to money resources than women. It was anticipated that income and also the benefits derived from educational and occupational levels would be more critical to the well-being of men than women.

A second proposition illustrates the relationship between value and general outcome or profit in social interaction.

Proposition 2 The value of interaction influences the amount of profit from the interaction and this is a positive, monotonic relationship (Burr, 1973, p. 56).

In social interaction, the more valued a relationship the greater profit or reward generally realized. This is possible because the potential for reward is greater and because the reward is greater in comparison to any alternative rewards that were foregone. The social responsibilities of a marital relationship generally fall upon the wife; she is expected to plan the social calendar, entertain friends and business associates, and visit with or write relatives. The wife is rewarded more strongly than a husband for sociability and hence, social interaction becomes more highly rewarding for women (Lowenthal et al., 1975; Troll et al., 1979). It was expected, therefore, that social participation would have more salience for the widow than the widower.

A third proposition shows the relationship of greater profit to affective state.

Proposition 3 If the profit from interaction is rewarding, the sentiment produced by interaction tends to be positive, whereas if the profit is costly, the sentiment tends to be negative (Burr, 1973, p. 56).

This proposition relates the reward potential of phenomena to affective states. Not only does conformity to sex role norms bring greater rewards, but also positive feelings. In late life, it was expected that sex role conformity would continue to enhance well-being.

Building on these social exchange propositions, the differential importance of income and social participation to the subjective well-being of widows and widowers is explained by the differential reinforcement of sex role norms.

It was therefore anticipated that income would take on greater importance for the subjective well-being of widowers than widows and that social participation would be more influential for the subjective well-being of widows in comparison to widowers. The final two hypotheses for the present investigation were these:

H₃ Income adequacy will have a greater effect on the subjective well-being of widowers than widows.

H₄ Social participation will have a greater effect on the subjective well-being of widows than widowers.

Contributions of this Research

The present study of sex differences in the subjective well-being of widowed older adults was designed to contribute to the social gerontological literature in four areas: the nature of sex differences in the well-being of the widowed, theory development, sampling methodology, and statistical procedures.

The literature notes that men and women have special problems in their adjustment to widowhood, some of which may be unique to each sex, but how the sexes compare has not been conclusively resolved. The present study provides some substantive answers about how widowhood differentially affects men and women, and whether one sex is more vulnerable to the stressful changes of this critical period than the other.

Secondly, the study adds to our theoretical understanding of sex role differentiation in the later years: an area

where there is little empirical research. Theories describing sex role development over the life span may be refined and elaborated once this area is investigated more thoroughly.

Studies that have made major contributions to our knowledge of widowhood have included samples of widows only (Lopata, 1973) or have included extremely small samples of widowers (Petrowsky, 1976). Therefore, comparisons by sex have not been possible in many studies. The merger of two representative samples of widows and widowers as was done in the present study provided a sufficient number of both sexes to adequately examine differences between the sexes in subjective well-being.

A fourth contribution of the study which facilitates the refinement of theory on sex differences is the use of a path analysis to examine a proposed causal model of factors influencing the subjective well-being of widowed older adults. The path statistical procedure allows the determination of independent direct and indirect effects of several variables on subjective well-being, the dependent variable. While several studies have reported the use of path analysis to examine models, they have not related their findings or the derivation of their causal model to any theoretical issues or ideas (Atchley, 1977; Elwell & Maltbie, 1978; Markides & Martin, 1979). The present study adds to the small but growing number of studies examining causal models and relates the findings to theoretical issues.

Scope and Limitations

The purpose of the present study was to ascertain the differential effects, if any, that sex differences have on the subjective well-being of the widowed. The study was limited to a secondary analysis of two data sets that included 261 widows and 71 widowers 65 years of age or older. The original data sets represented elderly persons randomly selected from two counties in Piedmont North Carolina: one a rural county and the other a predominantly urban county. The urban data were collected during 1970 and 1971 while the rural data were collected in 1976 and 1977. These different time periods may have introduced some cohort differences into the data. The cross-sectional design of the study means that any age differences might be confounded with cohort factors. Also, it was not possible to know to what extent the present life situation of the respondents differed from their previous life circumstances.

Definitions

Subjective Well-being--". . . the general affective experience of older persons in terms of a positive-negative continuum" (Larson, 1978, p. 109). Subjective well-being served as an umbrella term to denote well-being, personal and/or social adjustment, life satisfaction, happiness-unhappiness, and morale. Subjective well-being was operationalized in this study as the extent of unhappiness that respondents perceived themselves as experiencing.

Sex status--"An ascribed social status referring to the biological differences between people" (Duberman, 1975, p. 26).

Adequacy of Income--Perceived extent to which income meets needs.

Social participation--The frequency of social contacts.

Value--"A differentiation or variation in the worth or importance of something" (Burr, 1973, p. 53).

Assumptions

1. There is a dimension variously called mental health, psychological well-being or subjective well-being and individuals can be meaningfully assessed as being relatively high or low on such a dimension.
2. A person's relative position on a dimension of mental health or subjective well-being is determined by and reflected in his current life situation.
3. Role changes, whether incremental (involving role gain) or decremental (involving role loss) are potentially stressful (Lowenthal et al., 1975).
4. Widowhood precipitates involuntary role change.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature pertaining to sex differences and to the subjective well-being of older persons is presented in Chapter II. The first section includes a discussion of theories of sex role socialization, social exchange theory, and role theory as they relate to an understanding of sex differences. A final subsection includes a review of the literature on sex differences in late life. The second section presents a discussion of subjective well-being including its conceptual and theoretical bases, a critique of its measures, and a summary of its major correlates. Special emphasis is given to sex differences in the subjective well-being of the widowed.

Sex Differences

The first empirical interest in sex differences in adulthood was generated in the early twentieth century by feminists and was initially centered on intellectual functioning (Tyler, 1968). A broad range of male-female characteristics were scrutinized during the 1920's and 30's. The goal of much of this research was to improve relationships between the sexes through a better understanding of the differing emotional needs of men and women. During the 1950's

the emphasis shifted once more to a study of sex roles. The focus of study was the timing and manner in which young children developed sex role preferences and patterns of behavior. Tyler (1968) noted that sex role research was also undertaken in order to understand the developmental processes through which other aspects of personality come to exist. Much of the developmental research of the 1950's and 60's focused on the learning of sex roles (Tyler, 1968).

Theories of Sex Role Socialization

Three psychological theories dominate the sex role literature. The first is the classical Freudian position. The child is believed to enter the world with bisexual tendencies and to develop an early attachment to the mother. Sex identification is instigated by anxieties associated with sexual love for the opposite-sexed parent and fear and jealousy of the same sexed parent (the Oedipus complex in boys, the Electra complex in girls). According to Freud, the boy resolves the Oedipal conflict by identifying with his father, and the girl with her mother. The identification of the boy with his father is prompted by the boy's fear of castration as retribution for his hostility towards the father. Identification of the girl with her mother is less well grounded since girls develop an envy of boys for their anatomical differences and they do not have the fears of extreme punishment from the mother. Simone De Beauvoir (1953) in her interpretation of the works of Freud and Adler

stated that the woman is divided against herself more profoundly than is the male.

There is little research to support Freud's notion, but the literature does support some of the later elaborations of psychoanalytic theory. Mowrer, Sears, and Parsons, for example, put less stress on the resolution of the oedipal complex as a basis of sex role learning and more stress on the early discovery of sex differences. They explained that although boys and girls first identify with the mother, the boy takes his father as a model when he realizes his own sex identity. The difficulties of the boy's transition from the mother to the father as a sex model are emphasized with this psychoanalytic version. This stance on the evolution of sex differences appears to have more support in the literature than the Freudian interpretation. Hartley (1959) found considerable difficulties accompanying the learning of the masculine role in boys aged eight to eleven. This observation was also supported by Lynn (1969), Mowrer (1950), and Parsons (1955) who noted that same sexed identification for boys is difficult because the male role model is typically absent from the home much of the time.

Social learning theory postulates a sequence in which the child learns to "discriminate between sex-typed behavior patterns, generalizes these specific patterns, and finally demonstrates appropriate sex-typed behavior" (Holter, 1970, p. 188). The learning process involves observational learning

and "direct and vicarious conditioning of a multitude of stimuli that acquire differential value and elicit different emotional and attitudinal responses from the sexes" (Mischel, 1966, p. 51). A basic assumption of social learning theory is that sex-typed behavior is determined not by gender role, but by the person's history of social learning. Children learn appropriate sex behavior by observation that takes place with or without direct reinforcement. Parents reinforce appropriate sex role behavior through the differential rewards and punishments exerted on boys and girls. Cross-sex modeling of behaviors by boys and girls is not clearly understood. Presumably cross-sex behavior occurs more frequently when children are exposed to cross-sex models. Bandura, Ross, and Ross (1963) found that boys and girls tended to imitate the behaviors of the more powerful adult. If the adult male had greater control than the female over resources, both boys and girls imitated his behavior more than hers.

Kohlberg (1966) provided a cognitive developmental description of the basic processes whereby children acquire sex roles. His theory is based upon the assumption that sex roles are organized primarily in terms of one's gender identity or self-categorization as boy or girl. The labeling of gender starts with the awareness of anatomical differences between the sexes which occurs early in life.

Between the ages of two and seven, the cognitive judgement gradually crystallizes into a constant categorical identity as boy or girl, an identity with components pertaining to body-image, roles, values, dress personality traits, and attitudes that can vary considerably with the experiences of those years. (Holter, 1970, p. 189)

A child's self-categorization sets limits on the basic evaluations with respect to sex identity and provides the foundations for the development of values and sex role stereotypes. Values develop pertaining to one's masculinity or femininity along lines consistent with or like the structure of the self. Kohlberg (1966) observed that as children between the ages of four and eight become aware of values and stereotypes, both sexes tend to attribute greater power and prestige to the male role. This does not imply a decline in the prestige of the female role, as the prestige remains sufficiently high for the values about feminine roles to channel girls into socially acceptable activities. Once values about masculine and feminine traits have been acquired, they prompt children to identify with the same-sex parent and same-sex others. For Kohlberg, gender identity was a basic cognitive reality judgement and not mainly a result of social sanctions, parent identification, or sexual development. Cognitive development was viewed as following a regular course of development that helps to give structure to physical reality and maintains a stable, positive self-image. Contrary to other theories, Kohlberg proposed that intellectual maturity tends to produce adequate sex-role identification rather than the

reverse. Sex role development then, was best studied in terms of cognitive maturity.

Based upon these psychological views of sex role learning, Holter (1970) noted several implications for a sociological analysis of the mechanisms for maintaining sex role identification. First, with the exception of Freudian theory, sex role norms and behavior are generally believed to be learned through contact with sociocultural agents, and not primarily influenced by biological factors. Although the cognitive developmentalists emphasize the child's categorization of himself according to gender and assume that this is based on awareness of bodily differences, it is stressed that categorizations of gender are based on clothes, hairstyles, and other culturally ascribed characteristics.

Secondly, sex role learning begins early in childhood and is later highly resistant to change. Social learning theory stresses the importance of early learning over later learning. Psychoanalytic and cognitive-developmental theories stress early changes in stages of cognitive and emotional development. Holter (1970) believed this occurrence could lead to far-reaching implications if the social and economic conditions of society change, yet the adult's sex role norms and behaviors remain consistent with a former differentiation of sex roles.

All psychological theories of sex role learning account in some way for how sex roles are maintained. Furthermore,

all include the parents in this process. The psychoanalysts and social learning theorists regard the parents as the primary agents for transmitting and maintaining sex role norms. The cognitive developmentalists see the parents as only one class of cultural agents who contribute to the learning of sex role norms. One research question that has occupied the attention of researchers is whether or not parents treat boys and girls differently. There is some support to indicate that differential treatment by parents begins at birth and is clearly evident in the preschool years (Goldberg & Lewis, 1969; Moss, 1967; Murphy & Associates, 1962).

There has been little empirical research of the mechanisms whereby sex roles once learned are maintained. Two kinds of reinforcement are generally recognized as important to this continuity: (a) social control of sex role norms, and (b) role models provided through the mass media and literature. Social control mechanisms define for the individual the limits of conforming behavior and behaviors labeled as deviant. Holter (1970) pointed out that social control is effective because of the individual's capacity for anticipation of social sanctions or rewards. "The average person evaluates his impulses and his acts in accordance with his picture of the community's reactions to conformity and deviance from sex roles" (Holter, 1970, p. 198). Generally, individuals internalize many norms and personality traits associated with gender so that internal mechanisms trigger

sex typed behavior rather than its being initiated by conscious planning. The mass media have become an important mechanism of social control. The rewards projected particularly by advertising reinforce ideas of what can be gained by sex role conformity. Regardless of whether sex role learning is conceptualized as a biologically instigated process, as an outcome of reinforced sex appropriate behavior, or as a process emerging from intellectual development, mechanisms of maintenance function through the reinforcement of sex role norms. Thus, sex roles are learned early in life and it appears that they are not easily changed in adulthood.

Sex Differences in Late Life

Generally, the older population has been treated as a homogeneous group with little attention being given to sex differences. A few studies have investigated sex differences in personality and lifestyle in the later years as a part of life span investigations. Studies of the general population indicate that women have experienced more stress in their lives (Atchley, 1976; Lowenthal et al., 1975; Maas & Kuypers, 1974).

Maas and Kuypers' (1974) investigation is one such longitudinal study. Their research attempted to obtain a better understanding of how earlier and later phases of adult life are related to each other and how the contexts of early

adulthood and old age influence both personality and how people live. Sex differences were examined through separate analyses for men and women. The subjects were initially interviewed in 1929, and some forty years later information on those persons who could be contacted was collected about their lifestyles and personalities. The average age of the respondents was 70 years. The sample ($N = 142$) represented a fairly well-to-do group as more than half were college graduates and 80% of the men had been executives, professionals, and business owners. Widowers were omitted from the study because of their small number. On the whole, the influence of present environmental circumstances on personality in late life was not significant. Some significant sex differences did emerge, however.

Greater differences were observed among the women than the men in the level of ego pathology and defensiveness. The men were higher on six coping measures and lower on six ego-disorganization measures than the women which suggested that the older males exhibited greater strength and more homogeneity. When examining lifestyles of the sample, four different lifestyles were distinguished for the men and six lifestyles were representative of the women, again suggesting greater variability in women's lifestyles.

Continuity in lifestyle was more characteristic of the men whereas women had experienced more change in their lifestyles since early adulthood. The women as a group seemed

more dependent on changing circumstances in their lives and many had exhibited considerable "disconnectedness" in marital, parental, and occupational roles. In comparison to the men, women had been forced to become more adaptive to more changing conditions. Maas and Kuypers (1974) speculated that this generation of women did not have the freedom to exercise as much control over their life circumstances as corresponding males.

An investigation of men and women facing transitions at four stages over the life course was undertaken by the Human Development Program at the University of California at San Francisco (Lowenthal et al., 1975). Lowenthal et al. (1975) attempted to isolate coping strategies and social psychological influences on the adaptation to life transitions from an adult life course perspective. The sample was composed of 216 men and women including high school seniors, newlyweds, postparental men and women, and preretirement men and women from a closely contained community. They were mostly Caucasian, urban, and middle and lower middle class. The mean ages of the newlyweds, postparental, and preretirement groups were 24, 50, and 60 years, respectively. The sample encompassed, then, two groups facing "incremental" transitions characterized by role gains and two facing "decremental" transitions characterized by loss of roles. A major finding and one that was consistent in the many social psychological areas investigated was that differences between

the sexes were far more pronounced than those across the four life stages. Men and women in a given life stage resembled each other far less than the youngest men and women resembled the oldest of their sex.

Sex and stage differences in self-image could readily be traced to social role norms and to proximity to transitions of adult life. Preretirement women were more likely to attribute assertive and other stereotypically masculine qualities to themselves. Women at all life stages reported more stressful experiences than men. Lowenthal et al. (1975) also concluded that women exhibited more complex affective patterns than men and apparently could integrate many and diverse emotional experiences. These findings parallel those of Maas and Kuypers (1974) that women have experienced greater stresses and are more complex in terms of lifestyle and affective states than men.

Atchley (1976) reported findings that also indicate that older women report more negative psychological states than men. He controlled for age, marital status, education, and income adequacy while investigating selected social and psychological differences between men and women in later life. The sample ($N = 3,630$) was composed of a randomly selected group of retired teachers and an entire population of people retired from a telephone company. Loneliness, high anxiety, and unstable self-esteem were more prevalent among the female respondents.

Pepe and Wyly (1977) examined the perception of sex roles of males and females in three different age groups, 20-25 years, 40-49 years, and 60-69 years. The subjects were 325 white, middle-class males and females. Females in the 60-69 age group were less traditional whereas the males in this age group were more traditional in their values than other age groups. This finding revealed a shift for women's attitudes from the 40-49 age group who were most conservative in their view of sex-related behaviors to the less traditional older group. Cohort factors may, however, have been operating here.

Sex differences have been noted in intimate friendships in old age. A statewide sample of 234 individuals, 70 years of age or older, was used to assess the importance and nature of intimate friendships in late life (Powers & Bultena, 1976). Although men were found to have more frequent social interaction than women ($t = 3.2, p < .05$), fewer of their contacts were with intimate friends ($\chi^2 = 5.80, p < .05$). The findings revealed that women not only had a greater variety of intense relationships, but also a wider range of interactants than men.

In summary, few studies have examined sex-related differences in older persons. In those studies that have examined social psychological variables among men and women, significant differences were found between the sexes, and in

one study (Lowenthal et al., 1975) these differences were of greater import than life stage of the respondents. One finding repeatedly seen in studies of the general population of older adults is that older women show more "negative" psychological traits than men and appear to have experienced more stress and change in their lives. Yet, women in late life are found to have a greater variety and intensity of friendships than men. Women in late life have also been found to be less traditional in their sex role attitudes than men.

Theoretical Perspectives on Sex Differences

Role theory. Earlier, it was noted that sex identification is accomplished early in life and leads to differential role performance. Such sex differences may be observed in personality and lifestyles and in role transitions such as widowhood in late life. These differences when examined from a theoretical perspective seem most easily understood within the context of role theory. Role theory evolved out of an interactionist tradition and relies heavily on the insights of G. H. Mead, Linton, Park, and Moreno. This perspective actually embraces a number of formulations in several substantive areas. Although not a theory in the true sense of the term, role theory does embrace an identifiable domain of study, perspective, and language as well as some clearly defined concepts and sets of propositions and hypotheses (Biddle & Thomas, 1966). Role theorists are interested in the behaviors of individuals or of groups as they appear in

everyday life. Such facets of behavior as social position, divisions of labor, communication, learning and socialization, sanctioning and conformity, the individual's appraisal of himself, and how people learn to perform roles are a few areas examined from a role perspective.

The social world is viewed as a network of various inter-related positions or statuses to which a number of roles are attached. The analogy of the player acting on the stage before an audience parallels in many ways the role theorist's conception about social life. The performance of actors is determined by the script, the director's instructions, the performances of fellow actors, the reactions of the audience, and the individual talents of the actors. Likewise, the behaviors of individuals occupying certain positions in society are studied in terms of three general classes of expectations: (a) normative expectations, (b) expectations of other actors, and (c) the expectations of others (Turner, 1978). Norms provide actors with expectations about how they ought to behave. Also, the role performances of others in their respective positions and their expectations structure the behavior of the actor. A final source of expectations comes from "the audience" or those individuals who observe the role member's performance. "These audiences can be real or imagined, constitute an actual group or a social category, involve membership or simply a desire to be a member" (Turner, 1978, p. 351). They become reference groups with whom the

individual compares his behavior as he enacts his roles. The focus of understanding tends to be with the impact of specific norms, others, and reference groups associated with particular clusters of status positions on "(a) self-interpretations and evaluations, (b) role-playing capacities, or (c) overt role behaviors" (Turner, 1978, pp. 354-355). Much of social behavior then is structured in terms of expectations from a variety of sources and by the individual's own understanding and conceptions of what his behavior should be.

A distinction that separates the role field from other interactionist frameworks is the interaction of role and self (Sarbin, 1954). The self is defined in terms of categories one implies to himself as a set of self-identifications. One's self is the way one describes to himself his relationships to others in a social process by the individual's attempting from time to time to make aspects of his role explicit. Self-identities influence the interpretation of the various types of expectations that guide conduct. In reciprocal fashion, the role-playing skills and capacities of the individual affect the configuration of the self.

A second distinction between other interactionist frameworks and role theory is the emphasis on human interaction as organized into roles (Sarbin, 1954). Role is defined here as a patterned sequence of learned actions performed by a person in an interaction situation (Sarbin, 1954). Linton (1936) proposed a classic distinction between status

(position) and role. Whereas a status is viewed as a collection of rights and duties, a role is the behaviors associated with a status. When the individual puts the rights and duties of the status into effect he is performing a role. The two concepts, therefore, are inseparable in the sense that there are no statuses without roles and no roles without statuses.

The ease of transition into and out of roles over the life span has been a topic of interest to role theorists. Several factors influencing role transitions have been examined. Cottrell (1942) hypothesized that the opportunity to "practice" or vicariously rehearse the roles of others before being in a situation where it was appropriate to actually behave in that role facilitated later adjustment into the role. Experiences caring for children or taking courses in parenting might, for example, ease the transition to parenthood.

Another factor is the degree to which there is a set of explicit definitions of the behavior expected in a new role, that is the degree of role clarity (Burr, 1973). The aged in American society are an example of a group whose role is not well defined. Lack of clarity in this situation compounds the difficulties of adjusting to this status.

A third factor is the degree of compatibility with other roles that the new role presents. Role incompatibility is evident when a woman must exhibit leadership skills in her

job, yet use submissive behaviors in her role as wife. Another factor affecting the adjustment to roles is the degree to which the capabilities of the individual meet the skill requirements of the new role. Role competence, as alluded to earlier, is posited to be conducive to a heightened sense of positive self-identity. Factors affecting role adjustment were presented in Chapter I and they serve as the basis for some of the research hypotheses for this study (see section on Theoretical Framework and Hypotheses).

Since role theory states that prior role enactments, compatibility of roles, role competence, and role clarity are facilitative of role adjustment, it is appropriate to suggest that adjustment to a role transition such as widowhood would be a very different experience for men and women based on the different roles they have assumed. Sex is viewed here as an ascribed social status to which a number of roles are assigned the sexes in complementary fashion. The differences in sex roles provide an explanation for differences in the adjustment to role transitions in late life.

Social exchange theory. In addition to sex differences in adjustment to role transitions such as widowhood, this study hypothesized that some variables would have a differential impact on the subjective well-being of the widowed according to sex. These differences are believed to stem from different reward values that come from conformity to sex role norms. Social exchange theory seems to offer an understanding of the

relationship between the value of activities and their impact on social processes and on subjective well-being.

Theories of social exchange have combined principles of economics, psychology, and sociology in order to explain interpersonal behavior and group functioning. The formulations of Homans (1961), Thibaut and Kelley (1959), and Blau (1964) are basic to social exchange theory. Social behavior is defined "as an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons" (Homans, 1961, p. 24). Human beings are seen as reward-seeking and cost-avoiding individuals. In their interactions they attempt to maximize rewards and to minimize costs to obtain the most profitable outcomes (Simpson, 1972). Rewards are satisfactions a person receives for performing an activity. They serve as reinforcers of behavior and can be derived from the intrinsic benefits of the interaction itself. Costs, on the other hand, are any "intrinsically punishing experiences undergone, or an alternative reward forgone, in order to get a reward" (Simpson, 1972, p. 4). Individuals will voluntarily engage in behavior only as long as the rewards received from the interaction are greater than the costs involved in engaging in the behavior. In evaluating the outcomes of social exchanges, the terms "profit" or "goodness of outcome" are used to indicate the net reward when costs are subtracted from the rewards gained from the interaction.

Principles of satiation or diminishing marginal utility operate to influence the rewarding value of certain behaviors in exchange. The value of activity is defined as the degree of reinforcement or punishment an individual receives per unit of activity. Value generally declines the more units one receives.

Another concept central to social exchange theory is that of investments. Investments are defined as

a person's evaluated past activities in the group, and also his past activities outside the group and his social characteristics such as sex, age, and ethnic group classification if these are evaluated by the group. (Simpson, 1972, p. 4)

An individual expects to receive rewards in proportion to his investments whether they are ascribed or achieved in nature.

Sentiments are the feeling states of individuals. Positive sentiments are aroused when individuals receive the rewards they expect from engaging in an activity. Negative sentiment is expressed, for example, when individuals see persons with similar investments making larger profits than theirs. Such group phenomena as influence, power, competition, cooperation, status, norms, esteem and justice are explained with social exchange conceptualization.

From the previously defined concepts, Homans has stated some propositions of social exchange, three of which relate to reward properties.

(1) If in the past the occurrence of a particular stimulus situation has been the occasion on which a man's activity has been rewarded, then the more similar the present stimulus situation is to the past one, the more likely he is to emit the activity, or some similar activity, now. (Homans, 1961, p. 53)

(2) The more often within a given period of time a man's activity rewards the activity of another, the more often the other will emit the activity. (Homans, 1961, p. 54).

(3) The more valuable to a man a unit of activity of another gives him, the more often he will emit activity rewarded by the activity of the other. (Homans, 1961, p. 55)

As stated by Homans, individuals tend to repeat more often behaviors that have been rewarded in the past and those which bring valued rewards. Sex-typed behaviors represent in social exchange terms the product of differential rewards. Girls have been rewarded more highly for feminine behaviors and boys for traditional masculine role behaviors. These behaviors are reinforced and maintained through a normative system of sex role expectations.

Reinforcement of sex roles implies different reward values for sex-typed activity. Men, for example, are rewarded more than women for exhibiting bravery and are more negatively sanctioned for cowardly behaviors. Likewise, women receive greater negative sanctions for not visiting with friends and relatives than men since social activities are a part of female role expectations.

Social exchange theorists have tied the outcomes of exchanges to human emotional states. People believe that the rewards to individuals in interactions should be proportional

to their costs, and their profits proportional to their investments. This is the principle of distributive justice (Homans, 1961). When fairness in exchange is not realized, frustration and ultimately anger result. On the other hand, when profit is obtained in interaction, positive emotional responses are experienced. Social exchange theory then suggests that the more rewarding the interaction, the greater the profit that can be realized, and subsequently, the greater the positive feelings produced. In examining the differential reward values of sex role activity for men and women, it seems legitimate to suggest that activities related to sex role would have differential value in effecting positive states in men and women. Women are expected to be the "kin-keepers" and to direct social activities in families. If women receive greater rewards than men for social activities and therefore greater positive feelings for carrying out social roles, then in widowhood, it is anticipated that social participation will continue to be an important source of reinforcement and consequently will have a greater effect on the subjective well-being of widows than widowers. Likewise men are more likely to find the adequacy of their income closely associated with their subjective well-being in the widowed status, since income is closely linked with the provider role and may therefore have even greater reward value for men than for women. Hypotheses based on these postulations were presented in Chapter I (see Theoretical Framework and Hypotheses).

Subjective Well-Being

Conceptual and Theoretical Background

Social gerontologists have devoted much research effort to the subjective well-being of the elderly. A strong interest in what constitutes "successful aging" is a major reason for the copious research effort put forth in this area (Adams, 1971). A variety of concepts have been used to denote what in this study is termed subjective well-being. Subjective well-being is used here as an umbrella term to include such concepts as life satisfaction, morale, personal and social adjustment, psychological well-being, contentment, and extent of happiness or unhappiness. These terms have been defined differently across studies, yet Larson (1978) noted that there is a common theme running through these concepts in that they purport to measure the "general affective experience of older persons in terms of a positive-negative continuum" (p. 109).

Until Cavan, Burgess, Havighurst, and Goldhamer's (1949) initial attempt to conceptualize personal adjustment, early studies of subjective well-being were atheoretical in nature. Many of the early studies were concerned with the personal and/or social adjustment of older people (Cavan et al., 1949; Conkey, 1933; Folsom & Morgan, 1937; Landis, 1942). Adjustment was conceptualized as a "reorientation of the attitudes and behavior of the person to meet the requirements of a changed situation" (Cavan et al., 1949, p. 10). This reorientation to

aspirations and expectations in line with societal expectations was seen as necessary to achieve personal satisfaction in late life. It was recognized early that older persons had few role prescriptions and less meaningful functions in modern society. Thus, how persons reacted to these changed life circumstances was an important concern. Cottrell's (1942) conceptualization of adjustment focused on the transition into and out of roles and was indexed according to "the amount of tension, anxiety, and frustration generated by the attempt to discover and play a given role" (p. 617).

Rosow (1963) noted that many conceptions of adjustment whether stated or not have been based on an equilibrium model closely aligned with tension-reduction models used in personality theory. A basic assumption is that there is a constant strain toward balance or harmony between the internal and outside world of the individual.

Despite these initial efforts, many studies continued to limit conceptualization of subjective well-being to operational definitions. Britton (1963) for example, described a well-adjusted person as

one who is living a life which is reasonably satisfactory to himself and which meets the needs of society. This means that he is healthy and that he is a participant in a variety of activities, that he has both personal and specialized contacts with others, and that these interpersonal relations bring him satisfaction. It includes also the notion that the individual feels reasonably self-confident and adequate in initiating action and in intellectual functioning. He maintains a degree of interdependence and self-sufficiency and, as viewed by others, he functions appropriately and effectively. (Britton, 1963, p. 61)

The above interpretation of subjective well-being implies both an attitudinal and a behavioral dimension of the concept. Because behavioral conceptualizations of subjective well-being have been criticized for their value biases, most definitions have limited their focus to the internal states and attitudes of the individual (Larson, 1978). Livson (1962), for example, included the dimensions of attitude toward growing old, attitude toward current life situation, and changes in adjustment in recent years. Similarly, Neugarten, Havighurst, and Tobin (1961) used a definition that conceptualized well-being in strictly internal and attitudinal states:

An individual was regarded as being at the positive end of a continuum of psychological well-being to the extent that he: (a) takes pleasure from the round of activities that constitute his everyday life; (b) regards his life as meaningful and accepts resolutely that which life has been; (c) feels he has succeeded in achieving his major goals; (d) holds a positive image of self; and, (e) maintains happy and optimistic attitudes and mood. (p. 137)

Many of the definitions of well-being have used other terms to define the concept such as in the following example:

If the individual appeared very unhappy and discontented with life, expressed only dissatisfaction with associates and environment, and indicated a desire for death, he was judged to be poorly adapted to old age. If he evidenced a strong interest in life and current problems, appeared happy and contented with his lot, whatever it was, he was judged to be well adapted to old age. (Conkey, 1933, p. 388).

Happiness, well-being, and contentment have been terms used most frequently to define mental health (Jahoda, 1958).

Some attempts have been made to make distinctions between the various well-being concepts and to specify those that can be appropriately regarded as synonyms, yet these efforts have been meager (Britton, 1963; Britton & Mather, 1958; Graney & Graney, 1973; Rosow, 1963). Inadequate conceptualization and value and cultural biases inherent in well-being definitions remain prominent in the literature. Consequently, recent reviews of the literature showed that a variety of well-being terms are frequently found and are often used synonymously (Adams, 1971; Larson, 1978). For the purposes of the present investigation, unhappiness was viewed as one dimension of subjective well-being.

In summary, over the last 40 years attempts have been made to conceptualize subjective well-being. Yet the linkage of theory to definitions of well-being remains weak. The variety of well-being terms are conceptually vague and most of them have been defined solely on the basis of an operational definition with little attention given to conceptual clarification. Such terms as life satisfaction, mental health, psychological well-being, morale, adjustment, happiness-unhappiness have been used interchangeably in the literature. Although initial efforts to make distinctions between these terms have been attempted, current reviews treat them as roughly synonymous concepts. Definitions of subjective well-being have been criticized for their implicit value judgements and cultural relativity. Presently, most concepts of

subjective well-being specify some self-perceived attitudinal or internal state of the individual along a positive-negative continuum.

Measuring Subjective Well-Being

A variety of measures of subjective well-being have been constructed. Some of the most commonly used measures are presented with special attention given to measures of happiness and unhappiness.

In general, the early studies of social and personal adjustment in the later years used various activity and attitude measures (Conkey, 1933; Folsom & Morgan, 1937; Landis, 1942). Cavan et al. (1949) devised two inventories for the assessment of personal adjustment including an attitude and a behavioral inventory. The Attitude Inventory (Cavan et al., 1949) has been used more frequently than the Activities Inventory (Cavan et al., 1949) because it appears to have more in common with other well-being measures and definitions (Larson, 1978). The Attitude Inventory includes 70 items covering satisfaction in relation to several areas of life, e.g., friends, family, work, recreation, general happiness, and feelings of usefulness. Moderately high reliability and validity measures have been reported (Cavan et al., 1949; Larson, 1978). Both inventories and similar measures (Havighurst, 1957) have been criticized for representing biased or idealized ideas of satisfactory adjustment. Rosow (1963) noted that adjustment in late life

represents a dilemma for operationalization since there are no normative standards against which to compare older adults. Therefore, criteria for adequate adjustment have been arbitrary. Despite criticisms, the Attitude Inventory and its adaptations continue to be used as measures of subjective well-being (Hansen, Yoshioka, Taves, & Caro, 1965; Maddox & Eisdorfer, 1962; Pihlblad & McNamara, 1965).

Since the earlier studies of adjustment, the trend generally has been to view subjective well-being in terms of internal states of the individual omitting measures of activity, external states, or behavior. This may denote a conceptual advance in viewing external circumstances as correlates rather than as dimensions of subjective well-being. Larson (1978) observed that well-being measures represent a range of conceptualizations, some being unidimensional in nature and others representing a multidimensional perspective.

Unidimensional concepts of subjective well-being have been used by Kutner, Fanshel, Togo, and Langner (1956) in the development of the 7 item Kutner Morale Scale, the life satisfaction scale of the Cornell study of retirement (Thompson, Streib, & Kosa, 1960), the Havighurst and Albrecht (1953) scale of happiness, and single item measures of subjective well-being (Kivett, 1976; Palmore & Luikart, 1972; Spreitzer & Snyder, 1974). Palmore and Luikart (1972) used a single-item Cantril Ladder (Cantril, 1965) to assess global life satisfaction. This technique has the advantage of being

self-anchoring; however, no reliability or validity measures are available.

Multidimensional measures of subjective well-being are represented by the Life Satisfaction Index and its alternative forms (Neugarten et al., 1961), the Philadelphia Geriatric Morale Scale (Lawton, 1972), and the Bradburn Affect Balance Scale (Bradburn, 1969). Larson (1978) noted that these measures differ in the number of items, the length of time the respondent is assessing, and in whether well-being is based on a comparison to others, one's past experience, or one's conception of how things should be.

One of the most popular multidimensional instruments is the Life Satisfaction Index form A (LSIA), a 20-item scale assessing life satisfaction from the individual's own point of reference (Neugarten et al., 1961). Validity correlations in the .50's and low .60's and reliability coefficients in the high .70's have been reported. Questions on the LSIA attempt to measure life satisfaction which is operationalized as five components: zest for life versus apathy, resolution and fortitude, congruence between desired and achieved goals, self-concept, and happiness. A number of revisions of the LSIA have been suggested including removal of some weak items and the use of a three-point scale (Adams, 1969; Wood, Wylie, & Sheafor, 1969).

Studies have been undertaken to discover the underlying dimensions of subjective well-being primarily through the

use of factor analytic techniques (Cumming, Dean, & Newell, 1958; Pierce & Clark, 1973; Britton & Mather, 1958; Veroff, Feld, & Gurin, 1962). The variety of items used in these studies, however, has not made findings across studies comparable.

The Philadelphia Geriatric Center Morale Scale (PGC) (Lawton, 1972, 1975) is one such scale that has been devised with the use of factor analytic techniques. A 17-item scale representing three consistently reproduced factors--Agitation, Attitude Toward Own Aging, and Lonely Dissatisfaction--is the most recent revision. On the whole the PGC scale has been shown to be reliable and structurally invariant across several dimensions in the original and three new samples of elderly persons (Morris & Sherwood, 1975).

Extent of unhappiness. The measure of subjective well-being that was used in this study is a single item measure of the extent of unhappiness that respondents self-report. It is appropriate at this point to highlight some of the advantages and limitations associated with the use of unhappiness as a measure of well-being and to review the prevalence of its use in the well-being literature. Unhappiness and happiness are viewed as opposite ends of a continuum (Cameron, 1975) and therefore this subsection will include both terms in the discussion of the literature. It is acknowledged that these terms may carry different connotations which will affect response patterns.

Extent of unhappiness and happiness have been used as concepts that are synonymous with subjective well-being and also as operational measures of subjective well-being. The terms, for example, have been used interchangeably with adjustment and life satisfaction (Bradburn & Caplovitz, 1965; Folsom & Morgan, 1937; Kuhlen, 1948; Landis, 1942; Veroff et al., 1962). Rosow (1963) observes that personal happiness is one of two criteria (along with social participation) which has dominated the field as a measure of adjustment. Both the National Opinion Research Center (Univ. of Chicago) and the Survey Research Center (Univ. of Michigan) have used an "extent of happiness" item in questionnaires in order to measure subjective well-being. A measure of happiness has also been obtained through these questions:

Taking all things together, how would you say things are these days--would you say you are very happy, pretty happy, or not too happy? (Bradburn & Caplovitz, 1965; Pierce & Clark, 1973; Spreitzer & Snyder, 1974)

All in all, how much unhappiness would you say you find in life today? Almost none, some, a great deal. (Kutner et al., 1956, p. 49)

My life could be happier than it is now.
I am just as happy as when I was younger. (Cavan et al., 1949; Havighurst & Albrecht, 1953; LSIA, Neugarten et al., 1961)

Graney (1975) noted also that most criteria of well-being include happiness items.

Use of these two concepts [morale and adjustment] (and others) has involved implicit or explicit assumptions that these ways of conceptualizing well-being were either synonymous with happiness or that happiness was a major factor in them. (p. 701)

Graney noted, however, that these assumptions may not be justified.

Contrary to Graney's (1975) concern, factor and cluster analytic techniques have shown the importance of happiness or unhappiness to the construct validity of well-being scales. Pierce and Clark (1973) found that the item, "All in all, how much happiness would you say you find in life today" had the second highest factor coefficient (.73) on a cluster of items named Depression/Satisfaction. The item also significantly distinguished responses by a group of elderly psychiatric patients from a random community sample of older persons ($p < .001$). Similarly, Veroff et al. (1962) found "extent of unhappiness" represented a general factor of adjustment, but the association differed for males and females. Total attitude scores on Cavan et al.'s Attitude Inventory (1949) correlated .84 with the happiness subscale on the inventory.

The obvious face validity of happiness is one reason for its wide use as a measure of subjective well-being (Cavan et al., 1949; Wilson, 1967). While face and construct validity have been demonstrated for the concept of happiness, concurrent validity is not well established. In one such effort, Wilson (1967) noted that judges' ratings of subjective well-being were weakly correlated with self-ratings of avowed happiness. Harry (1976), on the other hand, provided a strong argument for the use of a single item happiness measure and its concurrent validity:

. . . we believe it [happiness item] has great validity. It correlates with those variables with which it "ought" to correlate e.g. income, marital status, social participation, marital satisfaction (Bradburn, 1969). Also in studying nonclinical populations we suggest that it would be very difficult to come up with an alternative and valid multiple-item measure of happiness with which our item did not correlate very highly and for which our item would not be the defining "marker" variable. (p. 291)

Happiness items have demonstrated good reliability. Correlations in the .70's and .80's have been reported (Wilson, 1967).

The subjective nature of happiness-unhappiness poses several limitations in attempting to quantify and measure this affective state. In the first place, there is no way of knowing if persons have accurately responded. The desire to give a positive appearance or one that is socially approved introduces a bias in response. Secondly, happiness may not be defined in the same way across subgroups of the population which contributes to comparisons of limited value (Graney & Graney, 1973). Limitations have been pointed out by Rosow (1963). He criticized happiness as a valid concept for scientific use because it can not be ensured or built into a social system and because the concept is based on middle class value biases. His criticisms and those of Graney and Graney (1973), however, apply equally to all of the subjective well-being concepts used in the literature.

In summary, a variety of self-report measurements have been devised to assess the subjective well-being of older people. Cavan et al.'s (1949) Attitude and Activites inventories were some of the first to provide checks for validity and reliability. Since that time most instruments have

limited their scope to an assessment of internal states of the individual as opposed to behavioral measures. These instruments have included unidimensional as well as multi-dimensional constructs. Well-being measures suffer from the disadvantages of being interpreted differently across subgroups of the population and from the tendency of respondents to give socially desirable answers. There are no normative standards against which to evaluate well-being, thereby making measures arbitrary and value based. High intercorrelations between measures and similarities in associations between well-being measures and social variables led Larson (1978) to conclude that the various instruments of subjective well-being do measure some shared construct of subjective well-being. The subjective well-being instruments presented in this section represent some of the most popular measures used in studies examining various correlates of subjective well-being among the older population. Unhappiness-happiness items have been widely used as operational measures of subjective well-being. They have demonstrated high construct and face validity and high reliability as measures of subjective well-being.

Theoretical Background to Correlates of Subjective Well-Being

Several theoretical frameworks have provided a basis for examining correlates of subjective well-being and are discussed briefly before turning to the research on well-being.

Activity theory emerged in the early fifties (Havighurst & Albrecht, 1953) and in the late fifties Disengagement theory evolved out of the Kansas City Study of Adult Life (Cumming & Henry, 1961). Both theories have provided explanations about life satisfaction of the elderly but they have made little contribution to conceptual refinement.

The Activity theory of aging which purports a positive relationship between the degree of activities and life satisfaction of the older person implies that optimal aging involves activity on high psychological, physiological, and social levels on the part of older persons. Lemon, Bengtson, and Peterson (1972) explicitly set forth a formal axiomatic statement of Activity theory couched within the larger perspective of an interactionist framework. The concept of role is central to their formulation. They postulated that the loss of activity in late life stems from a loss of social roles which in turn leads to a reduction in the amount of role support one receives. Since the self-concept of individuals is built upon the composite of role identities they have acquired during their lifetime and is sustained through interaction with others, the reduction in role support constricts the image individuals have of themselves. Lemon et al. further posited that satisfaction with life is contingent upon satisfying the various role identities that individuals have acquired. Thus, when roles are reduced, and self-concept lowered, life satisfaction is also lowered. As a result,

high life satisfaction seems most likely when individuals have sufficient involvement with others.

Disengagement theory posits a functional relationship between the individual and society. Since society must provide replacements for its members, older persons are expected to withdraw both socially and psychologically when they can no longer contribute productively. The disengagement process is considered a universal and inevitable event necessary for the smooth functioning of society (Cumming & Henry, 1961). It is hypothesized that life satisfaction is higher for older persons when they withdraw.

Several alternative theories of successful aging have appeared since the flurry of theory development in the fifties. One such theory is the Continuity theory which states that continuity in lifestyle is predictive of high life satisfaction. This theory recognizes the variation in life patterns of older individuals and postulates that persons can be high in life satisfaction despite very different lifestyles. Sudden changed circumstances such as role losses or declines in health are believed to create situations that lower subjective well-being.

A recent theory that has yet to be fully developed and empirically tested is Gubrium's (1972) Socioenvironmental theory. This explanation of subjective well-being is based on two interrelated concepts: (a) environmental effects, such as social homogeneity, residential proximity, and local

protectiveness, and (b) personal resources influencing behavior flexibility such as health, solvency, and education. Both the personal context and the social circumstances of the individual must be evaluated in order to determine general morale. Older persons who live in age-heterogeneous environments need the resources to cope with a greater variety of demands than older adults in an age-homogeneous environment. The behavioral expectations and demands placed upon someone in a retirement home, for example, would require fewer personal resources and coping strategies than the older adult living in the city among diverse age groups. The match of personal resources with environmental demands is seen by Gubrium as the critical determinant of subjective well-being.

In recent years, Activity, Disengagement, Continuity, and Socioenvironmental theories of aging have provided grounds for examining a variety of correlates of well-being. Researchers have examined the association of such correlates as activity and social participation rates to levels of well-being. Personal resources such as health, age, and socioeconomic status have been examined for their direct effects on life satisfaction and for their indirect influences on activity patterns and role change. Crisis and role change as reflected in widowhood, divorce, separation, and retirement are thought also to disrupt the continuity of lifestyle and to have an impact on subjective well-being. These findings are discussed in the following section.

Correlates of Subjective Well-Being

Following the organizational scheme of Larson (1978), the following review discusses major correlates of subjective well-being of older adults grouped under these headings: health and physical well-being, socioeconomic status, age, sex, race, employment status, transportation and residence, activity and social participation, and marital status. Included under marital status is a discussion of correlates of widowhood and subjective well-being and a presentation of the literature on sex differences among the widowed. Studies of the older population that have introduced control variables or used multivariate statistical techniques are highlighted in the discussion.

Health and physical well-being. Consistently, health has shown a positive association with measures of subjective well-being (Atchley, 1977; Bultena, 1969; Bultena & Oyler, 1971; Bull & Aucoin, 1975; Cavan et al., 1949; Clark & Anderson, 1967; Cutler, 1973; Edwards & Klemmack, 1973; Jeffers & Nichols, 1961; Kutner et al., 1956; Larson, 1975, cited in 1978; Maddox & Eisdorfer, 1962; Sauer, 1977; Sherwood & Nadelson, 1972; Spreitzer & Snyder, 1974). Persons who perceived themselves as healthy were more likely to feel content and satisfied with their lives. Self-ratings of health status appeared to have a stronger association with well-being than either physician ratings of respondents' health, number of illnesses, or number of days hospitalized (Atchley, 1977;

Maddox & Eisdorfer, 1962; Palmore & Luikart, 1972). Self-rated health accounted for nearly two-thirds of the explained variance in life satisfaction in one study (Palmore & Luikart, 1972) and in other multivariate studies a significant amount of variance was also accounted for (Edwards & Klemmack, 1973; Spreitzer & Snyder, 1974).

Kutner et al. (1956) found a confounding association of health with socioeconomic status. However, when controls were introduced the association between health and well-being remained strong (Cutler, 1973; Edwards & Klemmack, 1973; Larson, 1975, cited in 1978; Spreitzer & Snyder, 1974). Bultena (1969) and Kutner et al. (1956) found the association of health and well-being to be greater for those of low socioeconomic status than for higher socioeconomic groups. It appears that when social ranking is low, health has a more crucial impact on well-being.

Larson (1978) in a review of the well-being literature estimated that the independent association of health to subjective well-being ranged from $r = .20$ to $r = .40$. The analysis of a recursive path model revealed significant direct effects of health on life satisfaction and significant indirect effects on life satisfaction via the effect on activity levels (Markides & Martin, 1979). The sample for this study consisted of 141 men and women 60 years and over who resided in four low-income census tracts in San Antonio, Texas. Health proved to have the strongest total (direct

and indirect) effect on the life satisfaction of women and the strongest total effect second to education for men (Mar-kides & Martin, 1979). The path model was able to explain 50% of the variance in life satisfaction ratings for men ($R^2 = .496$) and 40% in the females' life satisfaction ($R^2 = .396$).

Socioeconomic status. Virtually all studies of well-being have examined the effects of socioeconomic status. Some studies include occupational, educational, and income measures or variations of these three elements of socioeconomic status. The literature reports a positive association between socio-economic status and subjective well-being (Bradburn & Caplovitz, 1965; Bultena, 1969; Cavan et al., 1949; Clark & Anderson, 1967; Hansen et al., 1965; Kutner et al., 1956; Louis Harris and Associates, 1975; Medley, 1976; Neugarten et al., 1961) even when the relationship was controlled by such variables as health, employment, or marital status (Bull & Aucoin, 1975; Cutler, 1973; Edwards & Klemmack, 1973; Larson, 1975, cited in 1978).

No one component of socioeconomic status seems to be a better predictor of life satisfaction than another (Larson, 1978). Consistently, income of respondents has had significant associations with well-being measures (Cutler, 1973; Edwards & Klemmack, 1973; Pihlblad & McNamara, 1965; Spreitzer & Snyder, 1974). Educational level also has shown significant associations with subjective well-being but these correlations have diminished with the introduction of control

variables (Edwards & Klemmack, 1973; Larson, 1975, cited in 1978; Markides & Martin, 1979). It has been suggested that a curvilinear relationship may exist between education and well-being (Clark & Anderson, 1967), since those at the middle ranges have reported the highest satisfaction (Campbell, Converse, & Rodgers, 1976; Clark & Anderson, 1967).

Income was found to be the strongest predictor of life satisfaction and the highest covariate of three socioeconomic variables in an analysis of life satisfaction of middle-aged and elderly respondents (Edwards & Klemmack, 1973). This analysis was able to account for 24.35% of the explained variance (using 22 independent variables which were grouped under six major categories). Findings from their study suggested that in considering any causal model for life satisfaction, it should be recognized that socioeconomic status has both direct and indirect effects on satisfaction. Its indirect effects appear to be through informal participation and perceived health which operate as intervening variables.

The path models of Markides and Martin (1979) showed differential effects for income and education on life satisfaction according to sex. While education played a minor role in the life satisfaction of females (β [path coefficient] = .06), it had a significant role in the life satisfaction of males (β = .38). The strong effects of education on males' life satisfaction may be related to the occupational role that education allowed men to acquire. Thus high education may

have led to successful occupational careers creating satisfaction with general life circumstances for men. Income had strong indirect effects on life satisfaction via activity for both males and females.

Age. Advancing age has been related to declines in subjective well-being of elderly persons (Clark & Anderson, 1967; Gurin, Veroff, & Feld, 1960; Kutner et al., 1956; Louis Harris & Associates, 1975; Riley & Foner, 1968). These declines, however, are related to other problems associated with advancing age rather than age per se. For example, when controls were introduced to account for decreased health, widowhood, loss of friends, and decreased activity, no relationship was found between age and well-being (Edwards & Klemmack, 1973; Kivett, 1976; Larson, 1975, cited in 1978; Palmore & Luikart, 1972). Larson (1978) cautioned that the effects of birth cohort must be considered in examining differences of age in cross-sectional studies. Longitudinal data indicate, however, that subjective well-being is relatively stable over the adult years (Campbell et al., 1976).

Sex. Generally the literature shows no sex differences in subjective well-being (Atchley, 1977; Cavan et al., 1949; Kutner et al., 1956; Louis Harris & Associates, 1975; Lawton, 1972; Neugarten et al., 1961). There are, however, significant sex differences in the importance that some variables played in determining the life satisfaction of older men and women (Markides & Martin, 1979). As pointed out earlier, income and education play a major role in the life satisfaction

of men but not of women (Markides & Martin, 1979). Important sex differences have been noted when marital status is controlled. These studies will be discussed under marital status.

Race. There is evidence that when controls which typically differentiate blacks and whites are introduced, race does not appear to influence life satisfaction (Clemente & Sauer, 1974; Spreitzer & Snyder, 1974). Clemente and Sauer (1974) found that when controls were introduced for sex, socioeconomic status, health, and degree of social participation, virtually no difference appeared between the morale of black and white older adults. The sample was composed of 721 black and 211 white residents randomly selected from a low income area of Philadelphia. Similarly, race figured negligibly in the prediction of life satisfaction among a national probability sample of older adults where controls were used (Spreitzer & Snyder, 1974). One exception to these findings is a study by Kivett (1976) who found blacks less likely to report unhappiness than their white counterparts even after controls for socioeconomic status and other demographic variables were introduced.

Employment status. Although studies show a positive relationship between well-being and employment, it is difficult to show that retirement has an independent effect on well-being when such factors as health and financial need are closely tied to retirement decisions. Jaslow (1976) and Thompson

(1973) found a slight but significant positive relationship between employment and life satisfaction after controls for health, physical disability, age, and income were introduced. Larson (1978) noted that a negative relationship between employment and well-being seems to hold only for certain groups of the population of older people. For example, declines in well-being have been noted among men and women who had been reluctant to retire or among persons who were unable to find anything to do following retirement (Thompson et al., 1960). Also, the very old and men with physical disabilities are two groups of retirees found to decline in well-being upon retirement (Thompson, 1973). In contrast, longitudinal data have shown no differences in well-being before and after retirement (Streib & Schneider, 1971).

Transportation and residence. The availability of transportation has been found to have a significant association with feelings of well-being (Cutler, 1972; 1975). Greater declines in well-being were noted between those who were without transportation than those with transportation even when controls for income, subjective health, age, sex, and location of residence were controlled. The association was strongest for persons living further than 1/2 mile from the center of town and more acute for those with low SES and poor health, living over 1/2 mile from town.

In several studies, findings have indicated no differences in the subjective well-being of urban and rural residents (Bull

& Aucoin, 1975; Cavan et al., 1949; Louis Harris & Associates, 1975; Sauer, Shehan, & Boymel, 1976).

Activity and social participation. The relationship of activity and social participation to subjective well-being has been frequently investigated with many different study populations and a variety of participation indicators. Larson (1978) observed that on the whole, positive associations between activity and well-being have been found. Correlations have ranged from $r = .00-.30$ when activity indicators have been correlated with the LSIA.

When examining more specific kinds of social participation the results are less clear. Four studies found a significant positive association between informal social activities and life satisfaction (Edwards & Klemmack, 1973; Lemon et al., 1972; Pihlblad & Adams, 1972; Smith & Lipman, 1972). Informal activity was measured by the frequency of non-familial social participation such as visiting in the homes of friends and neighbors. Palmore and Luikart (1972) did not find any association between informal activity and life satisfaction when using a Cantril Ladder measure. Their study of 502 persons 45-69 used a broader range of activity items, e.g., church meetings, sports events, volunteer work. Lemon et al. (1972) investigated the relationship of activity and subjective well-being with 411 randomly selected

members of a retirement community. Among a variety of activity indicators used, only one, informal activity with friends, was significantly associated with life satisfaction ($\Gamma = .21, p < .05$). Substantively, the level of association does not lend strong support to activity theory.

Findings have been consistent with regard to family interaction and well-being; generally no association has been found (Edwards & Klemmack, 1973; Lemon et al., 1972; Martin, 1973; Pihlblad & Adams, 1972). Within the marital dyad, however, the quality of the marital relationship has been found to be significantly related to morale (Lee, 1978).

Important rural-urban differences have been noted in the relationship of formal social activity to subjective well-being (Larson, 1978). The formal social participation of rural and small town groups has been found to be positively associated with subjective well-being (especially church activity and club participation) even when socioeconomic status is controlled (Edwards & Klemmack, 1973; Palmore & Luikart, 1972; Pihlblad & Adams, 1972; Pihlblad & McNamara, 1965). The relationship between formal social activity and subjective well-being does not appear to hold for urban populations (Bull & Aucoin, 1975; Cutler, 1973; Lemon et al., 1972). Bull and Aucoin (1975) studied 97 randomly selected older adults of middle income who lived in Kansas City. The data indicated that health and status characteristics were more important predictors of life satisfaction than participation in voluntary

associations. This relationship disappeared when the effects of health and socioeconomic status were controlled. Likewise, no relationship between formal activity and subjective well-being was found by Lemon et al. (1972) when controls were introduced ($\text{Gamma} = .08$).

High social status and good health seem to reduce the importance of social interaction to well-being. Smith and Lipman (1972) found that frequency of interaction with peers had no association with life satisfaction (LSIA) for persons with no health or income constraints. When controls for health and socioeconomic status were introduced, the relationship of formal social activity and life satisfaction was much weaker (Bull & Aucoin, 1975; Cutler, 1973; Edwards & Klemmack, 1973; Riley & Foner, 1968). Several other studies have shown that general activity levels and well-being were less strongly correlated with high socioeconomic groups (Kutner et al., 1956; Lemon et al., 1972). Bultena and Oyler's study (1971), however, did not support this finding.

The activity and social participation studies have been criticized for not including measures of the quality of relationships and the degree of intimacy in relationships (Conner, Powers, & Bultena, 1979; Lowenthal & Haven, 1968; Rosow, 1963). A study by Lowenthal and Haven (1968), for example, showed that the presence of a confidant relationship was a better predictor of life satisfaction than an index of social interaction and number of roles held. The relationship

of intimacy and the quality of relationships to subjective well-being is an area for needed research (Conner et al., 1979).

Another weakness in studies of activity and participation is the lack of longitudinal research. This void is especially important since some persons have suggested that differential participation rates may be lifelong patterns reflecting differences in personality and lifestyle (Rose, 1964; Rosow, 1963). Retrospective reports by Bultena (1969) and Havighurst et al. (1968) have shown significant associations between life satisfaction and declines in activity, although these reports were subject to validity problems. Larson (1978) summed up the status of the activity and well-being literature as showing indications of a causal relationship but not conclusively demonstrating this.

Marital status. The relationship of marital status to well-being is not entirely clear. On the whole, married persons express more positive well-being than nonmarried persons (Berardo, 1967; Bradburn & Caplovitz, 1965; Hansen et al., 1965; Harvey & Bahr, 1974; Kutner et al., 1956; Pihlblad & McNamara, 1965 (men only); Pihlblad & Adams, 1972; Wilson, 1967). Spreitzer and Snyder (1974) found this relationship to remain when socioeconomic status was controlled. Two exceptions to the finding of the relationship between marital status and well-being were studies by Palmore and Luikart (1972) and Edwards and Klemmack (1973). They found that when

controls for socioeconomic status and other variables were introduced, marital status was not a significant predictor. In examining a path model of causal relationships to well-being, Elwell and Maltbie (1978) found that widowhood had a direct negative effect ($p < .05$) on the life satisfaction of both men and women. This study is discussed in more detail later. Atchley (1977), in contrast, did not find widowhood to have either a direct or an indirect effect upon life satisfaction. Studies which differentiate between the unmarried statuses have usually found singles' well-being to be roughly equivalent to the married while widowed, divorced, and separated older adults tend to have lower well-being (Kutner et al., 1956; Pihlblad & Adams, 1972).

Only recently has the social adjustment and well-being of the widowed engaged the interests of researchers. In general the widowed who maintain high levels of interaction have been observed to have greater life satisfaction than others (Arling, 1976; Brown, 1973; Pihlblad & Adams, 1972). Higher morale has also been found among the widowed who had higher friend and organizational involvement (Pihlblad & Adams, 1972). Morgan (1976) found contact with family to be significantly related to morale. There appears, however, to be more support for the unimportance of family relationships to morale (Arling, 1976; Brown, 1973). Poor health (Berardo, 1967; Morgan, 1976), low education (Berardo, 1967; Lopata, 1973), age, and rural versus urban residence (Berardo, 1967) have been observed to lower the life satisfaction of the widowed.

Important sex differences have been found to be related to the subjective well-being of the widowed (Barrett, 1978; Berardo, 1967; Elwell & Maltbie, 1978; Kutner et al., 1956; Pihlblad & Adams, 1972; Pihlblad & McNamara, 1965). Berardo (1967, 1968) first provided strong evidence of the differential vulnerabilities of widowers and widows. His objective was to examine the existing social conditions under which the aged widowed lived and to identify some crucial sociological variables associated with positive adaptation to widowhood. The sample was taken from an existing data set collected in 1956. The original sample consisted of 549 randomly selected persons 65 years of age or older who were residing in Thurston County, Washington. Included in the sample were 181 widows and 44 widowers. A number of demographic and sociological variables were investigated and descriptive statistics were used. A major conclusion of the study was that widowers suffered the greater adjustment problems and declines in level of living compared to widows. With the exception of a relatively better economic situation, the widowers in the sample had poorer health; greater problems with loneliness, isolation, and free time; greater declines in activity; and less frequent interaction with kin and friendship groups than widows.

Barrett (1978) examined comparable groups of widows and widowers, relative to a group of married controls. A total sample of 379 married and widowed persons 62 years of age

and over were randomly selected and interviewed. The sample consisted of one and a half percent of all noninstitutionalized persons meeting the age criterion who resided in each census tract of a large midwestern city. Sex differences were more numerous in the widowed sample than in the married control group and almost always favored the women. When controls for age, number of children, work status, education and race were introduced the significant differences between men and women on life satisfaction and loneliness disappeared, but differences were noted on nine additional variables (Barrett, 1978).

Elwell and Maltbie (1978), in the second phase of their study, developed a path model to determine which demographic and social factors interact with widowhood status with respect to social participation, group affiliation, and total life satisfaction. A cumulative data set from the National Opinion Research Center (general surveys, 1972 through 1976) was used. The widowed sample included 421 widows and 109 widowers 60 years of age or older. The model was tested separately for men and for women and produced differential results depending on sex. For widowers, age ($\underline{P} = -.12$), social participation ($\underline{P} = .18$), income ($\underline{P} = .20$) and health ($\underline{P} = .29$) had significant direct effects upon life satisfaction. In the model for widows age ($\underline{P} = -.15$) and health ($\underline{P} = .26$) were the only variables to directly affect life satisfaction.¹ The results indicated that the interaction

¹All path coefficients in the present investigation are represented by the statistical symbol \underline{P} .

effects between the status of widowhood and education, age, income, health, social participation, and group affiliation are highly dependent upon the sex of the individual. The path model was able to account for 20% of the variance in life satisfaction for widowers and 11% of the variance for widows. The path results for widowers were considered tentative since the unstandardized beta coefficients had high standard errors.

Bradburn and Caplovitz (1965) found no general differences by sex in the happiness of their sample, however, differences did emerge between the sexes when controlling on marital status. Widowed men in this case were slightly more unhappy than widowed women (43% vs. 39% "not too happy"). Pihlblad and McNamara (1965) report a similar finding on the adjustment scores of widowed men and women. In contrast, Kutner et al.'s (1956) study found widowers ($N = 37$) slightly better adjusted than widows ($N = 183$) in a New York City sample of persons 60 years of age or older. Their sample included a large proportion of foreign-born respondents which may have accounted for the differences in their findings.

Sex differences among the widowed with regard to social interaction with friends, family, and formal social participation have also been found. Pihlblad and Adams (1972), Adams (1971), and Berardo (1967) found less social involvement among widowers than among widows.

Sex differences have also been noted among the widowed in morbidity, mortality, and suicide rates (Berardo, 1970; Bock & Webber, 1972; MacMahon & Pugh, 1965; Parkes, Benjamin, & Fitzgerald, 1969; Young, Benjamin, & Wallis, 1963); alcoholism rates (Bailey, Haberman, & Alksne, 1965); remarriage rates (Cleveland & Gianturco, 1976; Riley & Foner, 1968; Treas, 1976); and attitudes after widowhood (Cosneck, 1967; Heyman & Gianturco, 1973). Males have shown more negative ratings on these measures, adding support to the generalization that men are more adversely affected by widowhood.

Studies examining only female survivors have made visible the unique problems of widows. Berardo's study of widowed persons was followed in the early seventies by Lopata's (1973) classic investigation of role involvements of widows in an American city. She intensively explored patterns of adaptation through the social roles of 301 widowed females, 50 years of age or older who were residing in Chicago. Problems of social reengagement were evident particularly for those widows lacking adequate education, income, health, and the self-confidence to venture into new roles. Based on the findings Lopata (1970) made this generalization:

The more functional the husband-wife relationship is to the wife's role and the more multidimensional the involvement of her husband in a woman's life, the more disorganized become her other social relations with her husband's death. (Lopata, 1970, p. 43).

Lopata (1973) pointed out the problems of loneliness, reduced social status, inadequate income, and lack of experience with

personal finances that many widows face. She identified three patterns of social adaptation common to widowhood: withdrawal, continuation of social involvements with little modification, and social reengagement after a reexamination of lifestyles and goals. Lopata (1973) explained differences in adaptation in terms of past socialization and social role involvement.

Summary of correlates of subjective well-being. A variety of correlates of subjective well-being have been investigated. The choice of variables has been guided either explicitly or implicitly by the assumptions and formulations from such theories of "successful" aging as the Activity theory, Disengagement theory, Continuity theory, and the Socioenvironmental theory. Health and physical well-being stand out as probably the most important predictors of subjective well-being. Generally, there have been positive associations between socioeconomic status and well-being. There is evidence that socioeconomic status has both direct and indirect effects on subjective well-being via health and activity. Evidence tends to show no relationships between age, sex, race and subjective well-being when controls are introduced. The relationship between employment status and subjective well-being is not clear; however, a slight positive relationship between employment and life satisfaction was found when variables such as health, age, and income were controlled. Both availability of transportation and activity and social participation have shown positive

relationships to well-being. Results are less clear when examining specific kinds of social activity. Family interaction, for example, has generally shown no association with subjective well-being. Formal activity appears to be related to well-being in rural areas, but not to the well-being of urban samples. Generally, married persons express greater life satisfaction than the nonmarried, yet when controls are introduced, this finding is not consistently replicated. Social participation, strong primary relationships, health, education, adequate income, and relatively younger age are positively associated with the subjective well-being of the widowed. Sex differences among the widowed tend to reveal the greater disadvantages of men in the widowed status; however, more research is needed.

Summary

The subjective well-being of older persons constitutes one of the most prolific research areas in social gerontology despite the problems of inadequate conceptualization of well-being concepts. The Activity and Disengagement theories of "successful" aging have sparked a great deal of the research into the correlates of subjective well-being. Self-rated health and socioeconomic status have shown consistently strong positive associations with subjective well-being. On the whole, positive associations have been found between well-being and social participation, employment, availability of

transportation, and the married vs. nonmarried status. With controls, race, age, and sex are generally not significant covariates of well-being. Differences by sex are noted on subjective well-being when examining widowed populations. Also, such variables as income and social participation are of differential importance to the subjective well-being of widows and widowers, suggesting that sex differentiation has an important impact on the widowhood experience. Sex differences have been largely the foci of study in early childhood with few studies centering on later life. The major sex role theories--Psychoanalytic, Social Learning, and Cognitive-Developmental--all view the early years of the life cycle as the period when sex role socialization is generally accomplished. Little attention has been given to sex differences in late life and to the impact of prior sex role socialization on the role changes of the later years. Role theory and social exchange theory provide some basis on which to organize assumptions and develop explanations about why men and women are differentially vulnerable to the loss of a spouse.

CHAPTER III
METHODS AND PROCEDURES

Sample Selection

The sample for this study was obtained from two existing data bases. The sampling technique used for each of the original data sets is described in the following two subsections.

Guilford Sample Selection

The first data set, hereafter referred to as the Guilford data set, consisted of a random sample of persons 65 years or older living in Guilford County, North Carolina, a part of a Standard Metropolitan Statistical Area.² Guilford County is located in the Piedmont region of the state and within its boundaries lie the cities of Greensboro and High Point. Respondents were selected by a compact cluster sampling technique (all eligible persons within a selected area were interviewed).

²Agricultural Experiment Station Project 3240: The Aged in North Carolina: Physical, Social, and Environmental Characteristics and Sources of Assistance, was a coordinated effort of the School of Home Economics, UNC at Greensboro (Department of Child Development and Family Relations) and the Agricultural Experiment Station, North Carolina State University at Raleigh. Funding for the research was through the Cooperative State Research Service, United States Department of Agriculture.

Within the cities of High Point and Greensboro, all census tracts were listed and four subsamples consisting of nine area segments each and containing a total of 36 sampling units were selected for each city. This constituted a total of 72 sampling units. Area segments to be sampled were determined by use of a random start number and were then systematically located. All housing units containing more than five persons 65 years or older were excluded from this part of the sampling procedure.

Aerial photos showing the density of housing units were used in combination with a sampling ratio in those areas outside the city limits of Greensboro and High Point. Subsequent procedures for selection of the sample were identical to those for High Point and Greensboro. Five subsamples consisting of 12 area segments each and containing a total of 60 sampling units were selected.

Separate randomized selections were made among group quarters that housed the elderly. Group quarters included all living quarters in Guilford County housing six or more people who were 65 years or older. Nursing homes, domiciliary care units, and apartment complexes were included in this category. A listing was acquired of all housing units in the county that housed six or more adults over the age of 64. Group quarters consisted of 16 facilities that included two high-rise apartments and 14 nursing or domiciliary care facilities that were occupied principally by older adults.

Based upon a sampling ratio, a total of eight group quarters were systematically selected from the population. A listing of residents was prepared (alphabetically) for each of the eight selected quarters. Respondents were systematically and randomly selected from each group quarter unit at a ratio of m/M (where M = total population within the eight selected quarters and m = number of residents within the group quarters). Details of the numbers of respondents in the subsamples and area segments selected are presented in Table 1.

Caswell Sample Selection

The second data set, hereafter referred to as the Caswell data base, consisted of a random sampling of all persons 65 years or older living in Caswell County, North Carolina, a rural by-passed area.³ Caswell County is located in Piedmont North Carolina, bordering the Virginia state line. A listing of the number of persons 65 years or older living within each enumeration district within each of the county's nine townships was obtained. A compact cluster sampling technique was used. The enumeration districts were divided into clusters based upon a formula using a ratio of the

³North Carolina Agricultural Research Service Project 13240: The Rural By-Passed Elderly: Perspectives on Status and Needs, was a coordinated effort of the School of Home Economics, UNC at Greensboro (Department of Child Development and Family Relations) and the Agricultural Research Service, North Carolina State University at Raleigh. Funding for the research was through the Cooperative State Research Service, United States Department of Agriculture.

Table 1
Urban Sampling Units According to Area and Size

Sampling Unit	Population ^a 65 yrs. or older	Subsamples	Area Segments	Sample ^b Size
Greensboro	10,454	4	36	110
High Point	5,943	4	36	123
Areas outside city limits	5,966	5	60	223
Group Quarters	508 ^c	4	8	13
Total	22,363	17	140	469

Note. Data reported are from Kivett (1976).

^a1970.

^bSampling ratio .01446.

^cThis figure is included in those cited above.

desired number of clusters to the total number of households in the county occupied by persons 65 years or older (sampling ratio = .19). Eight "paper" zones (a multiple of the desired sample size of 320) were systematically established and four clusters were selected at random from each of the eight zones (subsamples = 32). A second sample (subsample = 64) was drawn in order to obtain the desired sample size.

All persons 65 years or older living within a selected area were contacted for an interview. Separate randomized selections were made for the group quartered, or persons living in housing units with six or more older residents. The number of respondents from each sampling unit is shown in Table 2.

Sample Characteristics

The two data bases upon which this study was based closely approximated the demographic characteristics of the general population of older adults within each respective county (U. S. Bureau of the Census, 1973). The Guilford data included 469 older persons with a mean age of 73.3 and a mean educational level of 8.0. The Caswell data included 418 older persons with a mean age of 73.4 and a mean educational level of 6.8 years. The sex composition of the Guilford study was 37.7% male and 62.3% female and was 43.4% male and 56.6% female for the Caswell study. In terms of racial composition, the Guilford study was represented by 75.0% white and 25.0% black and the Caswell study included

Table 2
Rural Sampling Units According to Township and Size

Sampling Unit	Population 65 yrs. or Older	Subsamples	Area Segments	Sample ^a Size
Townships				
Anderson	167	6	31	24
Dan River	226	9	42	70
Hightowers	131	3	24	27
Leasburg	105	4	20	12
Locust Hill	132	7	24	47
Milton	222	8	42	91
Pelham	255	9	47	59
Stoney Creek	55	7	10	24
Yanceyville	430	11	80	68
Group Quartered (included above)		3	-	16
Total	1,723	64	320	438

Note. From The rural by-passed elderly: Perspectives on status and needs, by V. Kivett & J. Scott, Raleigh, N.C.: North Carolina Research Service, Bulletin in press.

^aNineteen of the original 437 questionnaires were dropped because of missing information (N = 418).

62.8% white and 37.2% black respondents. The sample that was included in the present investigation consisted of all widowed respondents in the Guilford and Caswell samples. This resulted in a total sample of 332 widowed older adults, including 71 widowers and 261 widows.

Research Design and Interviewing Procedures

The present study was a secondary analysis of data from two large survey research projects. The data from the Guilford study were collected during the spring of 1970 and were completed in the fall of 1971. The Caswell data collection began in the spring of 1976 and was completed in the spring of 1977. Trained interviewers orally administered a structured interview schedule to each respondent in the respective counties. The interview took approximately one hour and fifteen minutes to complete.

Procedures and questionnaires for interviewing were very similar for the two studies. A total of 13 interviewers were trained to administer the questionnaire in the Guilford study. Twelve of the interviewers were female and one was male. They had a mean age of 48.2 years and a mean educational level of 15.7 years. Training sessions took place both prior to the data collection and during the actual collection of the data. Interviewers were assigned to previously selected area segments.

Six female interviewers, five white and one black, were involved in the administration of the questionnaire in Caswell

County. They had a mean age of 57.5 years and a mean educational level of 11.3 years. Training sessions were held prior to canvassing.

In both surveys, each available person 65 years or older within the assigned area was contacted for an interview. Surrogate respondents were interviewed in the event that an older person was too incapacitated to represent himself in the study. If a potential respondent was not at home the interviewer was required to follow up with at least two return visits.

The author checked all questionnaires for completeness as they were returned by the interviewers and coded each questionnaire in the Caswell study. All coded data were punched on computer data cards by the author and verified against the original questionnaires. Similar procedures were used with the Guilford data.

Research Instruments and Measures

Both of the questionnaires used in the two original studies were composed of items covering eight major areas: demographic characteristics, work and retirement, family and friends, health, activity, income, services and assistance, and subjective well-being. The questionnaires were pretested on small samples of older persons prior to both studies in order to detect problems in format and in item construction. The instrument used in the Guilford study contained 104 items and the questionnaire used in the Caswell study included 99

items. Only items that were identical on both questionnaires were considered for inclusion in the study. Those measures are described below:

Sex--The sex of each respondent was coded 1 if male and 2 if female.

Age--Age of each respondent at the time of the interview was recorded. Age served a dual purpose in the study; as a chronological measure of years of life as well as a proxy variable for length of widowhood. This use of age in the absence of length of widowhood has been used by others (Elwell & Maltbie, 1978). Barrett and Becker (1978) and Berardo (1967) found that age was a better indicator of general life circumstances and adjustment than duration of widowhood. Barrett and Becker (1978) demonstrated that the age of the widow was more frequently correlated with adjustment criteria than other variables, followed by length of widowhood. The researchers concluded, as did Berardo (1967), that "Duration of widowhood does not have as great an influence as the age factor" (p. 28).

Residence--Residence indicated whether persons resided in urban areas (coded 1) or in rural areas (coded 2). All of the Guilford sample was coded urban and the Caswell sample was coded rural.

Socioeconomic status (SES)--Socioeconomic status was determined through the use of the Two Factor Index of Social Position (Hollingshead, 1965). This measure attempts to determine the relative position that persons occupy in the status structure of society. The two factors used to determine social position on the scale were occupation and education. Each was weighted according to specific criteria. Two types of information on the respondent were required for this classification: (a) the precise occupational role of the head of household, or if retired, the occupation at age 50; and (b) the level of formal schooling of the head of household. In the case of both data sets, the respondents' own educational level rather than Hollingshead's intended head of household's educational status was used. This change provided a better approximation of social position since many widows had no occupational backgrounds.

The Hollingshead scale has eight categories for rating occupational status. The educational factor is measured by seven categories. These two components were combined by adding the weighted scores of each. A score may fall into one of five social classes, the higher scores representing lower class levels.

Self-rated health--Self-rated health was assessed

by the following question: "How would you rate your overall health at the present time--(1) good, (2) fair, or (3) poor." The Caswell data included an additional category for excellent health. To maintain similarity with the Guilford responses, the Caswell categories (good, excellent) were collapsed.

Adequacy of income--Adequacy of income was assessed

by this question: "Next I would like to talk to you about having enough money for what you need. Which of these best describes how far your money goes?"

- (3) You have enough money for everything that you need.
- (2) You have enough money if you're careful.
- (1) You do not have enough money for things that you need.

Social participation--Social participation was assessed

by the following question: "How often do you visit with friends and neighbors? Would you say that you visit . . . (4) Frequently--at least once a week, (3) Occasionally--at least once a month, (2) Seldom, and (1) Never."

Subjective well-being--Subjective well-being was

operationalized by response to the following

question: "All in all, how much unhappiness would you say you find in life today? (1) Almost none, (2) Some, but not much, (3) A good deal." Support for the validity and reliability of happiness-unhappiness items in assessing subjective well-being is presented in Chapter II (see Measuring Subjective Well-being). The unhappiness score correlated moderately ($r = .39, p < .001$) with the scores on the Philadelphia Geriatric Center Morale Scale (Lawton, 1972) in the Caswell study (the PGC morale scale was not included on the Guilford questionnaire). In general, extent of unhappiness correlated moderately and in the expected direction with several variables believed to be correlates of subjective well-being in both the Caswell and Guilford studies.

Data Analysis

Information on the widowed respondents from the Guilford and Caswell data sets was merged to form a new file using the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). Descriptive statistics were used to define the sample on several demographic characteristics.

The data were analyzed through the use of a path analytic technique available with SPSS. Path analysis was

introduced by Sewell Wright (1921) as a method for determining the direct and indirect effects of variables assumed to be causally related in a system of relationships (Kerlinger & Pedhazur, 1973; Land, 1969). Path analysis provides the researcher with a means for empirically examining the viability of a theoretical model in which causal closure and a causal ordering of the variables are assumed (Nie et al., 1975). The data analysis was accomplished in two parts: the first provided a test of hypotheses 1 and 2 and the second part tested hypotheses 3 and 4.

H₁ Sex will have a significant direct effect on the subjective well-being of widowed older adults.

H₂ Older widowers will experience significantly lower subjective well-being in comparison to older widows.

Hypotheses 1 and 2 were tested with an analysis of a multistage recursive path model shown in Figure 1 (path model I). The first path model included 5 exogenous variables (age, sex, residence, SES, and race) and 3 intervening variables (self-rated health, income adequacy, and social participation). The direct effects of all independent variables on each dependent variable were calculated using multiple regression equations and the SPSS multiple regression program (Nie et al., 1975). The direct effects on the five exogeneous variables ($X_1 \dots X_5$) were not analyzed as their

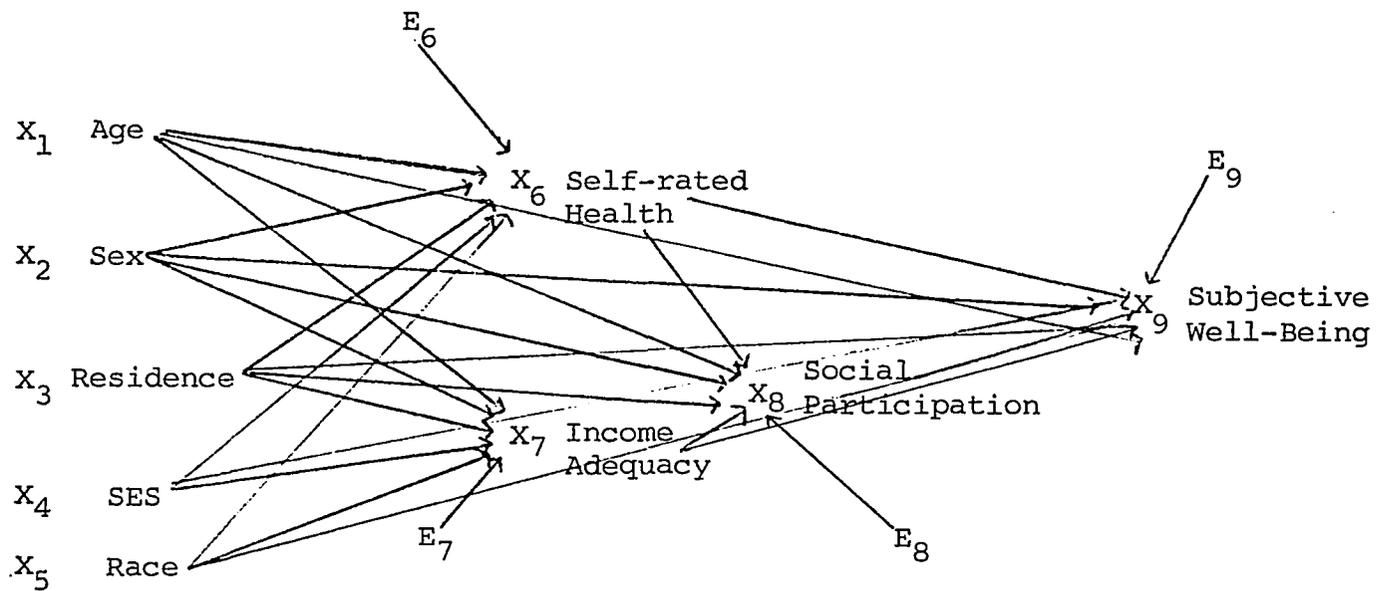


Figure 1. Path model for widowed sample.

"causes" were not the issue here.⁴ The effects of these variables as antecedents were figured into each regression equation for the direct effects on variables which appear later (to the right) in the theoretical model. The following equations were used to estimate the direct effects on each dependent variable:

$$X_6 = P_{61}X_1 + P_{62}X_2 + P_{63}X_3 + P_{64}X_4 + P_{65}X_5 + E \quad (1)$$

$$X_7 = P_{71}X_1 + P_{72}X_2 + P_{73}X_3 + P_{74}X_4 + P_{75}X_5 + E \quad (2)$$

$$X_8 = P_{81}X_1 + P_{82}X_2 + P_{83}X_3 + P_{84}X_4 + P_{85}X_5 + P_{86}X_6 + P_{87}X_7 + E \quad (3)$$

$$X_9 = P_{91}X_1 + P_{92}X_2 + P_{93}X_3 + P_{94}X_4 + P_{95}X_5 + P_{96}X_6 + P_{97}X_7 + P_{98}X_8 + E \quad (4)$$

The analysis of each of the four equations proceeded with a hierarchical inclusion method that ordered the entry of the variables according to temporal priority as illustrated in Figure 1. In effect, four multiple regression analyses were performed. Hypothesis 1 was considered confirmed if the path coefficient $P_{92}X_2$ in equation 4 achieved significance ($p < .05$). Hypothesis 2 was considered confirmed by a significant path coefficient, $P_{92}X_2$, that was negative in direction. Further analysis of the effects of variables in the model was accomplished through the determination of the total indirect effects (TIE) and residual causes of the variables.

⁴An exogenous variable is a variable whose variability is assumed to be determined by causes outside the causal model (Kerlinger & Pedhazur, 1973, p. 308).

H₃ Income adequacy will have a greater effect on the subjective well-being of widowers than widows.

H₄ Social participation will have a greater effect on the subjective well-being of widows than widowers.

The second part of the analysis provided a test of hypotheses 3 and 4 by means of a second multistage recursive path diagram (path model II). The second path model which contained the same variables as the first, with the exception of sex, was analyzed separately for widows and widowers (see Figure 2). As in the first path analysis, the second path analysis determined the direct effects of the antecedent variables on each variable appearing later in the model (to the right). Four sets of regression equations were solved separately for widowers and for widows as follows:

$$X_5 = P_{51}X_1 + P_{52}X_2 + P_{53}X_3 + P_{54}X_4 + E \quad (5)$$

$$X_6 = P_{61}X_1 + P_{62}X_2 + P_{63}X_3 + P_{64}X_4 + E \quad (6)$$

$$X_7 = P_{71}X_1 + P_{72}X_2 + P_{73}X_3 + P_{74}X_4 + P_{75}X_5 + P_{76}X_6 + E \quad (7)$$

$$X_8 = P_{81}X_1 + P_{82}X_2 + P_{83}X_3 + P_{84}X_4 + P_{85}X_5 + P_{86}X_6 + P_{87}X_7 + E \quad (8)$$

A hierarchical inclusion method was used in equations 5, 6, 7, and 8. Hypothesis 3 was considered confirmed if the total effect (direct and indirect) of income adequacy on subjective well-being was greater in the model for widowers than in that for widows. Hypothesis 4 was

considered confirmed if the path coefficient between social participation and subjective well-being ($P_{87}X_7$) was greater in the model for widows than in that for widowers.

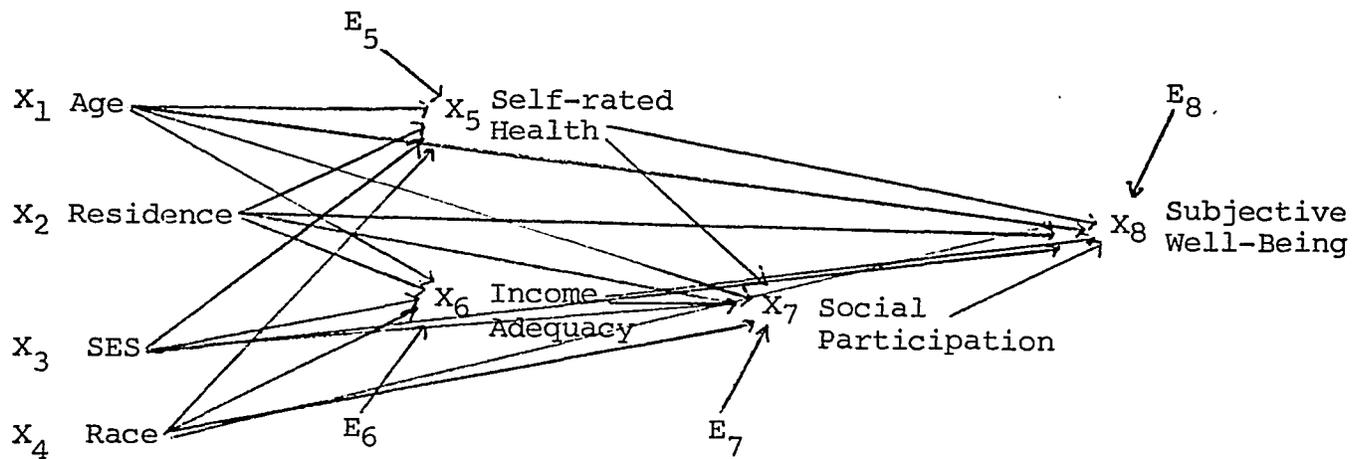


Figure 2. Path model tested separately for widows and widowers.

CHAPTER IV

ANALYSIS OF THE DATA

The first section of Chapter IV examines statistical assumptions, the nature and distribution of the responses, and the relationships between the variables included in the path models. The major results of the study are organized according to the four research hypotheses. Additional findings of the overall path models are presented. Throughout the chapter the statistical symbol, \underline{p} , is used to represent path coefficients.

Statistical Assumptions, Distribution of Responses, Correlations Among the Variables

The various statistical tests associated with path analysis and multiple regression are based on the assumptions that the sample was randomly drawn, that the dependent variable is normally distributed at each point along the independent variable, that the regression is linear, and that there is homogeneity of variance among the dependent variable scores at each point on the independent variable (Nie et al., 1975). The first statistical assumption was satisfied by the use of a compact cluster sampling procedure. A direct examination of scatterplots of the standardized residuals and standardized dependent values did not indicate any abnormalities in the data.

Path analytic procedures were used since path analysis is a statistical procedure providing information about the causal effect coefficients in a theoretical model. Since it was recognized that the scale of measure of the dependent variable did not completely satisfy the assumptions concerning a normal distribution of the data, a preliminary analysis was run. As a check, the data were run with a multiple discriminant analysis which makes no assumptions concerning the dependent measure. Comparable results were found. This similarity in findings provided evidence that no serious violations of the assumptions had occurred in the path analyses. This check for any serious violations of the assumptions supported the commonly held view of the relative robustness of the F statistic (Kerlinger & Pehazur, 1973).

In general, the frequency distributions for all variables of interest showed some extent of asymmetry. The responses making up the dependent variable, subjective well-being (extent of unhappiness), fell into the following distribution: 39.9% almost no unhappiness, 41.2% some but not much, and 19.0% a great deal of unhappiness. As a result, the distribution for the dependent measure was somewhat positively skewed. Socioeconomic status was skewed toward the bottom half of the scale. According to the Hollingshead Index, the mean for the sample fell into the next to the lowest social class. The self-rated health of the respondents was reported by 28.3% to be excellent or good, 42.9% had fair health, and

28.9% were in poor health. The mean age of the respondents was 75.6 years (see Table 3). In terms of perceived income adequacy, approximately 30% of the sample felt that their incomes were inadequate, 46.4% expressed that their incomes were adequate if they were careful, and 23.8% felt that their incomes were adequate to meet daily living expenses. Responses to frequency of social participation indicate that 15% of the sample never interacted with friends and neighbors, 23% seldom interacted with friends and neighbors, 28% saw friends and neighbors occasionally (at least once a month) and 34% visited frequently (at least once a week).

Table 4 shows the zero order relationships between the variables used in the path analyses. Although many of the variables were nominal or ordinal in nature, Pearson product moment correlations were used in the path analyses and therefore are reported here. Subjective well-being failed to correlate highly with any of the variables in the path models. A significant but low correlation was observed between subjective well-being and socioeconomic status ($\underline{r} = .23, p < .05$) and between subjective well-being and income adequacy ($\underline{r} = -.26, p < .001$). Social participation was not significantly related to subjective well-being ($\underline{r} = 0.09, p > .05$) and neither was sex a significant covariate with subjective well-being ($\underline{r} = .04, p > .05$). The highest correlations involved the relationships of income adequacy and race ($-.40$) and income adequacy and socioeconomic status ($-.50$). The

Table 3
 Mean, Standard Deviations for Path Variables by Sex

	Widows (<u>N</u> = 232)	Widowers (<u>N</u> = 60)	Total Sample (<u>N</u> = 292)
	\bar{X} (SD)	\bar{X} (SD)	\bar{X} (SD)
Age	75.30 (7.00)	76.77 (6.70)	75.60 (6.95)
SES	57.91 (17.52)	60.35 (16.43)	58.41 (17.30)
Self-rated Health	2.02 (.77)	2.10 (.71)	2.03 (.76)
Income Adequacy	1.94 (.72)	1.85 (.73)	1.92 (.73)
Social Participation	2.81 (1.05)	3.02 (1.02)	2.86 (1.05)
Subjective Well-Being	1.81 (.76)	1.73 (.66)	1.79 (.74)

Table 4
Pearson Correlation Coefficients for Variables
in the Path Models

Variable	2	3	4	5	6	7	8	9
1. Age	-.09	-.09	.03	.01	-.03	.13	-.32**	-.01
2. Sex		-.14	-.19*	-.06	-.04	.05	-.08	.04
3. Race			.13	.47**	-.15	-.40**	.01	.14
4. Residence				.08	.06	.05	.08	.12
5. Socioeconomic Status					-.34**	-.50**	-.17	.23*
6. Self-rated Health						.32**	.27**	-.15
7. Income Adequacy							.03	-.26**
8. Social Participation								-.09
9. Subjective Well-Being								

* $p < .05$

** $p < .01$

correlation between race and socioeconomic status was .47. Blacks and those at lower socioeconomic levels were more likely to perceive their incomes as inadequate. (High scores on the Hollingshead Index represented low SES.)

Examination of Hypotheses

The four hypotheses proposed for the present study were tested according to criteria described in Chapter III. The results are presented in the subsections below.

Hypothesis 1

Hypothesis 1 was derived to examine the effect of sex on the subjective well-being of widowed older persons.

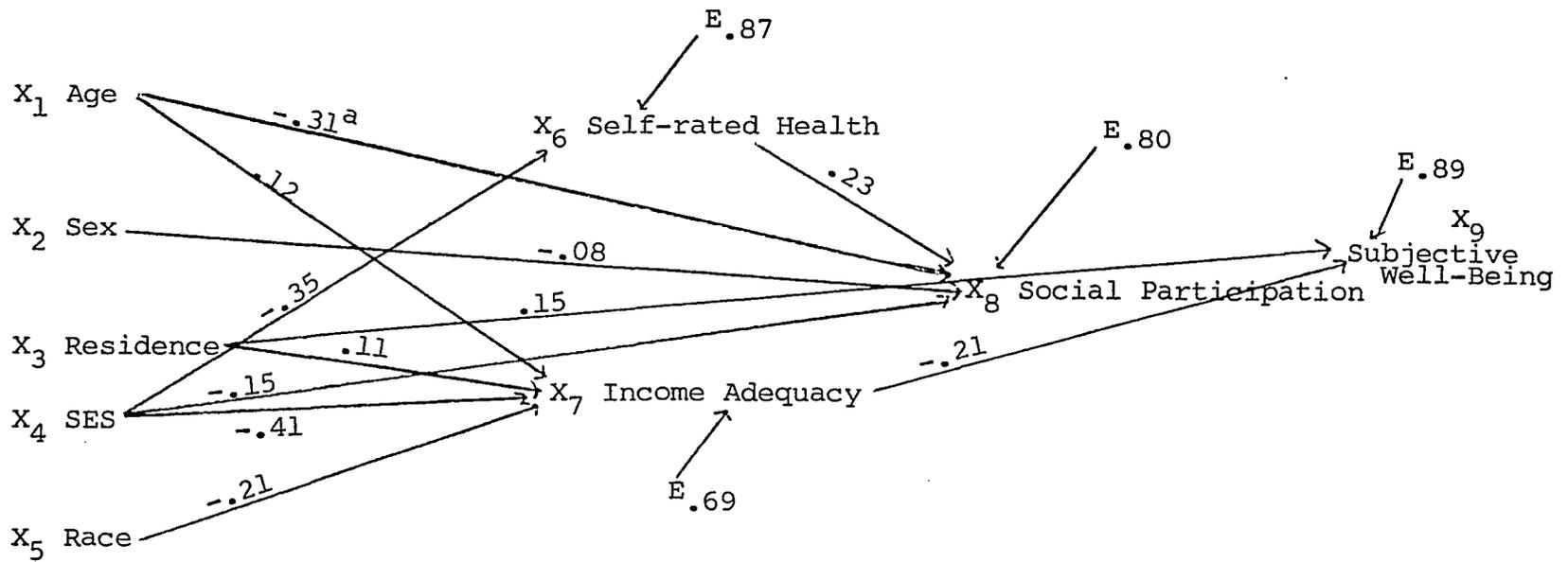
H₁ Sex will have a significant direct effect on the subjective well-being of widowed older adults.

As shown in Figure 3 sex did not have a significant direct effect on the subjective well-being of widowed older persons and, therefore, Hypothesis 1 was not confirmed. The correlation between subjective well-being and sex also indicated initially little association between the two variables (Table 4).

Hypothesis 2

In conjunction with Hypothesis 1, Hypothesis 2 concerned the direction of the sex difference in the subjective well-being of the widowed.

H₂ Older widowers will experience significantly lower subjective well-being in comparison to older widows.



^aAll paths reported are significant at the .05 level or less.

$$\underline{R^2} = .11$$

Figure 3. Path model of subjective well-being among widowed older adults.

Hypothesis 2 failed to be confirmed due to the nonsignificance of the path coefficient between sex and subjective well-being (Table 5). A comparison of the means on subjective well-being for widows and widowers (see Table 3) clearly showed the similarity of the two sexes in their responses on subjective well-being.

Hypothesis 3

Hypothesis 3 was concerned with the relative importance of income adequacy to the subjective well-being of widowers and widows.

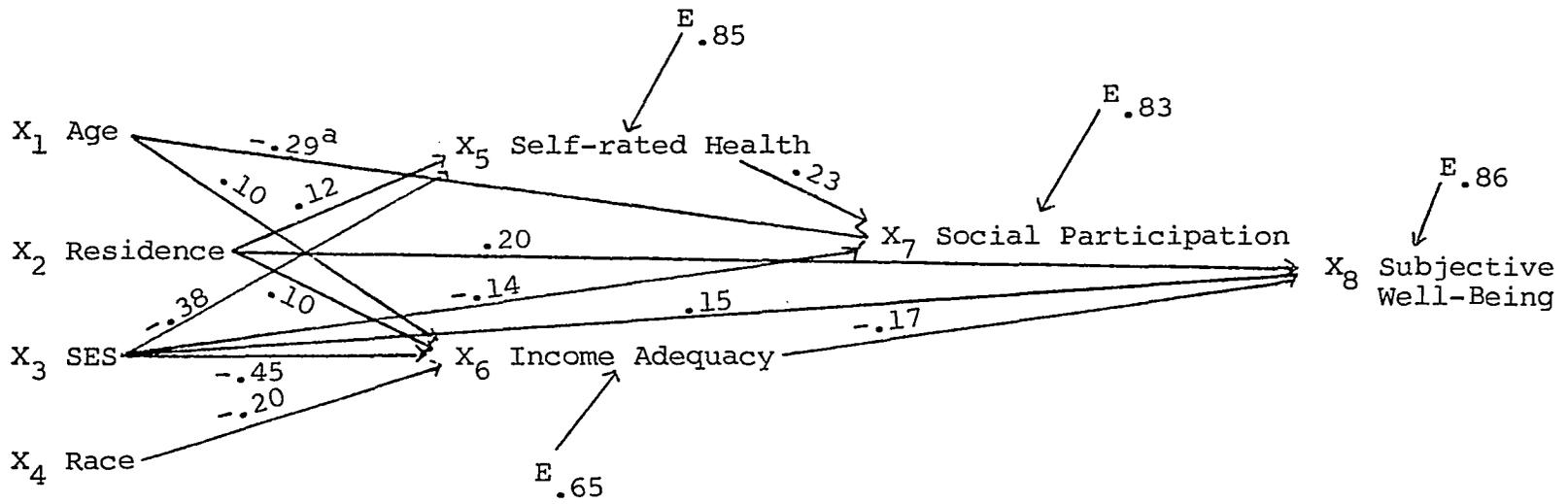
H₃ Income adequacy will have a greater effect on the subjective well-being of widowers than widows.

The inability of the path analysis for the widower group to attain significance suggested the instability of the model due to the small sample size. Nonetheless, the results provided tentative support for Hypothesis 3 due to the greater relative importance of income adequacy to the subjective well-being of widowers ($\beta = -.27$) than of widows ($\beta = -.17$) (Figures 4 and 5). Furthermore, income adequacy was the only variable in the model for men to provide any degree of explanation for subjective well-being (see Figure 5). In the path model for widows, income was second to residence in providing some explanation for subjective well-being scores (see Figure 4). Widowers and widows experienced lower subjective well-being if their income was inadequate and inadequate income had a greater effect on the subjective well-being of widowers.

Table 5
Summary Table for Path Analysis (Total Sample)

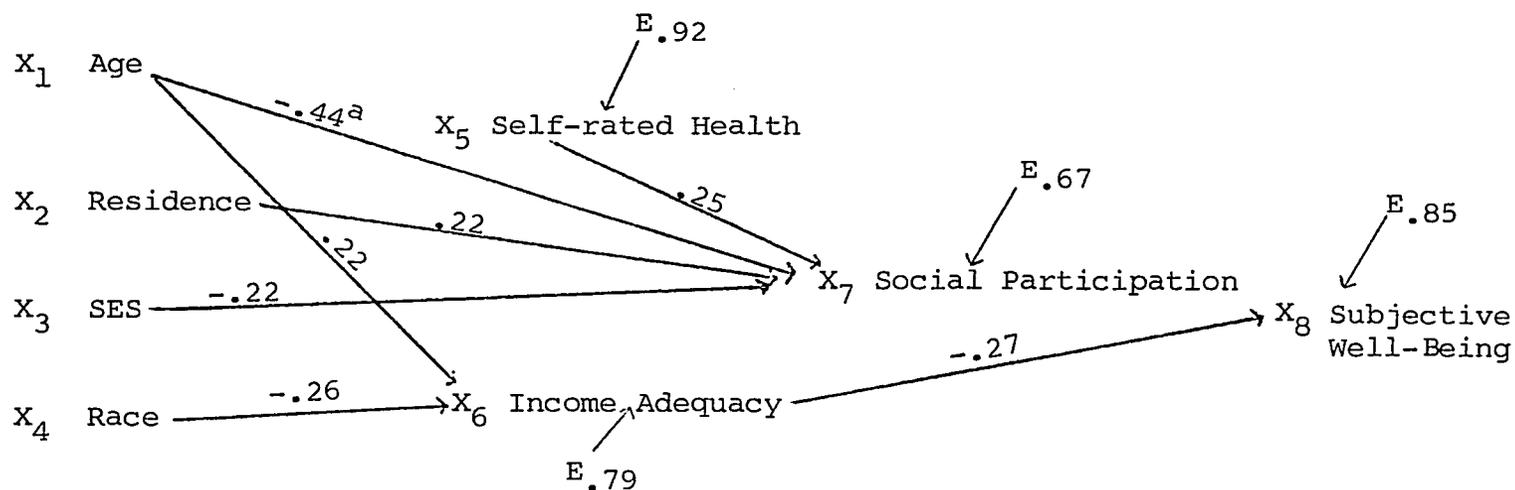
Regression Variable	R^2	R^2 change	Path Coefficients (standardized Betas)
I. Self-rated Health			
Age	.00	.00	-.04
Sex	.00	.00	-.05
Race	.03	.03	.00
Residence	.03	.01	.08
SES	.13	.09	-.35***
Overall F (5, 286)	= 8.36***		
II. Income Adequacy			
Age	.02	.02	.12***
Sex	.02	.00	.03
Race	.17	.15	-.21***
Residence	.18	.01	.11**
SES	.31	.13	-.41***
Overall F (5, 286)	= 25.74***		
III. Social Participation			
1. Age	.11	.11	-.31***
Sex	.12	.01	-.08*
Race	.12	.00	.04
Residence	.12	.00	.06
SES	.16	.03	-.15***
2. Self-rated Health	.20	.04	.23***
Income Adequacy	.20	.00	-.05
Overall F (7, 284)	= 10.12***		
IV. Subjective Well-Being			
1. Age	.00	.00	.00
Sex	.00	.00	.08
Race	.02	.02	-.01
Residence	.04	.01	.15**
SES	.07	.03	.10
2. Self-rated Health	.08	.01	-.03
Income Adequacy	.11	.03	-.21**
3. Social Participation	.11	.00	-.06
Overall F (8, 283)	= 4.28***		

* $p < .05$
** $p < .01$
*** $p < .001$



^aAll paths reported are significant at the .05 level or less.
 $\underline{R}^2 = .14$

Figure 4. Path model for subjective well-being of widows.



^aAll paths reported are significant at the .05 level or less.
 $\underline{R}^2 = .15$, overall model n.s.

Figure 5. Path model for subjective well-being of widowers.

Hypothesis 4

Hypothesis 4 was concerned with the relative importance of social participation to subjective well-being.

H₄ Social participation will have a greater effect on the subjective well-being of widows than widowers.

Social participation failed to have a significant effect on subjective well-being in the path models for both widows and widowers (-.03, -.22; $p > .05$, respectively) (see Tables 6 and 7). The results indicated that neither widowers' nor widows' subjective well-being was explained by the frequency of informal social participation and thus Hypothesis 4 was not confirmed.

Examination of the Overall Path Models

Path Model for the Widowed (total sample)

The overall path model for the widowed sample was able to account for 11% of the variance in subjective well-being scores (see Figure 3). Residence and income adequacy provided the most explanation through their direct effects on subjective well-being. Persons with the lowest reported well-being were those in rural areas, whose incomes were inadequate. All the exogenous or background variables with the exception of sex provided indirect effects on subjective well-being via income adequacy.⁵

⁵Decomposition tables (Nie et al., 1975) that summarize the direct effects, indirect effects, and joint associations of the variables in the path models are not presented with

Table 6

Summary Table for Path Analysis (Widows)

Regression Variable	R^2	R^2 change	Path Coefficients (standardized Betas)
I. Self-rated Health			
Age	.00	.00	-.01
Race	.03	.03	.01
Residence	.04	.01	.12*
SES	.15	.11	-.38***
Overall $F(4, 227)$	= 10.15***		
II. Income Adequacy			
Age	.01	.01	.10**
Race	.18	.16	-.20**
Residence	.19	.01	.10***
SES	.35	.16	-.45***
Overall $F(4, 227)$	= 30.12***		
III. Social Participation			
1. Age	.09	.09	-.29**
Race	.10	.00	.03
Residence	.10	.00	.03
SES	.13	.03	-.14**
2. Self-rated Health	.17	.04	.23**
Income Adequacy	.17	.00	-.04
Overall $F(6, 225)$	= 7.92***		
IV. Subjective Well-Being			
1. Age	.00	.00	.03
Race	.02	.02	-.03
Residence	.05	.03	.20**
SES	.11	.06	.15**
2. Self-rated Health	.12	.02	-.10
Income Adequacy	.14	.02	-.17**
3. Social Participation	.14	.00	-.03
Overall $F(7, 224)$	= 5.35***		

* $p < .05$
 ** $p < .01$
 *** $p < .001$

Table 7

Summary Table for Path Analysis (Widowers)

Regression Variable	R^2	R^2 change	Path Coefficients (standardized Betas)
I. Self-rated Health			
Age	.01	.01	-.11
Race	.03	.02	-.05
Residence	.05	.02	-.11
SES	.08	.03	-.19
Overall $F(4, 55) = 1.18$ n.s.			
II. Income Adequacy			
Age	.06	.06	.22*
Race	.17	.11	-.26**
Residence	.18	.01	.10
SES	.21	.03	-.19
Overall $F(4, 55) = 3.64^*$			
III. Social Participation			
1. Age	.20	.20	-.44**
Race	.20	.00	.13
Residence	.23	.02	.22*
SES	.28	.05	-.22*
2. Self-rated Health	.33	.05	.25**
Income Adequacy	.33	.00	-.07
Overall $F(6, 53) = 4.44^{**}$			
IV. Subjective Well-Being			
1. Age	.02	.02	-.16
Race	.03	.01	.13
Residence	.05	.01	-.02
SES	.05	.00	-.14
2. Self-rated Health	.06	.01	.19
Income Adequacy	.11	.05	-.27**
3. Social Participation	.15	.03	-.22
Overall $F(7, 52) = 1.27$ n.s.			

* $p < .05$ ** $p < .01$

The exogenous variables were best able to explain income adequacy ($R^2 = .31$); however, one variable, socioeconomic status, accounted for most of the explained variance in income adequacy. Those who saw their incomes as most adequate were generally of higher SES, white, rural, and older. Socioeconomic status was the only variable to have a significant direct effect upon health ($\beta = -.35$, $p < .001$). Those who rated their health good were of a higher SES background. Sex failed to have a significant effect on the variables in the model with the exception of a negligible effect on social participation ($-.08$). Although 20% of the variance in social participation was accounted for by the background and intervening variables, social participation itself did not have a significant effect on subjective well-being. Widowed persons who were younger, in good health, and had a higher socioeconomic status had a higher frequency of social contacts.

Path Model for Widows

The path model for widows was able to account for 14% of the variance in subjective well-being (see Table 6). Three variables had significant direct effects on subjective well-being: residence, socioeconomic status, and income adequacy. Widows with lower SES, less adequate incomes, and rural residence expressed the lowest well-being. The pattern

the data. Since most of the zero order correlations with subjective well-being were not significant, a further decomposition of the associations did not appear to be warranted.

that the significant path coefficients took resembled the overall model for the total sample (Figure 4).

Other relationships of interest were the indirect influences of age, residence, race, and SES on subjective well-being via income adequacy. The background variables were better able to account for the variance in income adequacy than the variance of other intervening variables in the model ($R^2 = .35$, Table 6), and it was only through income adequacy that the background variables had an indirect influence on subjective well-being. Widows who perceived their incomes as inadequate were younger, urban, black, and of lower socioeconomic status.

Self-rated health and social participation had no significant direct or indirect effects on subjective well-being; however, they had some significant relationships to the other variables in the model (Table 6). Two variables, residence and SES, had significant direct effects on health. Rural widows and those at higher socioeconomic levels had better self-rated health. Health, age, and SES had significant direct effects on social participation. Those who had better health, higher socioeconomic status, and were younger were more active socially with friends and neighbors.

Path Model for Widowers

The overall path model for widowers was able to account for 15% of the variance in subjective well-being; however, the final analysis (equation 8, Chapter III) failed to achieve

significance. Likewise, the multiple regression of self-rated health on the background variables was not significant (equation 5, Chapter III). Of the original 71 widowers, only 60 remained when cases with missing information were deleted which could have accounted in part for the lack of significant findings. Significant results were obtained in the two regressions of the variables on income adequacy and on social participation. Black and younger men had less adequate incomes than others. Widowers who had more frequent social contacts were younger, rural, in better health, and of higher socioeconomic status.

Summary of the Results

The data from the present study failed to confirm three of the four hypotheses and only tentative support was found for one. No significant sex differences were found in the subjective well-being of the widowed. In addition neither health nor social participation had significant effects on subjective well-being. Among the widowed group as a whole, residence and income adequacy were the only variables to have significant direct effects on subjective well-being. Rural residents and those with inadequate incomes expressed the lowest well-being. Tentative confirmation for Hypothesis 3 was found by the greater impact of income adequacy on the subjective well-being of the widower as opposed to the widow. In both the model for widowers and for widows, social

participation did not have a significant direct effect upon subjective well-being and therefore Hypothesis 4 was not confirmed. The path model for the widower group failed to achieve significance and consequently results for the model could not be generalized. The direct effects of residence, SES, and income adequacy were important to the subjective well-being of widows. Income adequacy emerged as a critical intervening variable in the path models.

CHAPTER V
DISCUSSION AND CONCLUSIONS

The impact of sex differences on the subjective well-being of persons in late life has received little attention. Some studies suggest that sex may influence adjustments to major late life transitions such as that precipitated by the loss of a spouse and may influence the subsequent psychological well-being of the widowed. The literature indicates that widows and widowers each have unique problems affecting their subjective evaluation of well-being. Whether one sex is more adversely affected than the other has not been resolved, although the weight of past research findings indicates that widowers are more stressed.

Summary

The purpose of the present study was to determine the direct effect of sex on the subjective well-being of widowed older adults. A second objective was to determine if factors such as income adequacy and social participation were more relatively important in explaining the subjective well-being of widows than of widowers. Propositions from role theory and from social exchange theory were used as a basis for the formulation of the hypotheses. Sex was hypothesized to have a significant direct effect on the subjective well-being of the widowed. Widowers were expected to experience significantly

lower subjective well-being than widows due to their different history of sex role socialization and role enactment. The differential reward value attached to sex related behaviors and role performances led to the hypothesis that income adequacy would have a greater effect on the subjective well-being of widowers and that social participation would have a greater effect on the subjective well-being of widows.

The sample for the study ($N = 332$) represented all the widowed respondents from two existing data sets. The original data bases included older adults selected by a compact cluster sampling technique from two counties in Piedmont North Carolina: one a rural county and the other a predominantly urban county. The sample was composed of 261 widows and 71 widowers 65 years of age or older. The data were collected via personal interviews that were administered by trained interviewers.

The hypotheses were tested through two theoretical models that were constructed on the basis of the research literature. Path analytic procedures were used in the analysis of the data. The first path model (path model I) was analyzed with the total sample and included 5 exogenous variables (sex, age, race, residence, and SES) and 3 intervening variables (self-rated health, income adequacy, and social participation). The second path model (path model II) was analyzed separately for widows and widowers and contained the same variables as the first with the exception of sex.

The findings failed to show that sex had a significant effect on the subjective well-being of the widowed and thus provided no evidence in support of hypotheses 1 and 2. Income adequacy, as hypothesized, had a stronger effect on the subjective well-being of widowers than widows. Due to the non-significance of the path model for widowers this finding was only suggestive of a differential effect by sex. Social participation failed to have a significant direct effect on subjective well-being for either sex and therefore hypothesis 4 was not supported. As a result, the findings showed tentative support for one hypothesis and no confirmation for the other three.

The findings of the present investigation raise several points for discussion. The following sections relate the findings to the research questions posed in Chapter I. The remaining discussion focuses on the implications of the findings and integrates them with the literature and with theoretical and methodological issues. A final section presents recommendations for future research.

Sex Differences and Subjective Well-Being (Path Model I)

The finding that sex did not have a significant influence on the subjective well-being of the widowed challenges many of the theoretical and empirical generalizations that posit a different adjustment experience for widows and widowers. The literature has shown significant sex

differences in the subjective well-being of the widowed--some indicating widows' better adjustment (Barrett, 1978; Berardo, 1967, 1968, 1970; Elwell & Maltbie, 1978) and some indicating widowers' better adjustment (Carey, 1977; Lewis & Berns, 1975). One possible explanation for the discrepancy in results is that many of the previous studies have relied on different indicators in order to judge adversity in widowhood, have not controlled uniformly on crucial variables, and have used very different samples.

Berardo (1967), for example, examined a number of social and demographic variables and a few measures of subjective well-being such as loneliness and satisfaction with contact with kin in his assessment of adaptation to widowhood. Had he controlled simultaneously on such factors as health, income, and age (on which widows and widowers differed) there may not have been differences on the well-being measures. Barrett (1978) examined the differences between widows and widowers on some 138 dependent variables including several subjective well-being measures. When controls were introduced there was a loss of significant sex differences on morale, loneliness, and satisfaction with life, although additional differences appeared in other areas of life functioning that were examined. While Carey (1977) found widowers to score higher on an adjustment-depression measure, his sample included widowers who had remarried.

A somewhat different research design may account for differences in findings between the present study and the

Elwell and Maltbie (1978) study. Widowhood was examined in a path analysis for its effect on life satisfaction. Married and widowed respondents were included and the path model was analyzed separately by sex. No direct comparisons of widowers and widows were made. Had comparisons been made by sex rather than with married persons, the results might have been different. In attempting to reconcile the difference between these previous studies and the present investigation, it seems that if widows and widowers differ on many demographic indicators, then they are likely to differ on self-report measures of subjective well-being unless these demographic indicators are controlled.

The findings from the present study generally supported the conclusions of Atchley (1975), Troll et al. (1979), and Petrowsky (1976) that neither sex seemed particularly more disadvantaged by widowhood. These studies showed demographic differences by sex. Although Atchley (1975) found widows to be somewhat more disadvantaged on such social variables as social participation, transportation, and income, findings on social psychological variables did not provide conclusive results.

The striking similarity between the widows and widowers in the present study on demographic factors would suggest similarities on social psychological states as well. One could speculate that regional factors contributed to the considerable homogeneity among the present sample of Southern

widowed persons. The mean income deficit for older persons in the South is the largest for any regional area in the nation (U. S. Bureau of the Census, 1973). In North Carolina, for example, incomes at the poverty threshold or below characterize 1 out of 2 older persons (Kivett & Passmore, 1977). Greater poverty in the South might serve as a leveler among the widowed sample. Based on these findings and observations, it can be concluded that sex has little or no effect on the subjective well-being of the widowed (as measured through extent of unhappiness).

The lack of sex differences in late life adjustment may suggest a curvilinear pattern to sex role differentiation over the life span rather than a maintenance of sex role norms throughout the life course. There may be an early learning of sex role norms which are strongly reinforced over much of adulthood and then a gradual weakening of normative prescriptions about sex appropriate behavior in late life. Given a pattern of decline in sex roles, the finding of no sex differences in the subjective well-being of the widowed would fit appropriately.

Influences on the Subjective Well-Being of Widowed
Males and Females (Path Model I)

Income Adequacy

The finding that income adequacy had a significant direct effect on subjective well-being was supported by most studies that have examined various indicators of income and

subjective well-being (Cutler, 1973; Edwards & Klemmack, 1973; Pihlblad & McNamara, 1965; Spreitzer & Snyder, 1974). A common theme running throughout the widowhood literature is that income is critical in structuring the widowed's lifestyle and psychological well-being (Atchley, 1975). Findings from the present study were consistent with the results of Edwards and Klemmack (1973) which showed income to be of greater importance to subjective well-being than other socioeconomic variables (education, occupation). This was perhaps because perceived income adequacy better reflected the current situation and subsequent change that had occurred as a result of widowhood or retirement. The indirect effect of SES via income adequacy also indicated the importance of prior education and occupation on the financial resources available in late life. Widowers in many studies have reported a better financial status than widows (Atchley, 1975; Berardo, 1967). Yet, in the present study widowers' perceptions of their incomes were no different from widows' perceived income adequacy.

Indirect effects via income adequacy. Income adequacy emerged as a crucial intervening variable in the explanation of subjective well-being among the widowed. Age, residence, race, and socioeconomic status had indirect effects on the subjective well-being of the widowed via income adequacy. Persons who perceived their incomes as adequate were generally older. This may be a result of the tendency of respondents

of advanced age to live in the home of a relative and consequently to have access to more resources.

Rural residence also contributed to income adequacy despite its negative direct effect on subjective well-being. Perhaps the availability of gardens or property would have contributed to a more positive evaluation of financial resources. Residence, however, only contributed 1% to the explained variance of income adequacy and age made a similar contribution. The lower perceived income adequacy of black widowed persons confirmed the literature showing the greater vulnerability of black widowed older adults to economic constraints (Hill, 1972; Kimmel, 1974). As was expected SES had substantial direct effects on income adequacy. Educational level and occupational status set some parameters for the amount of income perceived to be available in late life.

Residence and Subjective Well-Being

The finding that rural or urban residence had direct effects on the subjective well-being of the widowed supports the belief that the environmental context of older persons contributes substantially to their feelings of well-being (Berardo, 1967; Gubrium, 1972). The observation that rural widowed persons experienced lower subjective well-being than urban widowed persons may be related to several characteristics of rural areas that impinge on the widowed.

For one, rural areas lack public sources of transportation which can contribute to feelings of isolation, hamper

the use of services, and lower morale. This is supported by the findings of Cutler (1973, 1975) that persons further from town had greater transportation problems and lowered morale. The results also parallel the finding of Kivett (1978) that lack of transportation, widowhood, and being female were among several factors contributing to a higher risk of loneliness in rural areas. Also, the greater geographic distance in rural areas to stores and services adds to transportation difficulties and reduces the frequency with which widowed persons can get to shopping centers and services.

The transportation factor may reflect some sex differences which predispose widows to greater hardship. Kivett (1976), for example, found dependence on others for transportation to increase among older females. Berardo's data (1967) illustrate this dependence quite graphically in that only 6% of widows drove their own cars compared to 48% of widowers. A more recent study (Barrett, 1978) also showed a significant difference in transportation problems favoring widowers. Studies show the older rural woman to have the greatest difficulty with transportation (Atchley, 1975; Patton, 1975). Many women have relied on their husbands for transportation and have never learned to drive themselves (Atchley, 1975; Cutler, 1972). As a result, when the spouse dies problems with transportation can seriously alter women's lifestyles.

A second concern in rural areas is the lack of community services and programs for older citizens. Without community support systems the opportunities for widowed persons to adjust to role changes and reintegrate back into the community are curtailed. Youmans (1967) noted the isolationism of rural areas through his observation that older rural Americans were somewhat removed from the mainstream of American life (the concert hall, art gallery, library, legislature, etc.).

A third factor contributing to lowered subjective well-being of the widowed in rural areas is substandard housing. The poorer housing found in rural areas in contrast to that in small town and urban areas has been noted (Youmans, 1967). The cost of home maintenance and yard work may become burdens to those older persons without adequate incomes or past experience with these matters. Despite deteriorating housing, however, most older persons prefer to remain in their own homes.

The lower subjective well-being of the rural widowed in the present investigation should be qualified by a consideration of the nature of the urban sample that was used. Although the Guilford sample was urban in comparison to the Caswell sample, the urban area was not comparable to large metropolitan areas such as those found in the North and Midwest. The Guilford area may most nearly approximate the best of both urban and rural life since it is relatively free of the

problems that seriously affect rural or urban areas. Had comparisons between metropolitan widowed and rural widowed been made, the economic and social constraints characterizing the metropolitan elderly may have served to enhance the relative well-being of the rural elderly.

Social Participation and Subjective Well-Being

The failure of social participation to have a significant effect on subjective well-being was contrary to the findings of many studies of the general population of the elderly (Edwards & Klemmack, 1973; Lemon et al., 1972; Pihlblad & Adams, 1972; Smith & Lipman, 1972) as well as studies utilizing older widowed samples (Arling, 1976; Brown, 1973; Pihlblad & Adams, 1972). Furthermore, the unimportance of social participation to subjective well-being did not lend support to the Activity or Disengagement theories of "successful aging" which posit a strong relationship between the degree of social activity and life satisfaction. A qualitative measure of social participation may have produced different and more meaningful results.

Direct effects on social participation. The significant direct effects of self-rated health, age, and socioeconomic status on social participation supported much of the literature. Poor health, advancing age, and lower socioeconomic status repeatedly have been found to be related to reduced social participation (Berardo, 1967; Cutler, 1973; Edwards & Klemmack, 1973; Lopata, 1973; Riley & Foner, 1968). An

exception to this observation was a study by Bultena and Oyler (1971). They did not find the frequency of social contacts among older persons to diminish with poor health. Lopata (1973) found a strong relationship between prior educational level or socioeconomic status and the social involvement of urban widows. Evidently contacts with friends and neighbors in the present study were not a function of income adequacy but of prior lifestyle as reflected through SES.

Health and Subjective Well-Being

The lack of a significant direct path from health to subjective well-being as shown by the present study did not confirm the literature (Atchley, 1977; Bultena, 1969; Bultena & Oyler, 1971; Bull & Aucoin, 1975; Cavan et al., 1949; Clark & Anderson, 1967; Cutler, 1973; Edwards & Klemmack, 1973; Jeffers & Nichols, 1961; Kutner et al., 1956; Larson, 1975, cited in 1978; Maddox & Eisdorfer, 1962; Sauer, 1977; Sherwood & Nadelson, 1972; Spreitzer & Snyder, 1974). The lack of a significant effect among the present widowed sample may have been due to the advanced age of most of the respondents ($\bar{X} = 75.6$). The studies cited above represented a generally younger age group. With advancing years, age has been considered a leveler with respect to health status (Federal Council on the Aging, 1976). Although the responses to the question about self-rated health were evenly distributed among the three categories of response, there may not

have been substantial discriminating characteristics between those in good, fair, or poor health.

Theoretical Implications

The lack of sex differences in subjective well-being among persons who have experienced a late life role transition (widowhood) has several theoretical implications. Since the path models did not specifically test the role theory and social exchange theory propositions that were used as a basis for the hypotheses, one can only speculate about the implications the findings have for the transition to widowhood.

First, one of Cottrell's propositions may be challenged.

Proposition 1 The degree of adjustment to roles which society assigns to its age-sex categories varies directly with the clarity with which such roles are defined. (Cottrell, 1942, p. 618)

Role clarity particularly in late life may not be a critical factor in adjustment to widowhood since the aging process itself creates a void with respect to role expectations. Perhaps in late life there is little role clarity for either sex. As role loss becomes cumulative older adults find themselves without a social identity and with few standards for judging their behavior.

Restatement The degree of adjustment to roles varies directly with the clarity with which such roles are defined except when a lack of role clarity characterizes all roles at a given age category.

Further research which would show role clarity to have a stronger direct relationship to adjustment at age categories

where role prescriptions are numerous than when few role prescriptions exist would provide support for the proposition as it is restated.

With regard to another of Cottrell's propositions:

Proposition 3 The degree of adjustment varies indirectly with the discrepancy between the abilities of the individual and those required in the roles of the given age-sex category. (Cottrell, 1942, p. 619)

The different kinds of problems that are posed for widows and widowers by discrepancies between their skills and those skills required for role performance are probably stressful for both men and women (Chapter I). The findings from the present study suggest another facet of discrepancy in skill that may pose a greater problem for women.

Environmental and educational constraints serve to increase the dependency role of widows. For example, since women generally have relied on husbands for transportation, upon widowhood they find themselves dependent on friends, relatives, or on public transportation if it is available. Lack of education leaves the widow without skills or perhaps without the self-confidence to venture into new social roles. A critical factor is that for women in particular this increased dependency shifts from the husband to another group of significant others (children, friends, community services). While the marital relationship involved reciprocal roles, the dependency of the widow is often unilateral and may serve to make her feel that she is a burden on others. The male on the other hand is not forced to shift his dependency for

cooking and housekeeping on others. He may be able to "make do" or pay for the services of a cook or maid. It is argued here that a widower may be able to adjust to widowhood without disturbing the perception his close associates, neighbors and kin have of him. The widow may find herself more dependent and find her dependency shifted to a larger social sphere where need fulfillment takes on more unilateral qualities. Perhaps these problems, if they are greater for widows, offset any relative advantages widows have over widowers with respect to prior role rehearsal for widowhood or role incompatibility (Chapter I, Propositions 2 and 4). One could speculate then that both widows and widowers experience role adjustments that can be stressful. Neither sex seems more vulnerable, however, to psychological stresses in widowhood. In line with the preceding discussion, proposition 3 can be restated in order to take the intervening variable, dependency, into account:

The degree of adjustment varies indirectly with the amount of dependency created by the discrepancy between the abilities of the individual and those required in the roles of the given age-sex category.

The third and fourth hypotheses of the present investigation were derived from social exchange propositions. The tentative support found for Hypothesis 3 may be indicative of the hypothesized differential reinforcement of sex-role appropriate behavior and its differential influence on the subjective well-being of widows and widowers. However, the

support was weak. The failure of social participation (Hypothesis 4) to have a significant direct effect on subjective well-being did not allow a further test of these relationships.

The findings suggest that there is a change in the social rewards and the costs of adherence to sex role norms in late life. As discussed earlier, reinforcement for socially approved role behavior declines in late life as roles are given up and old roles are not replaced. Once the child-rearing and provider roles have been relinquished, there are fewer social rewards for maintaining a sharp division in sex roles and perhaps fewer costs associated with taking up traditional cross-sex behaviors. Furthermore, engagement in traditionally cross-sex roles and activities may not be a threat to self-perception; it may enhance older individuals' survival abilities and their sense of independence. One could speculate that any differentiating reward value for sex-appropriate behavior would be less clear cut or weakened considerably in late life.

Conclusions

Based upon the findings from the present study, the following conclusions may be made regarding the subjective well-being of the elderly widowed.

1. No differences may be observed between elderly widows and widowers on subjective well-being.

2. Rural or urban residence has consequences for the widowed. Rural widowed older adults experience lower subjective well-being than their urban counterparts.
3. Perceived adequacy of income influences the subjective well-being of older widowed persons. Inadequate income impairs well-being.
4. Income adequacy serves as a conduit for the effects of background factors (age, residence, race, SES) on the subjective well-being of widowed older adults.

Recommendations for Future Research

Further Improvements in Measures of Subjective Well-Being

Some of the methodological limitations in measuring subjective well-being were discussed in Chapter II. Further research is needed to pinpoint more precisely the nature of unhappiness or of other well-being concepts. The question of which terms are essentially synonymous concepts and which terms represent more general concepts is still unresolved. A question of special interest to the present investigation is whether or not sex differences exist in definitions or interpretations of unhappiness. There is some evidence that different subgroups define well-being quite differently (Larson, 1978). Research directed specifically at these questions would be helpful in resolving these issues.

A statistical concern with the single item dependent variable used in the present study prompts the recommendation that a scale of items be employed in future studies. Errors in prediction are relatively large as a result of a restricted range of scores. Use of an instrument with adequate validity and reliability checks and constructed on an interval unit scale is recommended for future multivariate studies. This would provide a dependent variable that would be interval in nature and better satisfy the assumptions of path analysis.

Research into the Quality of Relationships in Late Life

The findings of the present investigation and of others (Conner et al., 1979; Lowenthal & Haven, 1968; Rosow, 1963) suggest that assessing the quality and value of relationships would be a more fruitful approach for the assessment of social activity. Studies using "frequency of contact" and "scope of interaction" measures have produced inconsistent and often superficial findings with regard to the association between subjective well-being and social participation. Qualitative assessments of interpersonal relationships would add greatly to an understanding of how interpersonal factors might influence subjective well-being. Possible sex differences in the nature of close friendships and in the frequency of social participation may influence the subjective well-being of older widowed persons. More in-depth analyses of these relationships are needed before the influences of social activity can be ascertained.

Larger Sample Size

With the growing interest in the gerontological field in knowing more about special subgroups of the older population such as widows and widowers, sample size must be large enough to provide an adequate and representative number of respondents from subgroups for study. This is especially important when the group of interest is as disproportionately represented in the older population as is the case with older widowers where widows outnumber widowers almost 5 to 1. Also the need for larger samples is especially critical when multivariate statistical designs are employed. Most statistical tests of significance are in part a function of the sample size and therefore sample size can be a factor in determining how well the researcher can rely on his results or draw generalizations to other samples. Reliability of results can be a potential problem with multiple regression where regression coefficients are subject to change with different numbers of independent variables.

Continued Efforts Toward a Theoretical Model of Subjective Well-Being in Widowhood

It is recommended that further multivariate research with the testing of theoretical models be undertaken. Models designed to specifically test out social exchange and role theory propositions as they relate to an explanation of subjective well-being in widowhood would be a further step in the direction of theory building. The present investigation was limited in the number and kinds of variables that

could be included in the path models. Several variables such as transportation problems, length of widowhood, advanced preparation for death of spouse, quality of the marital relationship, and employment status are some variables that might be included in future models.

Research on Sex Differences in Late Life

It has been assumed that older adults maintain strictly sex-segregated roles and that these differentiated roles hinder role transitions such as those at widowhood. The increasing number of dual career couples and the sharing of traditionally sex-ascribed tasks may necessitate some reworking of this assumption. Presently there is little research about the nature of sex role stability and change. This is an area that needs further exploration and may be of increasing importance with each new generation of older adults. There may already be changes in late life with the relinquishing of childbearing and career responsibilities that have not been explored.

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