

LONELINESS AMONG WIDOWED PERSONS IN LATER LIFE

by

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(ABSTRACT)

This study was an investigation of loneliness among widowed elders using a model conceptually based on symbolic interaction theory. Symbolic interaction theorists contend that people are active, self-directing and creative individuals who adjust to dramatic situational changes such as widowhood by defining the transition according to its symbolic meaning and their current perspective of the event. The loneliness model suggested that certain background characteristics, personality resources (morale and mastery), and perceived levels of social support would influence the sample's perspective and definition of the social reality of widowhood, and thereby, serve to facilitate or impede the development of feelings of loneliness. In contrast to most studies of loneliness among widowed elders, this study included males (n = 38) as well as females (n = 135) and both short-term (6-24 months) and long-term (25-60 months) widowed persons. Participants were healthy, educated, unmarried

community residents aged 60 to 91 years. In general, the sample was well adjusted with high levels of social support, morale and mastery and low levels of loneliness. Data analyses included bivariate correlations, t-tests and multiple regression. The regression analysis revealed that morale and the social provision of emotional attachment and morale were the strongest predictors of loneliness in the regression model ($R^2 = .39$). The results of the study partially supported the proposed model of loneliness. The findings also served to further substantiate Weiss's theory of relational provisions and the importance of various social provisions, especially attachment, in countering feelings of loneliness during widowhood in later life.

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The purpose of this study was to investigate the incidence of loneliness among a sample of elderly persons, widowed for varying lengths of time. Specifically, the objectives were: (a) to examine the relationship between the experience of loneliness and the psychosocial condition of widowed elders, and (b) to identify variables significantly associated with loneliness among widowed elders using a model based on assumptions of symbolic interaction theory.

Loneliness among adults in later life is a social problem of international significance as evidenced by a surge of interest in this topic among researchers in the United States and abroad during the past decade (e.g., Andersson, 1984, 1985, 1986; Berg, Mellstrom, Persson, & Swanborg, 1981; Johnson & Mullins, 1987; Mullins, Johnson & Andersson, 1987a; Mullins, Longino, Marshall & Tucker, 1987b). A subjective experience reflecting a society's system of values concerning the degree of need for social contact and emotional bonding in social relationships (Johnson & Mullins, 1987), loneliness is a precursor to depression (Russell, Peplau & Cutrona, 1980; Schultz & Moore, 1984; Young, 1982), and is linked to low self-esteem (Jones, 1982); helplessness, pessimism, negativism, and unhappiness (Bradburn, 1969; Gaev, 1976; Perlman, Gerson, & Spinner, 1978); psychosomatic illness and complaints (Berg et al., 1981) physical illness and obesity (Bruch, 1957; Lynch, 1977), and suicide (Wenz, 1977) among adults.

Previous Literature

An early research theme of loneliness among adults in late life focused on dispelling the myth that loneliness was an inevitable experience stereotypic of old age (Peplau, Bikson, Rook, & Goodchilds, 1982a; Rubenstein & Shaver, 1982). More recently, researchers have concentrated on determining the etiology of loneliness, describing affective and behavioral correlates, and identifying significant demographic variables associated with the experience of loneliness among adults in mid and late life in a variety of settings and marital states (Essex & Nam, 1987; Kivett, 1979; Mullins et al., 1987b; Peplau & Perlman, 1982; Schulz & Hanusa, 1980).

Despite the noticeable growth of research interest in the problem of loneliness among adults during the past decade and in the identification of key predictor variables of loneliness, a clear understanding of this problem as it occurs in later life requires further investigation for a number of reasons. First, some researchers examining loneliness among adults have reported inconsistent findings regarding the significance of certain variables suggested as predictive of loneliness among elderly persons. Second, in most studies, investigators typically used samples comprised of adolescents, college students, or clinical subjects, neglecting to speculate about the implications of their findings for other age groups, especially the elderly population. Furthermore, researchers have failed to recognize that elderly persons as a group may be less inclined to report feelings

of psychological distress such as loneliness when compared to other groups (Peplau et al., 1982a). Third, theoretically-based models of loneliness that incorporate variables specifically applicable to older persons considered at-risk for the experience of loneliness, such as widowed elders, are relatively scarce in the current literature.

Widowhood

A review of the literature on widowhood in later life indicates that this transition signifies a period of multiple changes and losses, including the relinquishment of the role of spouse, couple-based associations, and friendships. Whether their past marriage was based on love, need, or conflict, surviving spouses must adapt to widowhood by reconstructing their self-identities and reorganizing their lives with few normative guidelines to follow (Lopata, 1973b; Peplau, Miceli, & Morasch, 1982b; Stroebe & Stroebe, 1987).

Comprising 50% of women over the age of 65 and 14% of men (AARP, 1987), widowed persons represent a group regarded as susceptible to a multitude of problems, including feelings of loneliness and depression, and high mortality and suicide rates (Osgood, 1985). In terms of seriousness of effect, Holmes and Rahe (1967) indicated on their schedule of life events that the death of a spouse was the most disruptive life event.

In contrast, others have argued that widowhood causes little or no long-term detrimental effects on psychological or physical health (Heyman & Gianturco, 1973). Possessing the psychological and economic

resources needed to adjust, a sensitive and strong support system, and the ability to seek and find assistance when needed, many widows and widowers are able to endure the process with few repercussions (Dimond, Lund, & Caserta, 1987). In fact, it is important to recognize that for many elderly persons, widowhood marks a period of relief from the tiresome and overwhelming responsibilities often felt in caring for a chronically disabled or terminally ill spouse.

Because the aging population is a heterogeneous group that demonstrates no common pattern of adjustment to the death of a spouse, however, the development of emotional problems such as loneliness during this transition requires further investigation. Clearly, there are questions that remain unanswered. For example, what factors cause some widowed persons to develop feelings of intense loneliness, while others manage to recover and adjust during the widowhood process without experiencing similar emotional distress?

Conceptualization of Loneliness

A review of the literature on loneliness indicates that most scholarly research regarding this subject reflects a preponderance of study with regard to the search for a common definition of the term, loneliness. Despite the ambiguity surrounding the operationalization of the concept, however, researchers generally agree on three underlying features of loneliness, namely, that (a) loneliness results from a perceived imbalance between a person's achieved and desired network of social relationships, (b) loneliness is a subjective experience,

unrelated to objective social isolation and, (c) loneliness is distressing and unpleasant (Peplau & Perlman, 1982).

Robert Weiss's (1974) typology of loneliness as social and emotional isolation is the most widely accepted conceptualization of loneliness to date. Weiss hypothesized that loneliness of social isolation (a) occurs as the result of the loss or absence of an engaging social network, (b) is marked by feelings of marginality, rejection, boredom, and aimlessness, and (c) is alleviated by the acquisition of a social network that provides a sense of belonging and social integration. Loneliness of emotional isolation (a) denotes feelings of loneliness associated with the loss of security and emotional intimacy formerly provided by an attachment figure, (b) causes a sense of vulnerability, anxiety, emptiness, and utter aloneness, and (c) is alleviated by an intimate relationship with another person who provides a sense of security and emotional commitment (Weiss, 1973, 1987).

Underlying Weiss's typology of loneliness of social and emotional isolation was his notion of a fund of sociability and the six relational provisions that he considered important to the fulfillment of social needs (Weiss, 1969; 1974). Expounding on the symbolic interactionist viewpoint that primary, close relationships assist the individual in understanding and dealing with social reality, values, and the self, Weiss hypothesized that a fund of sociability provided persons with social relationships of varying degrees of intensity across the life cycle through their provision of six distinct social forms of support

(Attachment, Social Integration, Reassurance of Worth, Guidance, Opportunity for Nurturance, and Reliable Alliance).

According to Weiss, loneliness occurs when an individual perceives an absence of a needed provision. An important aspect of this study is that the theoretical model of loneliness described herein further examines the basic assumptions of Weiss's notion of relational provisions by investigating the association of these six provisions with feelings of loneliness in widowhood.

Loneliness in Widowhood

Researchers generally agree that widowhood is a major cause of loneliness in adulthood (Berardo, 1970; Lopata, 1973a, 1973b; Townsend, 1968). Loneliness is more common, however, when there is lack of intimacy as provided by a confidant (Clark & Anderson, 1967), a perception of little control over the environment (Lowenthal & Robinson, 1976), and unfavorable comparisons between past and present social relationships (Gubrium, 1974; Peplau et al., 1982b; Townsend, 1968).

Helena Lopata (1973a, 1973b, 1980, 1982), investigated loneliness among widowed persons from a predominantly symbolic interactionist perspective and reported that loneliness among widowed women is associated with several key factors. In a sample of 1,169 metropolitan Chicago widows aged 60 years and older Lopata (1980) reported that widowhood required a reorganization of perspective and changes in identity and behavior. She also found that loneliness was most prevalent among those persons who (a) lacked a sense of social

integration, emotional support, and security in relationships with others, (b) stated that they were angry and demonstrated antagonistic behavior towards potential intimates, (c) lacked self-sufficiency, and (d) had no one to provide them with a sense of worth. Loneliness for this group of widows was also associated with short-term (less than 3 years) and long-term (from 9 to 11 years) widowhood, length of spouse's illness (short), age (young), low educational attainment (less than 8 years), and physical health problems. Lopata further reported that loneliness was not significantly associated with income, number of friends, number of children, or number of persons living in the widow's household.

Unlike Lopata's study, most research on loneliness among widowed elderly persons have been characterized by atheoretical investigations and little regard for the importance of length of widowhood as an intervening variable in examining emotional problems such as loneliness among widowed older adults. This study addressed these discrepancies in the literature by examining the association of length of widowhood to loneliness as well as including a sample of both sexes. In addition, a model of loneliness based on assumptions of symbolic interaction theory was proposed as an explanation of loneliness for this group.

Theoretical Background

Suggested as a theory appropriate for use in examining loneliness among adults by some researchers (Essex & Nam, 1987; Gubrium, 1974; Lopata, 1973b, Lowenthal & Robinson, 1976; Shanas et al., 1968;

Townsend, 1968), symbolic interaction focuses on the person-environment transactional process and the specific meaning each person attaches to an event or situation (Burr, Hill, Nye, & Reiss, 1979; Hewit, 1976; Manis & Meltzer, 1972; McPherson, 1983). According to symbolic interaction theory, people define situations or events according to what these situations or events subjectively mean to them from their own individual perspective; they observe and interact with others to examine and arrive at a definition of the self; and they decide the manner in which they will present themselves to others (Cooley, 1909; Mead, 1934).

In some cases, a person's social reality or social world (in this case, marriage) may become so important to the individual and intrinsic to the self that it shapes behavior and defines the self. Furthermore, if the marital state becomes a closed world where social interaction with external reference groups is limited, and if the marriage is continuously and intensely slanted to only one perspective and a single significant other person, then freedom, creativity, and adjustment to other states, such as widowhood, become difficult.

Moreover, Chappell and Orbach (1986, p.96) argued that "...standard ways of thinking and behaving no longer 'work'..." when dramatic transitions occur in a person's life during old age. To many persons in late life, widowhood represents such a dramatic and traumatic transition.

Symbolic interactionists further contend that, over time, unconscious emotions and habits lead some persons, lacking the freedom

to choose from a wide range of perspectives because of a limited repertoire of experience and resources, to respond to changing events:

...without thinking, without problem solving, without considering past and future, without role taking.

Some individuals may be highly influenced by habitual or emotional responses, unable to interact with others, unable to role-take, unable to cooperate in dealing with complex situations, and/or unable to communicate effectively (Charon, 1985, p. 177).

Based on these theoretical assumptions, I proposed in this study that there are clear indications that the experience of loneliness of social and emotional isolation among elderly widowed persons may be especially prevalent among those persons who: (a) have experienced an unrelenting and profound loss of security and attachment because of the death of their spouse, (b) currently lack a sense of mastery and exhibit low morale, (c) lack supportive relationships and are unable to meet their needs for the relational provisions intrinsic to social interaction with others, and (d) have been limited by the constraints of increasing age, poor health, low income, and low educational attainment. In sum, I suggested that the individual's definition of the event of widowhood and the avoidance of feelings of loneliness may be largely determined by the individual's social, psychological, and economic resources and experiential capacity to draw upon past and present

experiences and resources to develop an positive perspective to this transition.

Symbolic interaction theory served as a conceptual guide for the identification of variables I considered important in examining loneliness among this widowed sample of elders. The model of loneliness suggested in this study (Figure 1) avoided causality, and focused, instead, on those variables that were associated with the experience of loneliness among this sample. Two questions were addressed in the study:

- 1) What is the difference in perceived loneliness among widowed elders in regard to age (young-old and old-old), sex (male and female), and varying lengths of time (short-term and long-term) widowed?
- 2) Which independent variables (income, educational attainment, health status, age, gender, length of widowhood, morale, mastery, and social provisions) are significantly associated with variations of loneliness among this widowed sample?

Insert Figure 1 about here

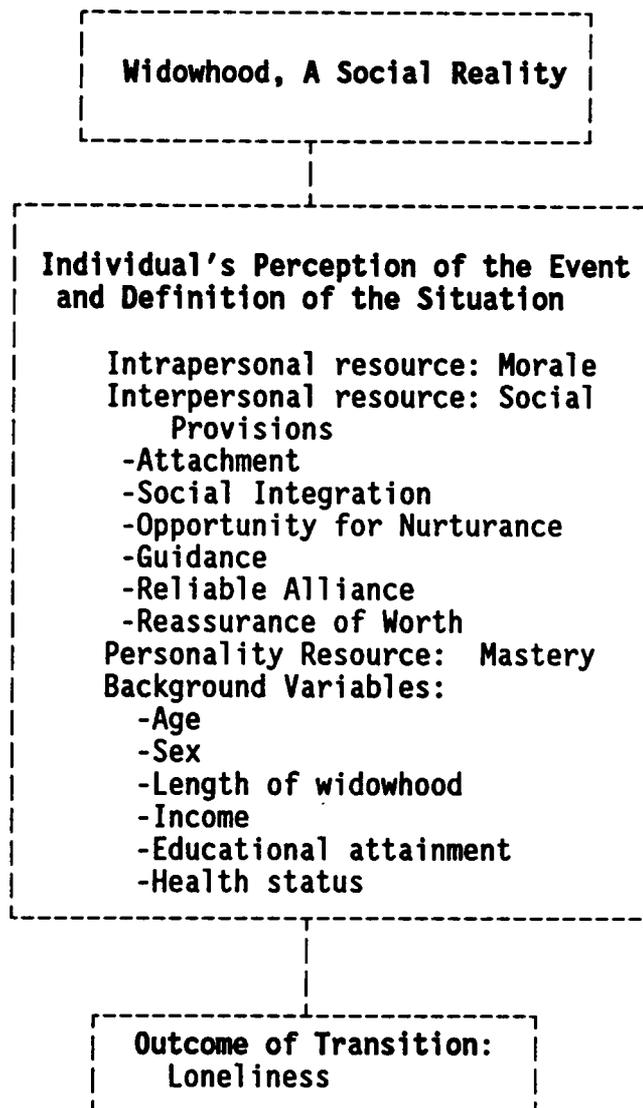


Figure 1: Loneliness Model

Methods

In this study, I examined existing data collected as part of a larger one-year project entitled "Continuity of Household Task Performance During Widowhood" (Lovingood, Blieszner, & Hill, 1987). The investigators of this project obtained funding from the American Association of Retired Persons-Andrus Foundation, Washington, D.C., and conducted their study through the Center for Gerontology at Virginia Polytechnic Institute and State University, Blacksburg, Virginia from April to October, 1987.

The investigators identified a potential sample of 629 widowed persons through examination of obituaries published in the major regional newspaper for a period of five years, 1982 to 1987. Referrals from community groups, agencies, and acquaintances of the widowed participants in the area constituted the remaining portion of the sample contacted for participation in the study. Criteria for inclusion in the study were: (a) widowed from 6 to 60 months, (b) aged 60 years or older, (c) living and functioning independently as head of a household in a private residence, and (d) unmarried at the time of the interview. The majority of the respondents lived in the Roanoke area SMSA (U.S. Bureau of the Census, 1980). Widowed spouses received a telephone call or letter to discuss the purpose of the project and to invite participation in the study.

From the original list of 629 potential participants, 83 persons were ineligible because of reasons such as remarriage, residence in a

nursing home, relocation out the area, failure to meet the age or length of widowhood requirement, or death. The research team was unable to reach 184 persons; in addition, 189 persons refused to participate because they were too busy (18), too ill (44), gave unspecified reasons (120), were afraid (6), still grieving (4), or agreed at first, but declined the actual interview (10). The final sample consisted of 38 men and 135 women (N=173), a participation rate of 47.8% of eligible persons (Lovingood et al., 1987).

Interviewers, trained at Virginia Polytechnic Institute and State University, conducted the face-to-face interviews with the respondents in their places of residence. The interviews lasted an average of one hour.

Measures

Loneliness. To measure the outcome variable of the model, loneliness, the investigators used the short form of the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). The items for this scale originated from reports of lonely people and their experience of loneliness. The scale (items 1, 13, 15, 18 of the original 20-item scale) consisted of the following statements: (a) I feel in tune with the people around me, (b) No one really knows me well, (c) I can find companionship when I need it, and (d) People are around me but not with me. The respondents indicated how often they experienced such feelings on a 4-point Likert scale, using the response categories of never (4), rarely (3), sometimes (2), or often (1). To obtain a total score for

the scale, the investigator reverse scored the two negative items and summed these with the two positive items. The range of scores was 4 to 16, with high values indicating less loneliness; categories for loneliness scores were low (4-10), medium (11-13), and high (14-16), indicating the degree of loneliness for respondents. Tested for concurrent and discriminant validity and considered a reliable instrument with a coefficient alpha of .75 (Russell et al., 1980), the Revised UCLA Loneliness Scale, short form, is considered appropriate for the measurement of loneliness among samples ranging in age from 18 years to 60 years or older. Internal consistency (Cronbach's alpha) of the loneliness scale for this sample was .61. A relatively low level of reliability, the alpha coefficient reported for this sample may have reflected the limited number of items selected to measure loneliness among this group.

Social provisions. To measure the sample's perceived level of social support, the original investigators used the Social Provisions Scale (Russell & Cutrona, 1984). Based on Weiss's (1974) theory of the fund of sociability and relational provisions, the Social Provisions Scale categorized six functions provided by social relationships essential for well-being and the avoidance of loneliness. The six relational provisions (four items each) were: (a) Attachment, a sense of emotional closeness with another, (b) Social Integration, a sense of belonging to a community or social network, (c) Reassurance of Worth, acknowledgement from others regarding one's skills and competencies,

(d) Reliable Alliance, assurance that one has someone to count on in an emergency, (e) Guidance, the availability of advice and information, and (f) Opportunity for Nurturance, a sense of responsibility for the well-being of another person.

Respondents rated the degree to which their social relationships were currently meeting their needs for each social provision on 4-point Likert scales that ranged from (4) strongly disagree to (1) strongly agree. The range of scores for the scale was 24 to 96 (low to high social provisions). Internal consistency (Cronbach's alpha) of the Social Provisions Scale for this sample was .86. Alpha coefficients for the six subscales were as follows: Attachment (.76), Opportunity for Nurturance (.76), Social Integration (.72), Guidance (.78), Reassurance of Worth (.76), and Reliable Alliance (.79).

Russell and Cutrona (1984) also reported a high alpha coefficient (.85) for the Social Provisions Scale. These investigators have confirmed through factor analysis a six-factor structure that corresponded to the six social provisions. The Social Provisions Scale appears in the Appendix C.

Mastery. The investigators examined mastery, the extent to which one regards life events as being under one's control versus being fatalistically determined by fate, chance, or luck, using a 7-item index developed by Pearlin and Schooler (1978) for their study on normative coping responses to life strains. Respondents indicated on a 4-point Likert scale the extent they (4) strongly disagreed to (1) strongly

agreed with each statement. A sample item used to measure the presence of a sense of mastery was "What happens to me in the future depends mostly on me". Values for this index ranged from 7 to 35, low to high mastery. The total score was derived by reverse scoring negative items and summing them with positive items. Internal consistency (Cronbach's alpha) of the index for this sample was .72.

Morale. To measure the sample's current state of morale, the original investigators used the revised version of the Philadelphia Geriatric Center (PGC) Morale Scale (Lawton, 1975) with 17 items included in the index. Two items from the Lonely Dissatisfaction subscale relate directly to loneliness and social relationships (i.e., "How much do you feel lonely?" and "I see enough of my friends and relatives"). I deleted these two items from the morale index in order to avoid confounding the measures of morale and social support with each other and with the dependent variable, loneliness. Morris and Sherwood (1975) noted that these two items measured the extent of one's social relationships and "constitute a domain conceptually different from morale" and should be excluded from analysis in an index on morale (p. 183).

The modified 15-item version of the Revised PGC Morale Scale measured a person's basic satisfaction with self, a sense of place for oneself in the environment, and acceptance of what cannot be changed, recognizing the positive and negative aspects of old age (Lawton, 1975; Morris & Sherwood, 1975). Consisting of three subscales, Agitation,

Attitude Toward Own Aging, and Dissatisfaction, the scale used dichotomous (yes-no) response categories. Agitation referred to items that related to anxiety and a dysphoric mood. Attitude Toward Own Aging referred to items that measured self-perceived change (or lack of change) as one ages and the respondent's subjective evaluation of the quality of these changes. Dissatisfaction referred to items that reflected the extent to which the individual was discontented with life. The 15-item version of the PGC Scale appears in the Appendix C.

To derive a total score for morale, negative items were reverse scored and summed with positive items; the range of scores was 1 to 15 (low to high morale). Internal consistency (Cronbach's alpha) of the 15-item PGC Morale Scale for this sample was .81. (Cronbach's alpha for the original 17-item scale for this sample was .83).

Background variables. The six background characteristics suggested in the model that may serve to facilitate or hamper adjustment to widowhood and influence the extent of loneliness for this sample were age, sex, length of widowhood, income, educational attainment, and health status. To obtain the respondent's age, the interviewer requested that the respondents state their date of birth. The interviewer recorded the respondent's sex as male or female, coded as 1 and 2, respectively.

Length of widowhood was recorded by the interviewer and the respondents were categorized as short-term widowed (widowed from 6 to 24 months) or long-term widowed (widowed from 25 to 60 months), coded as 1 and 2, respectively. Values for annual income ranged from 1 =< \$5,000

to 6= \$25,000 or more. Values for educational attainment ranged from 1 = 0 to 4 years to 8 = completion of postgraduate degree. To assess health status, five measures were used. The respondents rated their current health with values of 1 = poor to 4 = excellent and any limitations of daily living with values of 1 = a great deal to 4 = not at all.

Interviewers rated the respondents following the interview and noted any disabilities observed in hearing, vision, and mobility, with values for each disability ranging from 1 = marked to 4 = not at all. A total score for these five measures reflected the health status of the respondents with a range of 5 to 19 (poor to excellent health).

Results

Descriptive Analyses

Descriptive analyses of the widowed sample for this study, as presented in Table 1, indicated that the population ranged in age from 60 to 91 years (mean = 73.37). The average age of women was 71.89 years (range 60-91); for men, the average age was 78.65 years (range = 64-89). The majority of the sample was white (94.7%) and retired or lifelong homemakers. Over three fourths (76.7%) of the widowed sample reported they had been married for 41 years or more. Almost seventy percent of the total sample (males = 71%, females = 69%) indicated that their spouse had been ill a long time prior to death. Length of widowhood was almost evenly divided between short-term (48%) and long-term (52%) widowed.

Insert Table 1 about here

Overall, the health status of the sample was excellent. In response to the question regarding the extent to which their health condition contributed to restrictions in activities of daily living, 55% of the total sample (males = 61%, females = 53%) reported no limitations in activity. More males than females, however, were observed by the interviewers as exhibiting moderate or marked problems with hearing (5.3% = males, 2.3% = females), vision (11% = male, 4.5% = females), and mobility (males = 13.2%, females = 9%) with mobility noted as a distinct

problem for both groups, especially for males. The means for health status, although lower for males than females, were not significantly different.

Forty percent of the sample had completed some high school or had earned a high school degree. Males reported higher educational attainment than females with almost 30% of the males reporting they had completed college and/or earned a postgraduate degree. The means for educational attainment, though higher for males, were not significantly different.

The sample's annual income ranged from less than \$5,000 to over \$25,000 with the majority indicating an average yearly income of \$10,000 to \$15,000. Males received higher incomes than females; forty-one percent of the males received an annual income of \$25,000 or more, compared to 21% of the females. The means for income for the males and females in this sample were significantly different as indicated in Table 1.

In regard to the independent variables of social provisions, mastery, and morale, the results of the data analysis, presented in Table 2, revealed a high level of social support, mastery, and morale for this sample. The highest mean for a Social Provisions subscale was for Reliable Alliance, indicating that sample members believed they had people in their networks whom they could count on for help in times of emergency. The means for Attachment, Social Integration, Reassurance of Worth, and Guidance were similar, but slightly lower than the means for Reliable Alliance. Sample members were obviously involved in

relationships that provided feelings of emotional security, social activities with peers, self-esteem, and necessary advice, despite their fairly recent loss of their marriage partner. On the other hand, the lowest mean was on the subscale, Opportunity for Nurturance, indicating that sample members were less involved in relationships in which others depended on them for care than in the other types of relationships.

Insert Table 2 about here.

Males and females had comparable mean scores for the Social Provisions Scale, the PGC Morale scale, and the Mastery Scale. Males reported slightly higher scores than females on all three scales, however, revealing higher levels of morale, mastery, and social support. This was an interesting finding because some researchers reporting on sex differences in adjustment to widowhood contend that males recover more slowly than females after the death of their spouses, citing their lower degree of involvement in family and friendship relationships as well as their reluctance or difficulty in expressing their emotional feelings in times of need (Berardo, 1970). They also tend to experience more medical problems during the initial adjustment period, which affects their level of morale and control (Stroebe & Stroebe, 1987). Nonetheless, the results indicated that the males in this sample were relatively well adjusted and satisfied with their lives, felt a sense of mastery over the events that occurred in their lives and were able to

meet the needs that were important to them in social relationships with others.

Insert Table 3 about here.

In terms of loneliness, the widowed sample indicated a relatively low level of loneliness as presented in Table 3 (high scores indicate less loneliness). Females reported a slightly greater degree of loneliness than males. Tested for significant differences, the means for loneliness for these two groups were not significantly different.

Over three fourths of the sample reported that they rarely or never felt lonely. Only 17 per cent of the total population indicated that they felt lonely. Clearly, these results revealed a group of widowed elders that did not feel lonely. (Refer to Table B-1 for the sample's responses to the four items of the loneliness scale).

T-test Comparisons

I conducted t-test comparisons on the mean loneliness scores of the widowed sample to answer the first research question regarding the differences in loneliness of groups characterized by sex (male and female), age, and length of widowhood (short-term and long-term). To categorize the respondents in two groups for age, persons aged 60 years to 74 years constituted the young-old group (coded as 1) and those persons aged 75 years and older comprised the old-old group (coded as 2).

Initially testing for homogeneity of variance for each independent variable, I retained the null hypothesis of equal variability for each group based on sex, age, and length of widowhood.

Table 4 presents the findings of the t-test comparisons and the means and standard deviations for perceived loneliness of these three groups. No differences in loneliness with regard to sex, age, and length of widowhood were noted. These findings contradict the research findings of other investigators of loneliness among older women (Lopata, 1980) and adjustment following widowhood (Lopata, Heinemann, & Baum, 1982). These investigators reported that younger widows and those widowed for a shorter period of time experienced significantly more loneliness, depression, and emotional distress than older long-term widows.

Insert Table 4 about here.

With respect to the t-test comparison for sex and loneliness, the findings of this study contributed to the ongoing debate regarding sex differences in self-reports of loneliness. Citing inconsistencies in the findings of studies that have examined this issue, researchers have suggested that the lack of reported differences reflects gender differences in selection and the male's tendency to minimize verbal comments regarding intimate thoughts and feelings to others (Borys, Perlman, & Goldenberg, 1985).

Bivariate Correlations

In order to answer the second research question concerning the relationship between loneliness and the demographic, personality, and interpersonal resource variables identified in the loneliness model, I first computed Pearson correlation coefficients. The findings of this analysis are presented in Table 5.

Insert Table 5 about here.

In order of significance, morale emerged as the critical correlate of loneliness for the total sample followed by the Social Provision of Attachment, the personality characteristic of mastery, and the social provisions of Social Integration and Opportunity for Nurturance. The latter variable indicated a small, though significant, inverse relationship to scores of less loneliness for this sample, perhaps revealing the negative dimensions of social relationships that attend nurturant behavior or caring for others.

The results of the bivariate analysis further revealed that Nurturance had a negative effect on morale for this sample (See Table B-2 in Appendix B). Holahan and Holahan (1987) reported similar results regarding the subscale, Opportunity for Nurturance, in their study of 26 men and 26 women (aged 65 to 75) on self-efficacy, social support, and depression. These researchers deleted the subscale from further analysis because it was unrelated (zero correlation) to the dependent

variable of their study, depression, and "...conceptually different from the other subscales in that it pertains to giving support rather than receiving it" (p. 66). I decided not to delete this subscale because nonreciprocal and dependent relationships involving the care of others have the potential of creating loneliness and dissatisfaction with social relationships among elderly persons (Rook, 1984). Furthermore, I considered it an important dimension of social support in the proposed model of loneliness.

In examining the intercorrelations among the Social Provisions subscales, it was obvious that a number of provisions (namely, Attachment, Guidance, Social Integration, and Reliable Alliance) were highly intercorrelated (see Table B-2 in Appendix B). Problems of collinearity in the subscales of the Social Provisions Scale in studies of loneliness and depression among adults appear somewhat common as other investigators have reported similar results (Holahan & Holahan, 1987; Russell, Cutrona, Rose, & Yurko, 1984).

Because these high intercorrelations among variables indicated problems of linear dependence, I excluded one of the subscales, Guidance, from further analyses. Deletion of an "offending" variable is considered by researchers as one of several solutions to multicollinearity (Pedhazur, 1982). I based my decision to delete this particular subscale on the grounds that items in the social provision subscale of Guidance replicated items measuring Reliable Alliance with both scales related to the availability of assistance when needed. I

retained the subscales of Social Integration and Attachment in the loneliness model because of their significantly positive correlations with the dependent variable, loneliness, and because I considered these social provisions as important theoretical measures of the dependent variable of loneliness of social and emotional isolation.

With respect to the demographic variables, health status was the only background characteristic that indicated a significant correlation with loneliness for the total sample. Although a positive relationship, by degree, it is small. Despite this finding, the other demographic variables were included in the regression model because of their relevance to the theoretical assumptions of the model of loneliness.

The correlation coefficients further indicated noticeable differences in the correlates of loneliness by sex (See Table B-3 in Appendix B). The critical correlates of loneliness for males in order of significance were: morale, mastery, Attachment, Reliable Alliance, and Reassurance of Worth. It is possible to suggest from these results that widowed men in this sample countered feelings of loneliness by: (a) maintaining a high level of morale, (b) experiencing a sense of self-worth and respect from their peers, (c) exercising the belief that they had control over the events in their lives, and (d) meeting their needs in relationships for attachment and assistance from others.

For females, the significant correlates of loneliness were morale, Attachment, mastery, health status, Social Integration, and Opportunity for Nurturance. Widowed women in the sample were less lonely than

others if they (a) reported a general satisfaction with life and had a close relationship with another person that provided a sense of emotional commitment and security, (b) felt a sense of mastery or control over external events and met their needs for social integration with others who shared their interests, and (c) were not involved in roles in which others needed or relied on them for care. Health was also significantly associated with less loneliness for females in this sample.

In summary, the overall results of the bivariate analysis suggested that widowed elders who: (a) were dissatisfied with their lives, experienced agitation, and had a negative outlook on the changes intrinsic to aging, exhibiting low morale, (b) reported low levels of mastery, (c) felt that their social relationships did not meet their needs for Attachment and Social Integration, (d) experienced impaired health, and (e) were involved in relationships promoting the nonreciprocal aspects of nurturance were more likely to be lonely than others in this sample.

Multiple Regression of Loneliness

I conducted multiple regression analysis to address the second research question of the present study. This forced entry procedure examined the extent to which the 13 independent variables identified in the conceptual model explained the variance of loneliness for this widowed sample. The dependent variable for this analysis was loneliness and the independent variables entered in the equation were: morale,

mastery, the social provisions of Attachment, Social Integration, Reliable Alliance, Opportunity for Nurturance, and Reassurance of Worth. The background characteristics of age, length of widowhood, health status, income, and educational attainment, all recoded as continuous variables, except for sex, which was dummy-coded, were also included in the regression equation.

The results of this analysis, presented in Table 6, revealed that morale and the social provision of Attachment were the strongest predictors of less loneliness for this group. The model was significant and explained 39% of the observed variability in loneliness. The regression coefficients of Reassurance of Worth ($p < .0633$) and age ($p < .0818$) approached significance in the loneliness model.

Insert Table 6 about here.

The results indicated that social provisions related to family and friends were well met in the sample because of their low variance. In contrast, provisions related to spouses or intimate attachment figures and colleagues/peers were the best predictors of less loneliness for this group of widowed elders.

These findings corroborate the relative importance of a relationship that promotes a sense of emotional commitment and security among older widowed persons (Weiss, 1973). In spite of the presence of a viable network of social relationships, the loss of such a

relationship was associated with loneliness in this sample. The results further substantiate the symbolic interactionist viewpoint that the loss of an established source of definition of self and reality can lead to loneliness among elderly widows following the death of their spouse.

Intercorrelations between the predictors of loneliness for this model, morale and the social provision of Attachment, were examined for multicollinearity. Because the correlation coefficient met the assumptions of linear regression in regard to collinearity, the model was accepted as contributing to the explanation of loneliness for this sample.

Discussion

Researchers have generally defined loneliness as a perceived deficit in social relationships, but clearly there are characteristics that differentiate lonely people from nonlonely persons and cause these deficits. This purpose of this study was to examine the incidence of loneliness among widowed elders and to identify intrapersonal, interpersonal, and background variables significantly associated with loneliness for this group, using a model conceptually based on the assumptions of symbolic interaction theory. This model suggested that social background resources, personality characteristics (morale and mastery), and perceived levels of social support would influence the individual's perspective and definition of the social reality of widowhood and thereby, serve to facilitate or offset the development of feelings of loneliness following this transition.

Overall, the results from this study indicated that this widowed sample of elders was not particularly lonely. The majority of the participants were reasonably healthy, well educated, and economically independent, exhibiting relatively high levels of morale and mastery. They also participated in social networks that met their needs in regard to the social provisions of Reliable Alliance and Social Integration. For persons experiencing loneliness, however, the results of this study tended to confirm certain major assumptions of the model as evidenced by the amount of variance in loneliness (39%) accounted for by the independent variables in the regression equation.

Effects of Background Characteristics

In regard to the first question addressed in the study (the relationship of age, sex, and length of widowhood to loneliness), the results revealed that the background characteristics of sex and length of widowhood were unrelated to the experience of loneliness for this sample of widowed elders. This finding contradicted previous research examining the transition of widowhood (Lopata, 1979; Lopata et al., 1982) and loneliness among older adults (Mullins, Longino, Marshall, & Tucker, 1987b).

It is possible that the relatively small number of widowed men in the study, although reflective of the general population in old age, may have precluded detection of statistically significant sex differences in the t-test comparisons. Nevertheless, the results failed to substantiate speculations made by some researchers that men tend to suffer more

psychological distress than women following the death of their spouse (Perlman et al., 1978; Rayburn, 1986).

With respect to length of widowhood and loneliness, the two groups examined in this study were widowed from six months to five years, a relatively short time frame in which to detect significant differences in mean loneliness scores. In contrast, the majority of the women in Lopata's (1980) study had been functioning alone from four to eight years, allowing them time to experience adjustment and reformulation of identity following the death of their spouses.

In regard to age, the results corroborated previous investigations on loneliness examining the association of age and loneliness among elders (Harris & Associates, 1978; Mullins et al., 1987b) Age approached significance in the regression model, indicating that younger persons in this sample tended to report less loneliness.

To date, research on the relationship of age to loneliness has produced inconsistent findings (deJong-Gierveld, 1987; Fischer & Phillips, 1982; Rubenstein & Shaver, 1982). Some investigators have proposed that older persons are lonelier because of the greater risk of social isolation that accompanies increasing age as well as decreasing mobility and impaired health (Fischer & Phillips, 1982). Others have argued that there is no relationship between age and loneliness, suggesting that loneliness is symptomatic of poverty and ill health, not age per se (Rubenstein & Shaver, 1982). The results of this study suggest that age may be more closely related to morale than feelings of

loneliness, especially for older widowed men. For older widows in this sample, age was more closely associated with social relationships that met relational needs for intimacy and social interaction than with feelings of loneliness.

The results provided little support for previous research findings that have consistently shown that health is a significant predictor of loneliness among older adults (Harris & Associates, 1986; Kivett, 1979; Mullins et al., 1987a; Mullins et al., 1987b). Health was not a key predictor of loneliness in the present study.

Furthermore, the correlation coefficient for health and morale was higher than that for health and loneliness, especially for women in this sample. This finding served to corroborate Larson's (1978) summary of the research on morale and the overall consensus among researchers that health is the most strongly related predictor of morale in later life (Stock, Okun, Haring, & Witter, 1983).

It is interesting to note that loneliness researchers generally attribute the correlation between poor health and loneliness to isolation caused by chronic functional incapacities (Peplau, Miceli, & Morasch, 1982b). The literature on age differences in health assessment, however, provides a somewhat different perspective to this issue and a possible explanation for the results of this study.

Levkoff, Leary, and Wetle (1987) suggested in their study of health appraisal by aged and middle-aged adults that self-reports of poor health among the elderly may be more indicative of an exaggerated

concern for one's body and symptoms of depression and general dissatisfaction with life than actual health status. They further argued, citing relevant geropsychiatric studies, that social stresses and dramatic change during old age may cause some elderly individuals to assume a sick role and seek assistance from primary care providers, masking underlying problems of low morale and psychological distress. From this discussion, it is possible to suggest that poor health reported by elderly persons is related more to decreased levels of morale than to the experience of loneliness. The findings of the present study support this viewpoint, especially for the widows in this sample.

Effects of Psychosocial Variables

The second research question examined the relationship between loneliness and the interpersonal variable of social support and the intrapersonal variables of morale and mastery.

The finding that morale was the critical predictor of loneliness for this group was hardly surprising. Past research has consistently shown that loneliness is negatively related to emotional well-being among elderly persons (Perlman et al., 1978; Kivett, 1979; Lee & Ishii-Kuntz, 1988) and among widowed persons (Bahr & Harvey, 1979). But an important clarification is needed regarding the relationship of morale to loneliness.

In this sample of widowed elders, a high significant correlation coefficient between loneliness and morale raises some rather critical questions. For example, did the scale of loneliness tap the same

affective state as morale? The reported correlation suggests redundancy of measures and linear dependence. Larson (1978, p. 113) argued that one of the limitations of measurements of morale, well-being, and life satisfaction is that they provide "little information about the informants" because they are "shrouded by unique shades of meaning" about other affective states as well as the response style of the individual.

In addition, which variable precedes the other in terms of causing distress during widowhood? This is a difficult question to answer and one that indicates the complexity of extrapolating information about predictor variables when both morale and loneliness are measured in a single study. Lee and Ishii-Kuntz (1988) argued that loneliness was a critical correlate of morale; they further suggested that "explanation of one emotional state in terms of another emotional state, does little to advance sociological theory" (p. 470). It appears clear from the results of this study, however, that the sample's subjective perception of the transition of widowhood and their degree of loneliness was significantly influenced by their optimistic ideology, a basic sense of satisfaction with life and the quality of the changes indigenous to aging, and acceptance, rather than agitation and distress, of the social realities of aging and the social reality of widowhood.

Mastery was also associated with feelings of loneliness for this group at the bivariate level. It failed, though, to emerge as a statistically significant predictor of loneliness in the regression

model. A possible explanation may be that mastery was more highly associated with morale than loneliness for this group of widowed elders, especially the males. This finding corroborates previous research that has indicated that perceived control is associated with less distress during dramatic change and greater satisfaction with life in old age (Langer, 1983; Schulz, 1976).

Researchers studying at-risk groups such as widowed elders have also reported that the qualitative dimensions of social support and the presence of a confidant counter the stress and strain associated with widowhood and influence positive functioning and morale (Lowenthal & Robinson, 1976). The results of this study concurred with these findings by revealing that the social provision of Attachment was a key predictor of less loneliness for this sample of widowed persons in later life.

The subscale items for the social provision of Attachment were related to feelings of trust, intimacy, security, and emotional commitment in relationships, usually provided by a relationship with a spouse or close attachment figure. With college-aged adults, loneliness researchers have consistently reported that the social provision of Social Integration outweighs Attachment in importance (Cutrona, 1982). In contrast, middle-aged adults appear to equally value relationships that meet their needs for social interaction and intimacy (Russell & Cutrona, 1984). The above findings and the results of this study suggest a developmental shift in the need for certain social provisions

across the life cycle with older adults placing value primarily on relationships that provide a sense of security and intimacy.

Weiss (1969) suggested that following the death of their spouse, widowed elders experience an emotional imbalance for intimacy and attachment, previously provided by the deceased spouse. In their search for intimacy with another person, widowed elders lack the opportunities of younger adults to find attachment figures. He stated that "emotional responses are not communicated and responded to, they go undetected, uncorrected by another's perceptions" (p. 43). This distress, substantiated by the results of this study to some degree, is expressed by a feeling that one is no longer important, a sense of unhappiness, and eventually, a state of chronic loneliness.

Symbolic Interactionism and Loneliness

Researchers in gerontology have applied the symbolic interactionist perspective to a number of life-changing events that occur during old age, such as relocation, retirement, and widowhood. These are situations that require reorganization of one's perspective and habitual responses and that vary in degree of intensity in relation to causing distress (Lopata, 1973a; Marshall, 1986). A perspective that can be applied to situations that involve human behavior and social interaction, symbolic interaction theory also lends itself to analysis of the experience of loneliness.

To illustrate, symbolic interaction theorists may argue that lonely people have problems with symbols, gestures, and communication,

understanding others and being understood. Second, they may experience difficulties in role taking, either in their lack of ability or unwillingness to socially interact with others in a reference group that would normally be meaningful for them. Third, lonely persons may experience difficulties in applying an appropriate perspective to a situation, using other inappropriate reference groups to define problematic situations (Charon, 1985).

The presence of chronic difficulties in social interaction, a characteristic of lonely people, is supported by research findings that indicate that lonely people exhibit shyness (Peplau & Perlman, 1982), lack of motivational arousal to take risks in social interaction (Schultz & Moore, 1984), anormative self-disclosure patterns, self-deprecating behavior, and low self-esteem (Peplau & Perlman, 1982), and a pessimistic attitude in their relationships with others (Bradburn, 1969; Peplau & Perlman, 1982).

For the lonely widowed person, problems in interaction with others may lead to problems in communication, a failure to analyze and define the situation associated with distress and one's place in it, an inability to assess others and their acts accurately, and a failure to derive a plan for action to work out initial and long-term problems of adjustment. They may continuously compare their past lives in marriage to their present lives as widowed persons, clouding their perspective and definition of the event. When these feelings and behavioral responses become habitual and chronic, interaction with others may

become difficult and the widowed person may experience conflict and frustration with self and, finally, isolation from others.

Partially supporting the proposed model and symbolic interaction theory, the results of this study revealed that the majority of this sample were able to overcome the initial emotional distress commonly experienced during widowhood by most bereaved persons. Successfully utilizing their resources of morale, mastery, and social provisions as well as their personal resources, they were able to develop a positive and adaptable perspective to this transition and thereby, counter feelings of loneliness. Furthermore, it appears that the indirect effects of losing a spouse during old age, such as decreasing income and related health concerns, were not factors that related to the experience of loneliness during widowhood for the majority of the group. For sample members who experienced loneliness, however, the presence of a social support system did not necessarily alleviate the loss of attachment and security once provided by their spouse.

In conclusion, the present study has contributed to the literature of loneliness among widowed elders by its replication of other studies and the reconfirmation of the importance of Attachment in countering feelings of loneliness among widowed persons. However, caution should be used in generalizing the results beyond the sample described in this investigation because of the small sample size and purposive method of sampling.

There are questions that remain unanswered that suggest future research direction on this topic. First, additional study is needed to examine the relationship between health and loneliness, taking into account the effects of intervening variables such as morale and mastery that may serve to modify self-reports of health and loneliness among older persons. For example, health was more closely associated with morale than feelings of loneliness for males and females in the sample; health was also more strongly related to mastery for males. This suggests that persons with an optimistic ideology and sense of control deterred feelings of emotional distress by taking better care of themselves, avoiding the need to register psychosomatic complaints unrelated to objective health. Research is also needed that addresses the relationship of health to other subjective states such as depression, which is considered a cause of increasing suicide rates for older men, in particular (Osgood, 1985). A suggestion is to examine the effects of multiple life events common to aging that may occur following the event of widowhood, such as relocation and institutionalization, controlling for age, cohort and personality differences. These changes may have an impact on health status, increasing loneliness and other symptoms of psychological distress among widowed elders during the adjustment process.

Second, additional study is needed to detect the significance of varying lengths of widowhood in predicting feelings of loneliness and depression among widowed persons in later life. In addition, widowers

should be included in future research studies of emotional distress following the death of their spouses. Perhaps less obtrusive methods of sampling, such as mail questionnaires, would encourage men to be more candid about their feelings of loneliness.

Third, loneliness researchers need to address more closely the negative aspects of social support that may precipitate feelings of loneliness. Although the prevalent view seems to be that social support enhances morale and counters feelings of distress following an event such as widowhood, some researchers suggest that a balance of nonreciprocal and reciprocal help is a crucial aspect to a person's subjective perception of social support and morale (Rook, 1985).

Fourth, the amount of explained variance in the model strongly suggests several areas of concern other than that additional variables should be considered in examining loneliness among widowed elders. For example, a possible reason for the low variance explained in this model may rest in the sample that chose to participate in the study in the first place. They were obviously well adjusted and reasonably satisfied with their situation; therefore, they experienced low levels of loneliness. Furthermore, the problem of discriminant validity was evident in the scales of morale and loneliness. Researchers need to address this issue by further refinement of measurement instruments of affective states, such as morale and loneliness. In addition, the social stigma attached to admitting feelings of loneliness may have precluded the detection of high levels of loneliness. Finally, additional

variables related to widowhood adjustment may be more predictive of loneliness among widowed elders. For example, this study examined the qualitative dimensions of social relationships. Future research is needed that examines the effects of both qualitative and quantitative aspects of social support in a single study on loneliness. Factors such as the religiosity and financial and emotional preparation for widowhood should also be included in studies of loneliness. Palmore (1980) has suggested that religious institutions are an important resource in the provision of mental health care that is often overlooked in times of distress. And yet, few researchers include this variable in their studies of loneliness among elders.

Finally, studies that examine lifelong patterns of social interaction with others would also contribute to the explanation of loneliness among widowed persons in later life. It may be that loneliness is a trait that is established in childhood and continues to persist during adulthood into old age. For example, researchers have speculated that parental intrusion or neglect during childhood predisposes individuals for social and emotional isolation in old age (Andersson et al., 1987). Clearly, these variables and additional factors need to be considered in examining this problem among adults and those considered particularly at-risk for loneliness in old age, such as widowed persons.

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Table 1

Demographic Characteristics of Sample

Variable	Males		Females		Total	
	n	%	n	%	n	%
Sex	38	22.0	135	78.0	173	100.0
Length of Widowhood						
Short-term (6-24 months)	17	44.7	66	48.9	83	48.0
Long-term (25-60 months)	21	55.3	69	51.1	90	52.0
Race						
White	35	92.1	125	95.4	160	94.7
Black	3	7.9	6	4.6	9	5.3
Missing	0		4			
Age, years						
60-64	1	2.7	21	15.9	22	13.0
65-69	3	8.1	33	25.0	36	21.3
70-74	4	10.8	36	27.3	40	23.7
75-79	11	29.7	17	12.9	28	16.6
80-84	12	32.4	17	12.9	29	17.2
85-89	6	16.2	7	5.3	13	7.7
>89	0		1	0.8	1	0.6
Missing	1		3		4	
Mean	78.65		71.89		73.37	
S.D.	6.48		7.14		7.52	
Range	64-89		60-91		60-91	
Health Status						
8-10 (poor)	3	7.9	1	0.8	4	2.4
11-13 (fair)	4	10.5	16	6.1	20	11.8
14-16 (good)	10	26.3	32	24.2	42	24.7
16-19 (excellent)	21	55.3	83	62.9	104	61.2
Missing	0		3		3	
Mean	15.79		16.60		16.42	
S.D.	2.97		2.26		2.45	
Range	8-19		10-19		8-19	

t (50) = -1.57, n.s.

Table 1 (continued)

Demographic Characteristics of Sample

Variable	Males		Females		Total	
	n	%	n	%	n	%
Educational attainment						
1. 0-4 years	3	8.1	3	2.2	6	3.5
2. 5-8 years	11	29.7	18	3.3	29	16.9
3. Some high school	4	10.8	31	23.0	35	20.3
4. Completed high school	2	5.4	32	23.7	34	19.8
5. Business/trade school	3	8.1	15	11.1	18	10.5
6. 1-3 years college	3	8.1	20	14.8	23	13.4
7. 4 years college	7	18.9	9	6.7	16	9.3
8. Post graduate work	4	10.8	7	5.2	11	6.4
Missing	1		0		1	
Mean	4.30		4.25		4.26	
S.D.	2.44		1.75		1.91	
Range	1-8		1-8		1-8	

t (47) = 2.23, n.s.

Annual Income

1. < \$5,000	2	6.3	12	10.2	14	9.3
2. \$5,000-\$9,999	6	18.8	31	26.3	37	24.7
3. \$10,000-\$14,999	3	9.4	28	23.7	31	20.7
4. \$15,000-\$19,999	5	15.6	9	7.6	14	9.3
5. \$20,000-\$24,999	3	9.4	13	11.0	16	10.7
6. \$25,000 and above	13	40.5	25	21.2	38	25.3
Missing	6		17		23	
Mean	4.25		3.47		3.63	
S.D.	1.78		1.70		1.74	
Range	1-6		1-6		1-6	

t (148) = 2.29, p < .0236

Note. N=173.

Table 2

Psychosocial Characteristics of the Sample

Variable	<u>Total Sample</u>		<u>Males</u>		<u>Females</u>	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
<u>Social Provisions Scale ^a</u>						
Attachment	12.41	1.54	12.27	1.87	12.44	1.44
Social Integration	12.38	1.24	12.36	1.57	12.38	1.14
Reassurance of Worth	12.29	1.18	12.40	1.74	12.26	0.99
Opportunity for Nurturance	10.80	1.97	10.76	2.19	10.80	1.91
Guidance	12.60	1.41	12.50	1.42	12.60	1.40
Reliable Alliance	13.11	1.60	13.05	1.80	13.13	1.54
Total Scale ^b	73.80	6.61	74.13	8.31	73.72	6.15
F = 1.83, p < .1209 (test of homogeneity of variance)						
t(165) = 0.26, p < .7956						
<u>Mastery ^c</u>						
Total Scale ^d	25.43	4.79	26.76	4.82	25.06	4.73
F = 1.04, p < .8523						
t(166) = 1.91, p < .0568						
<u>Morale ^e</u>						
Total Scale ^f	10.71	3.37	11.30	3.58	10.55	3.31
F = 1.17, p < .5204						
t(148) = 1.14, p < .2540						

Note.

^aN= 167^b Range = 57-96^cN= 168^d Range = 12-35^eN= 150^f Range = 1-15

Table 3

Frequency of Loneliness for the Widowed Sample

		<u>Loneliness</u> ^a					
Response Category		<u>Male</u>		<u>Female</u>		<u>Total</u>	
		n	(%)	n	(%)	n	(%)
Low	(14-16)	22	(64.70)	68	(50.37)	90	(53.25)
Medium	(11-13)	10	(29.41)	50	(37.04)	60	(66.45)
High	(4-10)	2	(5.88)	17	(12.28)	19	(11.24)
Total		34		135		169	
Missing		4		0		4	
Mean		13.88		13.37		13.47	
S. D.		2.03		2.35		2.29	
Range = 7-16							

Note: N = 173; cases with missing data were excluded from analysis.

^a High scores indicate low loneliness.

Table 4

Group Differences for Loneliness by Sex, Age, and Length of Widowhood

Group	n	Mean	S.D.
<u>Sex</u>			
Male	34	13.88	2.03
Female	135	13.37	2.35
F = 1.34, p <.3250			
t(167) = 1.17, p <.254			
<u>Age</u>			
Young-Old	98	13.30	2.40
Old-Old	67	13.76	2.13
F = 1.27, p <.3086			
t(163) = -1.28, p <.2028			
<u>Length of Widowhood</u>			
Long-term	87	13.26	2.30
Short-term	82	13.70	2.28
F = 1.01, p <.9571			
t(167) = -1.22, p <.2230			

 Note. N = 173; cases with missing data were excluded from analysis.

Table 5

Correlates of Loneliness (N=173)

Independent Variables	Total Sample		Males		Females	
	n	r	n	r	n	r
Morale	152	.461***	32	.669***	120	.411***
Mastery	168	.273***	37	.541***	131	.203*
Social Provisions						
Attachment	172	.300***	37	.534***	135	.244**
Social Integration	168	.212**	36	.322**	132	.179*
Nurturance	172	-.151*	38	.005	134	-.195*
Guidance	171	.154	36	.315	135	.121
Reassurance of Worth	165	.030	35	.388*	130	-.096
Reliable Alliance	173	.100	38	.392*	135	.024
Age	169	.122	37	-.128	132	.141
Sex	169	-.089	34	.000	135	.000
Length of Widowhood	169	.100	34	.259	135	.073
Health Status	170	.164*	38	.072	132	.181*
Income	150	.017	32	.210	118	-.045
Educational Attainment	172	-.048	37	.318	135	-.163

* p < .05

** p < .01

*** p < .001

Appendix A
Literature Review

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Literature Review

This appendix describes the existing literature on loneliness among elderly adults and during widowhood. The basic assumptions of symbolic interaction theory and the model proposed for the study are explained in greater detail. The operationalization of the term, loneliness, is examined as well as terms frequently associated with the experience of widowhood. Also described are studies that have examined the effects of the intrapersonal and interpersonal variables of morale, mastery, and social provisions on loneliness during widowhood in later life.

Conceptualization of Loneliness

Most scholarly research and writing regarding the subject of loneliness reflects a preponderance of study with regard to the search for a common definition of the term. The subtle nuances inherent in the task of merely defining an abstract feeling such as loneliness are evident by the current definitions of this phenomenon. The controversy surrounding definition stems primarily from apparent conflicting viewpoints among researchers regarding the nature of loneliness as a social deficiency (Peplau & Perlman, 1982). Despite the ambiguity surrounding the operationalization of the term, loneliness researchers generally agree on three underlying features of loneliness, namely, that (a) loneliness results from a perceived imbalance in a person's achieved

and desired social network of relationships, (b) loneliness is a subjective experience, and (c) loneliness is distressing and unpleasant (Peplau & Perlman, 1982).

Delineation of Terms

In a study on widowhood in late life, it is important to note the distinct differences that exist between loneliness of emotional and social isolation and sentiments resulting from bereavement, grief, mourning, depression, and solitude or the state of being alone, terms often used interchangeably when examining feelings of loneliness among widowed adults. When an individual experiences the death of a spouse or loved one, bereavement naturally follows as an objective condition, prompting grief and mourning (Stroebe & Stroebe, 1987). Grief is the emotional component to the loss and a normal affective response, marked by feelings of anger, shock, protest, and painful sadness. Whereas mourning is a ritual attitude, a duty intrinsic to widowhood imposed by society (Durkheim, 1976; Stroebe & Stroebe, 1987).

Researchers consider loneliness of emotional and social isolation a precursor or precipitator to depression (Russell, Peplau, & Cutrona, 1980; Schultz & Moore, 1984; Weiss, 1973). They further argue that although feelings of loneliness may be relieved by the integration of a new relationship that provides intimacy and a sense of belonging, depression is a total surrender to distress that cannot be alleviated by a relationship with another person. Although recognized as symptomatically related to situational loneliness during the initial

stages of widowhood, depression may become pathological over time. Therefore, researchers delineate depression as a morbid state, classifying it a clinical condition, denoting a dysphoric mood that may be accompanied by feelings of loneliness (Osgood, 1985; Stroebe & Stroebe, 1987).

Finally, being alone is not synonymous with being lonely. Alone is a condition which causes a recognition of awareness of one's self and one's world (Weiss, 1973). Considered a positive condition by many, solitude provides some persons the opportunity for renewed concentration, relaxation, and heightened mood, as well as a time for search and discovery of the inner self (Larson, Csikszentmihalyi, & Graef, 1982). However, involuntary solitude may lead to feelings of marginality, rejection, and anxiety, sentiments associated with loneliness of social isolation (Weiss, 1973). Indeed, being old and alone is comparable to unhealthy dependence for many persons and a fear reported by some to be avoided at all costs. Having acknowledged the differences in these terms, it is important to recognize the situations or conditions that normally precipitate loneliness among older adults.

The existing research reveals that situational loneliness commonly results from the loss of a needed relationship with a romantic partner or members of a social network (Weiss, 1973) and occurs most often following separation or divorce, a move to a new community, the loss of close, intimate friends during old age, and during widowhood (Weiss, 1982; 1987).

Situational loneliness that becomes chronic loneliness precipitated by widowhood and the losses associated with the aging process is the focus of this study. Indeed, persistent and unremitting loneliness over an extended period of time can be especially debilitating for older persons. Because lonely people lack the necessary motivational arousal to seek ways to alleviate their distress, lonely older widows and widowers may become victims of their own debilitating emotions, clouding their perception of the event and their subsequent reactions.

Loneliness in Later Life

Loneliness researchers agree that most older people are not lonely and appear satisfied with the quantity and quality of their social contacts (Arling, 1976; Kivett, 1979; Mullins, Johnson, & Andersson, 1987a; Peplau, Bikson, Rook, & Goodchilds, 1982). Loneliness does exist among the elderly, however, and continues to increase in incidence especially among the old-old (Mullins & McNicholas, 1986). In the largest national survey conducted on loneliness in the United States, Louis Harris and Associates (1986) sampled 28 million persons over age 65 and reported that loneliness was a serious problem for over 12 % of these persons. Furthermore, of the 8 million elderly persons who lived alone, less than half received help in dealing with their feelings of loneliness. In addition, Harris and Associates (1986) reported that 80% of older Americans who lived alone were women and widowed. In short,

widows are likely candidates for loneliness in old age, especially if they have few opportunities for social engagement and intimacy with another person.

Loneliness During Widowhood in Later Life

The current literature regarding the incidence of loneliness among widowed persons in late life reflects the underlying belief among researchers that widowhood is a major cause of loneliness in adulthood (Lopata, Heinemann, & Baum, 1982) due to the emotional significance attached to marriage and the pleasurable intimacy and companionship intrinsic to such a relationship. Whether the marriage was a satisfying one or not, the sudden loss of this relationship central to the identity of the individual in concert with the debilitating effects of old age places one in a paralyzing position often accompanied by depression, withdrawal, and sense of total helplessness.

Helena Z. Lopata (1973a, 1973b, 1980) is one of the most prolific investigators of widowhood and a review of her research findings provides valuable insights concerning the problems most often associated with this transition, including the experience of loneliness. Lopata's examination of widowhood spanned a period of twenty years and began with a study of metropolitan Chicago widows in 1969. The sample for her 1973 study comprised predominately white elderly women (85%) over age 50 (mean age=69), and long-term widowed for an average of ten years. The majority of these women reported loneliness as their major problem for reasons such as they missed their former marital style of life, support

system, their team mate, companion, lover, validator, and confidant. Lopata noted changes in these women following the death of their spouses, particularly if they reported sanctification of the deceased spouse, dependency on the spouse for instrumental tasks, and social support from couple-based friendships and associations. Three major problems of widowhood emerged in her study. They were: (a) a feeling of incompleteness and incompetence as a person during the initial stages of widowhood, (b) a feeling of being shunned by others, and (c) strain in social former relationships based on couples.

Identity reformulation, a direct consequence of widowhood among better educated women who had a wide range of perspectives and experiences to draw upon, occurred with 82% of the sample reporting that they felt freer and more independent than before the death of their spouse. Lopata argued that less educated women tended to live in a segregated world apart from their husbands during marriage, identified less strongly with the spousal role, lacked a strong interpersonal social life, and reported no change in identity during widowhood because their definition of the situation now was no more distressful than their former marriage. These persons experienced more social isolation, however. Lopata suggested that these isolated women did not have persons nearby who noted any changes following widowhood; an uneducated woman and her friends simply lacked the conceptualization skills needed compare past identity to present change in identity (Lopata, 1973b, p.413). Furthermore, Lopata reported that these less educated, isolated

women considered their relative isolation as chronic, noting they had the same quality and quantity of social interaction as when the spouse was living. The importance of this study is that Lopata's research was conceptually based on theory, in this case, symbolic interaction, a notable exception in studies of loneliness among widows.

Other researchers studying loneliness among older widowed men and women have focused primarily on descriptions of the problem (Clark, Siviski, & Weiner, 1986; Hansson, Jones, Carpenter, Bruce & Remondet, 1987; Honn, Breckenridge, Thompson, Gallagher, & Peterson, 1973; Lowenthal & Haven, 1968). Widowed persons in Clark and Anderson's (1967) study of loneliness in old age complained of loneliness more frequently than those married or never married. Individuals who complained the most experienced difficult interpersonal relationships earlier in their lives. Chronically lonely, they were incapable of forming a socioemotional bond with another person. Clark and Anderson (1967) further suggested that lonely widows were not accepting of others and tended to be self-centered and pessimistic, key features symptomatic of loneliness of emotional and social isolation.

These findings are similar to those of Lowenthal and Haven (1968). These investigators described lonely old persons as individuals who earlier in life tried to satisfy dependency needs with others and failed, partially withdrawing from social interaction altogether. In one of the few studies to include a sample of both men and women, Clark et al. (1986) noted that the majority of the nonlonely widows and widowers

either remarried or were able to establish a close emotional relationship with another person, serving to further substantiate the belief that the presence of an intimate relationship acts as a buffer to loneliness in late life.

Honn, Breckenridge, Thompson, Gallagher, and Peterson (1973) also examined loneliness in a descriptive study of bereaved and nonbereaved men and women (mean age = 69). Their findings led them to suggest that loneliness was a perceived problem, unrelated to network composition deficits or quantitative support. Moreover, these investigators recognized loneliness as a subjective experience in contrast to objective integration.

In a more recent study, Hansson, Jones, Carpenter, Bruce, and Remondet (1987) investigated loneliness and adjustment to old age among a sample of 75 widows, aged 60 to 90 years, with a mean length of widowhood of 10.3 years. These researchers examined loneliness in a questionnaire using the UCLA Revised Loneliness Scale (Russell, Peplau, & Cutrona, 1980). The results of the study indicated that lonely widows reported less social comparison with reference groups of widows, were less likely to engage in rehearsal for widowhood, and spent a great deal of time pondering the consequences of their spouse's impending death when the deceased spouse was ill. Length of widowhood was unrelated to feelings of loneliness among this sample.

Although the investigators clearly recognized the importance of the temporal dimensions of the adjustment process and its relationship

to the presence or absence of feelings of loneliness during widowhood, their sample experienced widowhood for a longer period of time than the present study's sample. Clearly, most of their respondents were beyond the crisis phase of the transition process and they had developed a new perspective of the situation, a factor that could influence the recognition and incidence of self-reported loneliness among this group. Hansson et al.'s (1987) investigation also used a sample of women, excluding men altogether, a common occurrence in investigations on loneliness among widowed persons.

Widowers are often ignored in the research literature on widowhood and loneliness and yet, elderly widowers tend to be more vulnerable to suicide and social isolation than their female counterparts (Berardo, 1970; Osgood, 1985). Recognizing the need for special services for this population of aging persons, the American Association of Retired Persons (1983) created a task force to focus national attention on their plight. Berardo (1970) in a review of the literature on men during widowhood emphasized that the primary problems widowers experienced concerned establishing new intimate relationships and learning to perform domestic and household tasks. Coupled with the loss of occupation through retirement, widowhood places the widower in jeopardy for feelings of loneliness and depression.

In a longitudinal study spanning a period of 12 years, Helsing and Szklo (1981) examined epidemiological data of over 5000 married and widowed adult men and women. They reported that widowers exhibited

higher mortality rates than married men, with no differences noted between married and widowed women. These researchers argued that marriage provided the male with a protective screen from loneliness and isolation and served to increase longevity. Therefore, it is hardly surprising that many widowers remarry given the five to one ratio of older widowed women to their male counterparts (AARP, 1987). Those who don't remarry may opt to establish a new household with a sibling, also widowed (McPherson, 1983).

Some researchers have attempted to answer the question of whether loneliness is a major concern of widowers during the adjustment phase of widowhood. Clark et al. (1986) examined coping strategies utilized by 27 men (age range = 39 to 91 years; average age = 69 years) widowed from 13 to 17 months. It is important to note that the response rate for this study was low, fourteen per cent. The investigators initiated their study with a potential sample of 100 men, randomly selected through examination of obituaries and death notices in the newspaper (24 widowers refused to be interviewed, 34 failed to respond to initial contact letter or telephone call, and 15 were ineligible to participate).

Similar to the women in Lopata's (1973a) study of Chicago widows and Berardo's (1970) examination of loneliness among widowers, these men reported loneliness as their major problem (63%), followed by acceptance of the loss and managing alone. Less than one-half of the men reporting loneliness as a problem sought assistance from others. These researchers

noted that widowers indicating little or no loneliness tended to fill their days with informal activities, socializing with family and friends, volunteer work, and developing heterosexual dating relationships. Meaningful activity, mobility, and independence were key factors in coping with the widowhood transition for these men. In sum, like women, men appeared to need the positive aspects of social integration and activity to offset feelings of loneliness. Unlike women, however, they oftentimes possessed the economic resources to purchase assistance with household-related chores as well as the ready companionship of members of the opposite sex, key factors in coping with the transition of widowhood and offsetting feelings of loneliness for both sexes.

In addition to the experience of widowhood during old age, other factors may contribute to the presence of feelings of loneliness among elders, namely the intrapersonal and interpersonal resources of mastery, morale, and social support.

Intrapersonal Variables

Mastery. Pearlin and Schooler (1978) define mastery as a personality characteristic reflecting the belief that life's choices and events are under the control of the individual versus fatalistically determined by chance or fate. Similar to Rotter's locus of control (1966), the presence of a sense of mastery among other characteristics determines how persons prevent everyday strain from becoming emotionally stressful. Pearlin and Schooler (1978) considered widowhood a scheduled

and anticipated event among older adults and suggested that this event created less strain and stress if the individual possessed the personality resource of mastery in dealing with the changes associated with widowhood.

Researchers examining the relationship of control to loneliness among adults (Jones, Freemon, & Goswick, 1981; Moore & Sermat, 1974; Schulz, 1976; Schulz & Hanusa, 1980; Solano, 1986) have suggested that lonely persons are cynical and pessimistic, exhibiting hostility toward others and external control. Indeed, lacking the social skills to overcome their loneliness, many older persons are at risk for more debilitating problems, such as total withdrawal, depression, and suicide. Clearly, it is important that widowed persons sustain some measure of hope and perceived control in regard to their ability to improve and establish social relationships with others (Peplau et al., 1982). If there is no recognition of the possibility of change, the pain of loneliness could conceivably become more intense and debilitating, resulting in pessimism and cynicism about the future.

In Lopata's study of widows over age 50 (1973a), 71% of the widowed women stated they would never be able to replace previously lost friends and associates. They had lost hope and felt that widowhood and the losses endemic to aging were aversive and involuntary, external factors they were unable to control. Loneliness in concert with an absence of perceived control may cause some widowed persons to believe that loneliness is an inevitable and inescapable part of growing old,

further exacerbating their withdrawal from social integration and emotional attachment.

In one of the few studies of the relationship of control to loneliness among adults in late life, Schulz (1976) observed the effects of the predictability of visits to nursing home residents on loneliness and morale. Over a two month period, college students visited the elderly residents. Those who exercised control of visitation time reported less loneliness and increased morale as compared to those who received visits at random or unannounced times. In another study, Schultz and Moore (1984) examined loneliness and control among elderly residents in a housing complex (N = 57; mean age = 65) using the Revised UCLA Loneliness Scale (Russell et al., 1980). They reported that lonely persons exhibited externality, less risk taking in social activities, and low levels of happiness and life satisfaction. Schultz and Moore (1984) suggested from their findings that lonely people may be perpetrators of their loneliness due to their inability to take social risks and lack of initiative to take the first step towards establishing new relationships with others.

Morale. Existing research examining the relationship of marital status to morale indicates that widowed persons in late life exhibit decreased levels of morale because of the loss of the marital partner and loss of income (Atchley, 1975; Campbell, Converse, & Rodgers, 1977; Morgan, 1976).

To illustrate, in their study on successful aging with a sample of 195 older adults (aged 75 and older), Kivett and McCulloch (1988) emphasized the importance of morale to successful aging and the quality of life among older persons. These researchers also stressed the significance of physical health and high levels of education and income as determinants of successful aging among old-old persons. Their findings lend credence to the symbolic interactionist perspective in that constraints such as income, health, and education played an important role in older person's perception of the situation and adaptation and morale in later years.

Loss of income and low socioeconomic status affect some 33% of older widows who live alone (8 out of 10 elderly persons), placing them below the Federal poverty level (Harris & Associates, 1987). There are social implications to these figures. Namely, low-income persons have fewer opportunities to socialize with others, oftentimes cannot afford to live in safe environments, and lack the economic resources to request services from support facilities and agencies (McPherson, 1983).

A few investigators have analyzed the relationship of widowhood to morale and loneliness and report that the inability of some widowed persons to socially interact with others not only decreases morale, but places the widowed person in jeopardy for profound and chronic loneliness in old age (Lee & Ishii-Kuntz, 1987; Morgan, 1976). Leslie Morgan (1976) examined the relationship of morale to loneliness with a sample of 232 widowed women and 363 married women (aged 47 to 74). She

reported that low morale and loneliness among the widowed sample were attributable to poor health and little family interaction, rather than widowhood per se. Lee and Kuntz (1987) examined the effects of friendship and kinship on morale and loneliness among a sample of 2872 older adults. The strongest predictors of loneliness and low morale for both genders were poor health and lack of interaction with friends; no effects were noted for interaction with family and children. These researchers suggested that if the older widowed person experiences social isolation as a result of infrequent contact with others, lacks available transportation, has a decrease in income, and is unable to obtain services because of residential location, feelings of loneliness and decreased morale can only serve to further perpetuate the negative implications of the situation.

Interpersonal Variables

Social provisions. Recognizing that widowhood may create a need for identity reformulation, role change and accomodation, and changing patterns of interaction with friends and relatives (Lopata, 1973a), it is evident that the relationship between social support and loneliness during widowhood is a complex issue and perhaps gender related. Widows may have a support network of other widows to provide emotional and instrumental support; whereas men, generally older and in poorer health during widowhood (McPherson, 1983), may have fewer familial ties and may be unable to confide in their widowed peers about the emotional distress experienced in adjusting to widowhood and the loss of the supportive

relationship once provided by the spouse. Widowhood, however, does not signal the termination of social support for all persons experiencing the transition and loneliness of social isolation is not the direct result of this event. Indeed, many widowed persons may be emotionally lonely and yet socially integrated in a network of friends and relatives (Bankoff, 1983; Honn et al., 1973; Mullins et al., 1987a, 1987b; Weiss, 1987).

Bankoff (1983) examined social support and adaptation to widowhood with a sample of 245 widows (mean age = 52 years), 98 of the women widowed less than 18 months and experiencing the crisis loss phase, and 147 widowed from 19 to 35 months, experiencing the transition phase. Similar to the present study, she reported a response rate of 50% to her mail questionnaire. She suggested that the role of social support in alleviating strain and emotional distress during widowhood was related to the length of widowhood, the type of support offered, and the source of the support. She argued that investigators need to consider the phase of adjustment in examining the effects of social support on loneliness among widowed persons.

Persons experiencing the initial period of widowhood, the crisis phase, demonstrate different needs when compared to those experiencing the recovery phase. Walker, McBride, and Vachon (1977) also recognized the importance of the relationship of the phase of adjustment currently experienced to social support and emotional distress in their investigation of widowed adults. These researchers concluded that

persons widowed for a short period of time (0 to 12 months) required highly committed social support from friends and relatives. On the other hand, those widowed for a longer period of time, experiencing the recovery phase of widowhood, indicated a need for less committed and more flexible support from their friends. Clearly, widowed persons adjust better to the loss of their spouse when specialized types of relationship support from family and friends are available at different stages in the adjustment process.

Recognizing the significance of the qualitative dimensions of social support and the specialized needs of the elderly in countering psychological distress, Cutrona, Russell, and Rose (1986) investigated the relationship of loneliness to stress among a sample of 50 persons at a Senior Citizens Center, using Weiss's conceptualization of social support and loneliness. These investigators concluded that Reassurance of Worth and Nurturance were related to the enhancement of physical health; whereas, Reliable Alliance and Guidance were related to mental health. In this study, relationships with others that fulfill specialized needs such as guidance, caregiving, and a sense of worthiness related directly to self-esteem and the experience of emotional and social loneliness among elderly people.

It is evident from the literature on the relationship between social support and loneliness that qualitative dimensions of social support are important in countering feelings of loneliness among widowed men and women. Questioning respondents about the frequency of visits

with others, housing arrangement, and whether family or friends provide the most valuable service and support may be an invalid stance for researchers to adopt in examining this phenomenon. Reciprocity and mutuality are important features in assessing the overall value of social support as well as the person's subjective perception of the difference between desired and achieved levels of supportive relationships (Weiss, 1973).

In summary, the research literature on loneliness among persons in later life indicates that loneliness is a social problem of significance that warrants further investigation. Research on this problem has been characterized by atheoretical, cross-sectional investigations, same gender samples, and scarce regard for the significance of length of widowhood. Nonetheless, loneliness among widowed elders appears to be especially prevalent among persons who: (a) experience a profound sense of loss of security and attachment because of the death of a spouse, (b) lack a sense of control and motivational arousal to take social risks to align themselves with similar others, and (c) have few or no comparison groups due to the constraints of age, health, income, and education. The degree of attachment and security provided in the marital relationship is important to the individual's definition of self and subsequent change in identity following the death of a spouse. Most important, however, is the individual's definition of the situation and the event of widowhood and their capacity to draw upon their past experiences and

present resources to develop an alternative perspective and, thereby, adjust to the transition.

Conceptual Background: Symbolic Interaction

Symbolic interaction theory focuses on the person-environment transactional process and the specific meaning each person attaches to an event or situation (Burr, Hill, Nye, & Reiss, 1979; Hewit, 1976; Manis & Meltzer, 1972; McPherson, 1983). People define situations or events according to what these situations or events mean to them from their own individual perspective; they observe and interact with others to examine and arrive at a definition of the self; and they decide the manner in which they will present themselves to others. Symbolic interaction theory posits that persons view themselves through a "looking glass" (Cooley, 1909) to derive subjective definitions of the self. The self becomes something that individuals judge, evaluate, like or reject, love or hate. Through perception or imagination, a person "...sees himself from the standpoint of the (reference) groups in which he participates, and whatever he believes will impress his audience becomes a source of pride " (Shibutani, 1961, p. 436).

In some cases, a person's social reality or social world (in this case, within the context of marriage), may become so important to an individual and intrinsic to the self that it shapes behavior and defines the self. If the marital state becomes a closed world where social interaction with external reference groups is limited, and the marriage is continuously and intensely generated to only one perspective and a

single significant other person, freedom, creativity, and adjustment to other states such as widowhood can be difficult.

Particularly relevant to the present study of elderly persons were the assumptions underlying the temporal aspects of an individual's present perspective and definition of a given situation. Symbolic interactionists argue that people draw freely from their past, their experiences, significant others, and reference groups to form a perspective and deal with the present, and that the past is everchanging by the individual's interpretation, perspective or definition of the situation:

Humans are constantly changing, constantly 'becoming'. We are dynamic, our interactions influence what we do and are. We are not damned (or blessed) with our past as a determining agent; we are not imprisoned by the ideas or traits we have developed long ago. It is always in the present that we actively define what is important.

Interaction with others and with self constantly shifts our direction, our action, our definition of the world and self. (Charon, 1985, p.177).

Moreover, theorists argue that persons use the mind to draw out relevant conscious memories that are familiar to solve dilemmas and derive alternatives to problematic situations and they suppress

unconscious habitual responses that are inappropriate to a particular problem or situation. Chappell and Orbach (1986) suggested that formerly unconscious habitual responses become problematic among older persons during a dramatic transition period such as widowhood. They argued that "Standard ways of thinking and behaving no longer 'work,' leading to a reorganization of perspective and consequent changes in behavior and thus in the self" (Chappell & Orbach, 1986, p. 96).

They further suggested that how the individual copes depends on the resulting reconstruction, socially and individually, that takes place and the resources on which the person has to draw (meaning here the multiplicity of perspectives on which the persons can draw, and past experiences with similar events or changes in perspectives). (Chappell & Orbach, 1986, p. 96).

Furthermore, an individual's capacity to perceptually construct an alternative perspective to deal with an event such as widowhood may be limited by the constraints and limitations experienced in the past and present and further exacerbated in old age, for example, low income, poor health, and few options for social interaction with others. Symbolic interactionists further argue that unconscious emotions and habits lead some persons, lacking the freedom to choose from a wide range of perspectives because of a limited repertoire of experience and resources, to respond to changing events:

...without thinking, without problem solving,
without considering past and future, without

role-taking. Some individuals may be highly influenced by habitual or emotional response, unable to deal effectively with new situations or to new variables in situations, unable to interact with others, unable to role-take, unable to cooperate in dealing with complex situations, and/or unable to communicate effectively.

(Charon, 1985, p. 177.)

From this discussion, it is possible to suggest that elderly persons faced with a dramatic change in their lives such as widowhood are able to adjust and reformulate their self according to the viability and strength of the resources available to them. These resources determine their capacity to formulate a new perspective and definition of the event of widowhood and counter feelings of loneliness. These resources consist of the following: the background variables of income, age, sex, length of widowhood, health status, and educational attainment; their intrapersonal resources such as mastery and morale; and their interpersonal needs met through social relationships via social support.

This study was based on the assumption that adjustment to any event is an individual process. Important to the process are individual's status prior to and during the role transition. In this case, the degree of attachment in the marriage (measured by responses to the availability of the social provision of attachment and feelings of

loneliness) and the personal and demographic features of the individual that distinguished one person from another were the indicators of the transition process. The model suggested for loneliness among elderly widowed persons in this study avoided causality, and focused, instead, on variables that were associated with loneliness of social and emotional isolation among this group.

In summary, marriage is a complex combination of role change and accommodation with both spouses adapting to the personality and preferences of the other, their respective relatives and friends, and the marital roles modeled by parents before the marriage (George, 1983). When the death of a spouse occurs, the symbolic meaning of this event and the lifelong habits and emotions of the person determine the perspective and significance attached to the event, the reaction of the individual, and the subsequent modification of reality and self-identity. The loss of identity associated with widowhood is compounded by the changes endemic to aging (poor health and social isolation) and the limitations persons experience throughout life, such as low income and lack of options for social interaction with others outside their immediate reference group. If people have the opportunity to interact in a variety of situations with others, they are able to learn different perspectives or ways to view events and possible alternatives to defining a situation.

For many persons, old age is a season of changes and losses-loss of mobility, loss of job and change in community identity, loss of same-

aged friends and social contacts, loss of power, status, and income, and, finally, the loss of the marital partner. According to symbolic interaction theory, the loss of identity experienced during widowhood creates a need for reformulation of self-identity. This is particularly true if the person has relied on a significant other as the sole means to identify and negotiate appropriate role behavior (Lopata, 1973b). Having depended on another person for validation, instrumental, and emotional support (Stroebe & Stroebe, 1987) over an extended period of time, the bereaved spouse is often unable to adapt due to a profoundly felt emotional void from the loss of intimacy with an attachment figure. Therefore, transitory feelings of situational loneliness associated with the initial stages of widowhood become chronic.

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Appendix B
Methodology

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Methodology

This appendix describes the methodology used in the present study, providing more detailed information regarding the sampling procedure, the operationalization of variables, and the procedures used to conduct the data analyses.

Original Study

The present analysis is based on data collected as part of a larger one-year project entitled "Continuity of Household Task Performance During Widowhood" (Lovingood, Blieszner, & Hill, 1987). The investigators of the original project obtained funding from the American Association of Retired Persons-Andrus Foundation, Washington, D.C., and conducted the study through the Center for Gerontology at Virginia Polytechnic Institute and State University in Blacksburg, Virginia, from April to October, 1987. They based the project on a pilot study conducted by Hill (1985) who analyzed secondary data from Geerkin and Gove (1983). The purpose of the original study was: (a) to further develop and test previously identified variables considered important in the explanation of widowhood adjustment and coping in everyday life and, (b) to examine prewidowhood and postwidowhood continuity in household task performance (Lovingood et al., 1987).

Sampling Procedure

The investigators identified a potential sample of 629 widowed elderly persons through examination of obituaries published in the major regional newspaper, the Roanoke Times and World News, for the period of five years, 1982 to 1987. Referrals from community groups, agencies and acquaintances of the widowed participants in the area constituted the remaining portion of the sample contacted for participation in the study. Criteria for inclusion in the study were: (a) widowed from 6 to 60 months, (b) aged 60 years or older, (c) living and functioning independently as head of the household in a private residence, and (d) unmarried at time of interview. The majority of the respondents lived in Roanoke, Virginia, Standard Metropolitan Statistical Area (U. S. Bureau of the Census, 1980). Widowed spouses received a telephone call or letter to discuss the purpose of the project and to invite participation in the project.

From the original list of potential participants, 83 persons were ineligible because of reasons such as remarriage, residence in a nursing home, relocation out of the area, failure to meet age or length of widowhood requirement, or death. The research team was unable to reach 184 persons; in addition, 189 persons refused to participate because they were too busy, in ill health, afraid, or still grieving. The final sample consisted of 38 men and 135 women (N=173), a participation rate of 47.8% of eligible persons (Lovingood et al., 1987).

Lovingood et al. (1987) pretested the questionnaire by interviewing 5 widowers and 11 widows who matched the demographic criteria for inclusion in the study. Based on pretest results, they further refined their instrument for the survey. The interviewers, trained at Virginia Polytechnic Institute and State University, conducted the 173 interviews in the participants' place of residence. The average length of the interviews was 1 hour. At the conclusion of the interview, the interviewers presented the respondents with a Virginia Tech zipper pull and a packet of information about the local resources for widowed persons. None of the respondents indicated a need for professional counseling.

Operationalization of the Dependent Variable

Loneliness. A short form of the revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980) measured perceived loneliness. Considered a satisfactory criterion for testing differences in the experience of loneliness (Russell et al., 1980), the items for the scale originated from reports of lonely people and their experience of loneliness. This scale (items 1, 13, 15, 18 of the original twenty item scale) consisted of the following statements: (a) I feel in tune with the people around me, (b) No one really knows me well, (c) I can find companionship when I need it, and (d) People are around me but not with me. The interviewer asked the respondents to state how often they experienced such feelings on a 4-point Likert Scale, using the response categories of never (4), rarely (3), sometimes (2), and often (1). To

obtain a total score for the scale, the investigator reverse scored the negative items and summed these two items with the two positive items. The range of scores was 4 to 16, with high values indicating less loneliness; categories for loneliness scores were low (4-10), medium (11-13), and high (14-16), indicating the degree of loneliness of respondents. Tested for concurrent and discriminant validity and considered a reliable instrument with a coefficient alpha of .75 (Russell et al., 1980), the Revised UCLA Loneliness Scale, Short Form, is appropriate for the measurement of loneliness among samples ranging in age from 18 years to 60 and older. The Cronbach's alpha coefficient was .61 for this sample.

Operationalization of Independent Variables

Social provisions. The Social Provisions Scale (Russell & Cutrona, 1984) measured perceived social support in this study. Based on Robert S. Weiss's (1974) theory of the fund of sociability and relational provisions, this scale categorized six functions provided by social relationships, essential for well-being and the avoidance of loneliness (Russell & Cutrona, 1984). Weiss considered no single social provision as more important than another and argued that the degree of need for a particular function varied across the life course. However, the absence of any one function supposedly results in distress, loneliness, and inadequate life organization. Weiss regarded widowhood a relational loss and suggested that elderly widowed persons may be at risk of chronic loneliness because of the loss of intimacy experienced

through the death of a spouse. The six relational provisions (4 items each) in the Social Provision Scale are: (1) **Attachment**, a sense of emotional closeness with another, the absence of which leads to loneliness of emotional isolation; (2) **Social Integration**, a sense of belonging to a community or social network, the absence of which leads to loneliness of social isolation; (3) **Reassurance of Worth**, acknowledgement from others regarding one's skills and competency, the absence of which leads to low self-esteem or regard; (4) **Reliable Alliance**, assurance that one has someone to count on in an emergency, the absence of which leads to a sense of vulnerability; 5) **Guidance**, the availability of advice and information, the absence of which leads to anxiety; and (6) **Opportunity for Nurturance**, a sense of responsibility for the well-being of another person, the absence of which leads to aimlessness. A sample item measuring the presence of the social provision of Attachment was: " I feel a strong emotional bond with at least one other person." A sample item denoting the absence of the relational provision of Attachment was: "I feel a lack of intimacy with another person." (Refer to Appendix A for original items of the Social Provisions Scale). Cronbach's alpha coefficients for the present sample for each subscale were as follows: Attachment (.76), Social Integration (.72, Reassurance of Worth (.76), Opportunity for Nurturance (.76), Reliable Alliance (.79), and Guidance (.78).

The respondents rated the degree to which their social relationships were currently meeting their needs for each provision,

recognizing that multiple provisions may be obtained by the same person. Four items, two that described the presence or absence of the provision, measured each of the six provisions; the total number of items was twenty-four. Respondents indicated on a four-point Likert scale from "strongly agree" (4) to "strongly disagree" (1) the extent to which the statement reflected their current social relationships with others. To obtain subscale scores for each social provision, the negative items were reverse scored and summed with positive items. The range of scores for the Social Provisions Scale was 4 to 16 (low to high social provision) (Cutrona, Russell, & Rose, 1986).

Russell and Cutrona (1984) reported high alpha coefficients (.85 and .92) for the total Social Provisions Scale as well as the six subscales (alpha coefficients ranging from .64 to .76) across a variety of populations. Among the elderly, these researchers reported findings indicating that the scale items displayed significant concurrent negative correlations with depression and positive correlations with life satisfaction (Russell & Cutrona, 1984). They also confirmed a six-factor structure that corresponded to the six social provisions through factor analysis. Blieszner and Mancini (1985) examined the reliability and validity of this scale with a sample of 494 older adults and reported satisfactory internal consistency for each subscale and construct validity for the overall scale in their study.

In previous research, examining the social provisions identified by Weiss (1973, 1974), Dimond, Lund, and Caserta (1987) reported

intimacy, reciprocal confiding, and reliable alliance or mutual helping behavior as significantly associated with increased levels of coping, adjustment, and morale in widowhood. Similarly, in a two phased study of the prospective effects of stress and social support on the physical and mental health of 50 elderly persons, Cutrona et al. (1986) reported that physical health was directly influenced by the social provision of Reassurance of Worth, a sense of respect from one's peers, and Opportunity for Nurturance, a belief that others need or rely on one for care and nurturance. Psychological health was directly related to assistance and guidance from others. The presence of a relationship, based on reciprocity and mutuality, was a strong determinant in offsetting mental and emotional problems among this sample.

Mastery. The investigators examined mastery, the extent to which one regards life events as being under one's control versus being fatalistically determined by fate, chance, or luck, using an index developed by Pearlin and Schooler (1978) for their study on normative coping responses to life strains. In this study, respondents indicated on a four-point Likert scale the extent to which they "strongly agree" (4) or "strongly disagree" (1) with each statement. For example, two sample items used to assess the presence or absence of a sense of mastery were: "What happens to me in the future depends mostly on me" and "I often feel helpless in dealing with the problems of life". Values for this index ranged from 7 to 49 (low to high mastery values)

derived by reversing the negative items and summing them with the positive items to compute a total score.

Pearlin and Schooler conducted factor analyses on the mastery index using principal component analysis with varimax rotation and reported loadings ranging from .47 to .76 for the 7-item index. Folkman, Lazarus, Gruen, and DeLongis (1986) reported satisfactory internal consistency for this index (alpha coefficient of .75) in a study of 85 married couples, aged 35 to 54. The Cronbach's alpha coefficient was .72 for this sample.

Morale. The investigators examined morale, considered a unidimensional concept in this study, using the Revised Philadelphia Geriatric Center Morale Scale (Lawton, 1975). The Revised PGC Morale Scale measures a person's basic satisfaction with self, a sense of place in the environment, and acceptance of what cannot be changed (Lawton, 1975). This 17-item scale consisted of three dimensions of morale: Agitation (6 items), Attitude Toward Own Aging, (5 items), and Lonely Dissatisfaction (6 items); possible scores ranged from 17 to 34 (low to high morale).

Agitation, a factor that taps psychiatric symptoms, refers to a feeling of anxiety and a dysphoric mood (Lawton, 1975). Attitude Toward Own Aging, associated with age-related morale and self-concept, refers to items that measure the presence or absence of self-perceived change as one ages and the quality of these changes. Lonely Dissatisfaction refers to items that assess the respondent's general perception of life

quality (Lawton, 1975). Two items from the Lonely Dissatisfaction subscale relate directly to loneliness and social support ("How much do you feel lonely?" and "I see enough of my friends and relatives"). I deleted these two items from the morale index in order to avoid confounding the measures of morale and social support with each other and with the dependent variable, loneliness. Morris and Sherwood (1975) and Liang and Bollen (1985, p. 183) noted that these two items measure the extent of one's social relationships and "constitute a domain conceptually different from morale", providing further justification for deleting them in the context of analysis for the present study.

Recently, a number of researchers conducted factor analyses on the Revised PGC Morale scale to evaluate the stability of these three dimensions of morale. For example, Mancini, Shade, and Quinn (1985) conducted a factor analysis of the Revised PGC Morale Scale using data from a noninstitutionalized sample of 171 adults, aged 65 years and older. These researchers concluded that the 17 items of the scale clearly loaded on the three theoretical factors.

In addition, Liang and Bollen's (1983, 1985) studies of the factorial variance of the PGC Morale Scale, using the 15-item scale, resulted in no substantive gender or age differences in the factorial structure of this scale. This finding lends further support for the PGC Morale Scale's relatively stable factorial structure across the two age groups, young-old and old-old.

In the past, researchers examining the relationship of psychological well-being to feelings of loneliness reported an inverse relationship between the two variables (Kivett, 1979; Perlman, Gerson & Spinner, 1978; Snider, 1980). However, few loneliness researchers have chosen the PGC Morale Scale to measure morale in their studies.

The PGC Morale Scale uses dichotomous response choices; to derive a total score, negative items were reverse scored and summed with positive items. Cronbach's alpha coefficient was .81 for this sample of widowed elders. (Cronbach's alpha coefficient for the original 17-item PGC Morale Scale for this sample was .83).

Age. As part of the survey, the investigators asked the respondents to state their date of birth to obtain age in years. Although empirical evidence remains inconclusive to date, researchers examining the relationship of age to loneliness have speculated that age and loneliness are largely independent factors, mediated by other variables such as social participation, health, and morale (Clark and Anderson, 1967).

Sex. Although some researchers (Peplau, Bikson, Rook, & Goodchilds, 1982) attribute sex differences in reports of loneliness to the male's hesitancy to report loneliness because of its socially undesirable connotations, empirical evidence remains inconclusive regarding the significance of this variable in predicting loneliness among older populations. (See major article for coding of sex as a dichotomous variable.)

Length of widowhood. The investigators used two categories to record length of widowhood in this study. (See major article for coding of length of widowhood.) Researchers generally characterize the first six months after the death of a spouse as the most difficult, characterized by intense grief, followed by a period of recovery and reorganization which is usually completed in two years (Bankoff, 1983; Lopata, 1973a). In examining widowhood adjustment, few researchers have noted the significance of the relationship of time to psychological instability or feelings of loneliness among widowed elders (Bankoff, 1983; Blieszner, 1986).

Health status. The investigators measured the health status of the respondents using five variables. First, the respondents reported their current health and any limitations of daily living. Interviewers then rated the respondents following the interview and noted any disabilities observed in hearing, vision, and mobility.

A total score on these variables reflected the health status of respondents with a range of 5 to 19 (poor to excellent health). Previous research indicates that the use of subjective evaluations of health is a better predictor of subjective states and conditions (Kaplan, Barell, & Lusky, 1988). These self-evaluations are also more highly correlated with mortality, than more objective measures, such as physician ratings (Friedsam & Martin, 1962; Mossey & Shapiro, 1982).

Considered a key predictor of loneliness among adults (Baum, 1982; Essex & Nam, 1987; Kivett, 1979; Perlman, Gerson, & Spinner, 1978;

Weiss, 1973), poor health may serve to intensify emotional and social problems of widowed elders and place them in the position of additional jeopardy for depression and suicide.

Income. The investigators measured income by requesting that respondents indicate their current annual income before taxes from six income ranges, \$5,000 to \$25,000 or more, scored from 1 to 6. Considered a predictor of loneliness among adults (Fischer & Phillips, 1982), few investigators have examined the relationship of this variable to loneliness among elderly widowed persons. (See major article for coding of income.)

Educational attainment. The investigators of this study measured educational attainment by requesting that respondents indicate "How far did you go in school?". Response categories ranged from 0 to 4 years to completion of postgraduate degree. See major article for coding of educational attainment.)

In general, researchers consider education inversely related to loneliness among adults and low educational attainment predictive of loneliness among low income populations (Baum, 1982; Essex & Nam, 1987; Kivett, 1979). Based on her research findings with widows, Lopata (1973b) reported that educated women were lonelier than less educated women if they considered marriage as a major event in their lives, identified strongly with the marital role, and devoted more time and energy to their marriage.

Analysis of Data

The analyses of data for this study focused on two objectives: (a) to provide a descriptive assessment of the sample's social, economic, and psychological condition through examination of designated independent and dependent variables, and (b) to identify variables associated with the experience of loneliness, using a model based on the assumptions of symbolic interaction theory. For these analyses, the investigator used the SAS (Statistical Analysis System) program (1985).

Initial Analyses of Model Variables.

The investigator used descriptive statistics to summarize sample characteristics regarding the dependent variable, loneliness, and the independent variables of Attachment, Social Integration, Reliable Alliance, Reassurance of Worth, Opportunity for Nurturance, Guidance, morale (total score), mastery, and the background factors of sex (coded as male = 1; female = 2), age (coded as young-old = 1; old-old = 2), length of widowhood (coded as long-term = 1; short-term = 2), income, educational attainment, and health status. (See major article for coding of income, educational attainment, and health status.)

The investigator used the PROC FREQ procedure to derive frequencies of the independent variables and the dependent variable, providing an initial assessment of the sample characteristics of this widowed sample. Then the BY statement was added to the PROC FREQ statement to obtain separate frequency analyses for the three groups, sex (male and female), length of widowhood (long-term and short-term), and age (young-old and

old-old), coded as dummy variables for this procedure. See Table 3 in the major article for results of the PROC FREQ analyses for loneliness, the dependent variable, and sex. (Tables B-4 and B-5 present the results obtained for loneliness by length of widowhood and age.)

The investigator then computed means and standard deviations for the dependent variable, loneliness, and the independent variables, using the PROC MEANS procedure and BY statement for the three categorical variables of sex, age, and length of widowhood. Means ranged from 13.88 to 13.37 for the dependent variable, loneliness, for male and female respondents, with a actual range of 7 to 16. (See Table 1 and Table 2 in the major article for the means and standard deviations of the independent variables, noting the demographic and psychosocial characteristics of the sample).

To test for significant differences between means on loneliness scores for the three categorical groups (sex, length of widowhood, and age), the investigator used the TTEST procedure, using the CLASS statement for each categorical group. Normally, this procedure requires that the grouping variable has two values and assumes the variances of the two groups are equal. Since the three groups clearly indicated disproportionate size in number, the TTEST procedure was computed for the t statistic based on the assumption that the variances of the two groups were unequal. Called the F' (folded) statistic, this procedure tested the homogeneity of the two variances. The test of F' was a two-tailed F test since the direction of inequality was not known before

conducting the TTEST procedure. The assumption of homogeneity of variance was retained for the all three t-tests conducted. Therefore, under the assumption of equal variances, the t statistic was computed, using the pooled variable estimate. Results from the t-test procedure revealed that there were no group differences for loneliness for this sample. (See Table 4 in the major article for the results of this analysis, noting group mean differences for loneliness by age, length of widowhood, and sex).

Next, the investigator computed Pearson correlation coefficients, using the PROC CORR procedure, to analyze the relationships between and among the independent variables and the dependent variable, loneliness. The independent variables identified in the model (Figure 1) as associated with loneliness among this sample were: morale, mastery, social provisions (Attachment, Social Integration, Reliable Alliance, Guidance, Opportunity for Nurturance, and Reassurance of Worth), health status, income, length of widowhood and age (recoded as continuous variables for the remaining analyses of the study), as presented in Table B-2 and B-3 in Appendix B.

The results of this analysis indicated that there was a problem of collinearity among the social provisions, suggesting replication of items and linear dependence. Therefore, the investigator excluded one of the subscales, Guidance, from further analyses. The investigator based the decision to delete this subscale on the following rationale: (a) items in the social provision subscale of Guidance replicated items

measuring Reliable Alliance with both scales related to the availability of assistance when needed, (b) the intercorrelation between Guidance and Reliable Alliance was relatively high, (c) items in the Reliable Alliance subscale were directly related to trust, an important dimension of attachment and the feeling of security and commitment that binds one persons to another in an intimate relationship, and (d) Guidance also revealed high correlation coefficients with the provisions of Attachment and Social Integration. The investigator retained the social provisions of Attachment, Social Integration, Reliable Alliance, Opportunity for Nurturance, and Reassurance of Worth because these social provisions were important theoretical measures of the dependent variable of loneliness of social and emotional isolation.

The investigator then conducted the PROC CORR procedure to obtain correlation coefficients for males and females, using the PROC SORT, BY GENDER statement. The results of this analysis are presented in Table B-3 in Appendix B. There were noticeable differences in the correlates of loneliness by sex. Significant correlates of loneliness for males were morale, mastery, Attachment, Reassurance of Worth and Reliable Alliance. For females, the significant correlates of low loneliness were high levels of morale, Attachment, mastery, health status, Social Integration, and low scores of the subscale, Opportunity for Nurturance.

Variables in the loneliness model that were not significantly associated with loneliness for the total sample were the background characteristics of educational attainment, income, age, length of

widowhood, and sex. The social provisions of Reassurance of Worth and Reliable Alliance were also insignificantly related to loneliness for the total sample.

Multiple Regression Analysis of Loneliness

To analyze the collective and separate effects of the independent variables on the dependent variable, the investigator used the procedure, multiple regression analysis. Multiple regression analysis allowed the investigator to determine the extent to which loneliness was influenced by the 13 variables in the loneliness model: mastery, morale, the social provisions of Attachment, Social Integration, Reliable Alliance, Reassurance of Worth, Opportunity for Nurturance, age, length of widowhood, educational attainment, income, health status, all coded and entered as continuous variables, and, finally, sex, which was dummy-coded.

For this procedure, the investigator used the PROC REG statement. The results of this analysis, presented in Table 6 in the major article, revealed that the strongest predictors of loneliness for this sample were morale ($p < .0001$) and the social provision of Attachment ($p < .0034$). The social provision of Reassurance of Worth and the demographic variable, age, approached significance in the model. The regression model was significant ($F = 5.29, p < .0001$) and accounted for 39% of the variability of loneliness for this widowed sample. Examination of the standardized beta weights indicated the relative importance of the significant predictors in the model. Of the two significant predictors,

Attachment (Beta = .501) contributed the most to the explanation of loneliness, followed by morale (Beta = .414).

The results of this analysis indicated that the 13 variables identified in the model of loneliness explained only 39% of the variance of loneliness among the sample of widowed elders.

Additional study is needed to identify other relevant variables that may contribute to the explanation of loneliness of widowed elders. (See major article for suggestions for further research study.)

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Table B-1

Sample Response to the Short Form of the UCLA Loneliness Scale

Loneliness

Item	Never	Rarely	Sometimes	Often	Total
	<u>n (%)</u>				
1. I feel in tune with the people around me.	4 (2)	7 (4)	44 (26)	116 (68)	172 (100)
2. No one knows me really well.	92 (54)	37 (22)	32 (19)	9 (5)	170 (100)
3. I can find companionship when I need it.	2 (1)	6 (4)	41 (24)	122 (71)	171 (100)
4. People are around me but not with me.	72 (42)	43 (25)	35 (21)	20 (12)	170 (100)

Note. N=173; cases with missing data for items were excluded from analysis.

Table B-2 Intercorrelations of Loneliness for the Sample (n = 173)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Sex															
2. Length Widowed	.06														
3. Age	<u>.37</u>	.01													
4. Education	-.01	-.02	-.04												
5. Income	-.18	.03	.01	<u>.56</u>											
6. Health Status	-.13	-.14	.07	.05	.10										
7. Morale	-.10	-.08	-.12	.10	<u>.21</u>	<u>.39</u>									
8. Mastery	-.15	-.06	-.13	<u>.18</u>	<u>.22</u>	<u>.16</u>	<u>.56</u>								
9. Attachment	.05	.12	.11	.07	.01	.04	.14	<u>.19</u>							
10. Social Integration	.01	.04	.13	<u>.15</u>	.10	-.09	.10	<u>.21</u>	<u>.77</u>						
11. Nurturance	.01	.02	-.26	.07	.10	-.10	-.09	.09	.13	<u>.15</u>					
12. Reassurance of Worth	-.05	.07	.07	.14	.01	.02	.02	<u>.28</u>	<u>.61</u>	<u>.61</u>	<u>.30</u>				
13. Reliable Alliance	.02	.01	.11	.06	-.00	-.02	-.01	.14	<u>.70</u>	<u>.57</u>	<u>.22</u>	<u>.53</u>			
14. Guidance	.01	.09	.14	.08	.04	-.06	.05	<u>.18</u>	<u>.80</u>	<u>.70</u>	<u>.20</u>	<u>.59</u>	<u>.72</u>		
15. Loneliness	-.09	.10	.12	-.05	.02	.16	<u>.46</u>	<u>.27</u>	<u>.30</u>	<u>.21</u>	-.15	.03	.10	<u>.15</u>	

Note: Underlined correlations are significant at $p < .05$ or greater.

Table B-3 Intercorrelations of Loneliness for Females by SES

	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Sex														
2. Length widowed		.10	-.04	-.04	-.15	-.09	-.06	.13	.05	.00	.13	.01	.12	.07
3. Age	-.22		-.03	-.02	-.04	-.12	-.19	.20	.20	-.32	.08	.16	.20	.14
4. Education	.03	-.13		.42	.03	.04	.14	.05	.08	.02	.07	.01	.08	-.16
5. Income	.07	-.25	.22		.07	.20	.16	.00	.07	.03	-.06	-.07	.001	-.05
6. Health Status	-.08	.20	.08	.07		.48	.12	.01	-.16	-.06	-.17	-.23	.06	.18
7. Morale	-.03	-.37	.27	.14	.10	.49	.49	.04	-.04	-.10	-.14	-.11	.02	.41
8. Mastery	-.03	-.26	.30	.31	.20	.80	.80	.10	.11	.06	.12	.11	.14	.20
9. Attachment	.10	-.08	.11	.07	.13	.40	.48		.24	.03	.34	.21	.43	.24
10. Social Integration	.02	-.04	.30	.14	.06	.44	.50	.84		.08	.52	.57	.20	.18
11. Nurturance	.09	-.15	.20	.27	-.22	-.07	.21	.32	.32		.23	.14	.13	-.12
12. Reassurance of worth	-.05	-.02	.23	.06	.02	.35	.48	.21	.27	.45		.53	.57	-.10
13. Reliable Alliance	.01	-.01	.17	.21	-.15	.27	.27	.46	.57	.55	.58		.22	.02
14. Guidance	-.03	-.06	.10	.15	-.04	.27	.33	.73	.20	.42	.20	.21		.12
15. Loneliness	.26	-.13	.32	.21	.07	.47	.54	.53	.33	.01	.32	.32	.32	

Note. Correlations for males, (n = 30), are below the diagonal and for females, (n=135), above the diagonal. Underlined correlations are significant at p < 0.05 or greater.

Table B-4

Frequency of Loneliness for the Widowed Sample by Length Widowed

Response Category	<u>Loneliness</u>				<u>Total</u>	
	<u>Long-term</u>		<u>Short-term</u>		n	(%)
	n	(%)	n	(%)	n	(%)
Never (14-16)	40	(36.48)	50	(60.98)	90	(53.25)
Rarely (11-13)	37	(42.53)	23	(33.94)	60	(35.50)
Sometimes (8-10)	9	(10.35)	8	(9.76)	17	(10.05)
Often (4-7)	1	(1.15)	1	(1.22)	2	(1.18)
Total	87		82			
Missing	3		1			
Range= 4-16						

Note. N = 173; cases with missing data were excluded from analysis.

Table B-5

Frequency of Loneliness for Widowed Sample by Age

Response Category	<u>Loneliness</u>				<u>Total</u>	
	<u>Young-Old</u>		<u>Old-Old</u>		<u>n</u>	<u>(%)</u>
	<u>n</u>	<u>(%)</u>	<u>n</u>	<u>(%)</u>	<u>n</u>	<u>(%)</u>
Never (14-16)	51	(52.04)	38	(56.72)	89	(53.94)
Rarely (11-13)	32	(32.65)	25	(37.31)	57	(34.55)
Sometimes (8-10)	14	(14.28)	3	(4.47)	17	(10.30)
Often (4-7)	1	(1.02)	1	(1.49)	2	(1.21)
Total	98		67			
Missing	0		4			

Range = 4-16

Note. N = 173; cases with missing data were excluded from analysis.

Appendix C
Survey Instrument

Appendix C-1

The Social Provisions Scale
(Russell & Cutrona, 1984)

Subscale	Item
Attachment	30. I feel that I do not have close personal relationships with other people.
	39. I have close relationships that provide me with a sense of emotional security and well-being.
	45. I feel a strong emotional bond with at least one other person.
	49. I feel a lack of intimacy with another person.
Social Integration	33. There are people who enjoy the same social activities as I do.
	36. I feel part of a group of people who share my attitudes and beliefs.
	42. There is no one who shares my interests and concerns.
	50. There is no one who like to do the things I do.
Reliable Alliance	29. There are people I can depend on to help me if I really need it.
	38. If something went wrong, no one would come to my assistance.
	46. There is no one I can depend on for aid if I really need it.

52. There are people I can count on in an emergency.
- Reassurance
34. Other people do not view me of Worth as competent.
37. I do not think other people respect my skills and abilities.
41. I have relationships where my competence and skills are recognized.
48. There are people who admire my talents and abilities.
- Guidance
31. There is no one I can turn to for advice in times of stress.
40. There is someone I could talk to about important decisions in my life.
44. There is a trustworthy person I could to for advice if I were having problems.
47. There is no one I can feel comfortable talking about problems with.
- Oppportunity
32. There are people who depend for Nurturance on me for help.
35. I feel personally responsible for the personal well-being of another person.
43. There is no one who really relies on me for their well-being.
51. No one needs me to care for them.

Note. Response choices range from 4 = strongly agree to 1 = strong disagree.

Appendix C-2

The Philadelphia Geriatric Center Morale Scale
 Revised Version (Morris & Sherwood, 1975)

Factor	Items
Agitation	1. Do little things bother you more this year? (no) 2. Do you sometimes worry so much that you can't sleep? (no) 3. Are you afraid of a lot of things? (no) 4. Do you take things hard? (no) 5. Do you get mad more than you used to? (no) 6. Do you get upset easily? (no)
Attitude Toward Own Aging	7. Do things keep getting worse as you get older? (no) 8. Do you have as much pep as you did last year? (yes) 9. As you get older are you less useful? (no) 10. Are you as happy now as when you were younger? (yes) 11. As you get older are things better than you thought they would be? (yes)
Dissatisfaction	12. Do you have a lot to be sad about? (no) 13. Is life hard for you much of the time? (no) 14. Do you sometimes feel that life isn't worth living? (no) 15. Are you satisfied with your life today? (yes)

Note. Answers in parenthesis indicate the high morale response.

Appendix C-3

**Mastery Index
(Pearlin & Schooler, 1978)**

Items

1. I have little control over the things that happen to me.
2. There is really no way I can solve some of the problems that I have.
3. There is little I can do to change many of the important things in my life.
4. What happens to me in the future depends mostly on me.
5. I often feel helpless in dealing with the problems of life.
6. Sometimes I feel that I'm being pushed around in life.
7. I can do just about anything I really set my mind to.

Note: Response categories range from 4 = strongly agree to 1 = strongly disagree.

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