Social support: The effect of self complexity and the perceived ability to reciprocate

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SOCIAL SUPPORT: THE EFFECT OF SELF COMPLEXITY
AND THE PERCEIVED ABILITY TO RECIPROCATE

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A large volume of evidence has been accumulated that deficiencies in social support are associated with poor physical and psychological health. However, little work has been done to isolate factors involved in the acquisition and maintenance of social support networks. An understanding of factors which impact social support would have application in interventions aimed at improving health. Because the elderly often require more assistance in daily living than younger people, this population may also show more variation in factors involved in establishing and maintaining social support networks.

This study examined a number of possible factors that might lead to individual differences in levels of perceived social support. Eighty-one men and women over the age of 65 were interviewed and given questionnaires assessing social support, the ability to reciprocate, self-complexity and demographic variables. Their perception of their ability to reciprocate was found to be correlated with measures of perceived social support, suggesting that interventions directed at enhancing individuals' ability to help others could benefit their health by way of strengthening social support network. Their level of self-complexity did not correlate with measures of perceived social support, suggesting individual differences in styles of establishing social support networks does not predict the level of perceived social support. The concept of reciprocity, self-complexity, and other implications of the data are discussed.
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CHAPTER I
INTRODUCTION

A large volume of evidence that deficiencies in social support are associated with poor physical and psychological health has been accumulated (for reviews, see Broadhead et al., 1983; Gottlieb, 1987; Cohen & Syme, 1985; Sauer & Coward, 1985). This association has been found with a wide range of health measures and health problems. Bear (1988) found that the density of primary social support networks for the frail elderly was correlated with their intellectual impairment and daily activity functioning at the time of their entry into adult congregate living facilities. Bear defined primary networks as relative and non-relative close others who met the inclusion criterion of several contacts in the preceding year of material or emotional support. Density of primary social support was measured by the respondent's reported pattern of links between members within the network. The density of the residents' total primary network was inversely related to the severity of their cognitive impairments and functional limitations. These findings suggest that it is the structure of the resident's total network that has the primary effect on adult congregate living facility entry.

Procidano & Heller (1983) found that measures of reported social support from friends and family were inversely related to symptoms of distress and psychopathology.
Jamison & Virts (1990) followed 181 chronic pain patients for one year after completing treatment at the Vanderbilt Pain Control Center for chronic pain to examine the role family support plays in insulating patients from maladaptive behaviors associated with their pain. The patients who reported having non-supportive families tended to have work-related injuries, relied on medication, and reported having more pain behaviors and more emotional distress than patients with supportive families. The patients who described their families as being supportive reported significantly less pain intensity, less reliance on medication and greater activity levels. The two groups—those reporting supportive families and those reporting nonsupportive families—were not different in initial medical pathology, primary pain site, neurological examination findings, pain intensity ratings, or pain duration.

Berkman and Syme (1979) provided the first direct evidence that the lack of reported social ties is in fact a lethal variable. Their study, using the 1965 Human Population Laboratory survey of a random sample of 6,928 adults in Alameda County, California, and a subsequent nine-year mortality follow up, showed that people who lacked social and community ties were more likely to die in the nine-year follow-up period than those with more extensive contacts. Seeman, Kaplan, Knudsen, Cohen, & Guralnik (1987) used data
from the same Alameda County Study and found that social ties are also significant predictors of lower mortality risks in a 17-year follow-up period for those aged 70 and older. This increased risk of dying was correlated with social ties and not with age, sex, race, baseline health status, perceived health, depression or health practices. Other studies have replicated the correlation between mortality and social support; reported levels of social support have been found to significantly predict mortality in independent studies done by House, Robbins, & Metzner (1982) and by Blazer (1982).

A fundamental problem in the social support literature is that multiple definitions of the term social support have been used. Barrera (1986) reviews the literature and concludes that despite the great diversity in social support concepts and measures in the literature, social support concepts and their operationalizations can be organized into three broad categories: social embeddedness, perceived social support, and enacted support. He describes social embeddedness as the connections that individuals have to significant others in their social environments. Barrera suggests the need for measures of embeddedness to go beyond the quantification of social ties, such as marital status and number of siblings. Being married or having a sibling can be a source of social support, a source of stress, or can be of no consequence. Social embeddedness means being
connected with another individual or individuals who actually do provide social support exchanges. Involvement in churches and clubs is often used as a measure of social embeddedness as these represent current voluntary social support exchanges.

Perceived support is described by Barrera as the cognitive appraisal of being reliably connected to others. It is not the help or attention that one receives, but the belief that help or attention would be there when needed. Enacted support is the actions that others perform when they render assistance to a focal person. The actual helping behaviors that occur when a need or desire arises is enacted support. Vaux, Phillips, Holly, Thomson, Williams, & Stewart (1986) present a similar summary:

From our perspective, social support is best seen as a meta-construct, comprising several component constructs: (a) support network resources (i.e., the size, structure, and relationship characteristics of support networks), (b) specific supportive acts (e.g., listening, comforting, advising, loaning money, socializing, or assisting with tasks), and (c) subjective appraisals of support (perceptions/beliefs that one is involved, cared for, respected and/or having one's social needs met)" (p.196).

Their constructs seem similar to Barrera's definitions of social embeddedness, enacted support, and perceived support.
Are the three dimensions of social support interrelated? Is the perception of support developed only if enacted support is demonstrated? Is a high level of social embeddedness an indication of high perceived support? The answers to these questions are still being debated. Lakey & Heller (1988) investigated the effects of social support on social problem-solving effectiveness. Their results supported a model in which perceived support is not related to enacted support. College students brought friends to the experiment and were rated on perceived social support. Students consented to audio recording of their conversations with their companions, which were later content analyzed by teams of independent raters who were blind to students' standings on perceived support measures. In this study, higher levels of perceived support were unrelated to enacted support.

However, other studies provide evidence for a conflicting model in which recipients' perception of support is determined by enacted support. The results of a study by Vinokur, Schul & Caplan (1987) indicate recipients' perception of support is determined significantly and strongly by actual interpersonal transactions as reported by significant others. Cohen (1991) describes two other studies which measured the perceived availability of social support in people and subsequently had them track their
interpersonal interactions over some period of time. Both studies found that perceived availability of social support corresponded with people's reports of the support available to them in their environment.

Yet another point of view presented in the literature is that perception of support is based on actual enacted support, but only on those behaviors interpreted as supportive. Fincham & Bradbury (1990) review the literature on cognition in marriage and argue that explanations or attributions for spouse behavior, particularly in terms of whether the behavior is viewed as voluntary and selflessly motivated, is an important determinant of whether the behavior is perceived as supportive. Nadler, Fisher and Ben-Itzhak (1983) describe variations in affect and self-evaluation after receiving help as a function of the ego relevance of the tasks on which help was given. Thoits (1986) speculates regarding efficacious and nonefficacious types of support and concludes that the receiver's perceptions of sympathy or empathy in helpers may influence the results of attempts at assistance.

The relationship between social embeddedness and perceived social support has also been complex. In a study by Thompson & Heller (1990), measures of social embeddedness and perceived social support were both associated with psychological well-being, but there was a threshold effect for social embeddedness. Although greater perceived support
meant greater psychological well-being, subjects with low ties with friends and family members (low social embeddedness) showed deficits in well-being regardless of levels of perceived social support. These results indicate that regardless of perceptions, a minimal level of companionship and social activity are key elements in maintaining a sense of well-being.

Heller & Lakey (1985) review their own and others' research which supports their hypothesis that the effectiveness of support may not reside in any particular behavior of significant others, but in how that behavior and ensuing relationships are perceived. Most of the evidence for support effects has been based on subjective self-report measures that ask respondents to evaluate the quality of support available to them.

John Cassel (cited in Cohen, 1991), a social epidemiologist at the University of North Carolina, proposed a possible mechanism for the positive influence of social support on health and well-being: stress buffering. The idea of the stress buffering hypothesis is that stressors put one at risk for disease, but stressor related risk is reduced or totally ameliorated when those confronted with stressors have strong social support networks. The alternative hypothesis is that stress is not really an issue in social support's influence on health, i.e., having social support is beneficial to health overall, irrespective of
exposure to stress. This is termed the main effect hypothesis, because it predicts a main effect of social support without an effect on the interaction of stress and social support.

The construct of perceived social support has been described in the process of the stress buffering hypothesis (Cohen, 1991). The theory in developing this model was that people confront objective stressful events and appraise whether or not they can cope with those events. If they feel their coping resources are inadequate, they experience stress. If the perception of available social support is high, the stress experienced is lower.

Cohen also describes a model for the processes of the main-effect hypothesis. He describes social integration, or social embeddedness, as the facilitator of this model. First, social integration may cause people to have better health-promoting behaviors (e.g., exercising more, drinking less, and smoking less). Second, belonging to an integrated network may cause positive changes in psychological states (affect, control, self-esteem) that influence neuroendocrine response. Hormones released (or suppressed) as a response to these states are presumed to influence disease pathogenesis through their effects on biological systems involved in disease outcomes (Ader, Grota, & Cohen, 1987). Third, integrated social networks may prevent disease by providing material aid when needed. Finally, social
networks may provide warnings and information that help persons avoid confronting stressors.

Kessler, Kendler, Heath, Neale, and Eaves (1992) have concluded: "A review of the literature shows that two main social support dimensions have been consistently linked to emotional adjustment; perceived availability of support and integration into affiliative networks" (p. 258). The review presented here shows similar findings. The construct of perceived support is concise and measurable and has been correlated to health. Social embeddedness, or integration into affiliative networks, has also been shown to have effects on health. The present investigation utilized the measures of perceived social support and integration into affiliative networks (social embeddedness) developed by Kessler (personal communication, May 11, 1992) to measure levels of social support.

The association, and indeed the importance of the association, between social support and health have been established. Very little is known however, about the processes underlying this association. Identification of variables which impact the level of social support would allow interventions aimed at facilitating those support structures.

**Reciprocity**

Reciprocity is the concept of repaying or returning support. Reciprocity is a variable often reported in the
literature associated with help seeking, self worth, and life satisfaction. Greenberg & Shapiro (1971) collected data which supported the hypothesis that subjects who do not anticipate being able to return a favor are less willing to ask for and to receive needed help than subjects who anticipate being able to reciprocate. Nadler, Mayseless, Netanel, & Chemerinski, (1985) explored the link between an individual's self-esteem and willingness to seek help under conditions in which future reciprocity is, or is not, expected. They found that least help was sought by high self-esteem individuals who did not foresee an opportunity for future reciprocity. Social exchange patterns that either over-benefitted or under-benefitted respondents have been associated with greater loneliness (Rook, 1987).

The balance between support provided and received has been suggested to predict general self reports of happiness and well-being as well (Antonucci & Akiyama, 1987; Bell, 1982). In a cross-ethnic and cross-national study, Antonucci, Fuhrer, & Jackson, (1990) found that black American and French subjects who reported they provided as much support, advice, and help as they received also reported more satisfaction with their lives than subjects who reported unequal relationships. Gouldner (1960) quotes Cicero as saying, "There is no duty more indispensable than that of returning a kindness" (p. 161).
Buss (1990) suggests adaptive impetus to this compelling phenomenon in that humans have evolved specialized psychological mechanisms for detecting "cheaters" in social exchanges. The cultural significance given to reciprocity may impact the receiver in that help is refused or perceived as nonsupportive in a nonreciprocal relationship.

Reciprocal exchanges are used to initiate and maintain relationships and to reinforce the obligation in existing relationships (Wentowski, 1981). Reciprocal exchanges could be limited by perceptions of the availability of resources or abilities which the receiver feels he/she has with which to initiate and maintain relationships. Because the decision to accept help, or to consider assistance as supportive, would be a cognitive function of the receiver, the perception the receiver has of resources or abilities available to him would be the factor rather than actual resources or skills available. The variation in perceptions of ability to reciprocate would then be a variable affecting the level of social support accepted by the receiver. The measurement of perceptions of ability to reciprocate as it correlates to levels of social support has not been examined.

**Self Complexity**

Linville (1987) describes and presents empirical basis for a cognitive variable she calls self-complexity, which is theorized to moderate the adverse impact of stress on
depression and illness. Linville's model assumes self-knowledge is represented in terms of multiple self-aspects. As defined in this model, greater self-complexity involves representing the self in terms of a greater number of cognitive self-aspects and maintaining greater distinctions among self-aspects. The measure consists of the subjects' listing of traits within the roles the subjects choose to describe themselves. Linville assigns each subject a self-complexity score using a measure representing the number of independent attributes a subject lists for the roles chosen.

This measure has been used in a variety of studies. An inverse relationship between an individual's complexity of knowledge structures and the extremity of the individual's evaluative judgments in that domain was found in a study by Linville (1982) at Carnegie-Mellon University. In other words, the less complex a person's representation of stimuli from a given domain, the more extreme will be the person's evaluations of stimuli from that domain. Linville (1985) also reported results which suggested that the level of self-complexity provides a promising cognitive marker for vulnerability to depression.

Linville's proposal (Linville, 1982) that greater complexity resulted in greater attitude polarization has been replicated. Millar, Murray, & Tesser, (1986) reported support for Linville's hypothesis concerning initial evaluations. Less complex schemata were associated with
more polarized judgements than more complex schemata. Results of a study by Dixon and Baumeister (1991) suggest that high self-complexity serves as a buffer against the threatening implications of failure.

Self-complexity was found to predict vulnerability to the adverse physical and mental health consequences of stressful events (Linville, 1987). In that study, the number of groups created by the subject in the self-complexity sorting task did not predict illness and depression as well as the calculation of the self-complexity score (to be described later) which includes the extent to which these self-aspects are related to one another.

Self-complexity, as described and measured by Linville, is a cognitive variable which might also indicate a more complex set of self-representations of giving behaviors. The present study was designed to see if a high level of self-complexity would provide a subject with a perception of more abilities and attributes with which to initiate and maintain reciprocal relationships than subjects with low levels of self-complexity. The norms of reciprocity would allow the subject with higher levels of self-complexity to seek and accept higher levels of support. In other words, someone who views herself or himself as a good companion, a thoughtful friend, a hard-working gardener, a fun card player, and an experienced cook, may find it easier to repay a friend for a ride to the grocery store than someone with a
limited perception of self roles and traits. The person high in self-complexity would find it easier to initiate and maintain helping relationships and perceive the support as beneficial when it is received. In this way, self-complexity score would predict the level of social support. This study measured self-complexity scores and analyzed correlations with perceived reciprocity ability and levels of social support.

Social support networks have been shown to be an important factor in health, in fact a life and death factor. Empirical data from investigations of variables impacting social support networks would be valuable in guiding programs and policies providing services to needy populations. Programs providing care for the rapidly growing aging population are being developed or expanded in many areas. This study addresses the need to define variables impacting social support by measuring two variables, the perception of the ability to reciprocate and self-complexity, and examining the relationship of these two variables with a measure of social support.
CHAPTER II
METHODS

Subjects

A total of 100 adults over 65 years old living in western Montana were tested. Nineteen subjects were excluded from the analysis because of inadequate completion of questionnaires. The final sample consisted of 81 subjects, ranging in age from 65 to 90 (average age, 73.9). This age group was chosen because requirements for assistance in living are more likely to be high in this age group. Increased levels of requirements for assistance make the issues involved in the questionnaires more salient.

The subjects were from eleven locations in six towns in Western Montana. The locations included nursing homes, independent living apartment complexes for the elderly (this population receives no personal care, but has little home maintenance to do and lives near similar aged others) and senior citizen centers where people come for lunch or meetings. The subjects tested at the senior citizen centers included people who live in their own homes and people who live in independent living apartment complexes. Several nursing homes were visited, but most residents were unable to complete the questionnaire.

The non-random selection of subjects may result in a bias in the measures taken. In order to compare the subjects tested with demographics of the entire population of the
state of Montana, the gender and marital status of the
subject pool was compared to the Pioneers in the Frontier of
Life: Aging in Montana, 1990 telephone survey of adults over
60 years of age in Montana conducted by the Montana
Governor's Office on Aging (personal communication, April
30, 1993). This demographic information can be found in
Appendix A. Although the subject pool from this study and
the Montana Governor's office telephone survey of 1990 are
biased by subject availability, the former by restrictions
of willingness and ability of the subject to participate and
the latter by possession of a telephone, the similarity of
the subject pools suggests the present study approached a
representative sample of the population of Montana.

Procedure

Individuals were asked to participate in a University of
Montana survey about senior citizens in Montana. The study
was represented as asking about the social interactions and
self-conceptions of people over 65 years of age. The
subjects were given a questionnaire (Appendix B) and told
that the answers would be completely anonymous and that they
could feel very private about their answers. The
interviewer then gave the subject the self-complexity
feature cards and helped them begin the trait sort until the
interviewer felt confident that the subject was doing it
correctly. After the subjects completed the self-complexity
trait sort the interviewer collected the cards and the
results of the trait sort and subjects were asked to complete the questionnaire. The interviewer recorded the results of the self-complexity trait sort on the questionnaire after it was completed by the subject.

**Measures**

The complete questionnaire as the subjects saw it can be found in Appendix B. The first page of the questionnaire described the confidentiality of answers to the questions and the second page included demographic questions such as age, marital status, living companions, children's location, and income. Appendices C-G present separately each of the measures found in the questionnaire, which will be described in the following paragraphs.

**Social Support.** A questionnaire developed by R. C. Kessler (personal communication, May 11, 1992) was used. This questionnaire included multiple measures of perceived availability of support and integration into affiliative networks (see Appendices C1-C6).

Integration into affiliative networks was measured with four questions. Two questions asked the respondents (a) with how many people can you share your most private feelings and (b) how often do you let someone in your personal life know about a problem or worry when you have one. The responses for (b) were measured on 5-point scales ranging from **always** to **never** (see Appendix C1). Two questions assessed each applicable source of social support
(friends, relatives, children, wife, husband) on frequency of being with or talking on the phone, as measured on 6-point scales ranging from every day to never, and how often do you let your (friends/relatives/children/husband/wife) know about a problem or worry when you have one, measured on 5-point scales ranging from always to never (see Appendix C2-C6).

Formal integration, frequency of attending church and frequency of attending meetings of clubs and other affiliative organizations, were measured with two questions using 5-point scales ranging from always to never (see Appendix C1). Finally three statements representing comfort and closeness to others asked the respondents to record how representative the statement was of themselves—a lot, some, a little, or not at all (see Appendix C1).

Social relationships often have elements that create stressful obligations or that expose people to disappointments, conflicts, tensions, and unpleasantness (Rook, 1987). This questionnaire involved measures of the joint influence of both support and negativity in social relationships. Measurements of negativity as used in this questionnaire have been used to measure social support by Schuster, Kessler, & Aseltine (1990) and presently are being used in the National Comorbidity Survey by the Institute of Social Research at the University of Michigan (R. C. Kessler, personal communication, May 15, 1992). The measure
results in an additive score with negative responses being subtracted from positive responses.

Supportive interactions were indicated by responses to questions about (a) how much does your (husband/wife) really care about you, (b) how much does (he/she) understand the way you feel about things, (c) how much does (he/she) appreciate you, (d) how much can you rely on (him/her) for help if you have a serious problem, (e) how much can you open up to (him/her) if you need to talk about your worries, (f) how much can you relax and be yourself around (him/her). Four-point response options (ranging from a lot to not at all) were provided for each of these questions. Negative interactions were indicated by responses to questions about (a) how often does your (husband/wife/) make too many demands on you, (b) how often does (he/she) make you feel tense, (c) how often does (he/she) argue with you, (d) how often does (he/she) criticize you, (e) how often does (he/she) let you down when you are counting on (him/her), (e) how often does (he/she) get on your nerves. Responses were recorded on a 4-point scale (ranging from often to never). A parallel set of these questions regarding relationships with friends (see Appendix C2), relatives (see Appendix C3), children (see Appendix C4), wife (see Appendix C5), and husband (see Appendix C6) were used to assess these sources of social support.
Perceived Ability to Reciprocate. A questionnaire using examples from the five categories of aid that social networks provide, as described by Israel, Hogue and Gorton (1984), was developed (see appendix D). These categories of aid include affective (moral support, caring and love), instrumental (tangible aid and services such as money, food, help with childcare), cognitive (access to diverse information, new knowledge, advice and feedback), maintenance of social identity (validations of a shared world view), and social outreach (access to social contact and social roles). For each of these categories, subjects indicated on a 4-point scale (ranging from always to never) their ability to provide such aid to others. Each of the categories was assessed in current interactions and in interactions involving the subject at a younger age. Wentowski (1981) presented cases where past helping behaviors were considered equity for current help seeking. Subjects may feel an interaction is reciprocal because they had provided more help to than received from another person at a time when they were younger or more able and now they could receive more help than they give to that other person. Two open-ended questions were included to assess norms of reciprocity and perceived barriers to reciprocity.
As a supplement to the measurement of reciprocity, the Exchange-Orientation Scale for Friends (Murstein, Cerreto, & Mac Donald, 1977) was given (see Appendix E). This is a measure of the orientation of exchange relationships which has been found to correlate positively with intensity of friendships and negatively with marriage adjustment. In general a high Exchange-Orientation (E) score represents high expectations in a relationship. The correlations with friends and spouses represent opposite effects, and effects on social support levels have not been examined.

Self-complexity Measure. A measure of self-complexity, using the trait-sort method developed by Linville (1985) was used (see appendix F). In this measure, greater complexity of self-representation entails organizing self-knowledge in terms of a greater number of aspects that are relatively independent of one another.

Subjects received a packet of 33 randomly ordered index cards, each containing the name of one trait (e.g., outgoing, rebellious, lazy). Subjects were asked to think about themselves and to sort those traits that were descriptive of themselves according to which traits they thought belonged together. Traits could be sorted on any basis meaningful to the subject. The interviewer asked the
subject to, "Think of yourself at different times, places, or with different people. Form groups until you feel that you have formed the important ones. After you have established those areas go through the cards and sort the traits into those areas." After the subjects completed the sort and the rest of the questionnaire, the interviewer recorded the trait sorts on the record sheet.

The greater the number of self-aspects created and the less redundant the traits used in creating those self-aspects, the greater the self-complexity (SC) score. Thus, a high SC score results from having a large number of self-aspects that are nonredundant in terms of the traits that describe them. A low self-complexity score results either from having few self-aspects or from having many self-aspects that are highly redundant in terms of the features or traits that describe them.

Health. Although the significance of the correlation between health and social support has been found and replicated in the literature, it was decided to include a measure of health status in this investigation. A measure of self-reported health developed by Weinberger, Hiner, and Tierney (1987) was used (see Appendix G). A number of studies have validated self-ratings of health status among
elderly persons (e.g., Bear, 1988). Aside from being strongly correlated with physicians' assessments, subjectively rated health status has been found to be a better predictor of mortality than objective measures (Weinberger, Hiner, & Tierney, 1987).

Subjects were asked to evaluate (a) their overall health (1 = poor, 2 = fair, 3 = good, 4 = excellent); (b) their level of pain (1 = a lot, 2 = some, 3 = none); (c) their difficulty getting around (1 = a great deal, 2 = some, 3 = none); (d) their dependence upon others for performing activities of daily living, i.e., eating, bathing, dressing, grooming, and walking across the room (1 = totally dependent on others, 2 = need some help, 3 = need no help); and (e) limitations on activities imposed by their health (1 = severely limited, 2 = somewhat limited, 3 = not limited).

Four questions addressed more objective questions of health. These questions asked the respondents if they had been sick in bed for at least four consecutive days in the last year, been hospitalized in the last year, seen a physician in the last month about a health problem (other than routine exam), and the number of prescription drugs they were currently taking.
Chapter III

RESULTS

A self-complexity score was calculated for each subject, using the results of the trait sort described above. This measure represents the minimum number of independent attributes implicit in a subject's feature or trait sort. It is defined:

\[ SC = \log_2 n - (\xi_i \cdot n_i \cdot \log_2 n_i) / n \]

where \( n = 33 \), the total number of traits, and \( n_i \) is the number of traits that appear in a particular group combination. If a person forms two groups, a given trait may fall into one of four possible group combinations: 1, 2, 1-2 (if in both groups), or no group. The \( n_i \) in the formula would be interpreted as follows for this example: \( n_1 \) = number of traits sorted only into Group 1; \( n_2 \) = number of traits sorted only into Group 2; \( n_3 \) = number of traits sorted only into both Group 1 and Group 2; and \( n_4 \) = number of traits not sorted into any group.

In addition to the self-complexity scores, total scores were calculated for each questionnaire: Social Support (see Appendix C), Perceived Ability to Reciprocate (see Appendix D), Exchange Orientation (see Appendix E), and Health (see Appendix G). The correlations of these various
questionnaire scores with the variables of self-complexity, health, age, sex, marital status, and number of children living, are shown in Table 1.

| Table 1. Correlations of Social Support scores (SS), Perceived Ability to Reciprocate scores (Rec), Exchange-Orientation scores (Ex), Self-Complexity scores (SC), Health scores (Hit), Age, Sex, Married (Mar), Children living (Chd). |
|---|---|---|---|---|---|---|---|---|
| SS | Rec | Ex | SC | Hit | Age | Sex | Mar | Chd |
| 1.0000 | .3879** | .0033 | .1190 | .2626* | -.2834* | .0970 | .6413** | .5325** |
| Rec | .3879** | 1.0000 | .0726 | .1194 | .3069* | -.0432 | .1412 | .1623 | .1174 |
| Ex | .0033 | .0726 | 1.000 | -.0947 | -.0673 | .0097 | -.0115 | .0539 | -.0693 |
| SC | .1190 | .1194 | -.0947 | 1.0000 | .0620 | -.2324 | -.1578 | .2057 | .0508 |
| Hit | .2626* | .3069* | -.0673 | .0620 | 1.0000 | -.3070* | .0788 | .2477 | .0458 |
| Age | -.2834* | -.0432 | .0097 | -.2324 | -.3070* | 1.0000 | -.0946 | -.4288** | -.2345 |
| Sex | .0970 | .1412 | -.0115 | -.1578 | .0788 | -.0946 | 1.0000 | .2121 | .0146 |
| Mar | .6413** | .1623 | .0539 | .2057 | .2477 | -.4288** | .2121 | 1.0000 | .3339* |
| Chd | .5325** | .1174 | -.0693 | .0508 | .0458 | -.2345 | .0146 | .3339* | 1.0000 |

1-tailed Signif: * -.01 ** -.001

Subcategories of the Social Support Questionnaire were also totaled for the Friend Interactions, and the Confidant and Affiliative Organization Interactions. Correlations with these subcategories and total Social Support scores can be found in Table 2. These subcategories correlated highly with total social support scores, indicating that high social support scores can be achieved even if spouse and children and other relative questionnaires are not included in the computation.
Table 2. Correlations of the social support questionnaire subcategories, friend interactions and confidant and affiliative organization interaction with total social support questionnaire scores.

<table>
<thead>
<tr>
<th></th>
<th>Social Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend Interactions</td>
<td>.4851**</td>
</tr>
<tr>
<td>Confidant and Affiliative Organization Interactions</td>
<td>.3938**</td>
</tr>
</tbody>
</table>

1-tailed Signif: * - .01  ** -.001

Three individual questions from the Health Questionnaire were correlated with the total score on the Health Questionnaire (see Table 3). These questions asked the subjects to evaluate (a) their overall health (1 = poor, 2 = fair, 3 = good, 4 = excellent) (b) if they had been sick in bed for at least four consecutive days in the last year (1 = yes, 2 = no), and (c) if they suffer from pain (1 = a lot, 2 = some, 3 = none). The high correlation of these items with the total score on the Health Questionnaire indicates that
overall health status can be closely approximated either by a global self-rating of health or by more specific health related questions.

Table 3. Correlation of three individual questions on the Health Questionnaire; Your Health is, Have you been sick in bed for at least four consecutive days in the last year, and Do you suffer from pain, with the total Health questionnaire score.

<table>
<thead>
<tr>
<th>Total Health score</th>
</tr>
</thead>
<tbody>
<tr>
<td>self-rating of health</td>
</tr>
<tr>
<td>Have you been sick in bed?</td>
</tr>
<tr>
<td>Do you suffer from pain?</td>
</tr>
</tbody>
</table>

1-tailed Signif: * - .01  ** - .001

Causal modeling, using a program for iterative path solutions described in Loehlin (1987), was used to analyze the data. As described above, self-complexity was hypothesized to result in more ways to reciprocate, and the ability to reciprocate was hypothesized to result in the
acceptance and recognition of social support. These projections resulted in the following model:

\[
\begin{align*}
\text{self-complexity} & \rightarrow \text{reciprocity} \\
\text{reciprocity} & \rightarrow \text{social support}
\end{align*}
\]

An alternative conceptualization of the model would be that self-complexity impacts social support directly, through increased use of affiliative networks (ie, a person with a low SC score may read and watch TV whereas a person with a high SC score may read, watch TV, go to bridge club, bingo, and coffee clutches) as well as impacting the level of the perception of the ability to reciprocate. This model is represented below:

\[
\begin{align*}
\text{self-complexity} & \rightarrow \text{reciprocity} \\
\text{reciprocity} & \rightarrow \text{social support}
\end{align*}
\]
The relationship between reciprocity and self-complexity could also be conceptualized as correlated rather than causal. In other words, whatever it is that causes a person to be high in self-complexity also causes them to be high in reciprocity. Both self-complexity and reciprocity impacting social support without a causal connection between them would result in the following competing conceptualization of the model:

```
reciprocity -> self-complexity
  |       |
  |       v
social support
```

The fit of the data to all three models was examined to determine if either of the competing models fit the data better than the one proposed. The solution of the path diagrams are as follows:
Figure 1: Path A

Self-Complexity

\[ \text{Reciprocity} \quad .143 \]

\[ \text{Social Support} \quad .397 \]

The variance in social support accounted for by self-complexity and reciprocity jointly = .114

Figure 2: Path B

Self-Complexity

\[ \text{Reciprocity} \quad .120 \]

\[ \text{Social Support} \quad .388 \quad .071 \]

The variance in social support accounted for by self-complexity and reciprocity jointly = .150

Figure 3: Path C

Self-Complexity

\[ \text{Reciprocity} \quad .120 \]

\[ \text{Social Support} \quad .072 \quad .380 \]

The variance in social support accounted for by self-complexity and reciprocity jointly = .156
The path coefficients are included in the diagrams. These path coefficients are standardized partial regression coefficients. This means that changes measured in standard deviation units in the variable at the tail of the arrow (when all other variables in the diagram are held constant) are transmitted to the variable at the head of the arrow. The variance accounted for is very similar in all three models. This set of data has not distinguished between the three models presented above.

Additional variables; marital status, ability to reciprocate, existence of living children, and health were analyzed with social support as the downstream dependent variable in this hypothesized path:

Figure 4: Path D

The variance accounted for in social support by marital status, reciprocity, children, and health score and all the hypothesized connections among them = .773
The same path as above was analyzed with the addition of the self-complexity score:

These paths show that more of the variance can be accounted for if the factors of marital status, existence of living children, and health status are included in the path diagram. Self-complexity adds nothing to the variance accounted for, which further reflects the fact that this factor was not correlated with social support. Marital status and having children are easily conceptualized in a social support network. Health status could be conceptualized in several path diagrams. Jung (1990)
presents a model of social support as the positive reaction of others to patients with good health status as an alternative or complement to the prevalent model in which support is viewed as an antecedent of good health. In order to examine the data obtained in this study with the alternative causal directions of health and social support, the following path diagram was analyzed:

![Path Diagram](image)

The path coefficient, which is the standardized partial regression coefficient for the causal arrow from social support to health, is more than twice as large as the path coefficient for the causal arrow from health to social support. This means that changes measured in standard...
deviation units in social support (when all other variables in the diagram are held constant) result in changes in health at a higher rate than changes in health cause changes in social support.

These statistical analyses apply to the extent that the underlying assumptions of the path diagrams in the factor analysis hold. Loehlin (1992) suggests that with this type of factor analysis "one would probably do well to be modest in one's statistical claims if N is less than 100" (p. 60). The statistical tests reported in this paper are therefore mainly descriptive to orient the reader among the various models presented.
CHAPTER IV
DISCUSSION

The results of this study, first of all, replicate correlations found in the literature between social support and health, (see Table 1). A positive correlation was also found between perceived ability to reciprocate and social support. It is interesting to note that the correlation of social support with reciprocity held even when single sections of the social support score were used. That is, when a score was calculated from the questions concerning friends only, without adding in the questions concerning spouses, children, and other relatives, the score still correlated with the perceived ability to reciprocate (see Table 1).

Another measure of reciprocity, Exchange-Orientatio did not correlate with social support. These results suggest that the concept of reciprocity which is associated with social support is one of the individual's perception that he is able to meet the norms he has established and not the orientation which defines that relationship. Whereas Exchange-Orientatio defines the norm of the individual, i.e., exchanges must be paid immediately and in kind versus
a more lenient set of rules, it is the feeling of adequacy in meeting whatever 'set of rules' the individual possesses that correlates with the level of social support.

Self-complexity did not correlate with social support as hypothesized. This could be the result of several factors. The card sort is a complicated test which has not been standardized for elderly populations. The trait description words may not have tapped the descriptions best understood by this cohort. The subjects tested may not have understood the concept properly and therefore the results may not have reflected self-complexity adequately.

Another explanation of the results could be that the levels of self-complexity and exchange-orientation both define the styles of the individuals' support networks but not the amount of support. Perhaps social support networks are established and maintained at different levels of strength regardless of self-complexity or exchange-orientation. In other words a very complex person might have a set of rules about social support networks that would have to be met, including type of reciprocity requirements, and a person low in self-complexity might have a different set of rules that must be met. However, the individual's set of rules defining styles of reciprocity may not be a
factor in entering and keeping social support networks, but
the perception of the ability to meet those requirements may
determine if the individual enters, or recognizes as
beneficial, a social support exchange. Further study will
be required to support one of these two explanations of the
low correlation of self-complexity and levels of perceived
social support.

The results from this study suggest that the ability to
reciprocate is positively correlated with levels of
perceived social support. The ability to give is not
intuitively a primary focus when assessing another's
important needs for survival. These data suggest that an
individual's need to give to and help others should be
considered when need assessments are made. Interventions
addressing the concept of reciprocity could be cost
effective ways of impacting social support networks.
Assisting people to overcome barriers to helping others,
such as providing transportation and setting up newsletters
about the needs of others, could increase their
opportunities to enter reciprocal relationships by
increasing their abilities to give.

Social support networks are valuable commodities which
could be strengthened by attention to issues of
reciprocating informal aid. It may be that federally funded Area Agencies on Aging should focus their services on access to and development of interpersonal reciprocal relationships. An understanding of social support networks could result in programs which strengthen rather than inadvertently weaken the powerful effects of these support networks.

Intervention aimed at influencing a person's ability to recruit potential helpers and mentors has been developed. Balcazar, Fawcett, and Seekins (1991) tested the effectiveness of a training program designed to teach college students with physical disabilities to recruit help to attain personal goals. The training followed a behaviorally based instruction format. Balcazar et. al. developed a manual with definitions of the responses required during a conversation with a potential helper, examples of conversations with potential helpers, written exercises requiring participants to list the responses, and role-playing exercises to practice the skills. Results of their study indicated significant improvements in recruiting skills for all participants. Secondary measures suggested possible training effects on the size of participants' support networks and personal goal attainment. If
perception of ability to reciprocate is addressed in maintaining long term informal networks at all functioning levels, applications such as this mentor recruitment training could include making salient the skills and abilities the subject has to offer in an interpersonal relationship.

The degree and extent of one's ability to reciprocate in relationships may be a factor in determining whether help is accepted and the effectiveness of that help. Increasing volunteer efforts and charitable organizations will not be effective unless the recipients first of all seek or accept the aid, and second, perceive it as supportive once given. This investigation suggests the ability to give may impact this important concept.
References


Appendix A

Demographic Statistics

<table>
<thead>
<tr>
<th></th>
<th>Subjects Interviewed</th>
<th>Pioneers in the Frontier of Life: Aging in Montana. (Governor's office survey, Aug 1990)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Male</td>
<td>42.0</td>
<td>44.3</td>
</tr>
<tr>
<td>% Female</td>
<td>58.0</td>
<td>55.7</td>
</tr>
<tr>
<td>% Married</td>
<td>54.3</td>
<td>61.2</td>
</tr>
<tr>
<td>% Widowed</td>
<td>35.8</td>
<td>30.0</td>
</tr>
<tr>
<td>% Never Married</td>
<td>2.5</td>
<td>3.2</td>
</tr>
</tbody>
</table>
Appendix B
The following questionnaire will ask you to answer questions about your social interactions and self conceptions. You may fill out this questionnaire on your own, or you may have the interviewer read the questions to you. If you choose to have the questions read to you, you may either circle your answers on your copy after the questions are read, or you may have the interviewer mark the answers as you answer them out loud. Your answers will be kept in strict confidence. Your name will be separated from your questionnaire and no one will know how you answered the questions.
1. Name ____________________________________________

2. Birth date: Month_________Day_______Year______

3. Age ____________
   # of years

4. You are
   1. male          2. female

5. Are you currently
   1. married
   2. separated
   3. divorced
   4. widowed
   5. never married

   5a. Are you currently living with someone you are not
       related to or married to?
       1. yes          2. no

   5b. Are you currently living with a relative who is not
       your spouse or your child.
       1. yes          2. no

6. Do you have children?
   1. yes          2. no (if no, go on to question 7.)

   6a. How many children do you have?_______

   6b. # of children in same house_______
       # of children in same town_______
       # of children in your state_______
       # of children in another state_______

7. In which of the following categories is your yearly income?
   1. less than $10,000
   2. $10,001 - $20,000
   3. $20,001 - $30,000
   4. $30,001 - $40,000
   5. $40,001 - $50,000
   6. $50,001 - $60,000
   7. $60,000 plus
8. Your health is
   1. poor
   2. fair
   3. good
   4. excellent

9. Have you been sick in bed for at least four consecutive days in the last year?
   1. yes    2. no

10. Have you been hospitalized in the last year?
    1. yes    2. no

11. Have you seen a physician in the last month about a health problem (i.e., for other than routine exams)?
    1. yes    2. no

12. How many prescription drugs are you currently taking?
    1. more than five
    2. two, three, four, or five
    3. one
    4. none

13. Do you suffer from pain?
    1. a lot    2. some    3. none

14. Do you have difficulty moving around?
    1. a great deal    2. some    3. none

15. Do you depend on others for performing activities of daily living such as eating, bathing, dressing, grooming, and walking across the room?
    1. totally dependent on others
    2. need some help
    3. need no help

16. Are you limited on activities because of your health?
    1. severely limited
    2. somewhat limited
    3. not limited

17. Have you had a sudden change in health?
    1. yes    2. no

17a. If yes, when was this sudden change?____________________

17b. What was this change? _________________________________
1. If someone does you a favor, what kind of things do you currently feel you could do for them in return?

2. What kinds of things, if any, do you currently need to make you more able to do things for, and to help, other people?

3. Are you currently able to do work or tasks for family or friends who need it?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

4. Have you done work or tasks for family or friends in the past?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

5. Are you a source of information and advice for family or friends when they ask for it?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

6. Have you given information and advice for family or friends when they have asked for it in the past?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

7. Are you able to share fun or relaxed times with family or friends?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

8. Have you in the past spent time with friends just for fun or relaxation?  
   1.always  2.most of the time  3.sometimes  4.rarely  5.never

9. Are you a confidant? In other words are you someone with whom another has a close and abiding relationship and needs you to share her/his private feelings?  
   1.yes  2.no

10. Are you able to give money to family or friends if it is needed?  
    1.always  2.most of the time  3.sometimes  4.rarely  5.never

11. Have you given money to family or friends who needed it in the past?  
    1.always  2.most of the time  3.sometimes  4.rarely  5.never
Please circle true after the statements which apply to you and false after the statements which do not apply to you.

1. If someone sends me a card on my birthday, I feel required to do the same for them.
   1. true 2. false

2. It matters if people I like do less for me than I do for them.
   1. true 2. false

3. When working on a group project, I am usually aware of how much I am doing in relation to everyone else.
   1. true 2. false

4. I feel uncomfortable when someone does me a favor which I know I won't be able to return.
   1. true 2. false

5. I usually remember if someone owes me money, or if I owe someone money.
   1. true 2. false

6. If someone goes out of their way for me, I often wonder if they are doing it for some other reason (i.e., want something in return).
   1. true 2. false

7. When I feel that I have been injured in some way by a friend, I find it hard to forgive them even when they say they are sorry.
   1. true 2. false

8. I usually do not forget if I owe someone a favor, or if someone owes me a favor.
   1. true 2. false

9. I don't mind letting someone use something of mine as long as I know I'll be able to borrow something of theirs in return.
   1. true 2. false

10. I feel that I provide more than my share in making a relationship with a friend or loved one work.
    1. true 2. false

11. I am apt to hold a grudge if I feel a friend or loved one has not fulfilled an obligation of our relationship.
    1. true 2. false
12. If a friend needs assistance with the carrying out of his/her responsibilities, I resent it because I don't ask anyone to help with my responsibilities.
   1. true     2. false

13. I feel resentment if I believe I have spent more on a friend's present than he/she has spent on mine.
   1. true     2. false

14. I would campaign for someone whom I don't agree with politically, if I knew he/she would get me a better job.
   1. true     2. false

15. If I give someone a ride to work or school on an occasional basis (approximately 6 times a month), then I expect him/her to repay me in some way.
   1. true     2. false

16. If I had a neighbor who always used my lawnmower or another item and it broke a few days after he/she used it, I would expect him/her to pay for half of the repair costs.
   1. true     2. false

17. I hesitate to ask favors of a friend because I don't want to take advantage of the relationship.
   1. true     2. false

18. When buying a present for someone, I often try to remember what they have given me in the past.
   1. true     2. false

19. If I set the table when a friend of mine is cooking, then I expect my friend to set it when I'm cooking.
   1. true     2. false

20. I do not usually tell anyone anything about my private affairs (business, family or love experiences) unless they have first told me something about theirs.
    1. true     2. false

21. I wish people would show more acknowledgment when I do or say nice things to them.
    1. true     2. false
1. When you have a problem or worry, how often do you let someone in your personal life know about it?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never

2. Is there anyone to whom you can really open up about your feelings without having to hold back?
   1. yes
   2. no
   (go on to question 3.)

   2a. With how many people do you have that kind of a relationship? ________?

3. Next, there will be three statements for you to decide how much each one sounds like you:
   "I find it relatively easy to get close to other people. I am comfortable depending on others and having them depend on me. I don't worry about being abandoned or about someone getting too close to me."
   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all

4. Here is the next statement:
   "I am somewhat uncomfortable being close to others. I find it difficult to trust them completely and difficult to depend on them. I am nervous when anyone gets too close to me."
   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all

5. Now the third statement:
   "I find that others are reluctant to get as close as I would like. I often worry that the people I care about do not love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away."
   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all
6. How often do you attend church?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never

7. How often do you attend meetings of clubs or other affiliative organizations (e.g., unions or fraternal groups)?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never
1. How often do you talk on the phone or get together with friends?
   1. most every day
   2. a few times a week
   3. a few times a month
   4. about once a month
   5. less than once a month

2. When you have a problem or worry, how often do you let your friends know about it?
   1. always  2. most of the time  3. sometimes  4. rarely  5. never

<table>
<thead>
<tr>
<th>Question</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. How much do your friends really care about you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>4. How much do your friends understand the way you feel about things?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>5. How much do any of your friends appreciate you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>6. How much can you rely on them for help if you have a serious problem?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>7. How much can you open up to them if you need to talk about your worries?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>8. How much can you relax and be yourself around any of your friends?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>9. How often do your friends make too many demands on you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>10. How often do your friends make you feel tense?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>11. How often do any of them argue with you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>12. How often do any of them criticize you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>13. How often do any of your friends let you down when you are counting on them?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>14. How often do they get on your nerves?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
</tbody>
</table>
1. How often do you talk on the phone or get together with other relatives (not spouse or children)?
   1. most every day
   2. a few times a week
   3. a few times a month
   4. about once a month
   5. less than once a month

2. When you have a problem or worry, how often do you let any of your other relatives (not spouse or children) know about it?
   1. always 2. most of the time 3. sometimes 4. rarely 5. never

<table>
<thead>
<tr>
<th>Question</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Not including your husband/wife /children how much do any of your other relatives really care about you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>4. How much do any of your other relatives understand the way you feel about things?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>5. How much do any of them appreciate you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>6. How much can you rely on them for help if you have a serious problem?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>7. How much can you open up to them if you need to talk about your worries?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>8. How much can you relax and be yourself around any of them?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>9. How often your other relatives make too many demands on you?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>10. How often do any of your other relatives make you feel tense?</td>
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<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>11. How often do any of them argue with you?</td>
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<td>a little</td>
<td>not at all</td>
</tr>
<tr>
<td>14. How often do any of your other relative get on your nerves?</td>
<td>a lot</td>
<td>some</td>
<td>a little</td>
<td>not at all</td>
</tr>
</tbody>
</table>
1. How often are you in contact with a son or daughter?
   1. most every day
   2. a few times a week
   3. a few times a month
   4. about once a month
   5. less than once a month

2. When you have a problem or worry, how often do you let any of your children know about it?
   1. always  2. most of the time  3. sometimes  4. rarely  5. never

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
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<td>3. How much do any of your children really care about you?</td>
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15. Does your wife currently live with you or does she live some place else?
   a. currently lives with me (since ______________)  
   b. lives some place else (since ______________)  
      # of years_____  
      # of years_____

15a. If not with you, where does she live?
   1. nursing home/hospital  
   2. with family  
   3. own home  
   4. other(SPECIFY):________
1. How often are you and your wife with each other?
   1. most every day
   2. a few times a week
   3. a few times a month
   4. about once a month
   5. less than once a month

2. When you have a problem or worry, how often do you let your wife know about it?
   1. always  2. most of the time  3. sometimes  4. rarely  5. never

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15a. If not with you, where does he live?
   1. nursing home/hospital
   2. with family
   3. own home
   4. other (SPECIFY): _________
1. How often are you and your husband with each other?
   1. most every day
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   3. a few times a month
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You will be given a packet of 33 randomly ordered index cards, each card will contain one of the following traits:

- outgoing
- reflective
- emotional
- competitive
- humorous
- soft-hearted
- sophisticated
- quiet
- industrious
- impulsive
- lazy
- reserved
- conformist
- hard-working
- kind
- enthusiastic
- intelligent

- playful
- mature
- assertive
- relaxed
- affectionate
- individualistic
- unconventional
- organized
- imaginative
- unorganized
- irresponsible
- insecure
- rebellious
- honest
- pessimistic
- joyful

Please think about yourself and sort those traits that are descriptive of you into piles according to which traits you think belong together. Think of yourself at different times, places, or with different people. Form groups until you feel that you have formed the important ones.

Not every trait needs to be used and the same trait can be placed in multiple piles--extra cards will be provided for this purpose. Your name will not be recorded and there are no right or wrong answers, only your opinion. When the sorts are completed the interviewer will record them on the record sheet.
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Appendix C1

Social Support Questionnaire

Confidant and Affiliative Organization Interactions

1. When you have a problem or worry, how often do you let someone in your personal life know about it?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never

2. Is there anyone to whom you can really open up about your feelings without having to hold back?
   1. yes
   2. no
   (go on to question 3.)

   2a. With how many people do you have that kind of a relationship ________?
      # PEOPLE

3. Next, there will be three statements for you to decide how much each one sounds like you:

   "I find it relatively easy to get close to other people. I am comfortable depending on others and having them depend on me. I don't worry about being abandoned or about someone getting too close to me."

   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all

4. Here is the next statement:

   "I am somewhat uncomfortable being close to others. I find it difficult to trust them completely and difficult to depend on them. I am nervous when anyone gets too close to me."

   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all

5. Now the third statement:

   "I find that others are reluctant to get as close as I would like. I often worry that the people I care about do not love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away."

   How much does this sound like you?
   1. a lot  2. some  3. a little  4. not at all
6. How often do you attend church?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never

7. How often do you attend meetings of clubs or other affiliative organizations (e.g., unions or fraternal groups)?
   1. always
   2. most of the time
   3. sometimes
   4. rarely
   5. never
## Appendix C2

### Social Support Questionnaire

#### Friend Interactions

1. How often do you talk on the phone or get together with friends?
   - most every day
   - a few times a week
   - a few times a month
   - about once a month
   - less than once a month

2. When you have a problem or worry, how often do you let your friends know about it?
   - always
   - most of the time
   - sometimes
   - rarely
   - never

3. How much do your friends really care about you?
   - a lot
   - some
   - a little
   - not at all

4. How much do your friends understand the way you feel about things?
   - a lot
   - some
   - a little
   - not at all

5. How much do any of your friends appreciate you?
   - a lot
   - some
   - a little
   - not at all

6. How much can you rely on them for help if you have a serious problem?
   - a lot
   - some
   - a little
   - not at all

7. How much can you open up to them if you need to talk about your worries?
   - a lot
   - some
   - a little
   - not at all

8. How much can you relax and be yourself around any of your friends?
   - a lot
   - some
   - a little
   - not at all

9. How often do your friends make too many demands on you?
   - a lot
   - some
   - a little
   - not at all

10. How often do your friends make you feel tense?
    - a lot
    - some
    - a little
    - not at all

11. How often do any of them argue with you?
    - a lot
    - some
    - a little
    - not at all

12. How often do any of them criticize you?
    - a lot
    - some
    - a little
    - not at all

13. How often do any of your friends let you down when you are counting on them?
    - a lot
    - some
    - a little
    - not at all

14. How often do they get on your nerves?
    - a lot
    - some
    - a little
    - not at all
Appendix C3

Social Support Questionnaire

Relative Interactions

1. How often do you talk on the phone or get together with other relatives (not spouse or children)?
   - most every day - a few times a week - a few times a month
   - about once a month - less than once a month

2. When you have a problem or worry, how often do you let any of your other relatives (not spouse or children) know about it?
   - always - most of the time - sometimes - rarely - never

3. Not including your husband/wife/children how much do any of your other relatives really care about you?
   - a lot - some - a little - not at all

4. How much do any of your other relatives understand the way you feel about things?
   - a lot - some - a little - not at all

5. How much do any of them appreciate you?
   - a lot - some - a little - not at all

6. How much can you rely on them for help if you have a serious problem?
   - a lot - some - a little - not at all

7. How much can you open up to them if you need to talk about your worries?
   - a lot - some - a little - not at all

8. How much can you relax and be yourself around them?
   - a lot - some - a little - not at all

9. How often your other relatives make too many demands on you?
   - a lot - some - a little - not at all

10. How often do any of your other relatives make you feel tense?
    - a lot - some - a little - not at all

11. How often do any of them argue with you?
    - a lot - some - a little - not at all

12. How often do any of them criticize you?
    - a lot - some - a little - not at all

13. How often do any of them let you down when you are counting on them?
    - a lot - some - a little - not at all

14. How often do any of your other relatives get on your nerves?
    - a lot - some - a little - not at all
Appendix C4

Social Support Questionnaire

Children Interactions

1. How often are you in contact with a son or daughter?
    most every day - a few times a week - a few times a month
    - about once a month - less than once a month
2. When you have a problem or worry, how often do you
    let any of your children know about it?
    always most of the time sometimes rarely never
3. How much do any of your children really care about
    you?
    a lot some a little not at all
4. How much do any of them understand the way you feel
    about things?
    a lot some a little not at all
5. How much do any of your children appreciate you?
    a lot some a little not at all
6. How much can you rely on them for help if you have a
    serious problem?
    a lot some a little not at all
7. How much can you open up to them if you need to talk
    about your worries?
    a lot some a little not at all
8. How much can you relax and be yourself around any of
    your children?
    a lot some a little not at all
9. How often do any of your children make too many
    demands on you?
    a lot some a little not at all
10. How often do any of your children make you feel
    tense?
    a lot some a little not at all
11. How often do any of your children argue with you?
    a lot some a little not at all
12. How often do any of your children criticize you?
    a lot some a little not at all
13. How often do any of them let you down when you are
    counting on them?
    a lot some a little not at all
14. How often do any of your children get on your
    nerves?
    a lot some a little not at all
Appendix C5

Social Support Questionnaire

Spouse(Wife) Interactions

1. How often are you and your wife with each other?
   - most every day - a few times a week - a few times a month
   - about once a month - less than once a month

2. When you have a problem or worry, how often do you
   your wife know about it?
   - always most of the time sometimes rarely never

3. How much does your wife really care about you?
   - a lot some a little not at all

4. How much does your wife understand the way you feel
   about things?
   - a lot some a little not at all

5. How much does your wife appreciate you?
   - a lot some a little not at all

6. How much can you rely on her for help if you have a
   serious problem?
   - a lot some a little not at all

7. How much can you open up to her if you need to talk
   about your worries?
   - a lot some a little not at all

8. How much can you relax and be yourself around her?
   - a lot some a little not at all

9. How often does your wife make too many demands on
   you?
   - a lot some a little not at all

10. How often does your wife make you feel tense?
    - a lot some a little not at all

11. How often does your wife argue with you?
    - a lot some a little not at all

12. How often does your wife criticize you?
    - a lot some a little not at all

13. How often does your wife let you down when you are
    counting on her?
    - a lot some a little not at all

14. How often does your wife get on your nerves?
    - a lot some a little not at all
15. Does your wife currently live with you or does she live some place else?

- currently lives with me (since ________________)
  # of years_____
- lives some place else (since ________________)
  # of years_____

15a. If not with you, where does she live?

1. nursing home/hospital
2. with family
3. own home
4. other(SPECIFY):______
Appendix C6

Social Support Questionnaire

Spouse(Husband) Interactions

1. How often are you and your husband with each other?
   most every day - a few times a week - a few times a month
   - about once a month - less than once a month
2. When you have a problem or worry, how often do you
   let your husband know about it?
   always - most of the time - sometimes - rarely - never
3. How much does your husband really care about you?
   a lot - some - a little - not at all
4. How much does your husband understand the way you
   feel about things?
   a lot - some - a little - not at all
5. How much does your husband appreciate you?
   a lot - some - a little - not at all
6. How much can you rely on him for help if you have a
   serious problem?
   a lot - some - a little - not at all
7. How much can you open up to him if you need to talk
   about your worries?
   a lot - some - a little - not at all
8. How much can you relax and be yourself around him?
   a lot - some - a little - not at all
9. How often does your husband make too many demands on
   you?
   a lot - some - a little - not at all
10. How often does your husband make you feel tense?
    a lot - some - a little - not at all
11. How often does your husband argue with you?
    a lot - some - a little - not at all
12. How often does your husband criticize you?
    a lot - some - a little - not at all
13. How often does your husband let you down when you
    are counting on him?
    a lot - some - a little - not at all
14. How often does your husband get on your nerves?
    a lot - some - a little - not at all
15. Does your husband currently live with you or does he live some place else? 
   currently lives with me lives some place else
   (since ______________) (since _____________)
   # of years _______ # of years _______

15a. If not with you, where does he live?
   1. nursing home/hospital
   2. with family
   3. own home
   4. other(SPECIFY):______
Appendix D

Perceived Ability to Reciprocate Questionnaire

1. If someone does you a favor, what kind of things do you currently feel you could do for them in return?

2. What kinds of things, if any, do you currently need to make you more able to do things for, and to help, other people?

3. Are you currently able to do work or tasks for family or friends who need it?
   always  most of the time  sometimes  rarely  never

4. Have you done work or tasks for family or friends in the past?
   always  most of the time  sometimes  rarely  never

5. Are you a source of information and advice for family or friends when they ask for it?
   always  most of the time  sometimes  rarely  never

6. Have you given information and advice for family or friends when they have asked for it in the past?
   always  most of the time  sometimes  rarely  never

7. Are you able to share fun or relaxed times with family or friends?
   always  most of the time  sometimes  rarely  never

8. Have you in the past spent time with friends just for fun or relaxation?
   always  most of the time  sometimes  rarely  never

9. Are you a confidant? In other words are you someone with whom another has a close and abiding relationship and needs you to share her/his private feelings?
   1. yes  2. no

10. Are you able to give money to family or friends if it is needed?
    always  most of the time  sometimes  rarely  never

11. Have you given money to family or friends who needed it in the past?
    always  most of the time  sometimes  rarely  never
Appendix E

Exchange-Orientation Questionnaire

Please circle true after the statements which apply to you and false after the statements which do not apply to you.

1. If someone sends me a card on my birthday, I feel required to do the same for them.
   1. true  2. false
2. It matters if people I like do less for me than I do for them.
   1. true  2. false
3. When working on a group project, I am usually aware of how much I am doing in relation to everyone else.
   1. true  2. false
4. I feel uncomfortable when someone does me a favor which I know I won't be able to return.
   1. true  2. false
5. I usually remember if someone owes me money, or if I owe someone money.
   1. true  2. false
6. If someone goes out of their way for me, I often wonder if they are doing it for some other reason (i.e., want something in return).
   1. true  2. false
7. When I feel that I have been injured in some way by a friend, I find it hard to forgive them even when they say they are sorry.
   1. true  2. false
8. I usually do not forget if I owe someone a favor, or if someone owes me a favor.
   1. true  2. false
9. I don't mind letting someone use something of mine as long as I know I'll be able to borrow something of theirs in return.
   1. true  2. false
10. I feel that I provide more than my share in making a relationship with a friend or loved one work.
    1. true  2. false
11. I am apt to hold a grudge if I feel a friend or loved one has not fulfilled an obligation of our relationship.
    1. true  2. false
12. If a friend needs assistance with the carrying out of his/her responsibilities, I resent it because I don't ask anyone to help with my responsibilities.
    1. true  2. false
13. I feel resentment if I believe I have spent more on a friend's present than he/she has spent on mine.
    1. true  2. false
14. I would campaign for someone whom I don't agree with politically, if I knew he/she would get me a better job.
   1. true  2. false
15. If I give someone a ride to work or school on an occasional basis (approximately 6 times a month), then I expect him/her to repay me in some way.
   1. true  2. false
16. If I had a neighbor who always used my lawnmower or another item and it broke a few days after he/she used it, I would expect him/her to pay for half of the repair costs.
   1. true  2. false
17. I hesitate to ask favors of a friend because I don't want to take advantage of the relationship.
   1. true  2. false
18. When buying a present for someone, I often try to remember what they have given me in the past.
   1. true  2. false
19. If I set the table when a friend of mine is cooking, then I expect my friend to set it when I'm cooking.
   1. true  2. false
20. I do not usually tell anyone anything about my private affairs (business, family or love experiences) unless they have first told me something about theirs.
   1. true  2. false
21. I wish people would show more acknowledgment when I do or say nice things to them.
   1. true  2. false
Appendix F

Self-Complexity Card Sort

You will be given a packet of 33 randomly ordered index cards, each card will contain one of the following traits:

- outgoing
- reflective
- emotional
- competitive
- humorous
- soft-hearted
- sophisticated
- quiet
- industrious
- impulsive
- lazy
- reserved
- conformist
- hard-working
- kind
- enthusiastic
- intelligent
- playful
- mature
- assertive
- relaxed
- affectionate
- individualistic
- unconventional
- organized
- imaginative
- unorganized
- irresponsible
- insecure
- rebellious
- honest
- pessimistic
- joyful

Please think about yourself and sort those traits that are descriptive of you into piles according to which traits you think belong together. Think of yourself at different times, places, or with different people. Form groups until you feel that you have formed the important ones.

Not every trait needs to be used and the same trait can be placed in multiple piles--extra cards will be provided for this purpose. Your name will not be recorded and there are no right or wrong answers, only your opinion. When the sorts are completed the interviewer will record them on the record sheet.
Appendix G

Health Questionnaire

8. Your health is
   poor  fair  good  excellent

9. Have you been sick in bed for at least four consecutive days in the last year?
   1. yes  2. no

10. Have you been hospitalized in the last year?
    1. yes  2. no

11. Have you seen a physician in the last month about a health problem (i.e., for other than routine exams)?
    1. yes  2. no

12. How many prescription drugs are you currently taking?
    1. more than five
    2. two, three, four, or five
    3. one
    4. none

13. Do you suffer from pain?
    1. a lot  2. some  3. none

14. Do you have difficulty moving around?
    1. a great deal  2. some  3. none

15. Do you depend on others for performing activities of daily living such as eating, bathing, dressing, grooming, and walking across the room?
    1. totally dependent on others
    2. need some help
    3. need no help

16. Are you limited on activities because of your health?
    1. severely limited
    2. somewhat limited
    3. not limited

17. Have you had a sudden change in health?
    1. yes  2. no

   17a. If yes, when was this sudden change? ________________

   17b. What was this change? ____________________________