

AN ABSTRACT OF THE THESIS OF

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There is increasing recognition of the importance of older adults in providing support to and maintaining relationships with their nonkin peers. Social trends, such as smaller family size, may reduce the role of family members and increase the importance of nonkin peers in providing help to the elderly. Relationships with peers have a greater influence on the well-being of the elderly than do interactions with family members. The purpose of this study was to examine the association of perceived reciprocity of aid exchange and relationship quality among elderly female nonkin peers from a social exchange perspective. A review of the literature led to the hypotheses that perceived reciprocity of instrumental, social, and total aid exchange would have a curvilinear association with relationship quality.

The volunteer sample of 62 women over 60 years of age participated in interviews tapping help given and received, demographic data, and relationship quality. Respondents were more likely to be widowed and to have lower incomes than the general population; the average respondent's health

was fair to good. A series of three polynomial regression analyses were used to determine if perceptions of reciprocity in aid exchange had a linear or curvilinear association with relationship quality.

Data suggest that respondents perceived a greater exchange of socioemotional than instrumental help and reported giving more help than they received. The perceived amount of help exchanged was low compared to other studies while perceived relationship quality was relatively high. Regardless of the operationalization of reciprocity as a linear or a curvilinear term, perceived reciprocity among older female nonkin peers was not helpful in explaining variance in relationship quality. This lack of association held for perceived reciprocity in instrumental, socioemotional, and total help exchanged. Limitations in the study and possible reasons for the nonsignificant outcomes are addressed.

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Among Elderly Female Nonkin Peers

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PERCEPTIONS OF RECIPROCITY AND RELATIONSHIP QUALITY
AMONG ELDERLY FEMALE NONKIN PEERS

CHAPTER 1: INTRODUCTION

There is a growing recognition of the instrumental and socioemotional support older nonkin peers provide one another. Social gerontologists have noted trends, such as smaller family size (Chapman, 1989; Cicirelli, 1982; Mercier & Powers, 1984), which may further reduce the role of family members and increase the importance of peers in providing aid to the elderly. An example will illustrate the importance of aid exchange among older peers.

Mary and Alda live next door to each other in a trailer court several miles from town. Alda, who is childless, lives with her husband. Their income is more than adequate to meet their needs. Mary is 86 years old and lives with her bedridden husband. Their income is less than adequate. Her adult daughter passed away several years ago; a grown son lives 100 miles away. Alda takes Mary shopping and to the post office. Alda also picks up medicine for Mary and takes her clothes to the dry cleaners. Whenever Mary fixes desserts, she takes a generous portion to Alda, who does not like to cook. Mary also keeps an eye on Alda's trailer when Alda and her husband are away. Mary says that Alda has been depressed, so she keeps her company and thinks up cheerful stories to relate. In this relationship, both instrumental (e.g., transportation) and socioemotional (e.g., visiting)

aid are exchanged. Each partner depends on and describes the other as a friend.

Not all nonkin peers who exchange aid are friends. Some might describe themselves as acquaintances, neighbors, or co-residents in housing units. Just as aid exchange may vary from completely one-way to completely balanced, exchange partners may perceive their relationship as very distant to very close. There are advantages, however, to close relationships. Research indicates that interaction with friends has a greater influence on well-being of the elderly than does interaction with family members (Arling, 1976; Beckman, 1981; Lowenthal & Haven, 1968; Mancini, 1980; Spakes, 1979; Wood & Robertson, 1978). Thus, older nonkin peers play two important roles, that of providing support and of being a friend. The question that arises is what will happen to relationship quality if one partner is unable to reciprocate and the exchange of aid becomes unbalanced.

The increasing recognition of the contributions of the elderly to their nonkin peers is tempered by the realization that unbalanced exchanges may be detrimental to relationships. Nonkin peer relationships have no formal mechanisms to hold them together (Allan & Adams, 1989; Litwak & Szelenyi, 1969; Wood & Robertson, 1978). Nor are they bound by the obligations which characterize family relationships (Allan, 1986; Cantor, 1979; Reisman, 1981; Roberto, 1989; Rook, 1989; Stoller, 1985). They are governed, instead, by reciprocity (Johnson, 1983) which has

been described by Gouldner (1960) as a generalized, universal moral norm. Although social exchange theory assumes that in social interactions individuals attempt to maximize rewards and minimize costs, Thibaut and Kelley (1959) suggest that exchange partners will find balanced, reciprocal, interdependent relationships more rewarding than those which are asymmetrical. With regard to elderly nonkin peers, Allan (1986) asserts that although friends and neighbors are concerned about each other and will help in a crisis, unreciprocated help over longer periods of time is contradictory to the nature of nonkin peer relationships and will have adverse effects on relationship quality. Nevertheless, the degree of reciprocity or balance of exchange varies from one dyad to another (Rook, 1987).

Most studies indicate that reciprocal exchanges among elderly nonkin peers are positively associated with relationship quality (Goodman, 1984; Johnson, 1983; Jonas & Wellin, 1980; Roberto & Scott, 1986a, 1986b; Rook, 1987), although several have found that receiving more than one provides is associated with relationship closeness (Goodman, 1985; Roberto & Scott, 1986b). Because of variations in the conceptualization and measurement of key variables, however, it is difficult to compare results across studies or reach conclusions about the influence of aid exchange on relationship quality.

The purpose of this study was to investigate the association of perceived reciprocity and relationship

quality among elderly female nonkin peers from a social exchange perspective. Three aspects of perceived reciprocity were studied: the balance of total aid exchange, of instrumental aid exchange, and of socioemotional aid exchange. Relationship quality, the dependent variable, refers to partners' perceptions of several relationship indicators, such as closeness and communication.

This information will add clarity to the literature and be useful to practitioners and service providers working with the elderly in the community. Gerontologists and community planners need a clearer understanding of the interplay between aid exchange and relationship closeness to make informed decisions about how best to help aging individuals live independently and maintain important relationships. Before practitioners and decision-makers encourage nonkin peers to offer more assistance to one another, they need information about how perceived reciprocity is associated with relationship quality. This research was expected to provide data which would help practitioners and individuals concerned with social policy make informed choices about programs to assist the elderly.

CHAPTER 2: REVIEW OF LITERATURE

Social Exchange Theory

Social exchange theory provides a theoretical framework for understanding how reciprocity may influence relationship quality. Reciprocity has been conceptualized and operationally defined in a variety of ways in previous studies. Such differences in definition suggest the need to clarify the conceptualization of reciprocity and to exercise caution in interpreting and comparing the results of previous research. Similarly, it is helpful to review the various aspects of relationship quality that have been investigated, noting the salience of aid exchange and reciprocity to older individuals and to relationships outside the family.

Theoretical Framework for Reciprocity

Reciprocity has been defined as balanced exchange, the equal or comparable exchange of various types of aid (Antonucci & Jackson, 1989). From a social exchange perspective, social interaction is seen as being motivated by benefits and costs: That is, individuals in relationships attempt to maximize rewards and minimize costs (Thibaut & Kelley, 1959). The assumption that individuals are motivated to maximize benefits can lead to the expectation that individuals will prefer unbalanced, rather than balanced exchanges. It would follow that individuals receiving more help than they are giving may find such an exchange rewarding (McCulloch, 1990). The opposite,

however, could also be predicted. McCulloch (1990) points out that giving more help than is received may be rewarding to aid exchange partners. This argument is supported to some degree by Dowd's (1980) observations about the importance of independence to the elderly. Older individuals able to give more than they receive may experience a sense of power and independence. Both of these possibilities suggest that unbalanced aid exchange patterns are more rewarding (at least to one of the partners) than are balanced exchanges.

In their explication of social exchange theory, however, Thibaut and Kelley (1959), posit that exchange partners will derive more rewards when the relationship is reciprocal, balanced, and interdependent. Reciprocal, balanced relationships are those in which each partner provides rewards to the other, and the rewards received by each are perceived as essentially equal or equivalent. Interdependence has both behavioral and psychological components. Behavioral interdependence occurs when each partner's overt behavior affects the overt behavior and subjective, unobservable ideas, thoughts, and emotions of the other (Huston & Robins, 1982). When a relationship endures long enough for both partners to formulate general ideas and beliefs about each other and the relationship, it can be viewed as psychologically interdependent (Huston & Robins, 1982).

According to social exchange theory, for a relationship to continue, both members of the dyad must find interaction more rewarding than costly (Goodman, 1984). When one partner is unable to reciprocate, the resulting imbalance can be costly to both partners (Thibaut & Kelley, 1959). Furthermore, Dowd (1980) suggests that balanced, reciprocal exchanges may be especially salient for older individuals. Theoretically, any status characteristic of an individual, such as the person's age, may become a factor in exchange negotiations (Dowd, 1980). Because older people are perceived as having fewer resources, their bargaining position is weakened relative to those who are younger and presumably possess greater assets. Dowd (1980) suggests that age, as a status characteristic, will have several effects. The elderly are likely to engage in aid exchange with other older individuals of similar status (i.e., power). They will avoid unbalanced exchanges because such interactions involve dependence which is experienced negatively by most people.

From a sociological perspective, Gouldner (1960) provides further support for the importance of reciprocity, describing it as a generalized, universal moral norm. At a minimum, such a norm, makes two demands: "a) people should help those who have helped them, and b) people should not injure those who have helped them" (Gouldner, 1960, p. 171). Gouldner (1960) argued that reciprocity is one of the principal components of moral codes and a dimension of all

value systems. As a moral norm, reciprocity is reinforced initially by society. It may subsequently be internalized by individuals and cause feelings of discomfort if violated (Adams, 1989).

Reciprocity, then, is not only a theoretical construct but also a guiding principal in human interaction. When someone receives a favor, that individual is inclined to reciprocate, to give something in return. Those who provide too little are labeled as "cheapskates" or "stingy." Those who go overboard may be viewed as "pretentious" (Adams, 1965). The use of such terms in everyday conversation embodies an underlying assumption in social exchange theory - that exchange partners are aware of costs and benefits - and strengthens the argument that reciprocity is a universal, moral norm. In social exchange terms, it is costly to be labeled as and to be involved with one who is stingy or pretentious.

From a social exchange perspective three predictions concerning the association between the balance of aid exchange and relationship quality among nonkin peers can be made. First, individuals receiving more aid than they are providing will find that such an arrangement maximizes their benefits and minimizes costs. Second, older individuals providing more than they are receiving will feel independent and powerful. Hence, this arrangement will be perceived as more rewarding than costly. A third, even more compelling, theoretical argument suggests that rewards will be greatest

and costs least in balanced exchange relationships. The latter interpretation of social exchange theory suggests that balanced exchanges are likely to have a positive influence on relationship quality. Which of these theoretical positions most accurately reflects the influence of reciprocity on older nonkin peer relationships is an empirical question.

Types of Reciprocity

When describing reciprocity, theorists and scholars often refer to two broad categories of aid: instrumental (e.g., providing transportation) and socioemotional (e.g., listening to problems) (Cantor, 1979; Ingersoll-Dayton & Antonucci, 1988; Johnson, 1983). In addition, three terms frequently appear in the literature: balanced reciprocity, generalized reciprocity, and negative reciprocity.

Balanced reciprocity. The term "balanced reciprocity" generally refers to the direct exchange of goods and services between partners (Sahlins, 1965). What is reciprocated is the customary equivalent of that which was received. Individuals may spell out what they expect (e.g., "I'll pay for your gas if you drive me to the doctor's office") (Wentowski, 1981). The resources exchanged tend to be instrumental and not personal. In balanced reciprocity, there is little time delay between aid given and received and the reckoning is precise. Immediate, balanced exchanges are typical of friendly acquaintances and social friends (Wentowski, 1981).

Generalized reciprocity. When compared to balanced reciprocity, "generalized reciprocity" refers to exchanges with less similar resources, with more time elapsing between exchanges, and in which the reckoning is less precise. Wentowski (1981) suggests that generalized reciprocity occurs when balanced exchanges have persisted over time and partners have been satisfied with their exchange. Under those conditions, a deeper sense of commitment frequently develops. The items exchanged are often more personal than those exchanged in balanced reciprocity. Immediate repayment is not expected (Wentowski, 1981). Generalized reciprocity suggests a willingness to trust and to assume greater obligations than in balanced reciprocity and implies a state of interdependence. Failure to reciprocate does not cause the partner receiving less to stop giving to the other partner immediately; one-way giving can continue for a long time. If balance is not maintained in the long run, however, the less benefitted partner may decide that the relationship has poor potential and withdraw (Wentowski, 1981).

Negative reciprocity. Negative reciprocity may be described as an effort to get something for nothing (Sahlins, 1965). One partner attempts to maximize rewards without regard for the costs to the other. Negative reciprocity is the most impersonal type of exchange and is characterized by a lack of concern about social relations. Essentially, negative reciprocity violates the universally

accepted norm of reciprocity and is not relevant to the study of close relationships.

Social reciprocity. These descriptions of types of reciprocity refer to the balance of exchange between two people. Some other researchers and theorists (Berkowitz & Daniels, 1964; Levi-Strauss, 1969), however, have suggested that balanced exchange applies beyond the dyad. For example, Cantor (1979) used the term generalized reciprocity to indicate that the exchange between a given individual and all of that person's nonkin peers is generally balanced. In such studies, it is theoretically possible for the individual to be involved in one-way giving with some peers and one-way receiving with others even though overall balance may be maintained. In the proposed study, the terms dyadic and social will be used to differentiate these two connotations. For example, social reciprocity will be employed when the research pertains to the balance of exchange for a given individual and all nonkin peers. Dyadic reciprocity will be used when the research pertains to the balance of exchange for an identified pair.

As already indicated, the pattern of reciprocity within a relationship is likely to be associated with the quality of that relationship. Nonkin peer relationships vary on a continuum from close to distant, intense to casual.

Nonkin Peers and Aid Exchange

Peer Relationships

Recent research on help provided by nonkin peers encompasses a variety of nonkin relationships including those with friends, neighbors, acquaintances, and co-residents in housing units. Conceptually, nonkin peer relationships may fall on a continuum from those most close to those most distant, all of whom may be included under the rubric of friendship by investigators and respondents. Chown (1983), for example, argues that if the activities of friendship are variables under investigation, then anyone taking part in these activities can be called friends. Respondents may refer to both acquaintances and intimates as friends; relatives or neighbors may or may not be friends (Adams, 1989; Lowenthal & Robinson, 1976). Several investigators have concluded that measuring the degree of relationship closeness or intensity may be more useful than trying to place nonkin peers in relationship categories (Adams, 1989; Cantor, 1979; Jerrome, 1980).

Importance of nonkin peers. Nonkin peers are important to the elderly. Investigators have found that involvement with friends often has a greater effect on measures of well-being than does interaction with kin (Arling, 1976; Beckman, 1981; Lowenthal & Haven, 1968; Mancini, 1980; Spakes, 1979; Wood & Robertson, 1978). Elderly persons in close relationships with nonkin peers have experienced positive morale (Arling, 1976; Hochschild, 1973; Mancini, 1980;

Pihlblad & McNamara, 1965; Rosow, 1967), life satisfaction (Elwell & Maltbie-Crannell, 1981), emotional support (Babchuk & Anderson, 1989), enjoyment (Larson, Mannell, & Zuzanek, 1986), and good health (Arling, 1976; Cantor, 1979). Those participating in balanced exchanges with nonkin peers reported less loneliness than those in unbalanced exchanges (Rook, 1987).

Exchange of aid. In addition, there is increasing evidence that nonkin elderly peers are providing a number of instrumental and socioemotional resources to one another (Blieszner, 1989b). Instrumental resources reported in the literature include: housekeeping and domestic chores (Cicirelli, 1982; Goodman, 1985; Johnson, 1983; Jonas & Wellin, 1980; Krause, 1987; Penning, 1990; Roberto & Scott, 1986a, 1986b; Stoller, 1985; Ward, LaGory & Sherman, 1985), shopping (Cantor, 1979; Goodman, 1983; Penning, 1990; Roberto & Scott, 1986a, 1986b; Ward, LaGory & Sherman, 1985), meal preparation (Johnson, 1983), food (Goodman, 1985; Roberto & Scott, 1986a, 1986b; Stoller, 1985), household repairs (Roberto & Scott, 1984; Stoller, 1985), help when ill (Ingersoll-Dayton & Antonucci, 1988; Jerrome, 1980; Roberto & Scott, 1984; Rook, 1987), grooming (Johnson, 1983), personal care (Antonucci & Akiyama, 1987; Ingersoll-Dayton & Antonucci, 1988; Jonas & Wellin, 1980), emergency services (Allan, 1986; Bankoff, 1983; Cantor, 1979; Penning, 1990; Peters & Kaiser, 1985; Stoller, 1985), errands (Bankoff, 1983; Goodman, 1985; Roberto & Scott, 1986a,

1986b; Stoller, 1985), transportation (Bankoff, 1983; Cicirelli, 1982; Johnson, 1983; Roberto & Scott, 1986a, 1986b), checking in (Goodman, 1985; Penning, 1990; Ward et al., 1985), information (Blieszner, 1989b; Goodman, 1985; Krause, 1987), advice (Roberto & Scott, 1986a, 1986b; Shea, Thompson & Blieszner, 1988; Stoller, 1985), help with financial difficulties (Rook, 1987), and loans of money (Cantor, 1979; Roberto & Scott, 1986a, 1986b).

Specific types of social and emotional support are also reported in the literature including the provision of a sense of belonging (Antonucci & Akiyama, 1987; Bankoff, 1983; Krause, 1987), companionship (Bankoff, 1983; Cantor, 1979; Peters & Kaiser, 1985; Roberto & Scott, 1986a, 1986b), help in combating depression and maintaining morale (Antonucci & Akiyama, 1987; Cantor, 1979; Cicirelli, 1982; Jerrome, 1980; Johnson, 1983; Roberto & Scott, 1986a, 1986b; Rook, 1987), focused listening (Antonucci & Akiyama, 1987; Connidis & Davies, 1990; Goodman, 1985; Ingersoll-Dayton & Antonucci, 1988; Roberto & Scott, 1986a, 1986b; Rook, 1987), conversation (Rook, 1987), love (Blieszner, 1989b; Shea et al., 1988) physical affection (Roberto & Scott, 1986a, 1986b), recognition of special occasions (Roberto & Scott, 1986a, 1986b; Stoller, 1985), doing things together (Cantor, 1979; Connidis & Davies, 1990; Rook, 1987), taking vacations together (Cantor, 1979), and providing status (Blieszner, 1989b). In general, nonkin peers provide more social and emotional help than instrumental aid (Allan, 1986; Atchley,

1962; Chown, 1983; Peters & Kaiser, 1985; Rook, 1987; Shea et al., 1988; Stephens & Bernstein, 1984), although this pattern seems to be more true for women than for men (Roberto & Scott, 1986b).

Although in the past nonkin peers have undertaken fewer tasks than family members (Horowitz, 1985), social gerontologists have noted trends which may reduce the role of family members and increase the importance of nonkin peers in the support systems of the elderly. The proportion of elderly in the population, especially the old-old, is increasing (Brody, 1981; Mancini & Blieszner, 1989; Mercier & Powers, 1984). Because the old-old have more health problems and require greater support than younger individuals, they place greater stress on family caregivers (Cicirelli, 1982). In some cohorts, more young couples are remaining childless or having fewer children (Chapman, 1989; Cicirelli, 1982; Mercier & Powers, 1984). Those having children are delaying childbearing so that when they reach old age, their children may not be well enough established to provide needed help (Cicirelli, 1982). As families scatter over larger geographic areas (Adams, 1985-1986; Adams & Blieszner, 1989; Mercier & Powers, 1984) and as more women join the labor force (Brody, 1981; Mercier & Powers, 1984; Shanas, 1980; Treas, 1977), the amount of care families are able and willing to provide may decrease.

There is already evidence that, in some cases, friends provide more instrumental and socioemotional support when

family members are not available. For example, studies have shown that friends and neighbors are important providers of help to the elderly who have either no children or none who can help (Cantor, 1979; Cicirelli, 1982; Morris & Sherwood, 1983-84; Rook, 1987). Those who live alone rely on friends and neighbors, along with family members, for instrumental and emotional support (Chappell, 1991; Jonas & Wellin, 1980; Kohen, 1983; Lopata, 1980; Stoller & Earl, 1983; Townsend & Poulshock, 1986). Friends and neighbors are important care providers to married elders as well (Jonas & Wellin, 1980; Litwak, 1985; Townsend & Poulshock, 1986). When peers assume some, often considerable, responsibility for the support of disabled friends, they relieve pressure on relatives (Jonas & Wellin 1980; Lowenthal & Robinson, 1976). This, in turn, may not only strengthen the kinship network, but also defer institutionalization of the dependent elderly. In sum, nonkin peers are important social resources for older individuals (Chappell, 1991), with benefits accruing from both the relationship itself and the aid that is exchanged.

Reciprocity Among Older Nonkin Peers

Although many scholars recognize the dual advantages of aid exchange and close nonkin peer relationships for older individuals, some social gerontologists are concerned that aid exchange may have deleterious effects on relationship quality (Allan, 1986; Chown, 1983; Crohan and Antonucci, 1989; Johnson, 1983; Rook, 1989). Their concern centers

around reciprocity: As individuals age, one partner may be unable to provide as much help as the other, upsetting the balance of exchange and placing the relationship in jeopardy (Allan, 1986).

Reciprocity and nonkin peers. The norm of reciprocity appears to be particularly salient in relationships beyond the family (Lowenthal & Robinson, 1976). Nonkin peer relationships, unlike kinship and marriage, have no formal mechanisms to hold them together (Allan & Adams, 1989; Litwak & Szelenyi, 1969; Wood & Robertson, 1978). Nor are they bound by the obligations inherent among family members (Allan, 1986; Cantor, 1979; Reisman, 1981; Roberto, 1989; Rook, 1989; Stoller, 1985). They are governed, instead, by reciprocity and equality of status (Johnson, 1983). Almost every working definition of friendship, regardless of how broad, alludes to the importance of a mutual sense of give-and-take between members of a dyad (Roberto, 1989a). Relationship closeness is demonstrated by the giving and receiving of instrumental help and, more particularly, socioemotional support (Chown, 1983). It is difficult to have a relationship in which only one member of a dyad is giving (Antonucci & Jackson, 1989). Because nonkin peer relationships are voluntary and lack formal mechanisms to sustain them, an imbalanced exchange may threaten their stability (Rook, 1989).

Reciprocity and the elderly. In addition to relationships outside the family, reciprocity is also

particularly salient to the relationships of older adults (Antonucci & Jackson, 1989). Dowd (1980) suggests that as people age they are at an increasing disadvantage in social exchange. As their resources diminish, older individuals may have difficulty maintaining balance in their relationships. The costs of helping may be so great that the partner providing more than is received withdraws. Conversely, the partner receiving more than is provided may feel so in debt that ending the relationship may seem preferable to the discomfort of dependence (Chown, 1983). Changes associated with aging that alter partners' abilities to provide resources to one another, or their perceptions about each other and the relationship, are likely to affect their relationship (Huston & Robins, 1982). Thus, the norm of reciprocity is especially relevant to the relationships of aging, nonkin peers.

Research on reciprocity. Several investigators have examined the awareness and importance of reciprocity among older nonkin peers. Cantor (1979) investigated social reciprocity in a cross-cultural study of inner-city, primarily low-income elderly conducted by the New York City Department for the Aging. Most friends lived within walking distance, so there was a blurring between friends and neighbors. To assess aid exchange, respondents were given a list of five instrumental and eight affective tasks and asked which they do for neighbors, which neighbors do for them, and which activities they do together. Cantor (1979)

found a high degree of social reciprocity in relation to the exchange of instrumental and socioemotional help. Responses on the instrumental items indicated an almost equal flow of help among the elderly and their neighbors, especially in relation to help when ill and assistance with shopping. In the affective domain, respondents and their neighbors visited each other almost equally and shared a number of activities, particularly sitting and talking with each other.

Stoller (1985) investigated the impact of social reciprocity on the morale of the elderly. Data were obtained through interviews with a stratified linear probability sample of 753 noninstitutionalized older individuals, about 60 percent of whom were female. Two dichotomous indices were developed to measure patterns of instrumental exchange of help within the informal network (Stoller, 1985). The first measured the provision of help by the elderly to children, other relatives, and friends or neighbors. Respondents received a score of 1 if they provided help in one of nine areas: babysitting, running errands, household repairs, transportation, housework or yardwork, food preparation, advice on problems with children or household management, and advice on financial decisions. On the second index, respondents received a score of 1 if they received help in one of 12 areas: food preparation, shopping, light chores, heavy chores, laundry, bathing, using the toilet, dressing and grooming, transportation,

serving as a confidant, or helping with financial management and personal business. The indices were cross-tabulated resulting in four relationship types: (a) no exchange between the elder and others; (b) reciprocal exchange; (c) respondent was overbenefitted; and (d) respondent was underbenefitted.

More older persons reported giving help than receiving it (Stoller, 1985). Those who did receive help usually reciprocated. The prevalence of unreciprocated assistance to the elderly was higher in relationships with children or other relatives than with friends or neighbors.

Multiple discriminant analysis was used to differentiate elders reporting the four patterns of exchange. Although there was overlap among the groups, respondents who provided help to friends and neighbors were more likely to be women with little activity limitation. Those who received help were more likely to be men with notable activity limitations. With regard to family members but not friends and neighbors, Stoller (1985) found that depression was more significant in discriminating providers from nonproviders than in discriminating receivers from nonreceivers. She concluded that the inability to reciprocate rather than the need for assistance undermines the morale of the older person. Further, she proposed that the lack of significance of depression in discriminant analyses for nonkin peers may reflect differences in the degree of imbalance in such relationships. She concluded

that if reciprocity is the basis for voluntary nonkin relationships, then friendships would be less likely than family ties to survive highly uneven exchanges.

Ingersoll-Dayton and Antonucci (1988) investigated social reciprocity using a nationally representative sample of individuals 50 years of age and older. The majority were able to function independently although 4% required personal care and 24% needed instrumental help. Data concerning the perceived degree of reciprocity were collected through structured interviews. A reciprocity index was constructed by adding the number of people within each of three types of relationships (spouse, children, and friends) from whom respondents said they received help and subtracting the number to whom they gave support. Thus, a score of zero represented reciprocity within general relationship categories.

Ingersoll-Dayton and Antonucci (1988) found that most relationships were characterized by reciprocity. With increasing age, however, relationships with friends remained reciprocal while those with spouse and children were less balanced.

These studies relied on small numbers of items which did not represent the full range of support that older nonkin peers might exchange. For example, Cantor's (1979) affective tasks referred to activities partners do together (e.g., eat together, go to movies together) which required both proximity and a degree of mobility. Help items (e.g.,

listening to a partner's problems) that can be exchanged without regard for physical limitations and distance between partners were not included. Stoller (1985) asked about fewer types of help provided than received and the two sets of items were different. No personal care or socioemotional help items were included in her inquiries about help provided. In contrast, there were several personal care items and one socioemotional support in the help received category. Ingersoll-Dayton and Antonucci's (1988) study focused on a balance of people to whom aid was given and from whom aid was received. They measured only two aid items, confiding and aid when ill, narrowly limiting information about types of help exchanged.

The studies reported here contribute to the literature by suggesting that social reciprocity characterizes exchanges of aid among elderly nonkin peers. Moreover, reciprocity was more prevalent in peer than in kin relationships. Although the investigators generally concluded that unbalanced exchanges will have negative consequences for older peers, they did not address dyadic reciprocity or measure relationship quality per se.

Patterns of Aid Exchange and Relationship Quality

Most investigators have found that reciprocal exchanges among elderly nonkin peers are associated with relationship quality, although several have found that receiving more than one provides is associated with relationship closeness. Among the former, some investigators focused on friends and

family members (Rook, 1987; Jonas & Wellin, 1980; Johnson, 1983). Others studied best friends (Roberto & Scott, 1986a), old and new friends (Shea et al., 1988), or best and least best friends (Roberto & Scott, 1986b).

Social reciprocity and relationship quality. Rook (1987) used standardized interviews with 115 elderly, mostly white, widowed women in four senior citizen centers in Los Angeles to investigate social reciprocity. She inquired about giving and receiving help with regard to three types of social exchange: companionship (i.e., with whom they socialized and talked on the telephone), emotional support (i.e., to whom they confided personal problems and turned for help when depressed), and instrumental support (i.e., to whom they turned for help with illness or financial difficulties). Rook (1987) constructed two reciprocity measures. For the first, she subtracted the number of items for which respondents had given help from the number for which they had received help. For the second, Rook (1987) constructed a measure of the average number of reciprocal exchanges between respondents and their nonkin peers. This was accomplished by tallying the total number of reciprocal exchanges that occurred between the respondent and all people identified as friends, then dividing by the total number of friends. A similar measure was constructed for respondents and their adult children.

Rook (1987) also measured loneliness and social satisfaction. Loneliness was measured by nine items which

were summed. Social satisfaction was determined by asking respondents how satisfied they felt about their relationships with friends and adult children. They were given a list of all people with whom they exchanged aid and asked to identify those to whom they felt "especially close" and "most comfortable just being yourself." From these questions, Rook (1987) derived the proportion of friends and of family with whom the respondent felt especially close and most comfortable. Several control variables were used in data analysis (Rook, 1987). These included health (assessed on a 4-point scale ranging from excellent to poor), proximity (average for all members of the social network), and frequency of interaction (average for all network members). Using hierarchical multiple regression analyses, Rook (1987) entered the control variables in step 1 and then entered two reciprocity variables (based on the difference score described earlier) in steps 2 and 3. The first reciprocity variable was the linear term, which in Rook's (1987) study represented a social exchange orientation of maximizing rewards and minimizing costs. The second was the quadratic term, which Rook (1987) used to represent an equity or balanced exchange perspective. The outcome variable for this equation was loneliness.

The linear term of the equation was not significant. The quadratic term was significant indicating a curvilinear relationship between loneliness and social reciprocity. Specifically, those who were overbenefitted or

underbenefitted experienced greater loneliness than those in balanced relationships. Age and health were inversely related to loneliness.

Rook (1987) found that widows' exchanges with peers were more likely to be reciprocal (although no time frame is given) than their exchanges with adult children. Partial correlation analyses, controlling for age, health, and education, indicated that the average number of reciprocal exchanges with friends was positively associated with friendship satisfaction. In contrast, the average number of reciprocal exchanges with adult children was unrelated to relationship satisfaction. Similarly, the average number of reciprocal exchanges with peers was positively associated with feeling close to and comfortable with friends (Rook, 1987). The average number of reciprocal exchanges was unrelated to feelings of closeness and comfortableness with adult children. Rook (1987) ran a second set of partial correlation analyses using proximity and frequency of interaction as controls and found the same pattern. Reciprocity was positively associated with relationship satisfaction, closeness, and comfortableness with regard to friends but not adult children.

Rook (1987) employed dependent t -tests to determine if the degree of reciprocity (using difference scores) varied across the three exchange categories of companionship, emotional support, and instrumental support. Findings indicated imbalances for companionship and emotional

support. Elderly widows were more likely to provide both companionship and emotional support than to receive it. Respondents were more likely to receive instrumental support than provide it although this difference was not significant ($p < .06$). Rook (1987) suggested the possibility that respondents overestimated the emotional support and companionship they provided to others.

In her study, social reciprocity was found to be greater in elderly widows' interactions with friends than with their adult children (Rook, 1987). Thus, Rook's (1987) findings support those reported earlier. Further, a larger number of reciprocal exchanges was related to an increase in positive feelings toward friends but not toward children. Rook (1987) concluded that, over the long run, peers engaged in reciprocal, diverse exchanges will have positive feelings about each other.

In another study examining social reciprocity and older adult friendships, Goodman (1984) developed a social exchange typology which included four mutually exclusive groups: high helpers, mutual helpers, dependents, and isolates. The sample of 67 elderly was randomly drawn from two age-segregated housing developments in the same community and was predominantly white and female.

Goodman (1984) used unstructured interviews to determine the amount of give and take for the previous six months. Acts of giving and taking were summed. Goodman (1984) classified respondents as high helpers if they gave 5

or more acts than they received. Although Goodman (1984) did not give more specific parameters for the classification of high helpers, her article implied that high helpers gave 16 or more acts of aid. Respondents who described 16 or more acts of giving and a similar amount of receiving (within 4 acts) were classified as mutual helpers. The third category, neighborhood isolates, was composed of respondents reporting 15 or fewer acts of giving and similar (within 4 acts) acts of receiving. Too few respondents were found to analyze the final group, dependents, who took more than they gave. Although no details on measurement were given, Goodman (1984) also assessed relationship closeness.

The three types were not significantly different in relation to the demographic variables of age, gender, ethnicity, religion, education, occupation, and socioeconomic status. Nor did they differ on personality characteristics or frequency of contact with children, other relatives, and friends.

Most high helpers had worked as helping professionals (e.g., as nurses, welfare workers, or teachers) at some point in time, were very active as volunteers (e.g., volunteered time to agencies and church activities), and had greater contact with neighbors than mutual helpers or isolates. High helpers' relationships with those they helped were not close. One referred to those she helped as "little seniors." Although high helpers were self-sufficient and independent at the time of the study, Goodman

(1984) believed that they were vulnerable because they did not have the security of neighbors' support. Mutual helpers were more willing to rely on neighbors for help and to report a "friendly community." Some had developed traditions of exchange within a circle of friends. Goodman (1984) described them as "nested in a sense of security or support from their neighbors" (p. 142). Mutual helpers reported more close relationships than either isolates or high helpers.

Isolates had less contact with neighbors, reported fewer close relationships, and were in poorer health than those in the other two groups. Isolates reported parental admonitions not to get involved with their neighbors. Nevertheless, they did have relationships with people outside the neighborhood.

Goodman's (1984) results indicated that nonkin peers involved in mutual exchange had the closest relationships. Her high helpers appeared to receive the benefits of reaffirming their status as independent helpers. Yet, they were not close to those they helped and were viewed by the investigator as vulnerable due to their lack of neighborhood support. Goodman's (1984) isolates had the fewest close relationships with neighbors. Their poor health appeared to deter relationships based on proximity and bonds of past exchange. These results suggest that social reciprocity is associated with relationship closeness.

Jonas and Wellin (1980) carried out a study primarily focused on social reciprocity in 6 of 13 public housing projects for the elderly in one city. Two approaches were used in the collection of data. Ethnographic efforts involved informal, repeated interviews with a limited number of informants, occasional attendance at gatherings of residents, and observation in a variety of situations. Surveys were carried out using structured interviews with 414 respondents from a random sample of 37% of the residents of all six projects.

Respondents in this study were poor; most were widows. Their median age was 75. Their health was such that they could function independently when entering the housing project, although about one-third had some physical impairment by the time of the interview. As part of the standardized interview, respondents were asked whether they had received help during the two weeks preceding the interview due to illness or indisposition. If help had been received, they were also asked who had helped, how often, and the type of help given. They were asked similar questions about help they had provided to others.

Respondents reported receiving four types of aid: help with domestic chores, socioemotional support, personal care, and assistance with errands. Jonas and Wellin (1980) found that respondents reported giving help to neighbors and friends three times more frequently than receiving it. The investigators explained this discrepancy as resulting from

differing definitions by givers and receivers for certain kinds of help, particularly socioemotional. For example, one neighbor often regarded a visit to another as providing help with the purpose of cheering up, checking on, or visiting with the latter. The person visited defined the activity as normal neighborly friendliness rather than socioemotional support.

In this study (Jonas & Wellin, 1980), men provided more help episodes than women. Men helped with household repairs and transportation, often receiving payment for their services. Those who were married, however, gave help only to their spouses. Women provided fewer help episodes but helped more people. Most of those providing help were in better health although residents with poor or fair health also gave (some) help to others. Women received more help than men, and younger women received more help than older women. Those in poorer health received more help than those with fewer ailments. In general, women who were not married relied heavily on neighbors and friends for assistance.

Jonas and Wellin (1980) found several helping patterns among women in their sample. A group of more healthy and active women provided regular assistance to one or more less able residents. Although the less able residents did not return exactly the same type of assistance to their healthier exchange partners, they did engage in generalized dyadic reciprocity by providing gratitude, positive affect, homecooked food, or small gifts. Rarely was money

exchanged, and when it was, the monetary payment was clearly less important than the affective relationship. Some of these women considered helping an avocation, resembling Goodman's (1984) high helpers. Jonas and Wellin (1980) noted the emotional attachment between exchange partners and suggested that helping patterns among women depended on and reinforced relationships. In contrast, men's helping patterns were impersonal and businesslike.

Residents placed each other in three categories: friends, neighbors, and co-residents. Friends were few in number, of the same gender, and engaged in a high degree of dyadic reciprocity, interpersonal intimacy, and diverse personal involvement (Jonas & Wellin, 1980). Residents had more neighbors than friends. Neighbors were usually of both genders. Dyadic reciprocity, intimacy and personal involvement were more limited with neighbors than with friends. Co-residents comprised the remainder of the people in the project. Dyadic reciprocity, intimacy, and personal involvement were least apparent in this group.

In sum, exchanges between two women were often embedded in and extended interpersonal relations. Men were more likely to engage in exchanges in which a definite payback was expected, offered, and accepted. Negative dyadic reciprocity was noteworthy as a violation of social norms when coresidents expected more than a potential partner wanted to provide.

In an anthropological study comparing the friendship and kinship relations of the elderly shortly after hospitalization, Johnson (1983) used focused interviews with a sample of 167 elderly persons drawn from the admissions records of two acute care hospitals. The sample was lower and middle class, and all respondents were white Protestants or Catholics. Just over half were female, and almost half were married. Unlike the relatively healthy participants described in previous studies, only 19% could perform all the activities of daily living without help.

The investigator found that only one-third had active friend relationships. Those actively involved with friends were healthier and required fewer social supports than those without active friendships. They tended to have higher educations than their less active counterparts, placed higher value on independence, and had fewer contacts with their children. Respondents who had neither a spouse nor a child as a primary caregiver were much more active with friends than those with a spouse or children. In general, friends tended to step in when family members were not available to help.

Respondents with fewer friends were in poorer health and more functionally impaired. Johnson (1983) found that friendships tended to break down when poor health and physical limitations curtailed activities. She noted that when an individual needed instrumental help and was unable to reciprocate, the character of the relationship changed

from balanced to asymmetrical. The expressive component of the relationship became overshadowed by the more mundane instrumental functions. In fact, many respondents said they did not want to see their friends until they were in better health. Overall, Johnson's (1983) study supports Allan's (1986) contention that, except in rare cases, the relationships among nonkin peers break down when the norm of balanced dyadic reciprocity is not observed, particularly when instrumental exchange is imbalanced.

Dyadic reciprocity and relationship quality. Following equity theory, Roberto and Scott (1986a) examined the relationship of dyadic reciprocity to friendship distress/satisfaction among older adults who were best friends. Participants were a representative sample of 58 men and 58 women ranging in age from 65 to 91, who were living in the community. Respondents were white; most were married. Sixty percent were retired. Almost half reported good health. Data were collected during interviews in which respondents answered questions about exchanges, perceived equity, and quality of relationship with their best friend. To provide a framework for questions about balance of exchange, investigators first asked if respondents had given or received a limited number of aid exchange items: seven types of instrumental aid and six types of emotional support. Using a modified version of the Walster Global Measure of Participants' Perceptions of Inputs, Outcomes, and Equity/Inequity (Walster, Walster, & Berscheid, 1978),

respondents were asked to describe their own and their friend's contributions to the relationship on a scale from extremely low (1) to extremely high (8). Then, respondents were asked about their own and their best friend's outcomes, using the same scale. The Harris (1983) formula was used to calculate equity. In the Harris formula, equity is achieved when the relative gains (outcomes minus inputs) of one partner subtracted from the relative gains of the other partner equal 0. Austin's Total Mood Index was used to measure relationship satisfaction/distress. This index consists of four questions. Respondents were asked how: (a) content, (b) happy, (c) angry, and (d) guilty they felt about their overall relationship with their best friend (Roberto & Scott, 1986a). The sum score for anger and guilt was subtracted from the sum score for content and happy to get an overall index of relationship distress.

Roberto and Scott (1986a) found that over half of the respondents reported their exchange relationships with their best friends were equitable (i.e., balanced). Compared to respondents with equitable relationships, those with unbalanced relationships reported a greater amount of relationship distress whether the inequity pertained to instrumental help, emotional help, or the two combined. Contrary to equity theory, the overbenefitted reported more anger than the underbenefitted. A similar pattern pertained to the overbenefitted in relation to emotional support; they also reported more anger and less contentment with their

friendships. During the interviews, the overbenefitted attributed the imbalance to relatively poor health or said they would help their friend if help was needed. The underbenefitted perceived their best friends as being more alone or in poorer health than themselves. Roberto and Scott (1986a) concluded that the overbenefitted were unable to reciprocate, undermining their sense of self-worth and resulting in anger. Furthermore, the investigators commented that giving support to a friend in need can be gratifying, whereas being dependent on another may cause feelings of discomfort.

Discriminant function analyses were used to determine if social and demographic characteristics could predict aid exchange patterns. Roberto and Scott (1986a) found that women were more likely than men to describe themselves as underbenefitted. Respondents with higher educations and in poorer health were also more likely to perceive themselves as underbenefitted. Although they did not use controls in their regression analyses, the investigators suggested that gender, health, and education should be included in future studies involving reciprocity and friendship. Overall, respondents engaged in reciprocal exchanges reported closer relationships than did those in unbalanced exchanges. Respondents were reporting on relationships with best friends, however, not with nonkin peers.

Shea and her colleagues (1988) studied changes in dyadic patterns of aid exchange and relationship closeness

in old and new friendships of older adults. Their sample was drawn from a new rural retirement community. Thirty-three residents agreed to an interview within three months of moving to the community; 27 agreed to a second interview four months later. The majority (60%) were widowed. Approximately one third were in poor or fair health with other respondents reporting good or excellent health.

During the first interview, respondents placed friends and acquaintances within three concentric circles so that closest friends were in the inner circle, not so close friends were in the second circle, and acquaintances met since relocation with whom they wanted to become friends were in the third circle. Thus, sample selection focused on friendship rather than the provision of help. During the second interview, respondents received the list of Time 1 friends and acquaintances and indicated in which concentric circle the relationship was located at Time 2.

Items measuring the exchange of help were based on the four particularistic resource classes from Foa and Foa's (1974) theory: love, status, information, and services. A research team generated a small number of aid exchange items: two giving items (and two complementary receiving items) for each resource class. Respondents indicated the frequency of giving and receiving support using a scale from never (0) to more than once a day (6). Scores for giving and receiving were summed across the four domains and could range from zero, no exchange during the preceding month, to

96, daily giving and receiving of each resource during the month.

Affection was measured with an abbreviated version of Rubin's (1973) liking and love scales consisting of six items which assessed liking and ten which assessed love. A series of open-ended questions was used to gain additional understanding of the significance of the resources in the context of relationships and of the difference between old and new relationships.

Shea and associates (1988) found that old friends continued to exchange resources at about the same rate from Time 1 to Time 2. Love and status were exchanged about twice as often as information and services. Old friends were slightly better liked and considerably more loved than new friends at Time 2. Respondents exchanged status resources with new friends more frequently at Time 2 than at Time 1. Interestingly, new friends exchanged resources more often than old friends. New friends were better liked and loved at Time 2 than at Time 1.

Of importance to the present study, respondents confirmed the role of resource exchange as an element of friendship. Although they did not control for other variables such as health, Shea et al. (1988) did establish length of acquaintance as an important control variable. When speaking of old friends as compared to new, respondents were less concerned about receiving the exact benefit provided to their partners within a specified time and were

less aware of exchange patterns. Old friends considered the exchange of support over the history of the relationship and were more willing than new friends to accept periods of unbalanced exchange. Although dyadic reciprocity was more important to new friends than old, resources exchanged in both types of dyads tended to be complementary rather than identical (Shea et al., 1988).

In a study using the sample described earlier (Roberto & Scott, 1986a), Roberto and Scott (1986b) investigated respondents' relationships with their least best friends as well as their best friends. That is, after naming their closest friends, participants identified which person in the group was their best friend and which individual was their least best friend. Through a review of literature, Roberto and Scott (1986b) determined that gender was an important variable in equity studies of younger men and women (Hatfield, Greenberger, Traupmann, & Lambert, 1982; Davidson, 1984). They also noted the importance of gender in their own (Roberto & Scott, 1986a) and other studies of older adult friendships (Lowenthal & Haven, 1968; Rosow, 1967). In their second study, Roberto and Scott (1986b) used a 10-item scale developed by Gilford and Bengtson (1979) to measure relationship satisfaction. A modified version of the Walster Global Measure of Participant's Perceptions of Inputs, Outcomes, and Equity/Inequity (Walster et al., 1978) was used to measure respondents' perceptions of dyadic reciprocity in their friend

relationships, along with the Harris (1983) formula for calculating equity.

Using chi-square analyses, Roberto and Scott (1986b) found that for both best and least best friends, men were significantly more likely than women to perceive their friendships as equitable. To determine predictors of relationship satisfaction, Roberto and Scott (1986b) performed regression analyses. First they entered gender (dummy coded), the linear equity term (positive pole indicates underbenefitting and negative pole, overbenefitting), and the squared equity term (a low score indicates balanced exchange and a high score, either under- or overbenefitting). Next they entered the product terms of gender and each of the two equity terms in a block. Relationship satisfaction was the outcome variable.

The regression for best friend was not significant. In the regression for least best friend, a curvilinear relationship was found. The curvilinear term showed that balanced relationships were the most satisfying for least best friends. Although this study indicated that generalized dyadic reciprocity was not a predictor of relationship satisfaction for best friends, it was significant for least best friends. In best friend relationships, Roberto and Scott (1986b) found that overbenefitted men were most satisfied whereas women participating in balanced exchanges were most satisfied.

In partial support of Roberto and Scott's (1986b) comments, one other investigator (Goodman, 1985) found that the overbenefitted felt closer to their partners than those in balanced exchanges. Goodman (1985) examined the extent of dyadic reciprocity among older adult neighbors as well as characteristics of symmetrical and asymmetrical exchange relationships. During two-hour interviews, respondents reported on acts of providing or receiving help with up to three neighbors. The number of acts was summed for each dyad and for each respondent. Goodman (1985) developed six content categories to reflect responses: (a) giving tangibles, (b) personal and domestic upkeep, (c) social initiation, (d) providing vigilance, (e) informing, and (f) focused listening. More than half of the exchanges involved giving tangibles and domestic upkeep. Results indicated a high degree of generalized dyadic reciprocity among respondents (Goodman, 1985).

Goodman (1985) carried out a reliability check for 28 pairs of respondents who named each other in exchange relationships by looking at difference scores between what one partner claimed to give and the other partner claimed to have received. She found that respondents were only slightly inclined to overstate help given. Goodman (1985) also compared give-and-take episodes with global ratings of balance in relationships. Again, she found general consistency between the two ratings with a slight social desirability bias.

Relationship closeness was measured by one item ranging from extremely close to not close (Goodman, 1985). Chi square analysis indicated that those who identified themselves as receiving more than they gave felt closest to their exchange partners. Those engaged in reciprocal exchanges were in the middle. Respondents who gave more than they received felt least close to their partners.

Goodman (1985) assumed that, despite perceived relationship closeness with their exchange partners, overbenefitted respondents were vulnerable. That is, they were more replaceable than those who provided more help than they received. She suggested that in designing intervention strategies based on self-help among the elderly, reciprocal relationships offered the greatest promise for stable relationships to meet the needs of the elderly population.

Summary. Taken as a whole, the studies reviewed support the salience of reciprocity in nonkin peer relationships and the association of reciprocity with relationship quality. Four of the studies (Goodman, 1984; Johnson, 1983; Jonas & Wellin, 1980; Rook, 1987) examined social reciprocity and aspects of relationship quality. Rook (1987) found a curvilinear relationship between generalized social reciprocity and loneliness. Those in reciprocal relationships felt less lonely compared to over- or underbenefitted individuals. Social reciprocity was positively associated with relationship satisfaction, closeness, and comfortableness with nonkin peers as well.

Similarly, Goodman (1984) found that nonkin elderly peers engaged in social reciprocity had the closest relationships. In further support, Jonas and Wellin (1980) and Johnson (1983) also found that social reciprocity was positively associated with relationship closeness.

The remaining studies focused on dyadic reciprocity. Roberto and Scott (1986b) found a curvilinear relationship between relationship satisfaction and dyadic reciprocity for least best friends but not for best friends. Least best friends who perceived themselves to be over- or underbenefitted experienced less relationship satisfaction. In a second study, Roberto and Scott's (1986a) sample of best friends in inequitable relationships reported greater relationship distress than did those in equitable relationships. This finding pertained to the balance of instrumental aid, socioemotional aid, and total aid exchanged. Shea et al. (1988) found that older and closer friendships were characterized by generalized dyadic reciprocity. Newer and less close friends were more aware of and concerned with the balance of exchange. In contrast, Goodman (1985) found that overbenefitted respondents reported closer relationships than did those experiencing balanced dyadic reciprocity. Roberto and Scott (1986b) found a similar pattern among overbenefitted men in best friend relationships. Thus, while most investigators found that social or dyadic reciprocity was positively associated with relationship quality, Goodman (1985) and Roberto and

Scott (1986b) found that being overbenefitted (at least with some populations) was positively associated with relationship quality.

Situational Variables

Blieszner (1989a) suggests that certain situational and demographic variables provide opportunities for or constraints in developing relationships with peers. Theoretically, any status characteristic, such as education, may become important in exchange relationships (Dowd, 1980). The empirical studies pertaining to dyadic reciprocity identified gender (Jonas & Wellin, 1980; Roberto & Scott, 1986a, 1986b), health (Johnson, 1983; Jonas & Wellin, 1980; Shea et al., 1988), length of acquaintance (Shea et al., 1988), and education (Roberto & Scott, 1986a) as important.

Gender. The dyadic partners in most close relationships among nonkin peers are of the same gender (Powers & Bultena, 1976; Roberto & Scott, 1986b; Weiss & Lowenthal, 1975), perhaps because women and men differ in their relationships with others. While men tend to have a greater number of friends and acquaintances than women, women have more intimate relationships with nonkin peers than do men (Arth, 1962; Babchuk, 1978-1979; Cantor, 1979; Connidis, 1989; Peters & Kaiser, 1985; Powers & Bultena, 1976; Roberto & Scott, 1986a; Rosow, 1967; Strain & Chappell, 1982). Weiss and Lowenthal (1975) found that women emphasized reciprocity while men focused on similarity in friendship across the lifespan. Roberto and Scott

(1986b) found that, for female best friends, reciprocity was positively associated with relationship satisfaction. Among male best friends, being overbenefitted was associated with relationship quality. In the proposed study, gender will be controlled by limiting the sample to women.

Health. Health affects aid exchange as well as relationship quality. In general, it appears that those in better health try to provide care for their less able peers (Jonas & Wellin, 1980). Poor health and physical limitations can operate as stimuli in some contexts. In Rosow's (1967) study, the elderly in poor health who lived in residential retirement hotels elicited more contact with neighbors than those who were well (Rosow, 1967). In a sample of women living in age-segregated buildings (Allan & Adams, 1989), those who were ill had more local friends, more contact with friends, and more emotionally close local friends.

In community settings, however, declining health and physical incapacity adversely affect relations among nonkin peers (Allan & Adams, 1989; Johnson, 1983; Lowenthal & Boler, 1965). In a study of elderly widows, Arling (1976) found that those who were healthy were more likely to know their neighbors and have contact with friends. Physical incapacity was the best predictor of lack of social involvement. Chown (1983) argued that, for meaningful relationships to develop, there must be opportunities for social interaction. Poor health may curtail interaction and

adversely affect relationship quality. Illness and chronic conditions associated with old age may result not only in less physical mobility but also in the depletion of energy. In the latter case, the chores of living may become so taxing that the older person is unwilling or too tired to interact with peers. Other scholars agree with Chown (1983) that impaired health may lead to lowered relationship quality and lower reciprocity (Allan, 1986; Rook, 1987; Stoller, 1985).

An anthropological study of old age friendships following hospitalization lends further support to this argument. Johnson (1983) concluded that because of the voluntary nature of nonkin relationships, they are likely to break down when one partner becomes ill. Given the influence of physical incapacity on exchange and relationship quality, health will be considered as a control variable in the proposed study.

Length of acquaintance. In a study of older single adults residing in federally-assisted apartment complexes, Stephens and Bernstein (1984) found that the value of relationships with nonfamily peers was positively associated with length of acquaintance. As noted earlier, Shea et al. (1988) reported that old friends and new differed in their aid exchange patterns and relationship quality. Old friends engaged in generalized dyadic reciprocity while new friends focused on the balance of exchange. Old friends had closer relationships than did new friends. Weiss and Lowenthal's

(1975) respondents identified length of acquaintance as more important than proximity for both real and ideal friendships. Adams's (1985-1986) findings support the fact that length of acquaintance overshadows proximity. Adams's (1985-1986) investigation of emotional closeness and physical distance between friends appeared to indicate a positive association. The farther away a partner lived from the respondent, the more likely the partners were to be emotionally close. When Adams (1985-1986) reexamined her data, she found that duration of the relationship was a more important predictor of closeness than proximity, and, in fact, explained the relationship between physical distance and closeness: Old friends had moved away. Adams's (1985-1986) qualitative data further enhance an understanding of the connection between length of acquaintance and relationship quality. Some respondents felt that it takes time for a relationship to be established. For instance, one respondent said that while an old friend is tried and true, one should be more cautious with recent acquaintances, checking their background, work, and family. Other respondents felt that, with time, peers come to know each other's quirks and idiosyncrasies and confide in one another. Further, old friends were viewed as more caring and dependable than new friends. The vast majority of respondents found that making new friends was easy but felt that older friends were special (i.e., better) in a variety of ways. Duration of friendship was positively correlated

with emotional closeness. Adams (1985-1986) concluded that long-term friends were apt to be the closest ones regardless of how far away they lived. Length of acquaintance, then, will also be considered as a control in this study.

Education. In a discriminant analysis, Roberto and Scott (1986a) determined that education discriminated between those who felt overbenefitted and underbenefitted. Respondents who perceived themselves to be underbenefitted were more highly educated. It appears that education functioned as a status variable in this study so that more highly educated respondents (i.e., those with more resources) were providing more help than they were receiving. Education is also a potential control variable in the present study.

Limitations in the Literature

There are a number of limitations in the literature on aid exchange patterns and relationship quality among elderly nonkin peers. Despite concern about the effect of imbalanced exchanges on relationship quality (Allan, 1986; Chown, 1983; Crohan & Antonucci, 1989), relatively few studies have directly addressed this issue. In addition, the definition and measurement of both aid exchange and relationship quality have varied from study to study. The conceptualization of reciprocity and relationship quality have varied as well. Few studies have controlled for situational variables and status characteristics associated

with exchange patterns and relationship quality among nonkin peers.

Measurement of aid exchange. With regard to aid exchange, some investigators (Roberto & Scott, 1986a, 1986b) asked respondents to define and make global judgments about their own and their partners' contributions and outcomes. Others (Goodman, 1984; Goodman, 1985; Jonas & Wellin, 1980) also left the definition of aid to respondents by asking about aid exchange in general rather than inquiring about specific help items. While, in the absence of existing scales, such a technique can be useful, it leads to difficulties in comparing results across studies. After collecting data, Jonas and Wellin (1980) classified responses into four categories (domestic chores, socioemotional support, personal care, and assistance with errands), while Goodman (1985) identified six content areas (giving tangibles, personal and domestic upkeep, social initiation, providing vigilance, informing, and focused listening). Without reminders of specific types of aid that may have been provided or received, respondents may forget certain help acts, or they may not interpret a given act as aid. Blieszner (1989a) found that a number of respondents considered many aspects of socioemotional support to be so trivial that they discounted and failed to report them.

Studies which did pose specific questions about aid exchange relied on relatively few items. For example, Ingersoll-Dayton and Antonucci (1988) asked about two types

of aid: actual confiding behavior and anticipated help when ill. Rook (1987) asked about six forms of aid, two for each of three categories (companionship, emotional support, and instrumental aid). Johnson (1983) investigated five types of instrumental help (transportation, housekeeping, shopping, meal preparation, and maintenance of personal appearance) and two types of emotional support (combatting depression and maintaining high morale). Shea et al. (1988) inquired about eight forms of aid, two for each of four categories (love, status, information, and services). When investigators ask few specific questions about broad categories of aid, much of the actual help given and received may go unrecorded. Shea and colleagues (1988), noting discrepancies between unsolicited comments and their quantitative measures, suggested the need for a more sensitive instrument covering a range of exchange activities appropriate to older friends.

Yet another problem with defining and measuring aid exchange is the varying time frame used by researchers. In some studies (Roberto & Scott, 1986a, 1986b; Rook, 1987), no time frame is given. In others, the time frame for reporting the exchange of help ranged from two weeks (Jonas & Wellin, 1980), to the previous month (Goodman, 1985; Shea et al., 1988), to the previous six months (Goodman, 1984), to the previous year (Cantor, 1979). Studies which use a short time frame run the risk of inadequate sampling of events, while those that use a long time frame risk memory

distortions and/or errors in mental arithmetic (Huston & Robins, 1982).

Conceptualization of reciprocity. The conceptualization of reciprocity also varied considerably from one study to another both in relation to the unit of analysis and in the way giving and receiving aid were compared. Some investigators looked at social reciprocity while others investigated dyadic reciprocity. Some studied balanced reciprocity while others looked at generalized reciprocity over time. Such variation creates difficulty in comparing findings across studies and complicates the interpretation of results.

An equally important limitation is the failure, in most studies, to measure reciprocity as a continuous variable and to examine the degree of exchange imbalance. For example, in Stoller's (1985) classification system, exchanges in which a respondent provided any one or more of nine types of help and received any one or more of twelve types of help were classified as reciprocal. Thus, it appears that an individual providing help in one area and receiving help in eleven would be placed in the reciprocal exchange category. A second person, providing no help and receiving help in one area would be classified as overbenefitted. A third person, providing no help and receiving all twelve types of help would also be classified as overbenefitted. It could be argued that all three were overbenefitted to differing degrees. Only in recent studies (e.g, Rook, 1987; Roberto &

Scott, 1986b) have investigators treated balance of exchange as a continuous variable. These studies, however, used respondent's global judgments about their own and their partner's inputs and outcomes to derive this continuous variable. Researchers need to include a wide range of help acts and then consider the impact of the magnitude of any imbalance on relationship quality.

Nonkin peer relationships. There are notable limitations in the conceptualizations of nonkin peers. Most studies have been limited to friends or some subgroup of best friends, often leaving responsibility for interpretation of these terms to respondents. Thus, little is known about exchange relations among the full range of nonkin peers. Some researchers (e.g., Cantor, 1979) have investigated both friends and neighbors but found such terms overlapping. Adams (1989) concluded that measuring the degree of friendship or relationship closeness provides a reasonable alternative to such conceptual and measurement problems.

Control variables. Although investigators have examined the association of some situational and demographic variables with aid exchange and relationship quality, that effort has not been systematic. Only one, for example, (Shea et al., 1988) examined length of acquaintance. Although they indicated that health, gender, and education discriminated aid exchange patterns in their first study, Roberto and Scott (1986a, 1986b) included only gender in

their second investigation. Given the importance of such variables as health (Johnson, 1983; Jonas & Wellins, 1980) and gender (Adams, 1987; Allan & Adams, 1989) in studying reciprocity and relationship quality, it is important to include them as controls.

Research Questions

The purpose of the present study is to examine the association of perceived reciprocity and relationship quality among older nonkin peer dyads, controlling for the influence of situational and demographic variables. There are three research questions reflecting the different aid exchange patterns. First, is the degree of total perceived reciprocity associated with relationship quality among older nonkin peers in a linear or a curvilinear way? As suggested by McCulloch (1990), a significant positive association between aid exchange and relationship quality would show that those who gave more help than they received had closer relationships with their exchange partners than those who received more than they provided. This finding would support the idea that giving more help than is received is rewarding to older peers. A significant negative relationship would indicate that those who received more aid than they gave enjoyed closer relationships. The latter finding would indicate that receiving help is more rewarding than providing help.

A curvilinear association may also be found, as indicated by the social exchange concept that benefits are

maximized and costs are minimized when a relationship is reciprocal, balanced, and interdependent (Thibaut & Kelley, 1959). A significant curvilinear relationship would indicate that balanced exchanges are most rewarding for older nonkin peers, while unbalanced exchanges are costly in terms of relationship quality.

A second research question will determine whether the degree of perceived reciprocity in instrumental help is associated with relationship quality in a linear or a curvilinear way. A significant positive linear association between perceived reciprocity of instrumental help would indicate that those who gave more help than they received had closer relationships with their exchange partners. A significant negative relationship would indicate the opposite. A significant curvilinear relationship would indicate that balanced exchanges of instrumental help are associated with relationship quality as indicated by Allan (1986) and Johnson (1983).

Similarly, the third research question would assess whether the degree of perceived reciprocity in socioemotional help is associated with relationship quality in a linear or curvilinear way. Because the exchange of socioemotional help is less constrained by proximity and physical limitation than instrumental help, it is important to assess the association of each with relationship quality.

Hypotheses. Based on social exchange theory and empirical evidence, it is hypothesized that the degree of

total perceived reciprocity will have a curvilinear association with relationship quality. Further, it is hypothesized that the degree of perceived instrumental reciprocity and the degree of perceived socioemotional reciprocity also will have a curvilinear association with relationship quality.

Contributions to the Literature

The proposed study is expected to make several contributions to the literature. It clearly will investigate dyadic reciprocity while much of the previous work has focused on social reciprocity. The aid exchange patterns within a specific dyad will be used to predict the quality of the dyadic relationship. Unlike many previous studies, this research will investigate a range of nonkin peer relationships. Rather than look at a subgroup of friends or co-residents, the proposed study will sample a range of nonkin peers and measure the quality of specified dyadic relationships. The measurement of the relationship will be further strengthened by the use of several items as opposed to relying on a single-item indicator.

Because aid exchange will be measured and treated as a continuous variable, the degree of perceived reciprocity will be used to predict relationship quality. The type of association between the independent and dependent variables, whether linear or curvilinear, will be determined. Many more items will be used in the measurement of help given and received than in previous studies, hopefully affording a

more accurate picture of aid exchange. Descriptive data will provide a clearer understanding of perceptions of the types and amount of help exchanged by older nonkin peers. This study will also indicate what is costly and rewarding in elderly nonkin peer relationships. By analyzing perceived instrumental and socioemotional reciprocity separately, the association of each of these categories of aid with relationship quality can be investigated.

Control variables may be used in data analyses, also an addition to previous work. Two of these, education and length of acquaintance, have rarely been included in previous studies.

Taken as a whole, such improvements will afford a clearer understanding of the association of the degree of perceived reciprocity with relationship quality among elderly female nonkin peers. This information will not only add clarity to the literature but also be useful in addressing the needs of the elderly in the community. It appears that family members may have increasing difficulties in providing help for their elderly members due to smaller family size, mobility, dual-earner families, and other social trends. It also appears that interaction with nonkin peers has a more positive effect on the well-being of the elderly than does interaction with kin. Further, there is evidence that nonkin peers provide more help to the elderly than was previously recognized, especially when family members are unavailable. Such help may allow elderly

individuals to live independently in the community, a life style generally valued in our society.

Given this emerging picture of the importance of nonkin peers to the well-being and independence of elderly individuals, it becomes imperative to clarify the relationship between perceived reciprocity and relationship quality. If, for example, perceived imbalances in instrumental aid are negatively associated with relationship quality while perceived imbalances in socioemotional help have little association with relationship quality, then, practitioners and policymakers might plan alternative ways to meet instrumental needs of older individuals. Without such knowledge, practitioners might encourage increased provision of instrumental help by neighbors and friends, unaware of the potentially negative consequences for the individual and the relationship. If the degree of perceived reciprocity in socioemotional exchanges is important in predicting relationship quality, then programs which emphasize social skills and interaction might be in order. If the degree of perceived reciprocity has no effect on relationship quality, then perhaps concerns about overburdening nonkin aid exchange partners have been exaggerated. The proposed research is expected to provide data that will help practitioners and individuals concerned with social policy make informed choices about programs to assist the frail elderly.

CHAPTER 3: METHOD

Sample

Data for the study were taken from a larger Agriculture Experiment Station research project on Perceptions of Elder Care, Preferences for Care, and Relationship Quality (Martin & Gunn, 1991). Two waves of data were collected. In the first wave, information on help needed by and provided to older persons, as well as preferences for help provision, was collected from individuals through mailed questionnaires. In the second wave, in-depth interviews were conducted with a subsample of respondents and their nonkin aid exchange partners. Data were collected on perceptions of help provided to and received from each pair member, relationship quality, and other information not used in the present study.

Initial Survey

At the outset, all of the Nevada chapters of the American Association of Retired Persons (AARP) and the Nevada State Retired Teachers Association (NSRTA) were invited to participate in a study of Caring Relationships through a letter distributed by the State AARP president. This procedure was followed because chapter information as well as names and addresses of AARP members are considered confidential by the organization and were not available to the investigators.

The letter of invitation (Appendix A) briefly explained the survey and offered to reimburse participating chapters

for expenses plus \$1.00 for each returned questionnaire. The letter also requested that a member of the chapter, identified as the Chapter Representative (CR), volunteer to take charge of mailing the questionnaires and communicating with the investigators.

Sixteen of 19 chapters (14 AARP, 2 NSRTA) agreed to participate. CRs received written instructions describing the procedures (Appendix B) followed by a telephone call to answer questions and make certain the instructions were clear. CRs then mailed questionnaires to their respective chapter members. A letter of explanation and a return envelope were included with each questionnaire. CRs chose either to have the questionnaires mailed back to them or mailed directly to the investigators. One NSRTA chapter used the latter method. A total of 2,179 questionnaires were mailed by CRs. Of these, 35 were undeliverable. We received 1,501 questionnaires out of the 2,144 which reached potential respondents for a response rate of 70%. Of the 1,501 questionnaires returned, 20 were unusable due to extensive missing data, leaving a total of 1,481 usable questionnaires (1174 AARP, 307 NSRTA).

Interviews

A brief description of the interviews was included in the questionnaires, and all respondents were invited to participate. Three hundred four participants indicated their willingness to do so by writing their names, addresses, and telephone numbers in the space provided on

the questionnaire. Of these, 147 were providing care to or receiving care from any of a number of individuals (e.g., spouse, daughter, neighbor). One hundred of the respondents who volunteered for an interview had indicated on the survey that they were providing help to or receiving help from a friend, neighbor, or other nonkin peer. The survey focused on activities of daily living (e.g., bathing) and the instrumental activities of daily living (e.g., housework), but used the term "help." (Older individuals with whom we consulted during construction and piloting of the instrument preferred the term help to care. An example of a letter of explanation, which may or may not have been used by CR's, did refer to caregiving and care receiving.) Trained research assistants telephoned these 100 individuals to verify their eligibility for the project. Criteria for inclusion in the interview were that the individual (and that respondent's exchange partner) was 60 years of age or older and was providing help to, receiving help from, or exchanging help with a nonkin peer who was also willing to be interviewed. Further, both partners had to be in sufficiently good health to take part in an interview of 60 minutes or more.

During the first telephone contact with members of AARP or NSRTA who had volunteered for interviews, a written protocol was followed. Respondents were told that we wished to interview both them and the nonkin peers who had been identified by name in the survey questionnaire. After

ascertaining their eligibility, we offered several procedural options. We indicated our willingness to call the friend or neighbor directly, explain the study, and request participation but asked if the respondent would prefer to contact the nonkin peer. Those who preferred the latter option could choose either to call us back or to have us call them at an appointed time to check on the willingness and availability of the nonkin peer. Trained research assistants began contacting respondents one month after all questionnaires were received. The time period between receipt of questionnaire and initial telephone contact varied from one to six months depending on the ease of reaching respondents and when respondents had received the questionnaire from their respective CR.

Once scheduled, interviews were conducted primarily in respondents' homes although a few were carried out in Senior Centers and community rooms in mobile home parks. Each partner was interviewed separately to insure confidentiality. In addition, interviewers made every effort to conduct the interviews in a private room without distractions.

From the original 100 individuals who volunteered, 38 pairs of usable interviews were obtained ($n = 76$). We were unable to reach 9 of the original volunteers. In 5 cases, the respondents had no telephones or their telephones had been disconnected. In 4 cases, no one answered the

telephone despite repeated calls throughout the 6 month initial contact period.

Of the 91 volunteers whom we were able to reach, 38 or their partners were ineligible (primarily due to death or illness) and 12 were no longer willing to be interviewed. A partner of one of the 12 was a willing original volunteer. That refusal thereby eliminated 13 of those who volunteered for interviews. Two more pairs were eliminated because of concerns over the validity of the data in partners' interviews. A detailed description of reasons for ineligibility, refusals, and unusable interviews appears in Appendix C.

Data from usable interviews indicated that 9 respondents were male and 67 were female. Due to the small number of males, pairs containing men (7 pairs) were excluded from the proposed study. Thus, the sample contained 31 pairs of female exchange partners ($n = 62$).

Procedures

Before the interviews were conducted, a pilot study was carried out to correct procedural difficulties or problems with the interview schedule. The refined instrument included a combination of closed-ended and open-ended questions and paper-and-pencil measures. Whenever a response scale was used during the interview, a copy in large, bold print was put on the table or held up to assist the respondent. Any time respondents were given a paper-and-pencil measure, they could choose to fill it out

themselves or have the interviewer read aloud and fill out the form.

During the second wave, all respondents were interviewed by the co-investigators or trained research assistants. Interviews lasted from 20 minutes to 2 1/2 hours. The average interview took just under an hour and a half ($M = 88$ minutes). First, the project was briefly explained and informed consent was obtained (Appendix D) in accordance with University of Nevada, Reno Human Subjects protocol. Second, each respondent was given five dollars as a token of appreciation for participation, and a signed receipt was obtained. Then the interviewer reiterated the time needed for the interview, asked to move (if necessary) to a location where the interview would not be interrupted, and asked to sit at a table, if possible.

For "Partner A," the AARP or NSRTA member who had initially volunteered for the study, the interviewer began by reviewing some of the demographic data obtained from the mailed questionnaire, such as location and length of residence. Then, the interviewer identified "Partner B" by name "as someone who helps you, whom you help, or with whom you exchange help" and indicated that we would like to know more about Partner B. A short series of questions about gender, length of acquaintance, and how the partners met served as an introduction to the collection of in-depth information about the exchange of aid.

For "Partner B," the exchange partner, the interview began in a similar way, except there were no previous data. Partner B may or may not have been a member of AARP although the majority were members. Fifty-seven of the respondents belonged to AARP.

Upon completion, interviewers thanked respondents for their contributions. Immediately after the interview, investigators rated the usability of the information. Interviewers indicated whether the respondent was alone, someone was present but did not help, or someone helped fill out the questionnaire. They also indicated the degree of cooperation throughout the interview. Finally, investigators rated the overall quality of the interview and indicated the nature of the problem if quality was questionable.

Measures and Operational Definitions

Aid Exchange

Two sections of the interview tapped perceptions of "help given" by the respondent to the partner and, then, "help received" from the partner by the respondent. The "help given" and "help received" sections (Appendixes E and F respectively) were subdivided into four categories of aid (Jonas & Wellin, 1980): household chores (11 items), errands and household business which included filling out forms and handling money (10 items), personal and health care (10 items), and social/emotional support (9 items). Two-thirds of the items were adapted from Walker and Pratt

(1991). The remaining third was derived from a review of the literature. A relatively large number of items was used to tap a range of exchange activities as recommended by Shea et al. (1988).

For each item in the "help given section," respondents were asked if they had given this type of non-paid help to their partner over the last year. For example, respondents were asked if they had provided food to their exchange partner during the previous year. If so, they were asked how often they had done so (reverse coded so that 1 = rarely to 5 = daily). This response format was chosen for several reasons. It is important to inquire about the exchange of aid over a year's time frame because some help items are given only once or twice a year. Examples of such aid are a remembrance on one's birthday or keeping an eye on someone's home during an annual vacation. A shorter time frame would fail to capture such aid. To help eliminate memory distortion and errors in mental arithmetic (Huston & Robins, 1982), we chose a response format which helped respondents focus on smaller time segments within the year-long time frame. That is, respondents were asked whether they gave (or received) a particular help item rarely (such as once a year), several times a year (but not as much as once a month), at least once a month (but not as much as once a week), at least once a week (but not as much as every day), or daily. Respondents typically talked this through with the interviewer, so that the interviewer was able to verify

the accuracy of the response. For example, a respondent might say, "Well, I keep an eye on things when my partner is on vacation." The interviewer could then ask, "How many times during the last year did your partner go on vacation?" A respondent might name actual months of the year, or holidays, or even consult a calendar to answer this question. The interviewer could then verify the correct score by saying, "It sounds like you kept an eye on things for your partner several times a year, once at Thanksgiving and once during the summer, so that would be a '2.' Is that right?" Parallel questions and the same interview approach were used to inquire about help received from the partner. At the end of each of the four categories, respondents were asked if there were any other types of help given or received in the respective category until all additional items were recorded.

Help given categories. For this study, an instrumental help given score was computed by adding help given items listed under household chores, errands/household business, and personal care. Instrumental help given scores may range from 0 (no help given) to 155 (all 31 items x 5, help given daily). This score captures the total amount of perceived instrumental help given by including both the number of items for which help was provided and the frequency with which each was provided. For example, if an individual shopped for a partner once a week (score = 3), prepared meals once a month (score = 2), and helped a partner take

medicine daily (score = 5), the respondent would receive an instrumental help given score of 10. Other help given and received, as explained below, was calculated in a similar manner. The sum of items listed under social/ emotional support constituted a socioemotional help given score. Such scores may range from 0 to 45 (9 items x 5, help given daily). Total help given was calculated by adding the scores for instrumental and socioemotional aid, representing all help episodes given by the respondent to the exchange partner. Scores on the total help given variable may range from 0 to 200.

Help received categories. Similarly, the sum of help received items listed under household chores, errands/ household business, and personal care served as an instrumental help received score. This variable was measured in the same way as help given to yield an instrumental help received score (0 to 155), a socioemotional support received score (0 to 45), and a total help received score (0 to 200).

Dyadic reciprocity. The degree of perceived reciprocity was operationally defined as a difference score, subtracting help received from help given. The degree of perceived reciprocity was determined by difference scores for instrumental help and socioemotional help, considered separately as well as both categories together. The degree of perceived reciprocity of instrumental help was defined as the perceived amount of instrumental help provided to the

exchange partner in the year preceding the interview minus the perceived amount of instrumental help received from the exchange partner in the preceding year. Scores on this variable could range from -155 to 155. A score close to 0 represented a perceived balanced exchange of instrumental help between the respondent and that person's exchange partner. A positive score indicated that the respondent provided more help than the respondent received. A negative score indicated that the respondent received more than the respondent provided.

The perceived degree of reciprocity of socioemotional help was defined as the perceived amount of socioemotional help provided to the exchange partner in the year preceding the interview minus the perceived amount of socioemotional help received from the exchange partner in that same year. Scores on this variable could range from -45 to 45 and are interpreted in the same manner as those described for instrumental help. The difference scores for instrumental and socioemotional help were converted to z-scores prior to data analysis.

The degree of perceived reciprocity overall was defined as the z-score representing perceived reciprocity for instrumental help plus the z-score for perceived reciprocity for socioemotional help. Z-scores were used because of the larger numbers of instrumental as compared to socioemotional help items in the interview. Scores close to 0 represented perceived reciprocity over the preceding year.

Relationship Quality

Relationship quality was operationally defined as the respondent's score on a paper-and-pencil measure (Appendix G) adapted for dyadic nonkin peer relationships. The Positive Affect Index (Bengtson & Schrader, 1982) included five items that measured the degree of relationship quality and were relevant to nonkin peers: perceived closeness (Goodman, 1985; Reisman, 1981; Rook, 1987; Ward et al., 1985), communication (Hess, 1972; Paine, 1969; Peters & Kaiser, 1985; Ward et al., 1985), similarity of views (Crohan & Antonucci, 1989; Hess, 1972; Weiss & Lowenthal, 1975), doing things together (Chown, 1983; Weiss & Lowenthal, 1975); and getting along together (Allan, 1986; Hess, 1972; Rook, 1989; Weiss & Lowenthal, 1975). This index has been used previously to assess positive affect among family members. Wording was adapted to reflect nonkin peer relationships and to focus attention on the exchange partner of interest. For example, the original question on closeness read, "Taking everything into consideration, how **close** do you feel is the relationship between you and this child?" (Bengtson & Schrader, 1982, p. 154). The revised question read, "Right at the present, taking everything into consideration, how close do you feel is the relationship between you and _____?" The name of the exchange partner was provided for each of the five questions. Before giving this measure to respondents, the interviewer acknowledged that sometimes the people we give help to or receive help

from are close friends and other times they are neighbors or people we happen to know. Then respondents were asked to fill out this paper-and-pencil measure pertaining to their relationship with their exchange partner. Scores on each question could range from one to seven.

Cronbach's alpha measures of reliability for the five items were calculated. Items that constituted the group with an acceptable alpha level were retained in further analyses, while those that lowered the alpha level were eliminated. If all items had been retained, scores could range from 5 to 35 with higher scores indicating more positive relationship quality. In his discussion of reliability, Nunnally (1970) pointed out that no definite rule can be stated as to how high the reliability should be for an instrument. In establishing acceptable alpha levels, investigators must consider the way an instrument is used. If, for example, an instrument is used to determine admission to a hospital, then reliability must be very high (Nunnally, 1970). For this study, a reliability coefficient of .70 was acceptable.

Situational Variables

Three situational/demographic variables were considered as controls in the proposed study: health, length of acquaintance, and education.

Health. Health was operationally defined as the respondent's score on an item measuring the respondents' perception of their health. Respondents were asked,

"Overall, how would you rate your current health?" (1 = excellent to 4 = poor). These items were reverse scored so that the higher the score, the better the health.

Length of acquaintance. Length of acquaintance was operationally defined as the score on a single item assessing how long the respondents and their exchange partners had known one another. Respondents in this study were asked how long they had known their exchange partners. The number of months of acquaintance was recorded. For analysis purposes, number of months was divided by 12 to obtain years of acquaintance.

Education. This last control variable was operationally defined as the score on a single question asking how many years of education the respondent had completed. Actual years of education were recorded, ranging from no education (0) to post graduate work (19).

Data Analysis

Frequencies, correlations, chi-squares, t-tests, and multiple regression analyses were calculated through the SPSS program installed on a mainframe computer. Where appropriate, the .05 level of probability was used to determine significance.

Demographic Characteristics of Sample

Age, education, race, and marital status. Those who participated in the survey (male and female) are compared with interview respondents in Table 1. The interview sample of 62 older females ranged in age from 60 to 94 with a

Table 1

Comparison of Survey and Interview Samples on Age,
Education, Race, and Marital Status

Characteristic	Survey	Interview
Age		
Range	60 - 99	60 - 94
Median	72	76
Mean	72	75
Education		
Range	1 - 19	7 - 19
Median	13.52	13.50
Mean	14.09	13.79
Race (%)		
Hispanic	1.0	0.0
African American	3.0	10.0
Asian/Pacific Islander	.3	0.0
Native American	.3	0.0
White	91.2	90.0
Marital Status (%)		
Married	53.1	25.8
Widowed	31.6	59.7
Divorce	9.1	11.3
Never married	3.4	3.2

median of 76 years. They ranged in educational attainment from 7 years to postgraduate work. The distribution was bimodal with 10 participants having completed 12 years of education and 10 having completed graduate work. The median educational level was 13.5 years ($\underline{M} = 13.79$).

Ten percent of interview respondents were African Americans, and the remaining 90% were white. Most had been married at some time in their lives. At the time of the interviews, over half were widowed and approximately 25% were married. Just over 11% were divorced. Number of living children ranged from 0 to 9 with a mean of 1.86 and a standard deviation of 1.68. About 37% of the respondents had a child living within 5 miles; 13% had a child living between 6 and 60 miles; for 27%, the nearest child lived over 60 miles away. This information was not available for the survey sample.

Compared to the sample collected in the original survey, interview participants had attained similar educational levels but were older ($\underline{t} = -3.05, p < .01$) and far more likely to be widowed ($X^2 = 23.06, p < .001$). There were no significant differences in racial composition of the two samples. Ten interview respondents belonged to the NSRTA (16%); 47 were members of AARP (76%); and 5 respondents did not belong to either organization. In the original survey, 21% of respondents were members of NSRTA while 79% were AARP members.

Health. Data regarding health are presented in Table 2. Almost 39% of the interview respondents reported fair or poor health. Almost half reported that their health had declined over the last 5 years. Close to 60% indicated that health problems had restricted their activity level over the previous year.

Clearly survey respondents enjoyed better health than did interview respondents. The mean rating on current health by survey respondents was 2.9 ($SD = .80$), while the mean for interview respondents was 2.6 ($SD = .93$) ($t = 2.96$, $p < .01$). In addition, those interviewed reported more changes in their health status, for better or for worse, than did survey respondents ($X^2 = 23.09$, $p < .0001$). Given that interview volunteers were receiving or providing care to one another and that they were older than survey respondents, such differences in health were expected.

Residence and living arrangements. Information about residence and living arrangements is presented in Table 3. Just over half of those interviewed had lived in the same location for over 20 years. About 40% had lived in their present locations 10 years or less. The great majority of respondents remained in their residences all year.

As would be expected from the low percentages of married respondents, most lived alone (61.3%). Of those living with someone else, the highest percentage (22.6%) lived with a spouse. A comparison of the two data sets indicates that there were no significant differences in

Table 2

Comparison of Survey and Interview Samples on Current
Health, Changes in Health, and Health Problems

Characteristic	Survey (%)	Interview (%)
Current Health		
Excellent	21.7	14.5
Good	8.1	46.8
Fair	21.4	22.6
Poor	4.7	16.1
Health Change Over Last 5 Years		
Changed for better	7.7	17.7
Stayed same	62.5	35.5
Changed for worse	27.1	46.8
Health Problems		
Prevent Activity		
Not at all	43.0	40.3
A little	37.5	33.9
A great deal	15.5	25.8

Table 3

Comparison of Survey and Interview Samples on Residence and Living Arrangements

Arrangement	Survey (%)	Interview (%)
Length of Residence		
< 1 year	1.6	1.6
1 - 5 years	14.7	22.6
6 - 10 years	12.6	16.1
11 - 15 years	10.5	6.5
16 - 20 years	6.5	1.6
>20 years	56.5	51.6
Months Live in Area		
10 months	3.0	1.6
11 months	5.2	3.2
12 months	84.4	95.2
Living Status		
Alone	36.9	61.3
With someone	61.0	38.7
With spouse	52.3	22.6
With minor child	1.1	0.0
With adult child	5.9	4.8
With mother	.7	1.6
With father	.1	0.0
With other relative	4.3	1.6

length of residence or amount of time spent at residence throughout the year. Just over 61% of interview participants lived alone; only 37% of those surveyed lived alone ($X^2 = 13.98$, $p < .001$). Survey respondents were more likely to live with a spouse than were interview respondents ($X^2 = 22.55$, $p < .0001$).

Employment status and income. Data on employment status, income, and income adequacy are given in Table 4. Most of the interview respondents were not employed outside the home, although a small percentage were employed full-time or part-time.

Reported family incomes ranged from under \$5,000 to \$40,000 and above. The income category identified by the largest percentage of respondents was from \$10,000 to \$19,999 annually, followed by \$9,999 and below. It is important to note the relatively high percentage of respondents who chose not to answer this question (17.7%) as well as the percentage (11.3%) who did not know their annual income. Almost 70% said their incomes were just adequate and close to 20% reported that their incomes were inadequate to meet their needs. Only 11% of those interviewed reported more than adequate incomes.

Compared to survey respondents, interview participants fell into lower income brackets ($X^2 = 69.34$, $p < .0001$) and reported less adequate incomes ($X^2 = 22.46$, $p < .0001$). In addition, all interview respondents were female compared to 67.7% of survey respondents.

Table 4

Comparison of Survey and Interview Samples on Employment
Status, Income, and Income Adequacy

Characteristic	Survey (%)	Interview (%)
Employment Status		
Full-time	4.8	1.6
Part-time	7.2	6.5
Not employed	84.1	91.9
Income		
0 - 9,999	13.0	25.8
10 - 19,999	22.8	30.6
20 - 29,999	17.9	6.4
30 - 39,999	10.4	4.8
40 +	11.0	3.2
Don't know	3.0	11.3
Choose not to answer	21.9	17.7
Income Adequacy		
More than adequate	36.7	11.3
Just adequate	48.9	69.4
Not adequate	8.3	19.4

Comparisons with Other Populations

General population, survey, and interview participants.

Those who participated in the survey and interviews were also compared to the general population over age 55 (Bureau of the Census, 1991) with regard to education and income and to the general population of women over age 55 in relation to marital status (Table 5). The median education level for survey and interview participants was about a year higher than that for the general population. While survey respondents had somewhat higher incomes, interview participants had lower incomes than the general population. This may be accounted for by gender. That is, the interview sample was composed of women while the other samples contained both men and women. In terms of marital status, survey respondents were similar to the general population of women. Again, the somewhat smaller numbers of widowed respondents in the survey may be accounted for by gender. There is a higher percentage of widows and a lower percentage of married respondents in the interview sample compared to the general population of women over 55.

Overall, those interviewed were older females, more likely to be widowed, in poorer health, more likely to live alone, and to have lower incomes than those who participated in the mailed surveys. Compared to the general population, those interviewed were also more likely to be widowed and to have lower incomes. Such demographic data describe a sample

Table 5

Comparison of General Population, Survey, and Interview
Samples on Education, Income, and Marital Status

Characteristic	General ^a	Survey	Interview
Education (Median)	12.26 ^b	13.38 ^b	13.50 ^c
Income (Median)	\$21,539 ^b	\$25,000- \$29,999 ^b	\$15,000 \$19,999 ^c
Marital Status (%)			
Single	4.79 ^c	3.40 ^b	3.20 ^c
Married	52.23 ^c	53.10 ^b	25.80 ^c
Widowed	36.50 ^c	31.60 ^b	59.70 ^c
Divorced	6.48 ^c	9.10 ^b	11.30 ^c

^aData from Bureau of the Census (1991)

^bData for both men and women

^cData for women only

with limited resources for whom aid exchange is likely to be important.

Analysis strategy. A series of three polynomial regression equations were used to examine the hypotheses identified earlier. In this study, the respective independent variable for the degree of perceived instrumental, socioemotional, and total reciprocity was raised to the second power. Polynomial regression equations are done hierarchically (Pedhazur, 1982). The order of the equation indicates the number of bends in the regression line. Thus, a first degree polynomial (i.e., $Y = a + bX$) describes a straight line. A second-degree polynomial ($Y = a + b_1X + b_2X^2$) describes the regression curve with one bend, also called a quadratic equation. The analyses were carried out in a series of steps in which the control variables (if included) were entered first, followed by the first-degree polynomial (linear term) and by the second degree polynomial (curvilinear term). In this manner the increment in the proportion of variance accounted for at each stage can be obtained (Pedhazur, 1982).

The first equation tested the hypothesis that the degree of total perceived reciprocity will have a curvilinear rather than a linear association with relationship quality. To address this hypothesis, the variables were entered into a regression equation in the following order: the control variables entered together (health, length of acquaintance, and education as determined

by correlations); the difference score representing the degree of total perceived reciprocity (linear term); and that same dyadic reciprocity score squared (curvilinear term). The dependent variable was relationship quality. The equation is as follows:

$$RQ = a + b_1\text{Controls} + b_2\text{Totl} + b_3\text{Totl}^2$$

where RQ = relationship quality, a = the intercept, b equals the slope associated with each of the independent variables, Totl = the degree of total perceived reciprocity (linear term) and Totl² = the reciprocity score squared (curvilinear term).

The second equation tested the hypothesis that the degree of perceived reciprocity of instrumental help will have a curvilinear rather than a linear association with relationship quality. The third polynomial regression tested the hypothesis that the degree of perceived reciprocity of socioemotional help would have a curvilinear rather than a linear association with relationship quality. These latter equations paralleled the one outlined earlier, except that the appropriate reciprocity scores were entered into the analyses.

Assumptions. For multiple regression to produce the best unbiased estimates, it must meet the assumptions for bivariate regression, plus an additional assumption: the absence of perfect multicollinearity (Lewis-Beck, 1980). Perfect multicollinearity occurs when one of the independent variables is perfectly correlated with another independent

variable or linear combinations of other independent variables (Lewis-Beck, 1980). Several techniques can be used to detect possible multicollinearity. Bivariate correlations were examined for coefficients of .8 or larger (Lewis-Beck, 1980). To detect correlations of one independent variable with linear combinations of other independent variables, each independent variable can be regressed on all other independent variables. A high R^2 (near 1.0) indicates multicollinearity (Lewis-Beck, 1980). This latter technique was not needed in the present study because only two independent variables were used in each equation.

CHAPTER 4: RESULTS

Aid Exchange and Perceptions of Reciprocity

Respondents can be described in relation to perceived aid exchange. Means and standard deviations are reported for each item for which "A" and "B" partners perceived giving or receiving help.

Instrumental help. Three subcategories were used to capture instrumental help: household tasks, errands and household business, and personal care. With regard to household tasks (Table 6), respondents reported that they kept on eye on things and took food to each other more often than they provided other aid exchange items in this category. Respondents did not report provision of help with home repairs and car maintenance. Except on items for which no help was given, partners had different perceptions about the amount of help given and received. As can be seen, the mean amounts of aid given by "A" partners were greater than the amounts given by "B" partners (as perceived by both).

Respondents perceived a greater amount of aid exchange on items listed under errands and household business (Table 7), the second of the instrumental categories, than on items listed in either household tasks or personal care. The largest means were for the provision of transportation, taking partners shopping, and picking up medicine. Again, perceptions of the amount of help given and received varied between "A" partners and "B" partners, and reported means for "A" partners were higher than for "B" partners.

Table 6

Mean (SD) Amount of Perceived Help Given and Received on Household Tasks

Type of Help	A Gives	B Receivs	B Gives	A Receivs
	<u>M</u> (<u>SD</u>)			
Prepare meal	.10(.54)	.32(1.25)	.03(.18)	.00(.00)
Take food to	.84(1.59)	1.00(1.67)	.68(1.35)	.81(1.49)
Housework	.16(.64)	.32(1.14)	.00(.00)	.00(.00)
Sewing	.36(.84)	.29(.82)	.19(.75)	.13(.50)
Yardwork	.10(.79)	.13(.72)	.00(.00)	.00(.00)
Child care	.16(.90)	.00(.00)	.00(.00)	.00(.00)
Care of pet	.07(.25)	.29(1.04)	.07(.25)	.03(.18)
Keep an eye on things	1.48(1.91)	1.03(1.82)	.68(1.56)	.81(1.58)

Note. Mean scores indicate the mean amount of perceived help given or received by the partner (i.e., A or B) over the preceeding year. Scores could range from 0 = never to 5 = daily.

Table 7

Mean (SD) Amount of Perceived Help Given and Received on
Errands and Household Business

Type of Help	<u>A Gives</u>	<u>B Receivs</u>	<u>B Gives</u>	<u>A Receivs</u>
	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Transport	2.23(1.82)	2.50(1.86)	.23(.88)	.39(1.02)
Take shopping	1.23(1.70)	1.55(1.91)	.10(.54)	.13(.72)
Shop for partner	.26(.86)	.19(.79)	.13(.72)	.10(.40)
Contact agencies	.39(.96)	.03(.18)	.00(.00)	.00(.00)
Pick up medicine	.68(1.19)	.52(1.21)	.00(.99)	.07(.36)
Other errands	.29(.82)	.23(.88)	.03(.18)	.07(.36)
Fill out forms	.23(.50)	.00(.00)	.10(.54)	.00(.00)
Handle money	.22(.88)	.00(.00)	.00(.00)	.00(.00)
Loan or give money	.00(.00)	.00(.00)	.13(.72)	.10(.79)

Note. Mean scores indicate the mean amount of perceived help given or received by the partner (i.e., A or B) over the preceding year. Scores could range from 0 = never to 5 = daily.

Respondents reported little help exchange in the category of personal care (Table 8), the last category of instrumental help. They were most likely to report checking on their partners to make sure they were alright. No help was given with eating, dressing, or bathing. Partners in group A were more likely to give personal care than to receive it.

Socioemotional help. The last aid exchange category was socioemotional help (Table 9). Respondents perceived themselves to be giving and receiving more socioemotional help than any of the three instrumental categories of help. Nonkin peers were most likely to report sharing the joys of life, listening to their partner's problems, expressing affection and support, and maintaining confidentiality.

Perceptions of help given and received. Partners' perceptions of help given and received varied. On some items, "A" partners perceived that they gave less than "B" partners reported receiving. On other items, the opposite was true. Partners tended to agree more on whether or not a particular help item had been given or received and less on the amount of help exchanged.

Data in Table 10 suggest that respondents perceived that they gave more help than they received. Mean scores of the amounts of help given and received suggest that respondents perceived a greater exchange of socioemotional than of instrumental help. Furthermore, standard deviations

Table 8

Mean (SD) Amount of Perceived Personal Care Given and Received

Type of Help	<u>A Gives</u>	<u>B Receivs</u>	<u>B Gives</u>	<u>A Receivs</u>
	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Use telephone	.10(.54)	.00(.00)	.00(.00)	.00(.00)
Take medicine	.13(.72)	.00(.00)	.00(.00)	.00(.00)
Help with personal grooming	.10(.40)	.00(.00)	.10(.54)	.16(.64)
Get in or out of bed	.00(.00)	.03(.18)	.00(.00)	.00(.00)
Walk	.39(1.23)	.32(1.14)	.00(.00)	.00(.00)
Check on to make sure partner is alright	1.74(2.31)	1.39(2.08)	.81(1.87)	.71(1.72)

Note. Mean scores indicate the mean amount of perceived help given or received by the partner (i.e., A or B) over the preceeding year. Scores could range from 0 = never to 5 = daily.

Table 9

Mean (SD) Amount of Perceived Socioemotional Help Given and Received

Type of Help	A Gives	B Receivs	B Gives	A Receivs
	<u>M</u> (<u>SD</u>)			
Remember with card/gift	1.55(1.21)	1.10(1.11)	1.00(1.34)	.84(.97)
Listen to partner talk about problems	2.77(1.84)	1.48(1.71)	1.10(1.51)	1.71(1.55)
Share joys/fun times	3.00(1.43)	2.77(1.80)	2.55(1.90)	2.29(1.70)
Express affection or support	2.29(1.95)	1.61(2.04)	1.74(2.03)	1.39(1.86)
Stay with partner during difficult time	.42(.92)	.10(.40)	.00(.00)	.19(.54)
Say you would keep a conversation private	1.68(1.74)	.81(1.52)	1.10(1.64)	1.00(1.44)
Offer advice	1.13(1.54)	.55(1.18)	.52(1.26)	.81(1.25)
Do activity with partner to help get her mind off things	1.03(1.30)	1.16(1.68)	.58(1.18)	.74(1.37)

Note. Mean scores indicate the mean amount of perceived help given or received by the partner (i.e., A or B) over the preceding year. Scores could range from 0 = never to 5 = daily.

Table 10

Ranges, Means, and Standard Deviations for Help Given and Received, Difference Scores, and Z-Scores

Instrumental	Socioemotional	Total
Giving Help		
0 - 35	0 - 28	0 - 57
<u>M</u> = 7.24	<u>M</u> = 11.23	<u>M</u> = 18.47
<u>SD</u> = 8.72	<u>SD</u> = 7.47	<u>SD</u> = 13.86
Receiving Help		
0 - 48	0 - 31	0 - 79
<u>M</u> = 6.86	<u>M</u> = 9.27	<u>M</u> = 16.13
<u>SD</u> = 8.16	<u>SD</u> = 6.92	<u>SD</u> = 13.02
Difference Scores		
-48 - 33	-22 - 24	-70 - 57
<u>M</u> = .39	<u>M</u> = 4.37	<u>M</u> = 4.76
<u>SD</u> = 12.46	<u>SD</u> = 9.84	<u>SD</u> = 20.83
Reciprocity (<u>z</u>) Scores		
-3.88 - 2.61	-2.68 - 1.99	-6.56 - 4.61
<u>M</u> = 0	<u>M</u> = 0	<u>M</u> = 0
<u>SD</u> = 1.00	<u>SD</u> = 1.00	<u>SD</u> = 1.86
Reciprocity (<u>z</u>) Scores Squared		
.00 - 15.05	.00 - 7.18	.00 - 43.01
<u>M</u> = .98	<u>M</u> = .98	<u>M</u> = 3.42
<u>SD</u> = 2.25	<u>SD</u> = 1.39	<u>SD</u> = 6.47

indicate considerable variance, particularly in the instrumental category.

Table 10 also provides difference scores, the difference scores converted to z -scores (reciprocity scores), and those scores squared. The z -scores were used in the regression analyses, as described earlier. The range for instrumental difference scores (perceptions of instrumental help given minus instrumental help received) indicates that while some respondents received less than they gave (as indicated by a negative number), others reported providing more help than they received. Although the range is not as great, a similar observation can be made about socioemotional difference scores. The mean instrumental difference score is close to 0, suggesting that, on average, exchange partners perceived that their instrumental exchanges were reciprocal. The mean socioemotional and total difference scores are greater than 0, suggesting that the average respondent reported giving more socioemotional help than she was receiving. There was, however, considerable variance in the difference scores.

Data Analysis

Preliminary Analyses

Relationship Quality. As indicated in Chapter 3, Cronbach's alpha measures of reliability were calculated for five relationship quality items adapted from the Positive Affect Index (Bengston & Schrader, 1982). The alpha coefficient for all five items was .68. When the item that

tapped how often exchange partners do things together was removed, the alpha coefficient for the remaining four items was .74. The sum score for these four items was used for the dependent variable, relationship quality. Sum scores for relationship quality ranged from 16 to 28 with a mean of 23.48 and a standard deviation of 3.05.

Correlations of Variables. A Pearson r correlation matrix including all potential independent variables and the dependent variable is provided in Table 11. Three situational variables were considered as controls in this study: health, length of acquaintance, and education. The correlation matrix was used to determine the degree of association of the three potential control variables with the dependent variable, relationship quality. Health ($r = -.24$) was negatively related while length of acquaintance ($r = .15$) and education ($r = .09$) were positively associated with relationship quality. None of the correlations was significant. Therefore, none of the potential control variables was used in the final analyses (A. Acock, personal communication, January, 1992) (see Appendix H for further detail).

Table 11 contains the three potential control variables, health, length of acquaintance, and education. It also includes the z -scores for the perceived degree of reciprocity for instrumental, socioemotional, and total help exchanged (linear terms), these scores squared (curvilinear terms), and the dependent variable, relationship quality.

Table 11

Pearson r Correlation Matrix for Independent and Dependent Variables

	<u>Potential controls</u>			<u>Reciprocity</u>						
	1Helth	2Length Acq	3Educ	4Instr	5Socemo	6Total	7Instr ²	8Socemo ²	9Total ²	10Rel Qual
1										
2	.20									
3	-.09	.09								
4	.30*	-.06	-.01							
5	.28*	.04	.10	.74**						
6	.31*	-.01	.05	.93**	.93**					
7	-.16	-.05	.10	-.13	-.17	-.16				
8	-.15	-.03	.17	-.19	-.03	-.12	.67**			
9	-.19	-.06	.13	-.20	-.15	-.19	.94**	.86**		
10	-.24	.15	.09	-.08	.01	-.04	.10	.06	.08	
<u>M</u>	2.60	11.23	13.79	.00	.00	.00	.98	.98	3.42	23.48
<u>SD</u>	.93	10.95	3.96	1.00	1.00	1.86	2.25	1.39	6.47	3.05

*p<.05, **p<.01

Six of the bivariate correlations reached significance. The potential control variable, perceived health, was positively associated with the linear term for perceived reciprocity of instrumental help ($\underline{r} = .30, p < .05$) and with the linear term for perceived reciprocity of socioemotional help ($\underline{r} = .28, p < .05$). A positive correlation indicates that better perceived health was associated with perceptions that more instrumental and socioemotional help was given than received. Perceived health was also positively associated ($\underline{r} = .31, p < .05$) with the linear term for perceived reciprocity of total help exchanged. Better health was associated with perceptions of more help being given than received.

The linear term for perceived reciprocity in instrumental help was positively associated with the linear term for perceived reciprocity in socioemotional help ($\underline{r} = .74, p < .01$). Giving one type of help was positively associated with giving the other type of help. As would be expected, the separate categories of perceived reciprocity with regard to instrumental ($\underline{r} = .93, p < .01$) and socioemotional help ($\underline{r} = .93, p < .01$) were also positively associated with the linear term for total perceived reciprocity.

Similarly, the squared term for total perceived reciprocity was positively associated with the squared terms for perceived reciprocity of instrumental help ($\underline{r} = .94, p < .01$) and for perceived reciprocity of socioemotional help

($r = .86$, $p < .01$). Because none of the significantly correlated terms was used in the same regression equation, multicollinearity did not appear to be a problem.

Regression Analyses

To test the hypotheses identified earlier, three polynomial regression equations were computed. Relationship quality was the dependent variable for all three (See Table 12). The first equation tested the association of total perceived reciprocity to relationship quality. Perceptions of total reciprocity explained about 1% of the variance in relationship quality. The equation was not significant ($F = .19$; $p = .83$). The hypothesis that perceived total reciprocity would have a curvilinear rather than a linear association with relationship quality was rejected. Neither the linear nor the curvilinear terms was significantly associated with the dependent variable.

The second equation tested the association of perceived reciprocity of instrumental help (both linear and curvilinear terms) to relationship quality. Perceived instrumental reciprocity accounted for 1% of the variance in relationship quality. The results were not significant ($F = .45$; $p = .64$). Neither the linear nor the curvilinear terms was significantly associated with the dependent variable.

Table 12

Polynomial Regressions for Perceived Reciprocity and
Relationship Quality

	Step 1	Step 2
	TotalRec	TotalRec ²
beta	-.04	.04
R ²	.00	.01
adj.R ²	-.02	-.03
F _{(1,60) (2,59)}	.08	.19
	InstrRec	InstrRec ²
beta	-.21	.13
R ²	.01	.01
adj.R ²	-.01	-.02
F _{(1,60) (2,59)}	.39	.11
	SocemoRec	SocemoRec ²
beta	.04	.13
R ²	.00	.00
adj.R ²	-.02	-.03
F _{(1,60) (2,59)}	.01	.11

The third equation, which tested the association of perceived reciprocity of socioemotional help (both linear and curvilinear terms) to relationship quality, also was not significant ($F = .11$; $p = .90$). Perceived reciprocity of socioemotional help explained none of the variance in the dependent variable. Neither the linear nor curvilinear terms for perceived socioemotional reciprocity was significantly associated with relationship quality.

CHAPTER 5: DISCUSSION

The purpose of this study was to examine the association of perceived reciprocity and relationship quality among older female nonkin peers from a social exchange perspective. Compared to respondents to the survey (first wave of data collection) and to the general population (Bureau of the Census, 1991), women participating in this study were more likely to be widowed and living alone. They had lower income levels and their health was poorer than survey participants and the general population.

Independent and Dependent Variables

Help Given and Received

Interview respondents reported a give-and-take relationship with their exchange partners. In support of previous studies (Stoller, 1985; Ingersoll-Dayton & Antonucci, 1988), those who received help generally reciprocated by providing help to their exchange partners. In agreement with previous findings, (Jonas & Wellin, 1980; Stoller, 1985; Goodman, 1985), respondents perceived that they provided more help than they received, as evidenced by mean help scores.

One of the recommendations from previous studies (Shea et al., 1988) was to use a more sensitive instrument to measure aid exchange, one that covered a large number of help activities appropriate to older nonkin peers. Thus, a fairly lengthy instrument (based primarily on the work of Walker & Pratt, 1991) was developed for the present study.

The instrument contained three categories of instrumental help and one of socioemotional help (Jonas & Wellin, 1980).

Instrumental help. Nonkin peers in this study reported giving and receiving 24 of the 28 instrumental help items. There was, however, considerable variation among individuals with regard to the amount and types of instrumental help given and received. Instrumental help items most frequently reported were transportation, shopping, keeping an eye on things, and checking on exchange partners to make sure they were alright. The category in which the least amount of help was reported was personal care, as was expected from previous work (Powers & Bultena, 1976).

Socioemotional help. The findings in this study also support those of Shea et al. (1988) in that respondents perceived that they gave and received more socioemotional help than instrumental help. Respondents reported giving and receiving help with all of the socioemotional items. Socioemotional help items most frequently reported were sharing the joys and fun times, listening to someone talk about their problems, and expressing affection. The socioemotional item reported least frequently was staying with someone during a difficult time, which may have been perceived as personal care rather than social support.

Amount of help. The perceived amount of help exchanged by respondents in this study was relatively low. Shea et al. (1988) asked how many times old and new friends had exchanged a particular type of help during the preceding

month. Their means for the one-month time period were higher than the means obtained in this study for the preceding year. For example, respondents in Shea and associates' (1988) study reported exchanging expressions of love or affection with old friends 9.7 times and with new friends 13.4 times during the preceding month. Their respondents reported exchanging the provision of status with old friends 9.6 times and with new friends 13.3 times during the preceding month. The two combined represent a much greater exchange of socioemotional help among friends than was reported by nonkin peers in this study, as might be expected.

Relationship Quality

The use of four of the five items adapted from the Positive Affect Index (Bengtson & Schrader, 1982) reached an acceptable level of reliability. These items were perceived closeness, communication, similarity of views, and getting along together. The range in relationship quality varied from casual to extremely close. None of the respondents perceived themselves to be extremely distant from their exchange partners. The mean for relationship quality indicates that, on average, nonkin peers in this study perceived themselves to be good, but not extremely close, friends. The sample, composed of pairs of exchange partners, may have restricted variability in relationship quality. Respondents volunteered for the study because they were providing or receiving help from a nonkin peer, not on

the basis of friendship as was true for several previous investigations (Roberto & Scott, 1986a, 1986b; Shea et al., 1988). In this sample, at least, elderly female nonkin peers involved in aid exchange have relatively close relationships.

Control Variables

Unlike in previous studies (Johnson, 1983; Jonas & Wellin, 1980; Shea et al. 1988), the potential control variables - health, education, and length of acquaintance - were not correlated with the dependent variable, relationship quality. Health was associated with the degree of perceived reciprocity in instrumental, socioemotional, and total help exchanged, supporting the findings of Jonas and Wellin (1980) as well as Roberto and Scott (1986a). Those in better health reported that they gave more help than they received. Thus, it does not appear that respondents in poorer health perceived that they provided more socioemotional help to compensate for the larger amounts of instrumental help received from their partners. In fact, perceptions of providing instrumental help were positively associated with perceptions of providing socioemotional help. Perceptions of providing both types of help were positively correlated with total reciprocity scores.

Reciprocity and Relationship Quality

Contrary to expectations, no association was found between reciprocity and relationship quality. Regardless of

the operationalization of reciprocity as a linear or a curvilinear term, the exchange of aid among nonkin peers was not helpful in explaining variance in the dependent variable. This lack of association held for perceived reciprocity in instrumental, socioemotional, and total help exchanged. This finding supports the research of Roberto and Scott (1986b) who found no association of aid exchange and relationship satisfaction among best friends (but not least best friends).

When these findings are compared with previous studies of dyadic reciprocity (Johnson, 1983; Roberto & Scott, 1986a; 1986b), results seem contradictory. These contradictions may be explained by theoretical considerations, the operationalization and measurement of reciprocity, characteristics of the sample, the timing of data collection, or the nature of nonkin peer relationships.

Theory

Social exchange theory suggests that the nonsignificant results found in this study may be due to the costs and benefits associated with the exchange of help (Dowd, 1980). According to social exchange theory, giving more than one receives may be more rewarding than costly; the opposite also may be true (McCulloch, 1990). Alternatively, balanced exchanges may help maximize rewards and minimize costs (Thibaut & Kelley, 1959). Individuals could be expected to vary in their perceptions of the costs and benefits associated with balanced and unbalanced aid exchange

patterns. What is experienced as rewarding by one respondent may be perceived as costly by another. Further, what may be rewarding in the exchange may be costly to the relationship. Thus, these two processes, reward on the one hand and cost on the other, may suppress and counteract one another (McCulloch, 1990). Such an effect exemplifies difficulties inherent in social exchange theory propositions (McCulloch, 1990).

It is also possible that the concept of generalized reciprocity (Wentowski, 1981) might help explain the lack of association between perceived reciprocity and relationship quality. Older nonkin peers may not expect their exchanges to balance out over a year's time. They may view reciprocity over a longer time frame than was included in this study. As a result, perceived reciprocity measured at one point in a nonkin peer relationship may not be reflected in relationship quality.

Definition and Measurement of Reciprocity

Nonsignificant results may relate to the definition and measurement of reciprocity used in this study as well. Reciprocity was operationalized somewhat differently in this investigation than in previous work. Perceived reciprocity was derived by subtracting the amount of help received (instrumental and socioemotional, separately) from the amount given. Roberto and Scott (1986a, 1986b) used global measures of reciprocity based on exchange partners' perceptions of their own and their friend's relative

contributions to the relationship. Similarly, Goodman (1985) asked respondents to classify a given relationship as reciprocal or as one in which the respondent gave more or the friend/neighbor gave more. Shea et al. (1988) summed episodes of giving and receiving to indicate amount of exchange. Such differences in the operational definition of the independent variable may account for the inconsistency in findings.

Furthermore, the response format for help items ranged from 0 to 5. The question that arises is whether this range in possible scores accurately reflects the difference, for example, between help given/received rarely (1) and help given/received daily (5). Although similar scales have been used in other studies (e.g., Shea et al., 1988), they restrict variation in the independent variable. Thus, the response scale for help given and received may help explain nonsignificant findings in this study.

Sample

Sample characteristics also may help explain the variations in outcome obtained in this and other studies. Respondents in this study differed somewhat from those reported in earlier investigations. The most striking sample difference was in gender. All respondents in this research were female. Other studies that reported an association of aid exchange and relationship quality contained both men and women (i.e., Goodman, 1985; Johnson, 1983; Jonas & Wellin, 1980; Roberto & Scott, 1986a, 1986b;

Shea et al., 1988). In addition, more respondents in this sample were widowed compared with several of the other investigations (Johnson, 1983; Roberto & Scott, 1986a, 1986b). Although data do not allow direct comparisons, the women in this study also appeared to have more health problems than respondents in other studies of dyadic reciprocity with the exception of Johnson's (1983). Respondents in the present study were about the same age as those studied by Jonas and Wellin (1980) and Goodman (1985) but somewhat older than Roberto and Scott's (1986a, 1986b) sample. Respondents' educational and income levels appear to be roughly similar to those reported by Roberto and Scott (1986a, 1986b), Shea et al. (1988), and Goodman (1985). The state in which data were collected for the present study in recent years has had the highest rate of increase of people over age 65 in the nation (Fowles, 1986). Thus, there may be larger numbers of in-movers in this study than in other investigations. Because few control variables were used in previous research, it is not clear if and how such variation in the sample may have affected the results.

In terms of gender, Jonas and Wellin (1980) reported that women's exchanges were different from men's. The exchange between two women was often embedded in and extended interpersonal relations. Perhaps the presence of an exchange relationship rather than the degree of perceived reciprocity in that relationship is associated with relationship quality among women. That is, the giving and

receiving of help may be rewarding in social exchange terms, fostering close relationships among women beyond the costs and benefits associated with perceptions of reciprocity in the exchange. Jonas and Wellin (1980) lent some support to this idea by observing that exchanges between men in their study tended to be businesslike and impersonal as well as more immediate and balanced than exchanges between women.

Several additional characteristics of the sample may have resulted in a lack of association between perceptions of reciprocity and relationship quality. The sample was relatively small and was voluntary. The health of those most in need of help precluded their participation in an interview. This is further verified by relatively low levels of perceived aid exchange. Other studies in which only one exchange partner was interviewed would be more likely to tap exchanges in which the respondent was providing a great deal of help to an incapacitated partner.

Dependence in sample. A limitation of this study was the potential dependence in the sample which was composed of exchange partners. Post hoc analyses were carried out to determine differences or similarities in the perceptions of "A" and "B" partners with regard to help exchanged. A series of t -tests for paired samples was run for this purpose. Specifically, "A" partners' perceptions of what they gave were compared with "B" partners' perceptions of what they received on instrumental, socioemotional, and total help. Similarly, "B" partners' perceptions of what

they provided were compared with "A" partners' perceptions of what they received. Results can be found in Appendix I.

Partners designated as "A" reported that they gave significantly more socioemotional help and total help than their exchange partners ("B's") reported receiving. There were no significant differences in perceptions of instrumental help given by "A" partners as perceived by "B" partners. There were also no significant differences in perceptions of what "B" partners gave and "A" partners received. It should be noted that the instrumental items for which no help was exchanged may have inflated the apparent agreement in perceptions of aid exchange between partners in groups A and B. That is, there was greater agreement on the absence of aid exchange but, when aid was exchanged, there was less agreement on perceptions of how much help was provided and received. Nevertheless, four of the six comparisons were not significantly different. Because the analysis included exchange pairs, responses were not independent and variance was restricted. This may have resulted in an underestimation of the association between perceived reciprocity and relationship quality.

As already indicated, however, "A" partners who volunteered for the study perceived that they provided more socioemotional and total help than "B" partners reported receiving. It is not known if those who volunteer for studies also volunteer to provide more help to their nonkin peers than other potential respondents; or if volunteers for

research projects, in fact, overestimate the amount of help provided to others. Observational data are needed to determine accuracy of perceptions of help given and received.

Timing of data collection. The timing of data collection may have affected the results. Many respondents in this study are single women living alone on modest incomes. As their age increases and their health continues to decline, some may become more dependent on their exchange partners. It is possible that if and when levels of aid exchange increase, costs and benefits will become more pronounced and the association of perceived reciprocity and relationship quality will also increase. The challenge to researchers is to find ways to include more dependent respondents in future studies.

Nonkin Peer Relationships

It is also possible that the results of this study accurately reflect the association (or lack thereof) of perceived aid exchange and relationship quality among nonkin peers, at least for this volunteer sample. During the interviews, respondents were asked the degree to which giving or receiving particular help items was a hassle or an uplift, data not used in the present study. Respondents rarely perceived that giving or receiving help was a hassle but often acknowledged that it was an uplift. Qualitative data suggest that respondents chose to give or receive help that was not a burden. For example, a typical response was,

"Well, no, it isn't a hassle. If it was, I wouldn't do it." It appears that friends and neighbors in this study regulated the exchange of aid in such a way that it did not become burdensome and did not impact relationship quality. This agrees with Stoller's (1985) suggestion that exchanges with friends and neighbors may reflect less imbalance than those with family members. On the other hand, if a friend or neighbor becomes incapacitated and has few other sources of aid, or if social programs encourage friends to provide additional help to incapacitated friends and neighbors, it may become more difficult for nonkin peers to regulate aid exchange and avoid taking on more burdensome tasks. This, in turn, may impact relationship quality.

Recommendations

Future studies need to include a variety of nonkin peers to determine if reciprocity is more or less important at varying stages or degrees of relationship closeness. Studies that include only close friends should not be generalized to all nonkin peers without further investigation. Further, it would be helpful to operationalize and measure reciprocity in several ways to determine the extent to which the definition and measurement of this construct impacts results.

In research on nonkin peers, greater attention needs to be paid to the specification of independent variables. In this study, the independent variables explained little of the variance in relationship quality, suggesting that

important independent variables were left out of the regression equations. It is possible that variables such as total amount of aid exchange (Shea et al., 1988), similarity of exchange partners on demographic characteristics (Adams, 1987; Allan & Adams, 1989; Powers & Bultena, 1976; Rosow, 1967), costs and benefits of aid exchange, or reasons for caregiving may interact with reciprocity and/or help explain relationship quality.

A larger sample size which allows for independent analyses of exchange partners would be desirable. Longitudinal data, which takes into account changes in the capacity of one exchange partner relative to the other and any subsequent alterations in aid exchange patterns, would help determine the impact of changes in reciprocity on relationship quality.

Summary and Conclusions

Findings from this study support the work of previous investigators in several ways. As in other studies, respondents reported give-and-take relationships with their exchange partners. They reported giving and receiving more socioemotional than instrumental help. This investigation confirmed that health, as a control variable, is associated with the degree of perceived reciprocity.

This study demonstrated that older nonkin peers perceive that they give and receive many types of help, even though the amount of help exchanged may be limited. It also demonstrated adequate reliability for a measure of

relationship quality among nonkin peers originally designed for family members.

Results from this study provide no support for a direct association between perceived instrumental, socioemotional, or total reciprocity and relationship quality among older, female nonkin peers. Neither the linear nor the curvilinear terms for reciprocity were helpful in explaining variation in relationship quality. Theoretical issues, such as costs and rewards associated with perceived reciprocity and the concept of generalized reciprocity, may mediate the association of perceived reciprocity and relationship closeness. Differences in the operational definition and measurement of perceived reciprocity as well as variations in the sample may also account for the nonsignificant findings in this study as compared to most, but not all, of the previous research. It would be helpful to collect data from a larger sample and analyze data from exchange partners separately. Similarity of perceptions of reciprocity and relationship quality could then be assessed without restricting variation in the independent and dependent variables.

Because of the limitations reported earlier, these findings must be interpreted with caution. In general, the results have positive implications for the exchange of aid among female nonkin peers. They indicate that older female nonkin peers provide important resources in a variety of aid categories to one another. They suggest that older peers

regulate their exchanges in such a way that perceived inequities are not associated with relationship quality. They do not rule out, however, the possibility that if demands for help increased significantly, relationship quality would change.

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APPENDICES

Appendix A: Letters to Recruit Participants



Samuel Wunderbaum
 State Director, Nevada
 251 E. Delamar Drive
 Henderson, NV 89015
 (702) 564-4431

September 19, 1989

MEMORANDUM

To: AARP Chapter and ~~Unit Presidents~~
 Redacted for privacy

From: Sam Wunderbaum

Subject: Research Study

We are privileged to have been selected by the Department of Human Development and Family Studies, of the University of Nevada, Reno, to assist in a scientific study.

This project has been endorsed by the late Gene Sloyer, State Director; former ASD, Joe Souza; ASD Pat Ralls; Don Reitzer, AVP; and myself.

We have the opportunity to play an important part in a program that could effect all aspects of caregiving, relating to older persons and their families.

All materials, including postage, will be provided. Each Chapter will receive \$30.00 for addressing and mailing the individual envelopes, and an additional \$1.00 will be paid to the Chapter for each survey returned.

I will need to know, as soon as possible, the number of members in your Chapter that you will be mailing to.

Incl: 2

cc: D. Reitzer AVP

September 8, 1989

TO: Presidents of All Local Chapters, AARP, Nevada
FROM: Sally Kees Martin Barbara Gunn Starley Anderson
SUBJECT: INVITATION TO PARTICIPATE IN RESEARCH STUDY

We invite you and the members of your local chapter of the American Association of Retired Persons to participate in a study of caregiving and care receiving in Nevada. We are particularly interested in finding out more about the kinds of help given and the kinds of help received by relatives, friends, and neighbors. Our purpose is to document the importance of such help in the lives of older adults in Nevada.

From our standpoint, members of AARP chapters in Nevada are ideal for our study. Within your membership, we would expect to find some persons giving care, some receiving care, and others doing both. The location of chapters throughout the state would allow us to determine how caregiving might vary in different localities. We also know AARP shares our concerns for all aspects of caregiving related to older people and their families.

From your standpoint, participation of your members in our survey would have two advantages. First, you'd be helping to establish a research base which would lead to improved education programs and services for those who are providing or receiving care. Second, your participation would serve as a fund raiser for your club. We plan to pay each chapter \$30 for mailing out the questionnaires and an additional \$1 for each returned questionnaire. We would provide all mailing materials and postage. Having someone from your chapter do the mailing would protect the integrity of your mailing list and confidentiality for members.

We'd like to discuss the research project with you in more detail and answer any questions you, the members of your executive board, or the general membership might have. Please indicate on the enclosed card a convenient time for one of us to call you. (If you prefer, call us directly at 784-6977.) We will be available to meet with you or your representative at all stages of the project.

Appendix B: Instructions for Chapter Representatives

CARING RELATIONSHIPS SURVEY* Summary of Responsibilities

AARP Local Chapter and Unit Representative(s)

- Provide name, address, and phone number of contact person.
 - Participate in information briefing session with University researcher.
 - Publicize survey through announcements at meetings, personal contacts, and/or newsletter items.
 - Prepare cover letter for questionnaire.
 - Assign each member a number on a master list and write that number in the lower left-hand corner of a return envelope
 - Mail each member a copy of the cover letter, the questionnaire, and a numbered return envelope.
 - When envelope is returned, check off member's number on master list
 - If envelope is not returned within 10 days, try to contact member, explain importance of participation, and offer to mail a second questionnaire if needed.
 - If member declines to participate, say something like "I understand. Some people feel that way. Thank you very much. Goodbye."
 - If reason for refusal is given, please note that and include in Summary Report.
 - Return completed surveys in unopened envelopes, Summary Report, and Request for Payment to:
Starley Anderson
Project 904
College of Human and Community Sciences
University of Nevada
Reno, NV 898557-0131
 - Destroy master list.
- * The survey is one phase of a research project, "Perceptions of Elder Care, Preferences for Care, and Relationship Quality, funded by the Agricultural Experiment Station, University of Nevada, Reno. Researchers are Sally Kees Martin, Barbara Gunn, and Starley Anderson.

(sample draft)

LETTER FROM AARP CHAPTER REPRESENTATIVE TO MAILED WITH
QUESTIONNAIRE

Chapter letterhead

Date

Dear Member of AARP Chapter _____:

Our chapter is cooperating with researchers from the University of Nevada, Reno, in a study of caregiving, care receiving, and preferences for care. Enclosed is a questionnaire which we encourage you to complete and return in the postage-paid envelope also enclosed.

Your participating is important whether or not you are currently involved in receiving or providing care. Be assured that your responses will be strictly confidential. We will retain our chapter's confidential mailing list and send your sealed envelope directly to the researchers.

In the event that more than one person in your household receives a questionnaire, please return each person's reply in a separate envelope. Spouses should complete separate questionnaires. Our chapter will be reimbursed on the basis of the number of envelopes returned. Please return completed questionnaires within one week.

If you would like more information about the study, please contact me or one of the researchers: Sally Kees Martin, Barbara Gunn, or Starley Anderson at 784-6977. If calling long distance, ask to have the charges reversed to Project 904.

Thank you in advance for your attention to this matter.

Sincerely,

Chapter representative signature and phone number.

PLEASE NOTE: If you are willing to volunteer for a follow-up interview, please indicate this in the space provided on page 20. If you are selected for an interview, you will receive \$5 compensation.

SAMPLE NEWSLETTER ITEM

DON'T TOSS IT! If you receive a large manilla envelope with a CARING RELATIONSHIPS questionnaire, it's important! Your chapter is cooperating with researchers from the University of Nevada, Reno, in a study of caregiving, care receiving, and preferences for care.

Your participation is important whether or not you are currently receiving or providing care. Results of the survey will be used to document the extent and kind of informal help exchanged between family members, friends, and neighbors, and the kinds of additional help that may be needed in the future.

All expenses of the survey are paid by a grant from the Agricultural Experiment Station. This includes Chapter reimbursement of \$1 for each returned questionnaire. 100% participation will benefit Chapter ____ and, more importantly, contribute to this needed research.

Chapter No. _____

Date: _____

SUMMARY REPORT - CARE SURVEY

Number of questionnaires mailed	_____
Number of questionnaires completed and returned	_____
Number undeliverable by post office	_____
Number of follow-up calls/contacts	_____
Number unable to reach in follow-up calls/contacts	_____
Refusal comments (use back of sheet if necessary)	_____

Appendix C: Ineligibility, Refusals, and Unusable Interviews

Ineligibility. During the initial telephone screening of the 86 respondents we were able to reach, we discovered that 38 (or their exchange partners) did not meet the criteria. The most common reason for ineligibility was health related (n = 17). In 9 cases, the partner had passed away. Four respondents and 4 partners were too ill or incapacitated to be interviewed. Ten were not eligible because the only aid received was paid help or aid from family members. In 2 of the 10 cases, the partners were being paid. In 6 additional ineligible cases either the respondent or partner was not available. In 3 of these, the partner had moved out of state. In the other 3 cases, the respondents left on extended vacations out of state before we were able to schedule interviews. One partner was too young to be eligible (16 years of age). Two respondents were unwilling to ask their partners to participate in an interview, and another 2 partners declined our invitation to participate.

Refusals. As mentioned earlier, 12 of the original volunteers had changed their minds or did not remember having volunteered. The partner of one of these was a member of AARP who had also volunteered and was willing to be interviewed. In this case, one refusal eliminated two volunteers.

Unusable interviews. In two cases, partners' interviews were conducted but were not useable. In one interview, the partner was disoriented and unable to respond to the interview questions. In the second, the interviewer (one of the co-investigators) was unable to keep the partner focused on the interview. That individual was willing to converse but avoided answering interview questions. The interviewer was unable to determine the reason for this behavior. Both the original volunteers' and their partners' interviews were eliminated in these two cases.

Appendix D: Informed Consent

CARING RELATIONSHIPS
AES Project 904

Interview 1990
Form A

A. [BEFORE INTERVIEW, WRITE IN ID#, OBTAIN CORRECT FORM AND FILL OUT ITEMS THAT ARE STARRED ON QUESTIONNAIRE. FILL IN NAME OF PARTNER B AT DESIGNATED PLACES IN QUESTIONNAIRE. BE CERTAIN TO HAVE RESPONSE CARDS IN ORDER OF USE, COSTS AND BENEFITS QUESTIONNAIRES, AND RELATIONSHIP QUALITY QUESTIONNAIRE. HAVE \$5 AND RECEIPT FORM ON TOP OF INTERVIEW SCHEDULE. TAKE AN EXTRA PENCIL.]

1. Interviewer: _____ 2. Date: _____

3. Time Began: _____ Time Ended: _____

Respondent: _____

Address: _____

Phone: _____

[**READ:** HUMAN SUBJECTS STATEMENT. GIVE MONEY. HAVE SIGN RECEIPT.]

Hello, my name is _____ and I'm with the University of Nevada research project on caring relationships. Are you _____? Thanks for agreeing to talk with us. You have the right to refuse to answer any specific question and to stop the interview at any time. The information you give us will be aggregated with information from many others. Your name will not be associated with this information. This \$5 is a token of our appreciation for the time you are spending with us. For our records, we do need for you to sign a receipt. (If asked, \$5 is their to keep whether or not they terminate the interview. This is a gift and not taxable. It will not be reported to IRS).

The interview will take about an hour to an hour and a half, and it usually goes better if there is some place the two of us can talk without being interrupted. It's easier if we can sit at a table. (Determine best place)

Appendix E: Measurement of Help Given

Giving Help

[RESPONSES TO HELP ITEMS ARE CODED ACROSS THE PAGE. IF YOU GET A NO ON A QUESTION 1 FOR ANY HELP ITEM, GO TO NEXT ITEM. IF YOU GET A NO ON QUESTION 3, GO TO NEXT HELP ITEM. FOR EACH ITEM, ASK:]

1. [helpany] "Over the last year did you help anyone outside your family ____, help that you weren't paid to do" If yes, ask "How many different people did you help with ____?"

Example: Did you help anyone outside your family prepare meals, help that you weren't paid to do?" If yes, ask: How many different people did you help with meal preparation?"

No = 0 [GO TO NEXT HELP ITEM]

Yes = code actual number of people helped [GO TO QUESTION 2]

2. [freqany] If yes, then ask "how often did you provide such help?" {Give respondent card with response categories}

0. No help provided
1. Daily
2. At least once a week (but not daily)
3. At least once a month (but not weekly)
4. Several times a year (but not monthly)
5. Rarely

3. [helppart] "Did you help ____ with ____?"

Example: Did you help Mrs. Smith prepare meals?

0 = no

1 = yes

4. [oftnpart] If yes, then ask "how often did you do that"

[Refer back to response card]

0. No help provided
1. Daily
2. At least once a week (but not daily)
3. At least once a month (but not weekly)
4. Several times a year (but not monthly)
5. Rarely

Household Chores: Help Given

<u>Type of Help</u>	<u>helpany</u>	<u>freqany</u>	<u>helppart</u>	<u>oftnpart</u>
Prepare meals	—	—	—	—
Take food to	—	—	—	—
Housework, inside	—	—	—	—
Sewing, mending	—	—	—	—
Yardwork, gardening	—	—	—	—
Home repairs, in/out	—	—	—	—
Care of children (grandchildren)	—	—	—	—
Care of pet	—	—	—	—
Maintain car	—	—	—	—
Keep an eye on things	—	—	—	—
Do you help with any other household chores I have not already mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Errands/Household Business: Help Given

[READ: What about errands and other household business?]

<u>Type of Help</u>	<u>helpany</u>	<u>freqany</u>	<u>helppart</u>	<u>oftnpart</u>
Provide transportation	—	—	—	—
Take shopping for groceries/clothes	—	—	—	—
Shop for anyone	—	—	—	—
Contact agencies or professionals	—	—	—	—
Pick up medicine	—	—	—	—
Other errands (e.g., cleaners, post office)	—	—	—	—
Fill out forms	—	—	—	—
Handle money (write checks, pay bills)	—	—	—	—
Loan or give money	—	—	—	—
Do you help with any other errands/business I have not already mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Personal Care: Help Given

[**READ:** Now I would like to ask about help with personal care that you provide to others.]

<u>Type of Help</u>	<u>helpany</u>	<u>freqany</u>	<u>helppart</u>	<u>oftnpart</u>
Use the telephone	—	—	—	—
Take medicine	—	—	—	—
Eat	—	—	—	—
Dress/undress	—	—	—	—
Help with personal grooming (with hair, shaving, makeup)	—	—	—	—
Get in or out of bed	—	—	—	—
Bathe/shower	—	—	—	—
Walk	—	—	—	—
Check on to make sure someone is alright	—	—	—	—
Do you help with any other personal care I have not already mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Social/Emotional: Help Given

[**READ:** The next questions have to do with social or emotional help.]

<u>Type of Help</u>	<u>helpany</u>	<u>fregany</u>	<u>helppart</u>	<u>oftnpart</u>
Remember with a card or a gift (not holiday) (e.g., special occasion or to cheer up)	—	—	—	—
Listen to someone talk about their problems	—	—	—	—
Share joys and fun times	—	—	—	—
Express affection or support with a hug, pat, or hand squeeze	—	—	—	—
Stay with someone during a difficult time	—	—	—	—
Say you would keep a conversation private (confidential)	—	—	—	—
Offer advice	—	—	—	—
Did some activity with someone to help get his/her mind off things	—	—	—	—
Is there any way you have show emotional support that I haven't mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Appendix F: Measurement of Help Received

Receiving Help

[RESPONSES TO HELP ITEMS ARE CODED ACROSS THE PAGE. IF YOU GET A NO ON A QUESTION 1 FOR ANY HELP ITEM, GO TO NEXT ITEM. IF YOU GET A NO ON QUESTION 3, GO TO NEXT HELP ITEM. FOR EACH ITEM, ASK:]

[Now, we would like to ask you about the kinds of care you may receive from others. Let's start with household chores:

For each item, ask:

1. [anyhelp] "Over the last year did anyone outside your family help you ____, someone not paid to help? Do you receive help with _____?"

Example: Over the last year did anyone outside your family help you prepare meals? - someone not paid to help. [If yes] How many people help with meal preparation?

No = 0 [GO TO NEXT HELP ITEM]

Yes = code actual number of people helped [GO TO QUESTION 2]

2. [anyfreq] If yes, then ask "how often did you receive such help?" [Give respondent card, record responses]

0. No help provided

1. Daily

2. At least once a week (but not daily)

3. At least once a month (but not weekly)

4. Several times a year (but not monthly)

5. Rarely

3. [parthelp] "Does ____ help with _____?"

Example: Does Mrs. Smith help you prepare meals?

0 = no [GO TO NEXT HELP ITEM]

1 = yes[GO TO QUESTIONS 4,5,6,7]

4. [partoftn] If yes, then ask "how often does s/he help?"

[Refer back to response card]

0. No help provided

1. Daily

2. At least once a week (but not daily)

3. At least once a month (but not weekly)

4. Several times a year (but not monthly)

5. Rarely

Household Chores: Help Received

<u>Type of Help</u>	<u>anyhelp</u>	<u>anyfreq</u>	<u>parthelp</u>	<u>partoftn</u>
Prepare meals	—	—	—	—
Receive food	—	—	—	—
Housework, inside	—	—	—	—
Sewing, mending	—	—	—	—
Yardwork, gardening	—	—	—	—
Home repairs, in/out	—	—	—	—
Care of children (grandchildren)	—	—	—	—
Care of pet	—	—	—	—
Maintain car	—	—	—	—
Keep an eye on things	—	—	—	—
Did you receive help with any other household chores I have not already mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Errands/Household Business: Help Received

[**READ:** Now I would like to ask about help you have received over the last year with errands, shopping, and running your household.]

<u>Type of Help</u>	<u>anyhelp</u>	<u>anyfreq</u>	<u>parthelp</u>	<u>partoftn</u>
Transportation	—	—	—	—
Take you shopping for groceries/clothes	—	—	—	—
Shop for you	—	—	—	—
Contact agencies or professionals	—	—	—	—
Pick up medicine	—	—	—	—
Other errands (e.g., cleaners, post office)	—	—	—	—
Fill out forms	—	—	—	—
Handle money (write checks, pay bills)	—	—	—	—
Loan or give you money	—	—	—	—
Did you receive help with any other errands/ business I have not already mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Personal Care: Help Received

[**READ:** Now I would like to ask about help with personal care that people outside your family who are not paid to help have given you over the last year.]

<u>Type of Help</u>	<u>anyhelp</u>	<u>anyfreq</u>	<u>parthelp</u>	<u>partoftn</u>
Telephone	___	___	___	___
Take medicine	___	___	___	___
Eat	___	___	___	___
Dress/undress	___	___	___	___
Help with personal grooming (with hair, shaving, makeup)	___	___	___	___
Get in or out of bed	___	___	___	___
Bathe/shower	___	___	___	___
Walk	___	___	___	___
Check on to make sure you are alright	___	___	___	___
Did you receive help with any other personal care I have not already mentioned? Write in:				
_____	___	___	___	___
_____	___	___	___	___
_____	___	___	___	___

Social/Emotional: Help Received

[**READ:** Now I would like to ask about social and emotional help you receive from others.]

<u>Type of Help</u>	<u>anyhelp</u>	<u>anyfreq</u>	<u>parthelp</u>	<u>partoftn</u>
Remember with a card or a gift (not holiday) (e.g., special occasion or to cheer up)	—	—	—	—
Listen to you talk about your problems	—	—	—	—
Share joys and fun times	—	—	—	—
Express affection or support with a hug, pat, or hand squeeze	—	—	—	—
Stay with you during a difficult time	—	—	—	—
Say they would keep a conversation private (confidential)	—	—	—	—
Offer advice	—	—	—	—
Did some activity with someone to help get his/her mind off things	—	—	—	—
Is there any way you have received emotional support that I haven't mentioned? Write in:				
_____	—	—	—	—
_____	—	—	—	—
_____	—	—	—	—

Appendix G: Measurement of Relationship Quality

My Relationship With The Person I Help or Who Helps Me*

[Sometimes the people we give help to or receive help from are close friends. Other times they are neighbors or people we happen to know. Please fill out this questionnaire to give us an idea of your relationship with _____.

1. Right at present, taking everything into consideration, how close do you feel is the relationship between you and _____? (The scale below has extremely distant at one end and extremely close at the other. Please circle the number that best represents your relationship)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
 extremely distant _____ extremely close

2. At present, how is communication between you and _____ how well can you exchange ideas or talk about things that really concern you? (The scale below has extremely poor at one end and extremely good at the other. Please circle the number that best represents the quality of your communication)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
 extremely poor _____ extremely good

3. Generally, how well do you and _____ get along together these days? (Please circle the number that best represents how well you get along)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
 Not at all well _____ extremely well

4. In general, how similar are your views about life to those of _____? (Please circle the most appropriate number)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
 extremely different _____ extremely similar

5. How often do you do things together with _____? (Please circle the most appropriate number)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____
 never _____ constantly

Appendix H

In a discussion of the data analysis for this research, Dr. Alan Acock, Chair of the Department of Human Development and Family Studies at Oregon State University, recommended that only control variables that were highly correlated with the dependent variable be included in the regression equations proposed for the study. The author was unable to locate a published standard for defining "highly correlated;" that is, for defining the criterion for including or excluding control variables. In the absence of a published standard, the author chose to define "highly correlated" as those which reached statistical significance. In a subsequent discussion, Dr. Acock suggested the regressions be run with and without the control variables. This was done. When the control variables were kept in the equations, the regressions were not significant, the same results obtained when they were excluded.

Appendix I

Differences between Partners in Groups A and B on Perceptions of Aid Exchange

Perceptions of aid exchange	<u>M</u>	<u>SD</u>	2-tailed <u>t</u> -test
Instrumental Aid			
A Gives	11.23	9.83	.76
B Receives	10.13	9.32	
B Gives	3.26	5.01	- .47
A Receives	3.58	5.14	
Socioemotional Aid			
A Gives	13.87	6.85	3.77**
B Receives	9.58	7.99	
B Gives	8.58	7.21	- .33
A Receives	8.97	5.78	
Total Aid			
A Gives	25.10	13.70	2.71*
B Receives	19.71	15.55	
B Gives	11.89	10.60	- .50
A Receives	12.55	8.75	

*p < .05, **p < .01