

LAKEHEAD UNIVERSITY

DEPRESSION, QUANTITY OF SOCIAL INTERACTION,  
RECIPROCAL SELF-DISCLOSURE, AND PERSPECTIVE-TAKING  
IN THE ELDERLY

By

JOCELYNE B. HAMEL



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## Abstract

The present research was designed to investigate the relationships among: a) depression, b) the quantity of social interaction and, c) the quality of social interaction in the elderly. Twenty-three residents aged 72 to 98 of a rural senior citizens home were tested. The subjects were administered the Zung Self-Rating Depression Scale and Flavell's (1975) measure of visual perspective-taking. The quantity of social interaction was measured by the subject's self-reports of their frequency of interaction with various groups of people and the number of persons they talked to most frequently. The measure of the quality of social interaction was derived from a round robin procedure based on the subjects' reported self-disclosure to peers. This enabled the identification of subjects who had relationships characterized by reciprocal intimate disclosures - or confidants. The analysis provided partial support for the validity of the quantity and the quality of social interaction measures. Consistent with previous research, depression was negatively correlated with one measure of quantity of social interaction, the number of peers with whom the subject frequently talked. Contrary to expectation, perspective-taking was not significantly correlated with the measures of quantity of social



interaction or the measures of reciprocal disclosure. Contrary to the quality of social interaction research, the intimacy of the subject's disclosures and the intimacy of the target's disclosures were not significantly correlated, indicating that disclosure patterns among the elderly were not reciprocal. In addition, having a relationship characterized by reciprocal intimate disclosure was positively, rather than negatively correlated with depression. This indicates that the more depressed an elderly individual is, the more the individual had in objective terms - confidants. One interpretation of this latter finding was advanced, that depressed elderly reciprocate personal information in the form of negative perceptions or complaints.

## The Problem

The present thesis is concerned with the factors that may contribute to depression in the elderly. The concept of depression has generally been investigated within the parameters of two related paradigms that may be referred to as the medical model and the psychological model. The implications of the term depression is to some extent dependent upon the specific model used. The medical model utilizes the term depression to refer to a diagnosed disorder. The psychological model, on the other hand, generally uses the term depression to refer to depressive symptoms which may vary in severity or degree. The medical model has clinically defined depression as "a dysphoric mood, usually ... (associated with a) loss of interest or pleasure in all or almost all usual activities or pastimes. It is generally prominent, relatively persistent, and associated with other symptoms of the depressive syndrome ... (such as appetite loss, change in weight, change in sleep patterns, etc.)" (DSM-III, 1980, p. 210). The psychological model defines depression as "an emotional reaction, altered mood state, and symptom complex accompanied by negative self-concept and lowered self-esteem and associated with regressive and self-punitive wishes" (Murray et al., 1980, p.550). Related measures have been used to assess depression and depressive symptoms. For example, either model may assess depression and depressive symptoms utilizing self-report

questionnaires, such as the Langer scale, and inventories completed by raters from unstructured or semi-structured interviews such as the Geriatric Mental Status or the Combined Mental Status Schedule (Gurland, 1976). The medical model, in addition, includes psychiatric examination and diagnosis.

Research clearly indicates that depression is a problem in the elderly, although there is some disagreement concerning the extent of the problem. For example, studies utilizing the medical model have found that the frequency of depressive disorders is correlated with age and sex categories. Specifically, depressive disorders are more frequently diagnosed in persons between the ages of 25 and 65 years of age as compared to other age groups. In addition, females are more frequently diagnosed as depressed until approximately age 45. After age 45, frequency of female depression begins to decrease while male diagnostic rates begin to increase. Thus, by age 70 depression in males may even outnumber that in females (Gurland, 1976). Estimates of the frequency of depressive disorders in the elderly range from 2-4% (Gurland, 1976) to as high as 25% (Busse & Wang, 1974). Conversely, the psychological model indicates that the frequency of depressive symptoms are highest in the over 65 age group (Gurland, 1976). The very high rate of depressive symptoms, in the elderly, are very distressing (Silverman, 1968) with estimates between 10% (Gurland, 1976) and 65% (Pfeiffer & Busse, 1973) being reported in

the literature. In addition, depression is conceptually similar to morale and life satisfaction. Consistent with this, numerous investigations have demonstrated that depressive symptoms are correlated with the elderly individual's degree of life satisfaction and morale (Maddox, 1965).

Researchers have suggested that the variation in prevalence rates may be due to the wide variation in assessment devices utilized for assessment purposes, as well as the experience and training of the clinician (Gurland, 1976). Furthermore, it has been proposed that depression in the elderly has been overlooked because the symptoms are regarded as characteristic of senescence, organic impairment, or simply the inevitable accompaniments to aging, rather than as depression (Epstein, 1976). Thus, it is apparent that depression in the elderly may be an even greater problem than available estimates indicate. The following paper will use the term depression to refer to the psychological model of depressive symptoms.

### The Issue

Some research indicates that one important factor contributing to depression is the individual's level of activity or social interaction (Havighurst, Neugarten, & Tobin, 1968; Maddox, 1965). Investigation of the activity theory by Maddox (1965) for example, found that high levels

of activity and social interaction were positively correlated with the individual's life satisfaction score.

However, such investigations correlating social interaction/activity with morale and life satisfaction have been criticized for neglecting to consider the quality of the interaction. The existing theory and research points to two important aspects of the quality of social interaction that may affect depression in the elderly: 1) the form of the opportunity for intimate disclosure and, 2) the elderly individual's degree of egocentrism or correspondingly his/her lack of ability to take the perspective of another. The present research will focus upon the above identified dimensions of social interaction which may contribute to depression in the elderly. The specific factors which will be investigated include: the frequency of social interaction, reciprocal intimate self-disclosure, and egocentrism/perspective-taking.

### Activity in the Elderly

Disengagement theory is one prominent approach that has been used to describe responses to the aging process. Disengagement theory, first proposed by Cummings and Henry (1961) postulates that a reduction in the frequency of interactions with the environment is desired by both the elderly individual and society. The theory postulates that decreased emotional investment in others and an individual's preoccupation with the self are adaptive

responses to aging that are associated with life satisfaction. However, the theory also states that disengagement will be dysfunctional and the individual will suffer if the time of disengagement between the individual and society is incongruent.

A second approach, the activity theory (Havighurst & Albrecht, 1953) postulates that activity and life satisfaction are positively correlated, and that the greater the loss in one's social activities the lower one's life satisfaction (Lemon et al., 1972). The theory suggests that the needs and values of old age are the same as in middle age. However, social norms such as forced retirement and physiological decline often prevent the elderly individual from fulfilling one's natural tendencies. Thus, the individual must replace lost activities and roles with alternative activities and roles if morale and life satisfaction are to be maintained (Havighurst et al., 1968; Havighurst & Albrecht, 1953).

The two contrasting theories have served to generate research investigating the relationship between activity and well-being. One such study (Maddox & Eisdorfer, 1962) investigated the relationship between activity and morale in persons above 60 years of age. The subjects were divided into four groups based on high or low activity and morale scores. The results provided support for the activity theory by indicating that high activity was associated with high morale and low activity with low morale for 73% of the subjects. Maddox (1965) then

separated activity into interpersonal and non-interpersonal activity. The results indicated that the subject's total activity score, composed of both interpersonal and non-interpersonal activity subscores, was more highly correlated with life satisfaction than either individual subscore. The results also indicated that for the youngest elderly subjects the absence of clinical depression was positively correlated with high levels of activity. A similar study conducted by Markides and Martin (1979) provided additional support for the relationship between activity and life satisfaction. The results of their path analysis revealed that one's activity level, composed of both interpersonal and non-interpersonal activity, both directly and indirectly influenced life satisfaction in the elderly.

A somewhat different perspective proposed by Neugarten, Havighurst, and Tobin (1965) suggested that an individual's personality is the pivotal dimension in the relationship between life satisfaction and social role activity. Their study suggested that life satisfaction was associated with activity more often than non-activity, but with some exceptions. Those individuals who had chosen low activity levels were satisfied with their low level of activity; such as those labelled the disengaged or rocking-chair types, the armored-defended types, and the passive-dependent personality types.

## Social Interaction

Following the lead of activity theory, researchers have focused upon social interaction as a potential contributing factor to depression in the elderly. The term social interaction typically refers to the amount and frequency of social contact with other persons, such as family, friends, and associates (Beckman, 1981; Conner & Powers, 1975). Research generally indicates that the quantity of social interaction can be used to predict contentment, morale (Larson, 1978), life satisfaction (Harel et al., 1979; Larson, 1978; Leviton, 1982), and satisfaction with treatment (Harel et al., 1982). Data also indicated that as the frequency of visitation increases the level of psychosocial impairment decreases (Greene & Monahan, 1982). The association between subjective well-being, referred to as contentment, morale, life satisfaction, and related constructs (such as marital status, income, health, residence, availability of transportation, etc.) (Larson, 1978) and the frequency of social interaction supports the activity theory of successful aging.

Further support for the activity theory was found in a study investigating the relationship between social isolation and psychosocial functioning. Qualls, Justice, & Allen (1980) found that isolation from family members was associated with numerous social difficulties. For example,



social isolation was correlated with one's level of social functioning, drug and alcohol abuse, low productivity, trouble with the law, dependency on public agencies, diminished capability to cope successfully with the stresses of daily life, and with the implementation of less desirable coping mechanisms. Also, isolation from friends was found to correlate most strongly with depression and to a lesser extent, with decreased levels of social functioning.

More recent research, however, has consistently criticized such investigations for ignoring the quality of social interaction. The quality of social interaction has been conceptualized in various ways. Beckman (1981) proposed that it is the subjective or perceived level of satisfaction "... with the amount of contact and quality of (social) contact" (Beckman, 1981, p.1078). Previous investigators including Beckman (1981) have suggested that the quality of social interaction was a more salient factor contributing to well-being than the quantity of social interaction. Such hypotheses led Beckman (1981) to investigate the influence of both the quantity and the quality of social interaction on measures of psychological well-being consisting of morale, depression, and social isolation. The quantity of social interaction was measured by asking subjects to rate how frequently they interacted with eight different categories of people. The quality of social interaction was then assessed by requesting the subjects to rate their degree of satisfaction with both the

amount and the quality of their interaction with each person previously mentioned. A five point scale ranging from very dissatisfied to very satisfied was used for both satisfaction measures. Beckman then compared the elderly women's well-being scores to the quantity and the quality of contact with their children versus with friends and associates. Among other findings, the results indicated, that for mothers, well-being was most strongly correlated with the quality of one's contacts whereas, for non-mothers, well-being was correlated with both the quantity and the quality of the individual's contacts. Investigations by Chiriboga (1982) and Larson (1978) provided additional support for the predicted relationship between the quality of social interaction and well-being. Their investigations indicated that the disruption in psychological and social functioning which followed marital separation or divorce was greater in older adults than in younger adults (Chiriboga, 1982) and greater for recent widows without a confidant, than widows with a confidant (Larson, 1978).

The qualitative measures such as that used by Beckman (1981) have also been criticized. For example, Norris, Rubin, Cohen, & Both (1983) suggested that such measures are still assessing the quantity of social interaction, but in a more sophisticated manner; for example, in terms of the presence or absence of a confidant. Another investigation used to assess the quantity and the quality of social interaction in a somewhat different manner was

conducted by Cohen and Rajkowski (1982). Their study was primarily concerned with the investigation of the concept friendship, a measure of the quality of social interaction. They proposed that one individual's concept of friendship may not be equivalent to the researchers' concept of friendship, or to another individual's concept of friendship. Thus, variations in friendship patterns found in previous investigations may simply be the result of different individual's different concept and use of the abstract terms for defining and assessing the concept. The authors concluded that network analysis was one method which could be successfully used to tap the various levels and manifestations of social relationships. To achieve this goal the subjects were given the Comprehensive Assessment and Referral Evaluation (CARE) and the Network Analysis Profile (NAP). The CARE was used to assess physical health, mental health, and social functioning and the NAP to assess what may be referred to as the quantity and the quality of social interaction. The quantity of social interaction was assessed by measuring the frequency, duration, and intensity of the single room occupancy (SRO) elderly's various exchanges with others. The quality of the relationship was assessed by charting the directional flow and content of such exchanges. Accordingly, the subjects were required to report on the frequency of visits they typically received from others in their rooms or in the community lounge; frequency of exchanges in informal conversation; advice;

money; drinking/drugs; food aid; medical aid; other aid; eating out together; other social outings; and whether intimate thoughts were shared. The results indicated that persons rated as non-friends often engaged in activities typically associated with friends. For example, both friend and non-friend contacts exchanged more than one type of content (eg. conversation, loans), were considered intimate, and subjectively important. Further comparison of friend/non-friend contacts indicated that friends were typically seen less frequently, known longer, and lived more often outside the hotel. The authors concluded that reported friendship patterns typical of the general population may not be applicable to the elderly living in the SRO.

Although the investigation by Cohen and Rajkowski (1982) provides additional evidence for a relationship between the quantity and the quality of social interaction within the SRO elderly, it also generates several questions. The SRO elderly, for example, are not representative of the general population (Cohen & Sokolovsky, 1980), therefore, behavior patterns in the general population may differ substantially from those found in the above investigation. The authors also reported that the subjects were administered the CARE, but associations between the CARE (which included depression) and the NAP were not reported. Thus, one can only wonder what, if any, relationship exists between factors assessed on the CARE, such as depression, and the behaviors

identified in the NAP.

A second investigation which has yielded additional data regarding the quality of social interaction was conducted by Snow and Crapo (1982). Their sample of elderly medical patients were requested to complete the Emotional Bondedness Scale, while referring to a confidant. The confidant was described as the person "... you most trust and confide in" (Snow & Crapo, 1982, p. 610). The measure was composed of 12 items that required the subject to evaluate on a 3 point scale a given statement's accuracy in depicting their relationship with the aforementioned confidant. The self-report measure was conceptualized as assessing the extent of emotional support, mutual sharing, and feelings of positive affect an individual experiences in their relationship with a confidant. The scale was compared to two measures of subjective well-being (Affect Balance Scale and Life Satisfaction Index-A) and three measures of health including self-rated health, the Sickness-Impact Profile, and Zung's Self-Rating Depression Scale. The data analysis revealed that emotional bondedness was positively correlated with both measures of subjective well-being. The correlation between emotional bondedness and depression, unfortunately, was not reported by the authors.

Although previous research has studied the relationship between well-being and the presence of a confidant (Chiriboga, 1982; Larson, 1978), the

investigation by Snow and Crapo (1982) was a pioneering attempt at discerning the qualities of a confidant. One major problem with the investigation, however, concerns the validity of the subjects' self-reports of emotional bondedness. For example, the Emotional Bondedness Scale is strictly subjective, therefore, the correspondence between the obtained ratings and actual social relationships is not known. Consider, for example, the mutual sharing aspect of the scale. There is no objective evidence indicating whether the subject contributed to his/her relationship and whether the confidant reciprocated that contribution. It is also possible that the ratings simply reflect the individual's positive or negative view of social relationships. This issue is important because the correlation between emotional bondedness and life satisfaction may reflect the common attribute of perceived satisfaction, rather than a correspondence between a specific type of social relationship and life satisfaction (depression). One purpose of the present research is to investigate this latter relationship by assessing the validity of self-reports and by assessing, as objectively as possible, the quality of the social relationship.

### Self-Disclosure

One aspect of the quality of social interaction that has been dealt with by researchers, such as Snow and Crapo

(1982), can be termed self-disclosure with a confidant. Self-disclosure is defined as the act of revealing personally relevant information about one-self to another (Jourard, 1961). It is considered to be an indice of the "closeness" (Jourard, 1959, p.428) of the relationship. The extensive literature on self-disclosure has encompassed such areas as the: content of self-disclosure, reciprocal self-disclosure, loneliness, and also, to a more limited extent, self-disclosure patterns within the elderly.

Various characteristics of self-disclosure have been investigated by researchers. Jourard and Lasakow (1958), for example, found that females disclose more than males. The amount of self-disclosure, in addition to gender, has been found to be dependent upon the target of the disclosure. Unmarried college students, for example, reported higher amounts of self-disclosure to mother than to a variety of others such as: father, male friend, or female friend. Married subjects reported that they disclosed more information to their spouse than to others such as: mother, father, or same-sex friend. Additional research indicates that the content of self-disclosure is also dependent upon gender. College females, for example, disclose more information in the interpersonal area than college males; whereas, college males have a tendency to disclose more information regarding their social and political attitudes than college females (Rubin, 1978). The research by Cohen and Rajkowski (1982), on the other hand, suggested that such gender distinctions may not

apply, at least to those elderly in the SRO. Their results suggested that gender is only minimally correlated with the recipient of intimate thoughts. Due to the non-generalizability of their results, patterns of self-disclosure in other elderly populations should be investigated.

A means of determining the validity of self-disclosure was established by Jourard and Landsman (1960). During their investigation, the subjects were interviewed by one of the authors, who requested information contained on a 15-item Self-Disclosure Questionnaire. The authors then assessed disclosure-output by asking each subject what information contained on the questionnaire he had revealed to the eight fellow subjects in the study. Disclosure-intake was also determined by asking each subject what information on the questionnaire was known of each of the other subjects. In addition, subjects were asked which of their fellow subjects they liked best and also, knew best. The authors reported that the close association between disclosure-output, disclosure-intake, and the interview data demonstrated the validity of the questionnaire. Furthermore, the correlation between disclosure and knowing was stronger than the correlation between disclosure and liking. Therefore, this study suggested that an individual discloses to others he knows best and in turn, knows best those individuals who disclose to him.

Previous research has suggested that liking someone



does not necessarily lead to self-disclosure. In an attempt to identify factor(s) which may lead to self-disclosure, Miller, Berg, and Archer (1983) suggested that self-disclosure by a target individual may be dependent upon that individual's ability to elicit self-disclosure. The authors began testing their hypothesis by initially administering several indices designed to assess various dimensions of the individual including the individual's self-rated assessment of whether they characteristically elicited self-disclosure from others and if they themselves were high disclosers. Individuals scoring within the upper or lower third of the original population on either scale were then selected to participate in a second investigation. Various combinations of high or low scoring elicitors participated in a semi-structured conversation with high and low disclosers. The results indicated that low elicitors of disclosure did not perceive differences in their high or low disclosing partners, although, independent raters and the disclosers, perceived differences in the level of intimate disclosure elicited. Therefore, Miller et al. (1983) concluded that the ability to elicit self-disclosure may influence the accuracy of one's perception of the self-disclosure of others.

A consistent finding in research investigating patterns of self-disclosure has been termed reciprocal self-disclosure. Reciprocal self-disclosure generally refers to the pattern of communication whereby the

disclosure from one individual is met by reciprocal disclosure from a second individual (Perlman & Cozby, 1983). It has been proposed that the "norm of reciprocity" (Gouldner, 1960, p.171) governs such patterns of self-disclosing behavior. A number of investigations (Jourard, 1959; Jourard & Landsman, 1960; Jourard & Richman, 1963) have provided support for this position. For example, Jourard (1959) found that the disclosure-outputs of female nursing students were correlated with the disclosure-inputs of their nursing colleagues. Similarly, Jourard and Richman (1963) found that subjects' reports of their disclosure-outputs to specified target persons such as mother, father, and best friend were positively correlated with the disclosure-inputs also reported by those specified target persons. Davis (1976), in turn, has indicated that one individual in a dyad assumes major responsibility for the level of intimacy and the second individual fulfills the norm of reciprocity by responding with equally intimate disclosure.

Previous investigators have also hypothesized that reciprocal disclosure in the acquaintance process will lead to the development of mutual trust and liking associated with the development of relationships (Altman & Taylor, 1973). Investigation of the relationship between reciprocal self-disclosure and liking during the acquaintance process (Cozby, 1972), and within established relationships (Jourard, 1959), supported such a

hypothesis. Additionally, the research indicated that the intimacy levels of such disclosure influences the reported degree of liking. Cozby (1972), for example, has indicated that medium levels of disclosure were more strongly correlated with liking than low or high levels of intimate disclosure. Whereas, Brewer and Mittelman (1980) indicated that strangers rated trust highest after receiving medium disclosure. Correspondingly, Jourard (1959) found that in a group of individuals well-acquainted with each other, the two individuals least-liked indiscriminately disclosed high or low levels of intimacy.

The level of intimacy of disclosure, in addition to liking, has been found to influence the likelihood of reciprocal disclosure during the acquaintance process. Cosby (1972) found that high levels of intimate disclosure were less frequently met with reciprocal disclosure than either low or medium intimacy levels. Archer and Berg (1978) further demonstrated that the level of intimacy influenced a subject's response differently, dependent upon the specific experimental condition used in their investigation. Their subjects were presented with self-descriptions of either high, medium, or low intimacy and asked to either "respond" or "respond writing whatever you wish". Their results indicated that when subjects were given the freedom to respond as they wished, reciprocal disclosure was much more probable.

Research in self-disclosure has also dealt extensively with the concept of loneliness. Loneliness has been

defined as the "... person's conclusion that he or she has fewer or less initial social relationships than desired or expected. Furthermore, this conclusion is associated with a negative emotional tone ranging from mild discomfort to intense pain" (Solano et al., 1982, p. 524). Loneliness is viewed as a distinct and separate emotional state from that of depression (Weeks & Bragg, 1980). Research indicates that although loneliness and depression are not causal, they often co-occur. Loneliness, in addition to depression, (Qualls et al., 1980) has been associated with patterns of social interaction.

One such investigation compared loneliness to an individual's pattern of self-disclosure. The investigation by Chelune, Sultan, and Williams (1980) revealed that lonely women have difficulty revealing personal information appropriately to new acquaintances, although the difficulty was significantly diminished in established relationships and structured social situations. The lonely and non-lonely females also differed in their patterns of social activity. The level of social activity in females who adapted their patterns of self-disclosure to situational cues was greater than the social activity levels of females who did not adapt their self-disclosures. This was indicative of an association between one's activity level and pattern of self-disclosure.

Further investigation of the relationship between loneliness and pattern of self-disclosure was conducted by

Solano, Batten, and Parish (1982). Their results indicated that for both male and female subjects, loneliness was associated with the amount and form of self-disclosure. The results also indicated that the lonely subjects were significantly less well known and made different choices in topic intimacy than non-lonely subjects. Lonely subjects chose high intimacy topics for same sex-partner conversations and low-intimacy topics for opposite sex-partner conversations. Non-lonely subjects chose a reverse pattern. The results also indicated that lonely people, who chose low-intimacy topics, failed to perceive the lack of intimacy in their conversations with others. Lonely persons reported a higher degree of familiarity following their conversation with a non-lonely stranger, than did the non-lonely stranger. The lonely subjects did not appear to perceive the other individual's lack of involvement in the conversation. Thus, the authors concluded that both self-perceived and actual self-disclosure patterns differ among lonely and non-lonely college students.

Patterns of self-disclosure also differ among lonely and non-lonely elderly subjects (Perlman et al., 1978). The elderly subjects in this study were requested to respond to a self-administered questionnaire containing 101 closed-ended questions. The questionnaire encompassed such areas as: health, social contacts, social anxiety, social influence, self-disclosure, social and leisure activities, recent emotional feelings, and life satisfaction. The

results indicated that the frequency of social interaction was associated with loneliness, as assessed using 11 items from the UCLA loneliness scale and 2 items measuring the frequency and intensity of current loneliness. A stronger positive correlation between loneliness and frequency of interaction was found between the subject and friendship contacts than that found between the subject and child contacts. Willingness to disclose was not associated with loneliness, however, lonely subjects were more willing to disclose high intimate topics to acquaintances than non-lonely subjects. The authors suggested that this may be indicative of less sensitivity to appropriate self-disclosure patterns. Although, lonely and non-lonely individuals did not differ in the frequency of participation in organized activities, lonely individuals did report lower frequencies of participation in leisure activities with friends. In addition, lonely individuals more frequently reported feelings of emptiness, low energy, restlessness, boredom, as well as lower life satisfaction. The authors concluded that avoiding loneliness was associated with maintaining social contacts, developing new social contacts, and with maintaining control over one's personal affairs.

Patterns of self-disclosure have rarely been investigated within elderly populations. The study by Perlman, Gerson, & Spinner (1978) indicated that further research is warranted with specific attention focused upon reciprocal patterns of self-disclosure.

### Egocentrism and Perspective-Taking

The success in establishing a reciprocal pattern of self-disclosure may be associated with the individual's degree of egocentrism. Piaget (1950) referred to egocentrism as a lack of differentiation in some aspect of subject-object orientation or interaction. Looft (1972) states that "... egocentrism is not selfishness or the extensive use of 'I' or 'me'; it is an embeddedness in one's own point of view". Conversely, perspective-taking is viewed as the individual's ability to consider his/her behavior simultaneously from different perspectives (Feffer & Suchotliff, 1966). Egocentrism is thought to permeate functioning in numerous spheres during the early stages of development including: cognition, perception, speech, emotions, and attitudes (Muuss, 1982).

Central to the concept of egocentrism is the process of decentration. Decentration is the process by which a young child becomes able to discriminate subject from object in subject-object interactions (Piaget, 1950). This ability has been termed perspective-taking. It refers to "the ability to recognize, articulate, and coordinate the differing perspectives and internal states of others" (Marsh, 1981, p.38). According to the social relationship hypothesis the process of decentration occurs primarily as a result of the exchange of information, often dissonant information, during social interactions with one's peers.

The individual, as a result of the examination and re-examination of other perspectives and one's own perspective, as a function of social interaction, progresses to higher thought processes and learns to take another's point of view.

The ability to decenter is viewed as a concrete operational skill which, theoretically, should not change qualitatively in adulthood; the mental processes involved are invariant, unidirectional, and irreversible (Flavell, 1970). Looft (1972), by contrast, proposed that egocentrism is evident in the elderly, and may account for a wide pattern of behaviors documented in the literature. Support for Looft's position has been demonstrated in a number of studies (Bielby & Papalia, 1975; Looft & Charles, 1971; Rubin, 1974; Rubin et al., 1973) investigating the relationship between egocentrism and age. Tasks assessing visual and communicative perspective-taking, as well as conservation, have been reported as indicating that egocentrism is higher in older adult groups than in younger adult groups (Bielby & Papalia, 1975; Looft & Charles, 1971; Rubin, 1974; Rubin et al., 1973). Alternatively, an investigation conducted by Tesch, Whitbourne, and Nehrke (1978) did not support Looft's position. Age-related differences in the performance of visual and communicative perspective-taking were not found in a group of males between 33 and 83 years of age, from a single environmental setting. Their results suggested that perspective-taking abilities were maintained



throughout adulthood.

A variety of factors have been postulated as contributing to the poorer performance of elderly subjects documented in the literature. Such factors include cohort differences, differences in the level of educational attainment, and a reduced amount of social interaction (Looft, 1972). Cohort differences have not as yet been determined (Looft, 1972) and results regarding educational differences are somewhat inconsistent (Bielby & Papalia, 1975; Rubin, 1974; Rubin et al., 1973; Tesch et al., 1978).

Support for the hypothesized relationship between egocentrism and social interaction has been documented with individuals of different age groups. Cowan (1966), for example, demonstrated that performance on a visual perspective-taking task in children aged 8, 9, and 10 years was correlated with the child's performance during social interaction. An investigation by Marsh, Serafica, and Barenboim (1981) studied the interrelationships between affective and social perspective-taking, interpersonal functioning, and interpersonal problem solving in eighth grade children. The authors found a positive correlation between affective perspective-taking and effective interpersonal functioning; although, no correlation was found between social perspective-taking and interpersonal functioning. A third investigation, conducted by Feffer and Suchotliff (1966), indicated that the ability to take the perspective of another is correlated with measures of social interaction. These

results were obtained by administering a role-taking task assessing decentering ability to 36 undergraduate students. Dyads were then formed, composed of students who had obtained similar scores on the role-taking task. The performance of the subject pairs were then assessed during social interaction on a password game including: a) face to face verbal interaction, and b) back to back verbal clue, written response interaction. The 36 subjects were also assessed on measures of vocabulary, word-fluency, and word-association. The results indicated that the dyad role-taking score differences correlated with the scores obtained during the social interaction task. The results were interpreted as support for the hypothesis that effective social interaction is a function of an individual's ability to consider his or her behavior simultaneously from different viewpoints (Feffer & Suchotliff, 1966).

Looft and Charles (1971) hypothesized that the losses often associated with elderly individuals may include a reduction in the amount of social interaction with one's peers. They hypothesized that the loss of social interaction may result in a) decreased opportunity to exchange and examine different points of view, and in turn, b) decreased perspective-taking skills or increased egocentrism. Testing of the hypothesis was conducted by comparing two age groups of adults on a task assessing social interaction and a test of spatial egocentrism. The social interaction task required the subjects to place 16

objects in the same manner on a 4 x 4 matrix without viewing each other's board. Their results demonstrated that although the older subjects performed poorer on the spatial egocentrism task than the younger subjects, the scores were not related to performance on the social interaction task. Looft and Charles (1971) suggested that such results reflect the elderly individual's many years of experience in communicating with others, in essence, proposing that elderly individuals rely on the feedback received during social interaction.

The results obtained by Looft and Charles (1971) indicated that the younger adults' performance on a spatial egocentrism task was better than the older adults' performance. Their results also indicated that both adult age groups, utilized in the study, were able to interact successfully in the structured social situation. It can also be argued that the obtained results were due to the structured and simplistic nature of the social interaction task, which overtly demanded that the participants exercise perspective-taking skills. By contrast, naturally occurring behaviors such as during a conversation, in which perspective-taking is not so clearly demanded, may be correlated to one's degree of perspective-taking and success in social interaction.

Thus, previous research and theory suggests a relationship between perspective-taking and one aspect of the quality of social interaction, that of self-disclosure. Support for such a relationship was

indicated by Selman and Selman's (1979) exploratory investigation of friendship patterns in children, which indicated that children pass through a number of distinct stages in their development and understanding of friendship. During the initial stages of the investigation, a dilemma was presented to 50 pilot subjects, in the form of an open-ended, semi-structured interview, from which six issues important to friendships among children were identified. A dilemma was then presented to 93 additional subjects followed by a flexible series of questions based on the six friendship issues initially identified. The authors concluded that there were five sequential stages of friendship development, each characterized by a distinct, formal structure of thought. For example, during the development and understanding of friendships, a child might progress from viewing relationships from their own self-interested point of view to the stage termed Intimate, Mutually Shared Relationships, which is characterized by perspective-taking and collaboration with others for mutual and common interests. In addition, the authors speculated that the stages of friendship development identified in children may also apply to the qualitative phases in adult friendship development. Specifically, perspective-taking may be related to intimate self-disclosure. The proposed research will explore this relationship between perspective-taking and reciprocal self-disclosure in the elderly.

## Overview and Hypotheses

The elderly individuals in the present study were administered a number of tests designed to assess: a) depression, b) the quantity of social interaction and, c) the quality of social interaction. Specifically, depression was assessed by the Zung Self-Rating Depression Scale (Zung & Durham, 1965). The quantity of social interaction was assessed by a modified version of Beckman's (1981) scale designed to assess the subject's reports of their frequency of social interaction with various groups of people, and the number of persons he/she talked to the most. The primary measure of the quality of social interaction, the subjects' reported intimacy of disclosure to others and in turn, the others disclosure to the subject, were determined to enable the identification of individuals with high intimate reciprocal relationships. The validity of disclosure was assessed by a modified version of Jourard and Landsman's (1960) procedure in which both intimate disclosure and disclosure knowledge are measured. A secondary measure related to the quality of social interaction, egocentrism, was assessed by the visual perspective-taking measure developed by Flavell, Botkin, Fry, Wright, and Jarvis (1975).

Previous investigators have proposed a negative relationship between depression and the quantity of social interaction. Consistent with this hypothesis, researchers

have found that depression is negatively correlated with the frequency of social interaction (eg. Green & Monahan, 1982; Larson, 1978). Correspondingly, a negative correlation between depression and the frequency of social interaction, particularly with one's peers was expected. In addition, the validity of one measure of social interaction, the persons talked to, was also assessed.

Three issues related to the quality of social interaction were also examined in the present research. The first issue investigated was the relationship between depression and the quality of social interaction (eg. Beckman, 1981; Larson, 1978; Norris et al., 1983). Previous investigations have found that depression is negatively correlated to the quality of social interaction specifically, in terms of the presence or absence of a confidant (eg. Norris et al., 1983). One limitation of previous research, however, has been the subjective nature of the methods used to assess the presence or the absence of a confidant. For example, researchers have relied on the subjects' reports of their confidants, which may be influenced by the subjects' emotional state. Specifically, individuals who are depressed are more likely to view their relationships with others as negative and as a consequence perceive that others are not sharing their feelings; hence, they do not have any confidants. Therefore, a round robin procedure was implemented to enable the investigation of reciprocal disclosure among a group of elderly people who were familiar with each other.

The round robin procedure entailed assessing each persons disclosure to other group members and in turn, their disclosure to the individual. An additional aim of the present research was to assess the presence/absence of a confidant in an objective manner by determining whether others reciprocated intimate disclosure. This was achieved by generating a code identifying those individuals with both high intimacy and high disclosure reciprocity scores. Following the lead of previous research, it was expected that intimate reciprocal disclosure would be negatively correlated with depression.

The second issue assessed in the present research was the reciprocity of disclosure among the elderly. Previous research has shown that the disclosure from one individual is matched by the disclosure from a second individual (Perlman & Cozby, 1983). Consistent with this, Jourard (1959) found that among a group of individuals familiar with each other, intimate disclosure tended to be reciprocal. Correspondingly, a positive correlation between the intimacy of the subject's disclosures and the intimacy of the target's disclosures was expected.

The third issue examined with respect to the quality of social interaction, was the validity of self-disclosure. Jourard and Landsman (1960) indicated that the validity of self-disclosure could be assessed by correlating the intimacy of disclosure with an individual's knowledge of another. Thus, it was expected that the intimacy of the subject's disclosure to a given target (or

other person) would be positively correlated with the target's knowledge of the subject.

Although previous research has shown that both the quantity and the quality of social interaction are correlated with measures of subjective well-being, such as depression, the relationship between the quantity and the quality of social interaction has not been assessed. Therefore, a primary objective of the present research was to a) independently assess the measures of both the quantity and the quality of social interaction, and b) to explore the relationship between these measures.

Looft and Charles (1971) suggested that the losses often associated with elderly individuals, such as a reduction in the amount of social interaction, may contribute to the elderly individual's poorer performance on tasks assessing egocentrism documented in the literature. A number of investigations have in turn found that effective social interaction, as measured in terms of interpersonal functioning skills, is positively correlated with an individual's ability to take the perspective of another (Feffer & Suchotliff, 1966; Marsh et al., 1981). Therefore, in the present research, it was expected that the frequency of social interaction would be positively correlated with perspective-taking.

Previous research has also proposed that the ability to take the perspective of another may be related to intimate reciprocal disclosure. Selman and Selman (1979), for example, indicated that in children both



perspective-taking and intimate reciprocal disclosure are important dimensions of friendship development. In addition, previous research has indicated that the qualitative aspects of an individual's interaction with a confidant is correlated with the individual's reported depression (Snow & Crapo, 1982). Following the lead of previous research, it was expected that a) perspective-taking and intimate reciprocal disclosure would be positively correlated, and b) by that association, perspective-taking and depression would be negatively correlated.

The final aim of the present research was to explore the relationship between gender and intimate disclosure. Previous research on elderly in the SRO has shown that patterns of intimate disclosure are not related to gender (Cohen & Rajkowski, 1982); whereas, research on college populations have indicated that gender does influence the level of intimate disclosure (Rubin, 1978).

### Method

#### Subjects

A total of 28 subjects participated in the present investigation. Five subjects did not complete the study due to illness, deafness, or disinterest. The remaining 23 subjects included 18 female and 5 male residents of a rural senior citizens home. The mean age of the male and

female participants were 84.6 years and 82.2 years, respectively. Eighteen subjects were widowed, five subjects were married, and two were single. The two most frequently cited occupations of either the subject and/or the spouse were farmer and homemaker.

### Measures

The subjects were asked to complete the following instruments: a) Demographic Information Checklist (designed by the author), b) Social Interaction Scale (Beckman, 1981), c) Self-Disclosure Index (Miller et al., 1983), d) Visual Perspective-Taking (Flavell et al., 1975), and e) Zung Self-Rating Depression Scale (Zung & Durham, 1965).

The Demographic Information Checklist (shown in Appendix A) included questions regarding the subjects age, gender, marital status, length of widowhood (if appropriate), former occupation, length of retirement, education level, current yearly income, self-rated health, self-rated eyesight, and length of residence in the home.

Social interaction, the second measure (shown in Appendix B), required the subjects to rate how often they see or hear from various persons. Eight categories of people were included: 1) children; 2) neighbors; 3) confidants (those friends and/or relatives they felt close enough to that they could talk about anything); 4) other friends; 5) other relatives; 6) young people they felt

particularly close to (which may include grandchildren); 7) people they associated with in group activities; 8) any other people (eg. counselor, lawyer, doctor, or nurse).

The third measure, the Self-Disclosure Index (shown in Appendix C), developed by Miller et al. (1983) was used to assess intimate disclosure. The index consisted of eleven items designed in such a manner that the stem may be modified to refer to a specific target person. The initial 10 items were designed by Miller et al. (1983), the eleventh item was designed by the author. The subjects were instructed to respond to each item with one of 5 responses ranging from 1 (discussed not at all) to 5 (discussed fully and completely). The subject's responses on the scale were indicative of the extent of their disclosure to a target person.

The Self-Disclosure Index was also used to assess reciprocal disclosure. Reciprocal disclosure was assessed by having the identified target person(s) complete the index (shown in Appendix C). The individual was requested to indicate the extent of their disclosure to the subject. A modified version of the index (shown in Appendix D) was used to assess disclosure knowledge. Disclosure knowledge was assessed by having the subject complete the scale in terms of what knowledge he/she had of each target person.

Visual perspective-taking, the fourth measure, was developed by Flavell et al. (1975). It consists of four stimulus displays that were individually presented to each

subject. The subjects were requested to replicate the experimenter's view of each display, using materials identical in size, shape, and color to those of the stimulus display. The display(s) were placed immediately in front of the experimenter seated 45 degrees to the subject's right in the side position, or seated directly across from the subject in the opposite position.

The fifth measure, the Zung Self-Rating Depression Scale (shown in Appendix E) (Zung & Durham, 1965) was designed to measure depression at the time the scale is administered. The scale consists of 20 items purported to assess depressive symptomatology in the following areas: pervasive affect, physiological equivalents or concomitants, and psychological concomitants. The 20 items are subdivided such that 10 of the items are stated in a symptomatically positive manner and 10 items are stated in a symptomatically negative manner. Four response choices were available for each item, ranging from "none of the time" to "all of the time". The subject was asked to choose the statement within each category that best describes his/her condition. The subjects were administered 19 out of the 20 items. (Item 6 was omitted because the researchers felt that it was too personal to be included in the present investigation.)

### Procedure

A list of the names of potential subjects was prepared

by the matron of the residence, as specified by the experimenter. The experimenter's specifications required that the potential subjects speak English as a first language, and have the ability to see and hear without difficulty. The experimenter was then introduced to each subject on the list by a member of the nursing staff. Following the introduction, a letter providing a brief description of the proposed study (shown in Appendix F) was presented to all potential subjects. Individuals willing to participate in the research project were then asked to sign a consent form (shown in Appendix G) before the instruments were presented. The instruments were presented in two one and one half hour sessions held approximately one week apart. During the first session the Demographic Information Checklist, Social Interaction Scale (Beckman, 1981), and the Self-Disclosure Index (Miller et al., 1983) were administered. During the second session, the Visual Perspective-Taking Measure (Flavell et al., 1975), Zung Self-Rating Depression Scale (Zung & Durham, 1965), and the modified Self-Disclosure Index (Miller et al., 1983) were administered.

Before administration of the Self-Disclosure Index, the subjects were asked to select 4 persons they had talked to most frequently during the last month. Three of the selected individuals were to be living within the residence, and the fourth person could live either inside or outside of the residence. The nature of this request led to a modified "Round-Robin" effect, in which at

different points in the study, a subject was often a target person or correspondingly, a target person was a subject.

Following the completion of the Self-Disclosure Index (Miller et al., 1983), the experimenter requested the subject's permission to contact the specified target person(s) in order to assess reciprocal disclosure. Then, the complete name and/or telephone number of the target individual(s) were requested. Target individuals residing within the residence were contacted and administered the disclosure index in person by the experimenter. Target individuals residing outside of the residence were contacted and administered the disclosure index by telephone.

## Results

### Demographic Data

Various measures of demographic data were administered to the subjects in order to provide a brief description of the sample population. The means and standard deviations are presented in Table 1.

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Insert Table 1 About Here  
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Table 1

Means and Standard Deviations of the  
Demographic Characteristics of the Population

Demographic Characteristics	Mean	Standard Deviation
Length of stay in residence	5.96	4.57
Length of marriage	40.83	18.06
Length of widowhood	10.22	9.57
Number of children	2.30	2.57
Years of education	8.52	2.45
Income	1.61	0.84
Length of retirement	16.91	9.34
Length of spouse's retirement	10.78	10.21
Self-rated health	2.04	0.88
Self-rated eyesight	2.26	1.25

### Coding of the Quantity of Social Interaction Measures

Following the lead of Beckman (1981), summary scores for the various contact groups were generated, so that the influence of the frequency of social interaction with specified others could be determined. The first frequency score was termed the total frequency of social interaction. It was obtained by calculating a summary score composed of the number of interactions that would occur in one year, across the eight person categories. The second score, the frequency of contact with other residents, was obtained by calculating a summary score composed of the number of contacts with fellow residents that would also occur in one year. The third frequency score, the frequency of interactions with one's peers or persons other than one's children or grandchildren, was determined by calculating a summary score composed of the number of contacts that would occur in one year with these persons. Additionally, the subject's were asked to name the people they "talked to the most", up to a total of 4 people. This category was termed target persons. The last category, contacted targets, consisted of the number of target persons contacted by the experimenter to complete the self-disclosure form.

### Coding of the Quality of Social Interaction Measures

Intimacy of Self-Disclosure. One aim of the present



research was to investigate the relationship between depression and the quality of social interaction. One measure of the quality of social interaction, the Self-Disclosure Index (shown in Appendix C) was composed of eleven items. The subjects responded to each item with one of five choices: 1 indicated the least amount of intimate disclosure and 5 the greatest amount of intimate disclosure. The subjects completed the scale for each target person specified. The intimacy of the subjects' disclosure to target individuals was determined by calculating the overall mean level of the subjects' reported intimate disclosure. Correspondingly, the sum of the response choices were divided by the number of test items and then, by the number of target persons the subjects reported that they had talked to frequently. The overall mean level of the intimacy of the target's disclosure to the subject(s) was calculated in a similar manner.

Reciprocal Disclosure. A primary concern of the present research was to investigate, as objectively as possible, reciprocal disclosure patterns in the elderly.

The first step in the analysis of reciprocal disclosure patterns was to determine disclosure reciprocity, or the degree of similarity between the subject's level of intimate disclosure and the target person's level of intimate disclosure. This was obtained by calculating individual mean(s) for each subject's intimate disclosure to each target person and each target

person's intimate disclosure to each subject. The respective means of each subject-target pair were then subtracted from each other, yielding individual subject-target difference scores. The difference scores for each subject were summed, providing a total difference score, which was then divided by the number of persons that had added to the score, so that the frequency of social interaction could be partialled out of the equation. This result indicated an overall value of matched disclosure. The scores were then reversed by subtracting the largest obtained difference score from each individual's matched disclosure score. Thus, the greater the final score, the greater the level of disclosure reciprocity.

Intimacy of reciprocal disclosure, the second pattern of reciprocal disclosure to be investigated, was generated to reflect those subjects with high levels of intimate disclosure and high levels of disclosure reciprocity. Accordingly, intimacy of reciprocal disclosure was calculated by coding the top third of the sample with high levels of intimacy of subject disclosure and disclosure reciprocity scores as 2 ( $X=1.48$  and  $X=42.13$ , respectively), and the remainder of the population as a 1 ( $X=1.38$  and  $X=40.21$ , respectively).

Unique intimacy, the third pattern of reciprocal disclosure generated, was developed to reflect high levels of reciprocal intimate disclosure to one unique target person. This was achieved by generating individual matched disclosure scores following the procedure used to obtain

overall matched disclosure scores. Unique intimacy was then determined by coding the top third of the sample population with the highest mean disclosure to one target person and the highest matched disclosure of that target person as a 2, and the remainder of the population as a 1.

Cumulative intimacy, the last measure of intimate disclosure was generated to reflect the maximum or greatest overall levels of intimate disclosure. Thus, cumulative intimacy was determined by multiplying the intimacy of the target's disclosure score by the number of persons which had contributed to that score.

#### Coding of the Egocentrism or Perspective-Taking Measure

Visual perspective-taking was scored using the procedures recommended by Flavell et al. (1975) (shown in Appendix H). It was possible for a subject to accumulate a total score of 36 points, where the higher the score the greater the perspective-taking abilities indicated.

#### Coding and Status of the Depression Measure

The Zung Self-Rating Depression Scale (SDS) was also scored according to the method recommended by the authors (Zung & Durham, 1965). A raw score was calculated by summing the assigned value of each of the subject's responses. Thus, the total raw score value ranged between

19 and 76. The raw scores were then converted to the SDS index which expresses the scores as a decimal that in turn is used as an indice of the severity of depression. Zung and Durham (1965) report that the SDS indices for their control group, consisting of professional staff, nonprofessional staff, and medical patients of unknown age, range from 0.25 to 0.43. In addition, Okimoto, Barnes, Veith, Raskind, Inui, & Carter (1982) state that the SDS has been validated only in young subjects. Thus, they suggest that a cut off score of 60 (.75) be used for research purposes with geriatric medical patients concerning the detection of clinical depression. Therefore, the present population falls above the range found among younger subjects, but below the values found in geriatric medical patients when clinical depression was present.

### Validity Checks

A check on the measurement of social interaction, the persons talked to, was conducted. It was based on the assumption that there is some mutuality in social conversation, in that the communication of one participant is reciprocated by another individual. Based on this premise, validity of the measure was indicated if one individual reported that he/she talked to a specified person frequently, and the other person in turn reported that he/she frequently talked to them as well. Therefore,

the check on the measure of persons frequently talked to was assessed by determining the percentage of agreement between the individuals specified by the subject as persons they talked to most frequently, and the individuals also specified by the target persons as persons they talked to most frequently. The obtained percentage of agreement was 63.27%.

A modified version of Jourard and Landsman's (1960) procedure of assessing the validity of disclosure was used in the present study. The validity of disclosure was assessed by determining the correlation between a subject's intimate disclosure to a target person or intimacy of disclosure score and what knowledge each target person had of each subject or disclosure knowledge score. The obtained correlation was  $r(40) = .15$  which, did not provide evidence of the validity of the measure and did not support the expected relationship.

### Correlational Analyses

The means and standard deviations of the measures of depression, perspective-taking, quantity of social interaction, and quality of social interaction are shown in Table 2.

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Insert Table 2 About Here  
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The correlations among the measures of depression, perspective-taking, quantity of social interaction, and quality of social interaction are presented in Table 3.

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Insert Table 3 About Here  
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The present research provided partial support for the expected negative correlation between depression and the frequency of social interaction. The results indicated that depression was negatively correlated with the number of identified target persons,  $r(21) = -.43, p < .05$ .

The total frequency of social interaction was used both as an overall measure of the quantity of social interaction and was also divided into smaller categories representing the frequency of social interaction with fellow residents and one's peers. In addition, the individuals specified as contacted targets also composed the target person category. Consequently, a number of intercorrelations among the quantity of social interaction measures were both expected and found. Correlations among the quantity of social interaction measures indicated that

Table 2

Means and Standard Deviations of Depression,  
the Quantity of Social Interaction, the  
Quality of Social Interaction, and  
Perspective Taking Measures

Measures	Mean	Standard Deviation
Depression		
SDS	0.46	0.06
Quantity of Social Interaction		
Frequency of social interaction	1648.96	1366.85
Resident	940.83	1010.28
Peers	1368.26	1297.07
Target persons	3.83	0.49
Contacted targets	3.26	0.75
Quality of Social Interaction		
Subject overall mean disclosure	1.41	0.41
Target overall mean disclosure	1.55	0.35
Disclosure reciprocity	5.20	2.80
Cumulative intimacy	5.05	1.68
Perspective-taking	13.09	5.52
Disclosure knowledge	1.47	0.36

Note: Intimacy of reciprocal disclosure and unique intimacy were dummy coded such that the top third of the population received a score of 2 and the remainder a score of one. Thus, the means and standard deviations of these measures were not included in the table.

Table 3

Correlational Matrix Among the Measures of Depression, Gender,  
Quantity of Social Interaction, the Quality of Social Interaction  
and Perspective-Taking

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. SDS	.10	-.13	-.02	-.10	*-.43	-.37	-.12	.12	.26	*.52	.16	-.20	-.07
2. Gender		.22	.16	.20	-.22	.08	.37	.22	*-.42	-.04	.02	-.21	-.27
3. Total Frequency of Social Interaction			** .95	** .98	.24	.26	*.48	.01	-.41	-.13	.28	.23	.08
4. Resident				** .97	.21	.19	.39	-.05	-.36	-.03	.23	.12	.18
5. Peers					.28	.23	*.42	-.10	-.34	-.05	.25	.12	.13
6. Target Persons						*.50	-.11	*-.43	.11	-.15	-.31	.14	-.13
7. Contacted Targets							.13	.05	-.28	*-.49	-.26	** .72	-.03
8. Intimacy of Subject Disclosure								.20	*-.51	.11	** .71	.23	-.05
9. Intimacy of Target Disclosure									**-.53	-.15	.33	** .70	-.04
10. Disclosure Reciprocity										.32	-.20	**-.56	.17
11. Intimacy of Reciprocal Disclosure											*.51	*-.43	-.06
12. Unique Intimacy												.06	.11
13. Cumulative Intimacy													-.07
14. Perspective-taking													

\* p &lt; .05      \*\* p &lt; .01



the total frequency of social interaction was positively correlated with: frequency of contact with fellow residents,  $r(21) = .95$ ,  $p < .01$ ; and frequency of contact with one's peers,  $r(21) = .98$ ,  $p < .01$ . The frequency of contact with one's peers was also positively correlated with the frequency of resident contact,  $r(21) = .97$ ,  $p < .01$ . In addition, the number of target persons specified by the subjects, and the number of contacted targets were positively correlated,  $r(21) = .50$ ,  $p < .05$ .

One aim of the present study was to explore the relationship between the quantity and the quality of social interaction. The results of the present study indicated that the intimacy of the subjects' disclosures were positively correlated with: the total frequency of social interaction,  $r(21) = .48$ ,  $p < .05$ ; and the frequency of interaction with one's peers,  $r(21) = .42$ ,  $p < .05$ . In addition, the analysis indicated that the intimacy of the target's disclosure was negatively correlated with the number of target persons,  $r(21) = -.43$ ,  $p < .05$ , and also, cumulative intimacy was positively correlated with the number of contacted targets,  $r(21) = .72$ ,  $p < .01$ .

A reciprocal relationship between the intimacy of the subject's disclosure and the intimacy of the target's disclosure was also expected. However, the results did not provide support for this relationship,  $r(21) = .20$ .

A number of measures of the quality of social interaction were generated from the intimacy of subject disclosure and the intimacy of target disclosure scores.

Consistent with this, a number of intercorrelations among the quality of social interaction measures were expected. The results indicated that unique intimacy was positively correlated with: the intimacy of the subject's disclosure,  $r(21) = .71, p < .01$ ; and with the intimacy of reciprocal disclosure,  $r(21) = .51, p < .05$ . Cumulative intimacy was positively correlated with the intimacy of target disclosure,  $r(21) = .70, p < .01$ . A number of intercorrelations which were not expected were also found. For example, the intimacy of subject disclosure,  $r(21) = -.51, p < .05$  and the intimacy of target disclosure,  $r(21) = -.53, p < .01$  were both negatively correlated with disclosure reciprocity. In addition, cumulative intimacy was negatively correlated with both disclosure reciprocity,  $r(21) = .56, p < .01$ ; and the intimacy of reciprocal disclosure,  $r(21) = -.43, p < .05$ .

The expected negative correlation between depression and intimate reciprocal disclosure was not supported. Contrary to expectations, the results revealed that depression was positively correlated with intimate reciprocal disclosure,  $r(21) = .52, p < .05$ .

The results did not support the expected correlations between perspective-taking and depression, the total frequency of social interaction, or intimate reciprocal disclosure. The correlations were respectively,  $r(21) = -.07, r(21) = .08, r(21) = -.06$ .

In addition, gender was negatively correlated with disclosure reciprocity,  $r(21) = -.42, p < .05$  indicating

that disclosure reciprocity was lower for females than for males.

### Discussion

The results of the present study provide support for the validity of one measure of social interaction, that of the persons with whom the subject frequently talks. Contrary to expectation, the results did not provide support for the validity of self disclosure; the intimacy of the subject's disclosure and disclosure knowledge were not significantly correlated. One interpretation of the lack of correlation between the intimacy of the subject's disclosure and disclosure knowledge is that an individual's knowledge of another may not be solely dependent upon one individual's intimate disclosure to another; rather, others may also disclose information about a given individual to a third target person.

A number of investigators have suggested that depression is related to an individual's quantity of social interaction (Larson, 1978). Studies designed to assess the proposed relationship have in turn, shown that depression is negatively correlated to an individual's frequency of social interaction (eg. Qualls, Justice & Allen, 1980). The present research provided partial support for the predicted negative relationship between depression and the quantity of social interaction. As expected, depression was negatively correlated to the

number of target persons indicating that higher self-reported depression is associated with fewer persons with whom one frequently talks. This result suggests that depression is negatively related to the presence of others with whom one can converse.

Past theory and research has also suggested that depression may be related to the quality of social interaction (Larson, 1978; Norris et al., 1983). Investigations have in turn found a negative correlation between depression and measures of the quality of social interaction in terms of the presence or absence of a confidant (Snow & Crapo, 1982). The present study was designed to avoid the limitations of previous research by objectively assessing the quality of social interaction. Unexpectedly, the results indicated that depression was positively, rather than negatively, correlated to intimate reciprocal disclosure. This result suggests that the more depressed an individual is, the greater the likelihood that the individual's interactions will be characterized by intimate reciprocal disclosures. This result suggests that the more depressed an elderly individual is, the more he/she had in objective terms - confidants. One interpretation of this result may be that depressed individuals are more likely to express personal information in the form of negative perceptions or complaints to a second individual, who in turn responds with equally intimate reciprocal disclosure.

In addition, previous research and theory has shown

that people will typically reciprocate intimate disclosure, particularly with others familiar to them (Jourard, 1959). Contrary to previous research, the results of the present study indicate that the intimacy of the subject's disclosures and the intimacy of the target's disclosures were not significantly correlated. This indicates that intimate disclosure was not met with reciprocal intimate disclosure, or that the reciprocity of self-disclosure was not evident in this elderly sample. This issue should be investigated in future research.

One qualification of the reciprocity of self disclosure pattern is warranted. The overall mean of the intimate subjects' disclosure and the intimate targets' disclosures were respectively, 1.408 and 1.550. The possible range of the values were from 1 to a maximum of 5. Thus, the obtained level of both subject and target intimate disclosures were relatively low, indicating that the areas of intimacy tapped within the scale were "discussed a little" - and were objectively low in intimacy. In the present study, the measure of high intimate disclosure was high intimacy, relative to other intimate disclosure scores within the elderly group. The present findings may indicate that little communication among the elderly is highly intimate.

Previous research has investigated the relationship between measures of subjective well-being and the quantity and quality of social interaction. Such investigations have subsequently shown that depression is negatively

correlated with measures of both the quantity and the quality of social interaction. An additional objective of the present research was to explore the relationship between the measures of the quantity and the quality of social interaction. The results of the present research indicate that the intimacy of the subject's disclosures were positively correlated with both the total frequency of social interaction, and more specifically, with the frequency of social interaction with one's peers. This result indicates that the more frequently one interacts with others, the greater the intimacy of one's disclosures. The results also indicate that the intimacy of the target's disclosures were negatively correlated with the number of target persons, and that cumulative intimacy was positively correlated with the number of contacted targets. The lack of a significant correlation between cumulative intimacy and the number of target persons suggests that this latter correlation is artifactual.

Loofft and Charles (1971) proposed that the ability to take the perspective of another was related to the individual's quantity of social interaction. Consequent investigations have shown that perspective-taking is positively correlated with an individual's frequency of social interaction (Feffer & Suchotliff, 1966; Marsh et al., 1981). In addition, previous research and theory has led to a proposed relationship between depression, the quality of social interaction, and perspective-taking (Norris et al., 1983). The present study did not support

the expected relationships between perspective-taking and the measures of depression, the quantity, or the quality of social interaction. The failure to find a significant correlation between visual perspective-taking and the measures of depression, the quantity of social interaction, and the quality of social interaction suggests that a battery of perspective-taking measures may be more useful in assessing perspective-taking in the elderly, than the use of only one such measure.

The present research explored the relationship between gender and patterns of self-disclosure. Past investigations have found that female college students disclose more than male college students (Jourard & Lasakow, 1958); whereas, Cohen and Rajowski (1982) found that gender distinctions regarding the recipient of intimate disclosure did not apply to the elderly in the SRO. The negative correlation between gender and disclosure reciprocity indicates that males are more reciprocal in their interactions than females. This result should be considered cautiously, due to the small number of male subjects in the present study.

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**APPENDIX A**

Demographic Information



Demographic Information

1. Gender: 1. male  
2. female
2. How long have you been living at (residence) \_\_\_\_\_
3. How old are you: \_\_\_\_\_ years.
4. Are you 1. single \_\_\_\_\_  
2. married \_\_\_\_\_  
3. widowed \_\_\_\_\_  
4. divorced or separated \_\_\_\_\_
5. a) How many times have you been married? \_\_\_\_\_  
b) How long were you married? 1st marriage \_\_\_\_\_  
2nd marriage \_\_\_\_\_  
c) How long have you been widowed or alone? \_\_\_\_\_  
d) How many children did you have? \_\_\_\_\_
6. Where did you live during most of your adult life?  
a) city or town \_\_\_\_\_  
b) province \_\_\_\_\_
7. What was your former occupation? \_\_\_\_\_
8. If married, what was the occupation of your spouse?  
\_\_\_\_\_
9. What is the highest education level you attained?  
Year \_\_\_\_\_  
Province \_\_\_\_\_
10. What is your current yearly income:  
1. less than \$5000 \_\_\_\_\_  
2. \$6000 - \$10,000 \_\_\_\_\_  
3. \$11,000 - \$15,000 \_\_\_\_\_  
4. \$16,000 - \$20,000 \_\_\_\_\_  
5. Above \$20,000 \_\_\_\_\_
11. How long have you been retired (if employed)?  
\_\_\_\_\_  
If employed, how long has your spouse been retired?  
\_\_\_\_\_

12. How would you rate your health:

5. extremely good \_\_\_\_\_

4. very good \_\_\_\_\_

3. healthy \_\_\_\_\_

2. very poor \_\_\_\_\_

1. extremely poor \_\_\_\_\_

13. How would you rate your eyesight:

5. extremely good \_\_\_\_\_

4. very good \_\_\_\_\_

3. average \_\_\_\_\_

2. very poor \_\_\_\_\_

1. extremely poor \_\_\_\_\_

## APPENDIX B

Quantity of Social Interaction Scale

Quantity of Social Interaction Scale

"how often do you usually see or hear from":

less than once a month	once a month	twice a month	once a week	twice a week	Daily
---------------------------	-----------------	------------------	----------------	-----------------	-------

1	2	3	4	5	6
---	---	---	---	---	---

1	2	3	4	5	6
---	---	---	---	---	---

Category 1:

children

1

2

3

4

Category 2:

neighbors

1

2

3

Category 3:

confidants

1

2

3

Category 4:

other friends

1

2

3

Category 5:

other relatives

1

2

3

Category 6:

young people

1

2

3

Category 7:

group activities

1

2

3

Category 8:

others

1

2

3

## APPENDIX C

Self-Disclosure Index

(Disclosure-Output)

Self-Disclosure Index

(Disclosure-Output)

"Indicate the extent to which you have discussed the following with: Target 1; Target 2; Target 3; and Target 4."

Discussed not at all	Discussed a little	Discussed some	Discussed a lot	Discussed fully and completely
1	2	3	4	5
			(Inside)	(Outside)
			1 2 3	4

01. My personal habits
02. Things I have done which I feel guilty about
03. Things I wouldn't do in public
04. My deepest feelings
05. What I like and dislike about myself
06. What is important to me in life
07. What makes me the person I am
08. My worst fears
09. Things I have done which I am proud of
10. My close relationships with other people
11. Things I have done in the past

## APPENDIX D

Self-Disclosure Index

(Disclosure Knowledge)



Self-Disclosure Index

(Disclosure Knowledge)

"Indicate the the extent to which you know the following information about Target 1; Target 2; Target 3; Target 4"

Know nothing at all	Know a little	Know some	Know a lot	Know fully and completely
1	2	3	4	5
			(Inside)	(Outside)
			1 2 3	4

01. His/her personal habits
02. Things he/she has done which he/she feels guilty about
03. Things he/she wouldn't do in public
04. His/her deepest feelings
05. What he/she likes and dislikes about his/herself
06. What is important to his/her in life
07. What makes he/she the person he/she is
08. His/her worst fears
09. Things he/she has done which he/she is proud of
10. His/her close relationships with other people
11. Things he/she has done in the past

## APPENDIX E

Self-Rating Depression Scale

Self-Rating Depression Scale

- | none or<br>a little<br>of the time | some<br>of the<br>time                                 | a good<br>part of<br>the time | most or<br>all of<br>the time |
|------------------------------------|--------------------------------------------------------|-------------------------------|-------------------------------|
| 1                                  | 2                                                      | 3                             | 4                             |
|                                    |                                                        |                               | 1      2      3      4        |
| 01                                 | I feel downhearted and blue.                           |                               |                               |
| 02                                 | Morning is when I feel the best.                       |                               |                               |
| 03                                 | I have crying spells or feel like it.                  |                               |                               |
| 04                                 | I have trouble sleeping at night.                      |                               |                               |
| 05.                                | I eat as much as I used to.                            |                               |                               |
| 06.                                | I still enjoy sex.                                     |                               |                               |
| 07.                                | I notice that I am losing weight.                      |                               |                               |
| 08.                                | I have trouble with constipation.                      |                               |                               |
| 09.                                | My heart beats faster than usual.                      |                               |                               |
| 10.                                | I get tired for no reason.                             |                               |                               |
| 11.                                | My mind is as clear as it used to be.                  |                               |                               |
| 12.                                | I find it easy to do the things I used to do.          |                               |                               |
| 13.                                | I am restless and can't keep still.                    |                               |                               |
| 14.                                | I feel hopeful about the future.                       |                               |                               |
| 15.                                | I am more irritable than usual.                        |                               |                               |
| 16.                                | I find it easy to make decisions.                      |                               |                               |
| 17.                                | I feel that I am useful and needed.                    |                               |                               |
| 18.                                | My life is pretty full.                                |                               |                               |
| 19.                                | I feel that others would be better off if I were dead. |                               |                               |
| 20.                                | I still enjoy the things I used to do.                 |                               |                               |

**APPENDIX F**

Letter of Introduction

Hello,

I am a student at Lakehead University. I am looking for people to volunteer 2-3 hours of their time to participate in a survey which I must carry out in order to graduate from university. The survey would consist of 2 or 3 visits which may be scheduled at your convenience anytime between July 30th and September 30, 1984. The survey is on conversation between people.

The kind of questions I would be asking in the survey are: How you are feeling, how often you see or hear from other people, what kind of things you talk to your friends about and what your friends talk to you about (these are very general questions). I would also ask you to give me the names of a few friends so I could ask them what they talk to you about as well. I would also ask you to do a few short tasks taking a total of 10 or 15 minutes.

What is said during our visits will not be reported to anyone on an individual basis. The results of the survey will be reported to my instructors on a group basis only.

I really need your help to complete my school work; So, if you are interested in volunteering your help, please leave your name at the desk and I will contact you.

Sincerely,

Jocelyne Hamel

**APPENDIX G**

Letter of Consent

Letter of Consent

I agree to participate in the study being conducted by  
Jocelyne Hamel.

I understand that all information will be  
confidential. The results of the study will be released  
on a group basis only.

Signature \_\_\_\_\_

Witness \_\_\_\_\_

## APPENDIX H

Perspective-Taking Instructions and Scoring Key



Perspective-Taking Instructions and Scoring Key

Instructions:

"I'm going to sit here and look at the block very carefully. Now I'm going to give you some instructions about what to do with your block and I'd like you to listen very carefully. And then, when I've finished I'd like you to say them back to me in your own words. Now take your block and put it on the paper there next to you so that it looks to you, there, just as this block looks to me, here, so that you see on your block just what I see on my block."

Now I'm sitting in a different place and looking at the block from here. Put your block on the paper so it looks to you, there, just as this block looks to me, here.

Perspective-Taking Scoring Key

Display 1:

Side Position:

- 3 configuration correct on first attempt
- 2 incorrect on first attempt, but correct on second attempt (that is, after going over to look from E's position)
- 0 incorrect on first attempt, and the second arrangement is the egocentric, S-perspective one
- 1 incorrect on first attempt, and the second arrangement is any other incorrect one

Opposite Position:

Where S had "used up" his second attempt in the previous sub-task:

- 3 correct
- 1 miscellaneous (that is, incorrect but nonegocentric)
- 0 egocentric

Where S still had a second attempt available to him:

- 3 correct on first attempt
- 2 correct on second attempt
- 1 miscellaneous on second attempt
- 0 egocentric on second attempt

#### Display 2

(both subtasks)

- 4 configuration correct
- 1 miscellaneous
- 0 egocentric

#### Display 3

(both subtasks)

- 5 both configuration and height correct
- 4 configuration correct, L cylinder properly placed, but M and H cylinders incorrectly placed, relative to each other, on either the right-left or the front-back (or both) dimensions
- 3 configuration correct but height "more incorrect" than in 4
- 2 configuration incorrect but height correct or partly correct (that is, correct ordering of cylinders on either right-left or front-back dimension but not both)
- 1 miscellaneous
- 0 egocentric (both in configuration and in height)

Display 4

(both subtasks)

- 6 configuration and color correct, and height at least partly correct
- 5 configuration correct, height at least partly correct, but color only partly correct (ie., only two of the three cylinders properly oriented as regards color)
- 4 configuraton correct, and either height or color (not both) at least partly correct
- 3 either of the following: (a) configuration correct but neither height nor color even partly correct, (b) configuration incorrect but both height and color at least partly correct
- 2 configuration incorrect, but either height or color (not both) at least partly correct
- 1 miscellaneous
- 0 egocentric (in configuration, height, and color)