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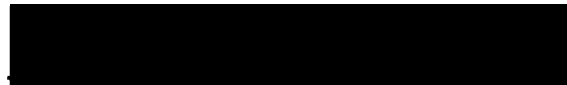
An Investigation of the Relationship of  
Self-Disclosure, Interpersonal Dependency,  
and Life Changes to Loneliness in Young Adults

Noreen Elizabeth Mahon

Submitted in partial fulfillment of the  
Requirements for the Doctor of Philosophy  
degree in the School of Education, Health,  
Nursing, and the Arts Professions of New York University

1981

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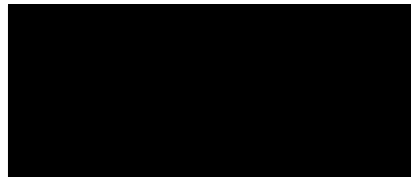
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The literature suggests that loneliness is widely distributed, severely distressing, and a painful, frightening experience (Fromm-Reichmann, 1959; Weiss, 1973). Despite the ubiquity and poignancy of loneliness, clinically observed relationships among variables associated with loneliness have had little systematic investigation. This study attempted to identify whether or not both personal variables and disruptive changes experienced by a person vary with the loneliness experience. The purpose of this study was to investigate the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults.

In this study, loneliness is viewed as evolving in a person through the interaction between the person and the person's environment. An interactional theory, as suggested in this study, considers personal and environmental variables which may contribute to the experience of loneliness.

Respondents for this study consisted of two-hundred and nine (209) volunteer students from an urban university between the ages of 18 - 25. To reduce extraneous variation, the sample was limited to subjects who did not take drugs known to distort emotions and perceptions. All subjects were free from a diagnosis of depression. Respondents completed the Revised UCLA Loneliness Scale, the Jourard Forty-Item Self-Disclosure Questionnaire, the Interpersonal Dependency Inventory, the Recent Life Change Questionnaire, and the General Information Sheet in the presence of the investigator. All respondents completed an Agreement Contract. Subjects' anonymity was preserved by using coding numbers on all instruments.

The data were analyzed using Pearson product-moment correlation coefficients and multiple regression analysis. Three of the hypotheses were supported: (1) the lower the self-disclosure, the higher the level of loneliness ( $r(209) = -.336, p < .005$ ); (2) the higher the interpersonal dependency, the higher the level of loneliness ( $r(208) = .239, p < .005$ ); and (3) lower self-disclosure together with higher interpersonal dependency and higher life changes will be a better predictor of higher levels of loneliness than any single variable alone ( $F(3, 204) = 14.433, p < .01$ ). One hypothesis was not supported: the higher the life changes, the higher the level of loneliness.

From a stepwise multiple regression analysis of the data it appears that self-disclosure was the single best predictor of loneliness. Further, interpersonal dependency significantly added to the prediction of loneliness. However, life changes did not add to the prediction of loneliness. Some of the reasons for non-support of a relationship between life changes and loneliness include overinclusiveness of life events, the potential personal growth enhanced by life changes, and testing for the impact of life changes on loneliness in the most recent six month period.

Alpha reliability coefficients were computed for the Revised UCLA Loneliness Scale, the Jourard Forty-Item Self-Disclosure Questionnaire, and the Interpersonal Dependency Inventory; all coefficients were above .70 on these three instruments.

Analysis of data via Pearson product-moment correlation coefficients between specific questions on the General Information Sheet and loneliness demonstrated several significant relationships.

Relationships exist between higher levels of loneliness and dissatisfaction with living conditions, non-closeness of family, non-closeness of a relationship with a loved one, fewer friends, dissatisfaction with the quality of friendships, and less participation in groups and organizations. Further, from a stepwise multiple regression analysis of this additional data and predictor hypotheses variables, 43% of the variance in loneliness was accounted for by fewer friends, dissatisfaction with friendships, lower self-disclosure, non-closeness of a relationship with a loved one, and higher interpersonal dependency. These results suggest that explanations for loneliness are quite complex and include personal characteristics such as self-disclosure and interpersonal dependency and external support systems such as relationships with friends and loved ones.

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## Chapter I

### The Problem

It is a widely held view that loneliness is a significant condition in America. May (1953) believed that the chief problems of people in the twentieth century are emptiness and loneliness. People have feelings of being "on the outside", "isolated", or "alienated". Loneliness has been viewed as an experience accompanied by feelings of anguish, pain, and uncomfortableness. Sullivan (1953) described loneliness as "so terrible that it practically baffles clear recall" (p. 261). Fromm-Reichmann (1959) stated that loneliness is "such a painful, frightening experience that people will do practically anything to avoid it" (p. 1). Weiss (1973) viewed loneliness as "a condition that is widely distributed and severely distressing" (p. 9). He described loneliness as a "gnawing ... chronic distress without redeeming features" (p. 15).

Loneliness has become an almost permanent condition for millions of Americans, a mass social problem in this country (Gordon, 1976). The phenomenon of loneliness knows no boundaries. It is experienced by the rich and the poor, the famous and the unknown, the married and the single, males and females, children and the aging regardless of the community in which they reside (Tanner, 1973).

The question can be raised: what personal and what environmental (situational) factors are related to the loneliness experience? This study explores interpersonal dependency, self-disclosure, and life

changes as they relate to loneliness. While relationships among these variables have been theorized, there has been little or no systematic testing of these relationships.

#### Statement of the Problem

What is the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults?

#### Subproblems

1. What is the relationship between self-disclosure and level of loneliness?
2. What is the relationship between interpersonal dependency and level of loneliness?
3. What is the relationship between life changes and level of loneliness?
4. What is the relationship between self-disclosure, interpersonal dependency, and life changes and level of loneliness?

#### Definition of Terms

Loneliness refers to a state in which a person is aware of not relating to other individuals along with experiencing a need for other individuals (Leiderman, 1969). Loneliness is an uncomfortable, subjective, affective state in which personal variables and environmental factors interact to comprise the experience.

Level of loneliness is operationally defined as the subjects' total score on the Revised UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978). The higher the score, the higher the level of loneliness.

Interpersonal Dependency refers to a "complex of thoughts, beliefs, feelings, and behaviors which revolve around the need to associate closely with, interact with, and rely upon valued other people" (Hirschfeld, Klerman, Barrett, Korchin, & Chodoff, 1976, p. 374).

Interpersonal dependency is operationally defined as the weighted total score on the three subscales of the Interpersonal Dependency Inventory. The weighted total score equals:  $+ .67$  (Scale 1)  $+ 1.0$  (Scale 2)  $- 1.0$  (Scale 3) (Gough, Note 1).

Self-Disclosure refers to the process of revealing oneself to another person (Jourard, 1971b).

Self-Disclosure is operationally defined as the total score on the Jourard Forty-Item Self-Disclosure Questionnaire (Jourard, 1971a).

Life Changes refer to alterations in the individual's environment. Life changes are situational events which change the individual's usual patterns of connectedness between the individual and other people.

Life Changes are operationally defined as the total score of life changes using the unit scaling method for the most recent six-month period on the Recent Life Change Questionnaire (Rahe, 1974b).

#### Delimitations

1. All subjects were between the ages of 18-25. By age 18, the multiplicity of variables associated with adolescence are largely passed while the likelihood of degrees of loneliness continues. In a study conducted by Rubenstein (1979, p. 58) results indicated that "people become less lonely as they grow older". Further, results of an analysis of variance indicated that people 60 years of age and older are least lonely while people 18 to 25 years of age are

most lonely. Therefore, in this study persons over 25 years of age were not included in the sample.

2. Individuals who have been diagnosed with depression were not included in this study. The terms loneliness and depression are often used interchangeable in the literature (Weiss, 1973). In order to avoid further confusion people who were known to be depressed were excluded from the sample.

3. Subjects who were taking tranquilizers, amphetamines, or anti-depressants were excluded from this study. These drugs have known actions and side-effects which can influence emotions and perceptions (Bergersen, 1976).

### Theoretical Rationale

This study is based on the view that loneliness evolves in a person through the interaction between a person and the individual's environment. More specifically, it is held that loneliness evolves from an interactive combination of characteristics of a person and events that occur in an individual's environment. Within this framework, several theoretical constructs were brought together to explain the loneliness experience.

A personal factor which people bring to their interactions is their level of interpersonal dependency. Interpersonal dependency refers to the complex of thoughts, beliefs, feelings, and behaviors which revolve around the need to associate closely with, interact with, and rely upon certain other people (Hirschfeld et al., 1976). To Hirschfeld et al. (1976) the concepts of attachment and dependency are embedded in the construct of interpersonal dependency.



Attachment refers to the affectional bond that one person forms to another specific person (Bowlby, 1969). Confidence in the availability of an attachment figure, or lack of it, is built up slowly during childhood or early years and whatever expectations are developed during these years tend to persist relatively unchanged throughout the rest of life (Bowlby, 1973b). Thus, the more stable and predictable the interactional regime of the child, the more secure the child's attachments tend to be; the more discontinuous and unpredictable the interactional regime, the more anxious the child's attachments (Bowlby, 1973b). In other words, the child learns interactional patterns through the relationship with its mother or mother figure; early attachment experiences influence adult relationships.

Dependency is a term for those learned behaviors which imply seeking not only contact and proximity to other persons but also help, attention, and approval (Ainsworth, 1969). Dependency is differentiated from dependent. An infant is dependent; a growing child and/or an adult may have learned dependency. Through interactions with the environment a child learns both independent and dependent behaviors. Through interactions a balance between dependence and independence emerges which maximizes the maintenance of social relationships (Stendler, 1954).

Using Hirschfeld's construct of interpersonal dependency which encompasses the concepts of attachment and dependency, a relationship between interpersonal dependency and loneliness can be posited. By Hirschfeld's use of attachment theory insecure or inconsistent relationships are linked to increased levels of interpersonal dependency,

and by Hirschfeld's use of dependency theory, an imbalance toward dependency is also linked to higher levels of interpersonal dependency. With loneliness conceptualized in this study as a state in which a person is aware of not relating to other individuals while experiencing a need for other individuals, it is logical to derive the proposition that persons with experience deficits in forming secure and consistent relationships and with leanings toward dependency, measured together as "interpersonal dependency", would be people most susceptible to experiencing loneliness. Thus, the predicted relationship between interpersonal dependency and loneliness can be stated as: the higher the level of interpersonal dependency, the higher the level of loneliness.

Another personal variable which people bring to their encounters with others is their individual tendencies toward self-disclosure. Self-disclosure refers to the process of revealing any information about oneself that a person communicates verbally to another person (Jourard, 1971b). The process of disclosing oneself to another is one means of engendering a person's connectedness to another. Komarovsky (1976) pointed out that the desire to escape loneliness, to find support, reassurance, and appreciation generates the need to share feelings and thoughts with others. Weigert (1960) discussed the relationship between loneliness and withdrawing from the future and from the world versus trust and openness to the future and to the world. Kramer (1978) postulated that the inability to disclose oneself to significant others may result in serious impasses in living. One such impasse is loneliness. Thus, the lower the individual's self-disclosure, the higher the risk of experiencing loneliness.

An environmental factor which bears on people's interaction is change and/or disruption. Packard (1972) addressed the problems faced by people in American society of living in a continually changing environment where there is little sense of community. Changes caused by widespread social pressures can increase an individual's vulnerability to loneliness as can changes in an individual's life (Rabkin and Struening, 1976). Life changes, in this study, refer to alterations in the individual's environment. Life changes are situational events which change the individual's usual patterns of connectedness between the individual and other people. A disruption of interpersonal relationships and any marked change in social situation can be found to be associated with changes in mood, thought, and behavior and some slight disturbances of bodily processes (Hinkle & Wolff, 1957). Thus, disruptions and/or changes in social and interpersonal ties that occur in an individual's life may engender a sense of disconnectedness, of non-relatedness to people and objects which leaves the individual at risk for experiencing loneliness. This formulation suggests that the greater the number of social and interpersonal changes that occurs, the greater the risk for experiencing loneliness.

Thus, within an interactional framework, encompassing personal and environmental factors, it is hypothesized that lower self-disclosure, higher interpersonal dependency, and higher life changes will together be more likely to predict a higher level of loneliness than either personal or environmental factors alone.

#### Hypotheses

1. The lower the self-disclosure, the higher the level of loneliness.

2. The higher the interpersonal dependency, the higher the level of loneliness.

3. The higher the life changes, the higher the level of loneliness.

4. Lower scores on self-disclosure together with higher scores on interpersonal dependency and higher scores on life changes will be a better predictor of a higher level of loneliness than any single variable alone.

#### Significance of the Study

Today an important concern of mankind is the complex phenomenon of loneliness. Since the focus of nursing is man, an exploration of concerns related to loneliness and its indicators is a justifiable endeavor for nursing.

For nursing, this study provides data for the theoretical basis of nursing by describing the relationship of loneliness in one age group to factors personal and environmental. Rogers (1970) stated that a better understanding of man is essential to nursing. Paterson (1978) in discussing theory development and its relevance for practice noted varying phenomena which practicing nurses selected as essential to nursing; one such phenomenon was loneliness.

This study may have ramifications for application in the practice of nursing. Knowledge of patterns of self-disclosure, interpersonal dependency, and life changes and their influence on loneliness would help in the prediction of people who will be most likely to experience loneliness. The relationships discovered through this study may

provide insight to preventive measures that could reduce the loneliness experience for many people. For example, knowledge of the relationship among the variables would support a plan for including classes on communication, developmental needs, and coping with the impact of change as part of general and adult education courses, pre-marriage classes, and parenting classes.

An example of the potential clinical significance of this study is application of results to help chronically ill persons cope with their loneliness experience. One social and psychological problem influencing social relationships of the chronically ill is "the prevention of, or living with, social isolation caused by lessened contacts with others" (Strauss, 1975, p. 7). Social relationships of the chronically ill person are often disrupted due to personal limitations imposed on the person by the illness(es). By knowing some of the parameters of loneliness, nurses would be able to help patients better understand and manage their loneliness experiences.

Knowledge about predicting and preventing loneliness would be relevant for all health professionals who are actively involved with individuals and families in the community, health clinics, and hospitals. In nursing, this knowledge would be relevant to all areas of clinical practice. This study may also act as a stimulator in increasing awareness and concern for those people who experience loneliness. Finally, this study may stimulate investigations which more clearly explicate in what way personal and environmental factors relate to loneliness.

## Chapter II

### Review of Related Literature

The present investigation explores the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults. The following review of the literature presents a background from which the theoretical rationale and hypotheses were developed.

#### Loneliness

The psychodynamic, sociological, and the personal/situational perspectives of loneliness were employed to form the conceptual basis for this study. Each of these theoretical approaches to loneliness and current research findings are discussed.

According to Leiderman (1969), the underlying dynamics which seem to be crucial in loneliness are the development of object relationships and self-object differentiation. Leiderman suggested the following formulation of the psychodynamics of loneliness. Loneliness appears as a sense of incompleteness, a longing for or yearning for another person. Loneliness reflects uncompleted or undifferentiated self-object representations within the ego system. To describe this lack of self-object differentiation, Leiderman used the psychoanalytic model as developed by Freud. Freud (1955) described the relationship development between the infant and mother relative to the infant's pain and anxiety that accompany intermittent separation from, and restoration of, its mother. Repeated situations of satisfaction for the in-

fant gradually create an intrapsychic object representation out of the mother. The pathological process in self-object differentiation occurs when the care-takers in the infant's environment are not available to meet the specific needs of the infant. Leiderman (1969) suggested that since self-object representation takes place over a relatively long period of time, throughout childhood at the very minimum, variations in the manifestations of loneliness should be expected from a most pathological form, as seen in the panic-stricken schizophrenic patient, to a most benign form as seen in normal individuals. Furthermore, since self-object differentiation is a dynamic process, loneliness symptoms vary in the course of development as well as when conditions exist where self-object relationships become obscured, e.g., where drugs disrupt normal perceptual and cognitive processes.

The interpersonal theorists (Fromm-Reichmann, 1959; Sullivan, 1953) suggest that loneliness occurs when a basic human need for intimacy is not met and propose that childhood experiences may predispose some persons to loneliness. Sullivan (1953) perceived loneliness as an unpleasant and driving experience related to the inadequate discharge of the need for human intimacy. Sullivan explored the developmental history of the motivational systems that appear to underlie the loneliness experience. The first components of the motivational system appear in infancy as the need for contact and the need for tenderness; these needs extend into childhood. During childhood children need adult participation in their activities. In the juvenile period the need for peers arises as well as the need for acceptance. In preadolescence the need for intimate exchange with another person who can be described as a friend or a loved one arises.

If the needs that arise during the developmental periods are not met, the roots of loneliness are laid (Sullivan, 1953).

Fromm-Reichmann (1959) suggested that the longing for interpersonal intimacy remains with every person from infancy throughout life; there is no one who is not threatened by its loss. The more severe developments of loneliness appear in the unconstructive, desolate stages of isolation and real loneliness. Real loneliness is described as the forgetting of people in one's past life and lack of expectations of interpersonal relationships in one's future life.

Weigert (1960) discussed loneliness and trust as basic factors of human existence and analyzed anxiety and its sources in childhood as an organizing theme in understanding the tension between trust and loneliness. From a subjective view the exchange between the individual and the world is experienced as more or less pleasurable, or more or less painful. The openness of the individual to the future and to the world is reflected in the subjective experience of trust; withdrawing from the future and from the world is subjectively experienced as loneliness. Trust aims at interpersonal truth; in other words, the ability to share facets of oneself. In contrast, lonely individuals recoil from self-revelations.

In summary, from a psychodynamic framework, those aspects of development which appear to be most crucial to the genesis of loneliness are uncompleted or undifferentiated self-object representations within the ego system, unsatisfied early needs for interpersonal intimacy, and reduced communication where trust is lacking. It should be noted that there has been little systematic testing of these loneliness concepts.



Another perspective of loneliness springs from sociological theories which suggest that social forces such as social mobility and technological changes foster loneliness (Packard, 1972; Slater, 1970; Wood, 1953).

Wood (1953) stated that the present era is, in many respects, an era of transition. There are forces in our society that tend to isolate one person from another. The forces are those social processes - individual achievement and competition, for example - which have become increasingly valued in modern society. These forces seriously handicap a person's efforts to establish desired relationships.

Slater (1970) conceived of loneliness as evolving from social and psychological forces in society which influence the individual's need fulfillment. Slater (1970) stated that "technological change, mobility, and the individualistic ethos combine to rupture the bonds that tie each individual to a family, a community, a kinship network, a geographical location - bonds that give him a comfortable sense of himself" (p. 7). Thus, the contemporary social situation tends to frustrate individual basic desires: first, the desire for community - the wish to live in trust, cooperation, and friendship with those around us; second, the desire for engagement - the wish to be involved with one's social and physical environment; and third, the desire for dependency - for the opportunity to share with others responsibilities and decision-making processes. The frustration of these desires by societal forces is conducive to the loneliness experience (Slater, 1970).

Packard (1972) suggested that many people are disturbed by the feelings that they are rootless or increasingly anonymous, that they are living in a continually changing environment where there is little sense of community. This contemporary uprooting takes many forms; for example, the uprooting of traditional male-female relationships, of traditional religious beliefs, of vocational stability, and of onrushing technological and social changes in general. These forms of uprooting are creating greater distances between people. In the disruption of familiar patterns many people respond with a deepened sense of loneliness (Packard, 1972).

The accelerated rate of this uprooting process has been addressed by Toffler (1970). The term "future shock" has been used to describe the greatly accelerated rate of change in society. By changing our relationship to the resources that surround us, by expanding the scope of change, and by accelerating its pace, we have broken with the past. The number of changes in life events has been greatly increased in recent decades. Toffler (1970) indirectly suggested that people assess the impact of the amount of change and the number of personal life event changes which they face in order to cope. It is suggested in this study that a possible outcome of accelerated numbers of changes may be an increased sense of disconnectedness to people, places, and things perceived as significant or meaningful to the individual.

In summary, from a sociological perspective, socially isolating factors within an individual's environment can be conceptualized as a cornerstone of loneliness.

The approach to loneliness, as described by Weiss (1973), emphasizes the importance of both personal and situational factors. In this view, some people are prone to loneliness because of their personality, social skills, or values; and some situations, such as the death of a spouse or changing jobs, increase the likelihood of loneliness. Weiss (1973) perceived loneliness as a relational deficit which can arise from emotional and/or social isolation. Separate discussions of loneliness of emotional isolation and loneliness of social isolation are presented.

Loneliness of emotional isolation is begun "by the absence of a close emotional attachment " (Weiss, 1973, p. 33). Loneliness of emotional isolation represents the "response to the absence not so much of a particular other but rather of a generalized attachment figure" (Weiss, 1973, p. 89). Experiences or feelings of loneliness would seem to give rise to yearnings for a relationship - an intimacy, a friendship, or relationship with relatives - that would provide what is lacking at that point in time for the lonely person (Weiss, 1973).

Weiss (1973) draws from the work of Bowlby (1973a) who suggested that bonds between people are the rule in various species including man. The essential feature of affectional bonding is that the bonded persons tend to remain in proximity to each other. If the ability to form bonds is interfered with during early childhood, or if bonds are disrupted during the life cycle, one of the emotions experienced by individuals is loneliness.

According to Peplau (1955), people frequently have a feeling of unexplained dread, of desperation, or of extreme restlessness when

experiencing loneliness. Some of the manifestations of the loneliness of emotional isolation, according to Weiss (1973), may stem from a re-experiencing of the anxiety produced by childhood abandonment.

Weiss (1973) suggested that persons experiencing loneliness of emotional isolation are likely to experience a sense of severe aloneness, whether or not the companionship of others is available to them. Many times this sense of aloneness is viewed in terms of an empty inner world in which the individual feels 'empty', 'dead', or 'hollow'.

Loneliness of social isolation, as defined by Weiss (1973), is "the absence of the provisions of meaningful friendships, collegial relationships, or linkages of a coherent community" (p. 17). Any severe disruption of a social role, such as those resulting from work loss or marital loss, can be capable of producing loneliness of social isolation. Living in an unaccepting community or moving to a new community may also produce this condition. Any situation that leads to loss of contact with those who share one's concerns may give rise to loneliness of social isolation. Individuals who have experienced a recent divorce, a bereavement, unemployment, mobility, stigmatization due to handicaps, religion, or cultural/racial membership are at high risk for experiencing loneliness of social isolation (Weiss, 1973). Thus, Weiss suggested that losses the individual experiences in his personal environment are conducive to loneliness. This formulation suggests that the greater the personal losses or life changes experienced by the individual, the greater the potential for loneliness.

According to Weiss (1973), an underlying concept that is related to the loneliness of social isolation is engagement. Continued interaction is necessary to sustain an individual's sense of relatedness.

Through social interaction man's needs for affirmation and reaffirmation are met. When a person can no longer find meaningful social interaction, loneliness occurs.

To summarize, Weiss' approach to loneliness emphasizes the importance of both personal and situational factors in the development of loneliness. This view suggests that exploration of both characteristics of the person and an individual's situation will provide insight to further conceptualizations of loneliness.

Although research on loneliness, to date, is limited, some patterns and characteristics of the loneliness experience are emerging from research and merit discussion. A recent study on loneliness conducted at New York University by Rubenstein (1979) utilized a questionnaire that was published in the Sunday magazine section of three East Coast newspapers in the Spring of 1978. Approximately 25,000 people responded to the questionnaire. Of these people, approximately 3,800 subjects formed the sample - 2,000 people in New York, 1,139 people in Massachusetts, and 676 people in Florida. This sample consisted of adults of all ages, races, and income levels. Of the overall sample, 15% said they felt lonely most of the time and 6% said they never felt lonely. The majority felt lonely on occasion. Moreover, results indicated that "people become less lonely as they grow older" (p. 58) ( $r = -.14$  (New York);  $r = -.11$  (Massachusetts), and  $r = -.24$  (Florida)). Analyses of variance showed that the youngest respondents (18 to 25 years) are most lonely while the eldest (60 to 69 and 70 plus) are least lonely ( $F(6, 1993) = 7.02, p < .0001$  (New York);  $F(6, 1129) = 2.96, p = .007$  (Massachusetts);  $F(6, 669) = 7.08, p < .0001$  (Florida)). Further findings in this study support the hypothesis

that adult loneliness has its origins in childhood. Lonely subjects remember their parents as being 'disagreeable', 'remote', and 'untrustworthy'; subjects who were not lonely described their parents as 'close', 'helpful', and 'warm'. Correlations between parental qualities such as helpful, close, and trusted and loneliness ranged from  $r = -.14$  to  $r = -.25$  in the overall sample (Rubenstein, 1979; Rubenstein, Shaver, & Peplau, 1979).

Several questions arise from Rubenstein's research study. One question addresses the technique employed in eliciting subjects for the study. The sample may have been drawn from those most lonely in the population. That is, lonelier people may have been more inclined to answer a newspaper questionnaire. If so, the percentage of people feeling lonely most of the time (15%) could be higher than exists in the general population. Another question arises relative to the potential early childhood origins of loneliness as reported in this study. The retrospective nature of the inquiry with the sample might be modified by current affective perceptions of relationships with parents. However, the view that loneliness has its origins in early childhood experiences is addressed in the loneliness literature.

Jones (Note 2) conducted a study on 60 undergraduates to assess the correlates of loneliness. The students monitored and recorded each conversation they had for four consecutive days. The results indicated that although loneliness was not related to the average number of daily interactions, the lonelier the person, the greater diversity of people with whom interactions had occurred and the more frequently the person reported interacting with strangers and acquaintances and the less with family and friends.

In another study by Jones (Note 2) male and female college students were designated as lonely or not lonely (based on median split of scores on the UCLA Loneliness Scale). The subjects were paired with an opposite sex stranger and instructed to discuss the topic "What attracts me to members of the opposite sex". Results indicated that lonely students differed significantly from non-lonely students: they made more self-statement, they asked fewer questions of their partners, and they changed the topic under discussion more frequently. Lonely students also responded more slowly to the previous statement of their partner.

Upon reflection, the results of Jones' study suggest that lonely students are self-involved and scattered in interactions with others. These characteristics of the lonely student may increase the difficulty of forming meaningful relationships with others, thus contributing to the experiencing of loneliness. The slower responses to previous statements of partners, noted by Jones, suggest that the inability for social intercourse may lead to feelings of isolation and loneliness.

In a study of 203 college students, the emotional and physical correlates of loneliness were investigated by Paloutzian and Ellison (Note 3). Results indicated that frequently loneliness was significantly correlated ( $p < .01$ ) with feelings of helplessness, depression, rejection, being misunderstood, emptiness, worthlessness, frustration, isolation, and being unloved. The study demonstrated significant but low correlations between loneliness and feelings of chest tightness ( $r(186) = .15$ ) and loneliness and tiredness ( $r(195) = .14$ ). This study, however, did not report the configuration of the students' social network which might influence their degree of loneliness.

In summary, research findings on loneliness indicate that loneliness appears to begin in early childhood experiences; lonely people report interacting less frequently with family and friends; lonely people appear to be more egocentric; and lonely people experience feelings of helplessness, rejection, emptiness, isolation, and worthlessness.

In the loneliness literature references are made to dependency, self-disclosure, and the social environment suggesting they are in some way related to loneliness. In the next sections, the literature on these variables is examined more closely. The thesis which evolved is that relationships do exist among these variables and loneliness. The investigation is designed to test this thesis.

### Self-Disclosure

The construct of self-disclosure has been primarily developed by Jourard stemming from his psychotherapeutic orientation. Self-disclosure as defined by Jourard (1971b) is the process of willfully disclosing oneself to another person, letting another person know what one has done, what one feels. It is the act of making oneself manifest, showing oneself so others can perceive him/her. Early in his work Jourard (1959) reasoned that the amount of personal information that a person was willing to disclose to another person may be an index of the closeness of the relationship, of the love, affection, or trust that existed between the two people. In relationships, participants reveal their thoughts, feelings, and emotions to the other person and are revealed to in return.



Later in his development of self-disclosure Jourard (1971b) posited that the most powerful determiners of self-disclosure are the identity of the person to whom one might disclose oneself and the nature and purpose of the relationship between the two people. Disclosure of one's experience is most likely to occur when the other person is perceived as a trustworthy person of good will and/or one who is willing to disclose his/her experiences to the same depth and breadth.

Komarovsky (1976) pointed out some universal dilemmas in self-disclosure. The "desire to escape loneliness, to find support, reassurance, appreciation, perhaps absolution - all generate the need to share feelings and thoughts with others. Pitted against these advantages are the risks of sharing, e.g., possible criticism, ridicule, loss of power, and the like" (p. 163). Thus, a person's perceptions of the dynamics of the interpersonal interaction, content of proposed disclosures, and the risks associated with the disclosure may influence the levels of self-disclosure.

Several major areas in the literature on self-disclosure are particularly relevant to this study: (1) self-disclosure as related to healthy personality and loneliness; (2) self-disclosure, family patterns, and loneliness; and (3) self-disclosure, relationships, and loneliness.

#### Self-Disclosure as Related to Healthy Personality and Loneliness

Jourard (1959) stated that a person's mental health is dependent upon the directness and intimacy of communication; people become maladjusted to the extent that they have not been able to disclose themselves to another person. Jourard (1963) suggested that accurate portrayal of the self to others was an identifying criterion of healthy

personality. In 1968 Jourard further stated that healthier personalities find and maintain relationships of love and friendship in the world. Less healthy personalities find themselves to be terrible company. They cannot tolerate solitude well, and they need to be involved in busy-work or superficial companionship with others. They do not truly encounter another person and enter into a relationship with him/her. Thus, the feeling of loneliness, of not being known and understood, chronically bothers the person. The healthier personality, because he is less self-concealing and has readier access to his fantasies, feelings, and memories is less afraid of solitude; when he is with others, he feels secure enough in his own worth that he lets encounter and dialogue occur.

In a study of self-disclosure and mental health, Kramer (1978) predicted and supported the premise that college students ( $n = 50$ ) would report significantly higher past self-disclosure than subjects attending an out-patient psychiatric day hospital ( $n = 50$ ). For every aspect of self measured by the modified Jourard Self-Disclosure Questionnaire, students disclosed significantly more information about themselves than patients. Kramer (1978) further predicted and supported that the variance of reported self-disclosure of patients would be significantly greater than the variance for college students. The variance for patients (8.032) as compared to the variance for students (2.235) was significant ( $p < .01$ ). These findings suggest that an inability to disclose oneself to important others may result in serious impasses in living. An ancillary finding in this study suggested that there was a difference between students and patients in the amount of information they shared with close friends. Students disclosed a

moderately high amount of information to both best male and best female friends; patients shared very little with best friends. Further, another ancillary finding in this study is that the patients disclosed most to friends about the usually guarded aspects of self, namely personality. They disclosed as much about the area of body as they did about attitudes and tastes. In normal samples, topics of discussion such as money, personality, and body are areas of low disclosure. This finding suggests that when patients do disclose to others, the content is inappropriate. This finding supports other research (Cozby, 1973; Komarovsky, 1976) that indicates that higher disclosures, in certain situations, may be perceived by others as maladjusted. High indiscriminate disclosure is not only a deterrent to social bonding but has been found clinically to be an indicant of a troubled personality and sometimes a precursor of a major disorder.

Komarovsky (1976), using a modified version of the Jourard Self-Disclosure Questionnaire in a study of intimacy and isolation in male college students, identified characteristics of very high and very low disclosers. The results of this study suggested that a high level of disclosure may be associated with personal adjustment, heterosexuality, self-acceptance, or, at the other extreme, it may be associated with an exceptional need for succorance and support. These results were generated from the following data. Using disclosure in the area of personality as an index of psychological intimacy, Komarovsky compared extreme scores on self-disclosure with scores on the Gough Adjective Check List. Low disclosers among white students were characterized by low scores on heterosexuality, affiliation (to seek and maintain many friendships), personal adjustment, achievement,

intraception (attempts to understand one's own behavior or the behavior of others), and succorance (dependent on others, seeking support). These differences were predictable with the exception of succorance. The high scores on succorance of the highest disclosers suggested that at least some of these individuals may be motivated by unusual needs for support. Further, the ten highest and the ten lowest disclosers were compared on ten dimensions of the California Psychological Inventory. The high disclosers had higher scores than low disclosers on socialization, self-acceptance, dominance, femininity (appreciative, patient), and psychological-mindedness.

#### Self-Disclosure and Family Patterns and Loneliness

In a recent study by Rubenstein, Shaver, and Peplau (1979) findings suggested that adult loneliness may have its roots in childhood. Lonely people tended to remember their parents as being disagreeable, remote, and untrustworthy; non-lonely people remembered their parents as close, warm, and helpful.

Since the roots of loneliness may begin in infancy and childhood interactions, exploration of patterns of self-disclosure in childhood has relevance to this study. Child-rearing practices and family interaction seem to influence patterns of self-disclosure in adults. Researchers have found that later borns show higher self-disclosure scores than first borns. They conclude that while first borns may have greater affiliation needs than later borns, they are not as adept at satisfying the needs through establishing close relationships with others (Dimond & Hellkamp, 1969; Dimond & Munz, 1967).

A study by Pederson and Higbee (1969) found that disclosure to parents was correlated with subjects ratings of parents on such adjectives as close, warm, friendly, and accepting. Also, it was found that females who rated the mother as cold, distrustful, and selfish tended to score high on the Social Accessibility Scale which measures willingness to disclose to strangers, acquaintances, and/or best friend. Doster's and Strickland's (1969) research findings support the notion that generally high disclosers perceived their parents as more nurturant than low disclosers; people from low nurturant homes disclose more to friends than parents while the reverse is true with people from high nurturant families.

#### Self-Disclosure in Relationships and Loneliness

Since loneliness appears to be a response to the absence of some particular type of relationship, a close, intimate attachment or a meaningful friendship (Weiss, 1973), investigation of self-disclosing tendencies in relationships is relevant to this study. According to Altman and Taylor (1973) the development of relations stems from the dynamics of the encounter between people, topics being discussed, and characteristics of the participants.

Several research endeavors, using normal samples, point out the influence of self-disclosure on relationships. Research conducted by Jourard (1961c) suggested that persons scoring high on self-disclosure were rated high in the ability to establish and maintain communicative relationships and demonstrated a high degree of openness in relationships. Taylor (1968) also reported that level of self-disclosure was related to the development of relationships. However, Taylor found that high disclosing dyads engaged in greater amounts of intimate

exchange than low disclosing dyads. Results of research conducted by Halverson and Shore (1969) suggested that persons who are socially open to others are seen as more interpersonally competent than individuals who are guarded and closed in their personal affairs. Further insight into self-disclosure and relationships evolved from a study by Rubin and Shenker (1978). Rubin and Shenker reported that higher levels of self-disclosure occurred among close friends than among less close friends; increasingly intimate self-disclosures were related to higher levels of friendship. These studies suggest, then, that higher levels of self-disclosure, in normal samples, may be conducive to the development and maintenance of relationships. The maintenance of meaningful relationships appears to be related to loneliness.

To summarize, higher levels of self-disclosure appear to be an index of the openness of a relationship with normal subjects. Persons who are higher disclosers may be better able to interact more meaningfully than persons who are lower disclosers. Gilbert (1976) suggested that higher levels of self-disclosure may indicate acceptance and commitment of not only the disclosure but of the person making the disclosure. A person who is not able to disclose to another significant person may not be able to establish interpersonal relationships to meet his social and intimacy needs. Thus, a person who is a lower discloser may have a paucity of meaningful encounters with significant persons and be at risk for experiencing loneliness.

### Interpersonal Dependency

Interpersonal dependency is a multi-faceted construct, encompassing attachment, separation, dependency/independency, and over-

dependency. While numerous theorists have addressed these concepts separately from a variety of theoretical frameworks, it is Hirschfeld et al. (1976) who can be credited with the particular construct of "interpersonal dependency". They define it as a "complex of thoughts, beliefs, feelings, and behaviors which revolve around the need to associate closely with, interact with, and rely upon valued other people" (p. 374). The thoughts involve views of self and relationships with other people. The beliefs are related to the value placed on friendship, intimacy, interdependence. The feelings involve both positive (eg., warmth, closeness, affiliation) and negative emotions (eg. emptiness, separateness, and aloneness). The behaviors involve maintenance of interpersonal closeness, for example, being pleasant, giving or requesting advice, or helping others. This complex of thoughts, beliefs, feelings, and behaviors is an element in the normal adult personality structure (Hirschfeld, Klerman, Gough, Barrett, Korchin, & Chodoff, 1977).

In the following review of the literature several theoretical origins of interpersonal dependency are reported which make it reasonable to hypothesize that higher levels of interpersonal dependency are associated with higher levels of loneliness. The tentative links of the concepts of attachment and dependency to loneliness are explored. Within the context of the review, relevant research on these concepts and relationships, pertinent to the current study, are reported.

#### Attachment, Separation, and Loneliness

The review of the literature on attachment is organized as follows: importance of the development of attachment for interpersonal functioning, consequences of discontinuities in the development and

maintenance of attachment, and the relationship of these to loneliness.

Moss (1967) stated that exploration of the early attachment literature is legitimate in that a major reason for studying human infants is derived from the assumption that adult behavior, to a considerable extent, is influenced by early experiences. If aspects of infant experiences and behaviors can be conceptualized, then predicting and understanding adult behavior is more likely to occur.

Sullivan (1953) proposed that loneliness occurs when a basic need for intimacy is not met and suggested that childhood experiences may predispose some persons to loneliness. Thus, an understanding of the infant's and child's development of early relationships may provide some insights into comprehending the loneliness experience.

Schaffer and Emerson (1964) defined attachment as the tendency of the young to seek the proximity of certain members of the species. Cohen (1974) stated that the object of attachment served a specific psychological function for which others could not substitute. Ainsworth (1972) conceived of attachment as an affectional tie or bond that one person forms between himself/herself and another specific individual. Thus, the conceptual essence of attachment appears to be related to the affectional response inherent in an attachment relationship.

Bowlby is recognized as one of the primary developers of attachment theory. In Bowlby's (1969) theoretical formulation attachment behavior has biological underpinnings which can be comprehended within an evolutionary context. To Bowlby, attachment refers to the affectional bond that one person forms to another specific person. The person



is viewed in a social context with the person's attachment behavior interlocking with reciprocal behaviors of others. Attachment behavior as conceived by Bowlby (1977) is any form of behavior that results in a person attaining and retaining proximity to a preferred person.

Research has been undertaken which outlines the development of attachment behaviors between infants and young children and their mothers (Ainsworth, 1964; Ainsworth & Bell, 1970; Ainsworth, Bell & Stayton, 1972; Feldman & Ingham, 1975). These studies indicated that there are individual differences in the manifestations of attachment behaviors; for example, some children showed attachment by active, affectionate, and interactive behavior when in physical contact with their mothers, while others seemed ambivalent to contact or not especially to care for it. Further, differences in manifestations of attachment behavior vary relative to the age of the child.

Although there is a body of literature that documents behavioral indicators which imply the existence of attachment, researchers and theorists have found it difficult to explicate the learning process through which attachment bonds are developed. Yarrow is one theorist who has attempted to conceptualized attachment as part of a chain of social and cognitive developmental changes. Attachment can be viewed, according to Yarrow (1972), as an organizing concept that indexes a broad range of behaviors extending over a wide developmental time span and encompassing similar but phenotypically different behaviors at various periods throughout life. In other words, behaviors which are thought to indicate attachment will change throughout the course of developmental periods. Although behavioral indicants change over time, reciprocity of relationships remain central to the attachment

process. The interactional nature of attachment is manifested by the mother's or some other responsive person's behavior toward the infant and the infant's behavior and feeling toward the mother or mother figure. One outcome of an attachment between the mother and the child may be a high degree of autonomy in the child since the child develops confident expectations toward its mother and the environment. In middle childhood and adolescence, reciprocal interaction includes a wider circle of people - siblings and peers of both sexes and other significant adults. Bowlby (1977) posited that during adolescence and adult life attachment behavior is directed not only toward persons outside the family but also toward groups and institutions other than the family. A school, work group, religious group, or political group can become for many people an attachment figure. That attachment behavior in adulthood is a continuation of attachment behaviors in childhood is shown by the circumstances that elicit adult's attachment behaviors: in sickness and calamity, adults often become demanding of others; in dangerous situations adults seek proximity to another trusted person (Bowlby, 1969).

Thus, at any particular developmental point, attachment behaviors will vary in intensity and on a number of qualitative dimensions. Yet these varied behaviors have a common conceptual core: the relationship between the two people in which there is a strong interdependence and an affectional component (Yarrow, 1972). Frank (1973) addressed the need for a special relationship in which the person believes that a significant other genuinely cares about his/her welfare. This relationship enables the person to overcome demoralization and sense of alienation from his fellows.

Confidence in the availability of attachment figures, or lack of it, is built up slowly during the years of immaturity, infancy, childhood, and adolescence, and whatever expectations are developed during these years tend to persist relatively unchanged throughout the rest of life (Bowlby, 1973b).

During the formation, the maintenance, the disruption, and the renewal of attachment relationships many of the most intense emotions arise. Bowlby (1973a) indirectly suggested that when a person loses a significant person upon whom the person has relied, one of the emotions experienced is loneliness.

When unwilling separation and loss of attachment objects occur, many forms of emotional distress and personality disturbances can occur (Bowlby, 1977; Lamb, 1974). In a follow-up study of the effects of mother-child separation by Bowlby, Ainsworth, Boston, and Rosenbluth (1956) two groups of children were studied: children who had been hospitalized for long time periods before their fourth birthday with tuberculosis - the age at the time of follow-up ranged from 6.10 to 13.7 years; and a control group matched for age, sex, and same school class. Data used for comparison of the two groups were derived from two sources - teacher's report form and a psychologist's report. Results indicated that qualitatively the differences between the two groups of children demonstrated that the hospitalized children were inclined toward withdrawal, apathy, roughness, and tempers. Further, the hospitalized children were classified by form of personality organization. They fell into three major classes: the first contained children who showed strong positive feelings toward their mothers and included many children who were pathologically

over-dependent; the second class consisted of children who were ambivalent in their relationships; the third contained children whose relationships demonstrated hostility or indifferences. The results of this study support the thesis that discontinuities in early childhood may have serious influences on the personality development of the child with potential resultant problems in maintaining meaningful interpersonal relationships.

There are people of all ages who are prone to show unusually frequent and urgent attachment behavior without an apparent reason for it. Upon understanding these people, according to Bowlby (1973b), it becomes evident that these people have no confidence that their attachment figure will be accessible and responsive and thus they adopt a strategy of remaining in close proximity to ensure availability. Bowlby (1973b) described this condition as "anxious attachment" or "insecure attachment". Anxious or insecure attachment, according to Bowlby (1973b), is a natural desire for a close relationship with an attachment figure accompanied by apprehension lest the relationship be ended. Anxious attachment may develop because a person's experiences have led the person to build a model of an attachment figure who is likely to be inaccessible and/or unresponsive to the person. The more stable and predictable the interactional regime of the child the more secure a child's attachment tend to be; the more discontinuous and unpredictable the interactional regime of the child the more anxious the attachment (Bowlby, 1973b).

From this information it can be hypothesized that an anxiously attached child may become an anxiously attached adult with anticipated

interpersonal relationship problems. If an adult is overly anxious regarding relationships and if the anxiety is transferred to the other person in the relationship, the other person may respond by withdrawing from the relationship, enhancing feelings of isolation, of loneliness.

In summary, people of all ages need specific people with whom they can have meaningful interaction. An infant learns interactional patterns through the relationship with its mother; early attachment experiences influence adult relationships. People who have formed secure relationships in adulthood will experience intense emotions if the attachment is lost. One such emotion experienced in the absence of an attachment figure is loneliness. Children who have experienced discontinuities in their attachment relationships often exhibit anxiety in their future relationships. The anxiety can be disruptive of an attachment relationship, thus creating loneliness within the person.

#### Dependence, Independence, Overdependence, and Loneliness

The review of the literature in this section is organized as follows: the development of dependence and independence and the development of overdependence with implications for loneliness.

Dependent behaviors can be considered as part of the normal behavioral system of the person. According to May (1953) it is through interaction with others in seeking help, attention, and approval that an individual derives his sense of reality. By contrast, when alone and isolated from others, people feel threatened by the potential loss of their boundaries (Fromm-Reichmann, 1959). The degree of dependence upon others for self-orientation may be related to the degree of

loneliness experienced by people (Fromm-Reichmann, 1959).

Dependency can be viewed as an acquired drive, evolving from the infant's helpless dependence on the mother for gratification of its physiological needs (Ainsworth, 1969). Behaviors, such as crying, clinging, characteristic of the baby when the baby is in a primary drive state are reinforced through the mother's nurturant activities. Also the stimuli provided by the mother's face and presence become signals of gratification to come, and thus, the infant acquires a drive to be close to its mother and seek her attention. Through learning, new behaviors are added to the cluster of dependency behaviors through which the dependency drive is expressed. Behavioral expressions of a dependency drive come to include not only seeking physical contact and proximity but also seeking attention, help, and approval. Through learning, dependency becomes generalized so that the drive is no longer solely directed toward the mother as the source of reinforcement, but also toward other people (Ainsworth, 1969).

According to Stendler (1954), the American socialization process emphasizes the learning of both dependence and independence. In our society standing on one's own and being able to care for oneself are important characteristics of the socialization process. On the other hand, turning to parents for guidance and learning when to seek the help and support of others are valued also in American society. Successful socialization, then, involves acquiring a culturally approved balance between independence and dependence.

Beller (1955) described behaviors associated with dependence and independence which may evolve from early parent-child interaction.

The behaviors indicative of a generalized dependency drive consist of physical contact, proximity to the parent, parental attention to the child, parental help to the child, and parental praise and approval. On the other hand, independence is associated with the child's own behavior with drive reduction when the child begins to explore and manipulate the environment. Some of the behaviors that emerge as the child develops independence are taking initiative, overcoming obstacles, persistence, wanting to do something, and wanting to do things by oneself. Thus, it may be valid to conjecture from Beller's formulation that if a healthy balance exists between dependence and independence, social relationships are more easily maintained and the risks of experiencing loneliness decrease.

Not all children learn the balance between dependence and independence. Some children become overly dependent upon their mothers or mother figures. These are the children who continually seek out adults for their presence, their help, and/or their approval. They cling to their mothers for support and find it difficult to grow up (Stendler, 1954).

Beller (1955) outlined the development of dependency, including overprotection. Overprotection of children by parents is one mechanism that will interfere with the development of independent drives. Through excessive help and contact, the parent will prevent the child from experiencing drive reduction relative to the child's activity. The parent is likely to manifest excessive anxiety over possible injury to the child as the child attempts to explore the environment and natural obstacles. Thus, essential components of independence fail

to get reinforced and instead become associated with anxiety. Concomitantly, the parent is more likely to acquire and maintain an exaggerated reward as an omnipotent drive reducer and protector (Beller, 1955).

In a study by Stendler (1954) twenty children (six years old) who were rated as overdependent were compared with twenty children who served as controls. Results of the study supported the view that overdependency can evolve from maternal overprotection and from discontinuities in the socialization process from nine months to three years in learning dependency.

The development of overdependency, seeking too much attention, help, and/or approval from others may be related to loneliness. Overly dependent persons may be perceived by others as excessively needy and since their needs are so great, people tend to avoid them. Thus, overly dependent persons may be isolated from interaction with others and be at risk for experiencing loneliness.

In a study of dependence proneness of college students ( $n = 101$ ) by Sinha (1968) findings indicated that a dependence-prone person is anxious, an escapist, a fatalist, and impractical. The person confides uncritically, likes to follow others, obeys elders, gets easily discouraged, and seeks excessive help from others. The person is not one who will exert for personal advancement, take interest in work, or look for new ways to success. This research suggests that persons exhibiting characteristics of dependency proneness may find themselves alienated from other individuals, thus possibly experiencing a paucity of meaningful relationships.



A study by Kalish (1971) focused upon anticipations younger people ( $n = 107$ ) have of their own feelings, roles, behaviors, and circumstances relating to their eventual age-caused dependency. Results indicated that in anticipating aging the relationships with the spouse appear to be weak; women tend to turn to their children and grandchildren for support; and men turn to the state and to friends for support. It would seem, then, if the anticipated relationships are not available to the sample at the point of their anticipated dependency loneliness might be experienced.

In summary, dependency is a term for those learned behaviors which imply seeking not only contact and proximity to other persons but also help, attention, and approval. As the child interacts with the environment the child learns independent behaviors such as taking initiative, persistence, and overcoming obstacles. Through interaction a balance between dependence and independence emerges which maximizes the maintenance of social relationships. When the balance is skewed, particularly toward dependency, the risk of experiencing loneliness may exist for the person.

#### Life Changes: External Events and Subjective States

Studies on human behavior and social change have viewed change as a time of stress for the individual (Hoffer, 1952; Rahe, Meyer, Smith, Kjaer, & Holmes, 1964). Toffler (1970) suggested that there are important psychological consequences of experiencing high degrees of change in one's life; the high degree of change may lead to confusion, fatigue, anxiety, and irritability, and eventually to apathy and withdrawal. While change over time may lead to a higher level of

integration and better fit to the social and physical environment, change is often seen as difficult and a threat to those facing it in the present (Wildman & Johnson, 1977). Societal forces that engender an uprooting of traditional male-female relationships, of vocational stability (Packard, 1972), and the decrease in value of membership in a social network or community (Slater, 1970) may foster loneliness. Weiss (1973) posited that any situation that leads to loss of contact with those who share one's concerns may give rise to loneliness. Individuals who have experienced, for example, a recent divorce, a bereavement, unemployment, and mobility are at risk for experiencing loneliness of social isolation. These situations that can lead to loneliness implicitly suggest a change in the individual's sense of connectedness to meaningful persons and things in one's life.

One approach to studying the impact of change on the individual is through investigation of life change events experienced by the person. Rahe and Holmes (1966) pioneered in the identification of life change events. Evolving mostly from ordinary social and interpersonal transactions, these events pertain to major areas of significance in the social structure of the American way of life. These areas include family constellation, marriage, occupation, economics, residence, group and peer relationships, religion, recreation, and health. Some events are socially undesirable; others are socially desirable according to American values of achievement, success, future orientation, and self-reliance. These life events have one theme in common: the occurrence of each event usually evokes or is associated with some adaptive or coping behavior on the part of the involved individual. The emphasis is on change from the existing state, and not on the

psychological meaning, emotion, or social desirability (Masuda & Holmes, 1967).

In general, the purpose of life change event research initially was to demonstrate a temporal association between the number of events that require socially adaptive responses on the part of the individual and onset of illness. The underlying assumption was that such events serve as precipitating factors, influencing the timing but not the type of illness experience. Onset of both physical and psychiatric disorders have been studied in retrospective and prospective designs using the life change framework (Rabkin & Struening, 1976).

In the present study, life changes refer to the alterations in the individual's environment. Life changes are situational events which change the individual's usual patterns of connectedness between the individual and other people. To date, research has not been undertaken which links life changes and loneliness, an uncomfortable, subjective, affective condition in which a person is aware of not relating to other people, but experiences a need for other people (Leiderman, 1969). Loneliness is a state in which personal characteristics and environmental changes may have significant effects upon the loneliness experience. Is there an association between life change events and loneliness? If an individual loses a sense of relatedness to meaningful persons and objects in his/her world through change will loneliness be an outcome of the change?

Although loneliness has not been studied using a life change framework, various research has been conducted in which an association between life change events and affective states has been demonstrated (Brown, 1974; Brown & Birley, 1968; Hudgens, 1974; Markosh & Favero, 1974; Myers, Linderthal, & Pepper, 1972; Paykel, 1972a, 1974b;

Paykel, Myers, Dienelt, Klerman, Linderthal, & Pepper, 1969). These studies indicate that life change events frequently precede and are often associated with an increase in psychiatric symptomatology. Interestingly, in the loneliness literature, Fromm-Reichmann (1959) has emphasized loneliness in schizophrenia and Leiderman (1969) has suggested that loneliness and depression may occur simultaneously within a person. Thus, research suggests that life change events can influence people to such a degree that manifestation of illness appear either physically or emotionally.

Another group of studies focused on the relationship of life change events to personality factors and social and psychological functioning.

Costantini, Davis, Braun, and Iervoline (1973) explored relationships between high degrees of life change and personality and mood factors. Two hundred sixty-two college students completed the Schedule of Recent Experience (SRE), the Psychological Screening Inventory, and the Profile of Mood States. Scores on the SRE had significant positive correlations with Profile of Mood States scores of tension, depression, anger, fatigue, confusion and total mood disturbances. The scores on the SRE also had significant positive correlation with the Psychological Screening Inventory scores of alienation and social nonconformity and a negative correlation with defensiveness. The pattern of personality and mood correlates of scores on the SRE showed that adverse psychological consequences may result from a great deal of change. Of particular interest is the positive correlation between scores on the SRE and the score of alienation. Alienation, as described by Belcher (1973), is "the lack

of identity with, or the rejection of prevalent social values by the individual, largely on the basis of esthetic, cultural, or humanistic grounds" (p. 9), thus suggesting a disconnectedness of the person from society. This research finding of the Costantini et al. study appears to be the closest link for positing a relationship between life event changes and loneliness.

Justice, McBee, and Allen (1977) investigated the relationship between life events and social and psychological functioning. The sample consisted of 39 subjects admitted to the adult out-patient clinic at a large mental health center. The subjects' life events were measured by the Social Readjustment Rating Scale. The social and psychological functioning of the subjects was measured by the Denver Community Mental Health Questionnaire and an abbreviated form of the Minnesota Multiphasic Personality Inventory. An association was found between stress, relative to the life change events accumulated in the preceding 12 months, and impairment in both social and psychological functioning.

The above studies further support the proposition that life changes can have an influence on psychological states. The research finding that there is an association between life changes and alienation further lends support to the thesis that life changes and loneliness may be related.

The above review of the literature on life change events has suggested an association between life change events and the emotional and psychological state of an individual. Briefly, research findings indicate that increased rates of life changes are associated with psychiatric problems, schizophrenia and depression, and personality and

mood factors, tension, anger, fatigue, confusion, and alienation. Thus, adverse psychological states may result from excessive amounts of life changes. The changes in social and interpersonal interactions that result from high levels of life changes can disrupt connectedness from significant people and objects in a person's life. Thus, a person may feel unrelated to familiar persons and objects. This disruption or unrelatedness may conceivably create a sense of loneliness within a person. The hypothesis that life change is related to loneliness will be tested in the current study.

## Chapter III

### Method

#### The Sample

The sample for this study consisted of 209 volunteer male and female students ranging in age from 18 years to 25 years. The sample size was more than twice the 77 required for the desired medium effect size,  $f^2 = .15$ , at the .05 level of significance at a power of .80 for multiple regression (Cohen, 1977). Since the literature on self-disclosure strongly suggests a sex difference in self-disclosing patterns, the sample size was increased to facilitate the analyses.

A descriptive analysis of selected characteristics of the sample in this study is presented in Table 1. Of the 209 respondents, 57% were females and 43% were males. According to age, almost 60% of the respondents were 18 - 20 years of age while approximately 40% of the sample were in the age category 21 - 25. Of this sample, 90% were single and 8% were married. The vast majority of the respondents were White (78%) while 13% were Black and 7% were Spanish. The majority of the respondents (69%) lived with their parents while 13% lived with a spouse or a roommate. Approximately 5% of the respondents lived in a dormitory. All the subjects attended a state university in an urban setting. Of this sample, over 90% were undergraduate students.

Table 1  
Frequencies and Percentages of Selected  
Characteristics of the Sample

Characteristics	<u>n</u>	Percentages
Sex	209	100.0
Male	89	42.6
Female	120	57.4
Age in years	209	100.0
18 - 20	123	58.9
21 - 25	86	41.1
Marital status	209	100.0
Single	187	89.5
Married	17	8.1
Separated/Divorced	5	1.4
Race	209	99.9
White	187	78.0
Black	28	13.4
Spanish	15	7.1
No response	3	1.4
Level of education	209	100.0
Undergraduate	196	93.8
Graduate	12	5.7
No response	1	0.5
Living situation	209	100.0
Alone	10	4.8
With parents	145	69.3
With roommate	16	7.6
With spouse	11	5.3
With child(ren)	2	1.0
With spouse and child	4	1.9
With more than two genera- tions of family	9	4.3
In dormitory	10	4.8
Other family	1	0.5
No response	1	0.5



### The Procedure

Volunteer students were recruited from an urban state university. An agreement contract (See Appendix A) was obtained from individuals willing to participate in this study. Each student was given a "Letter to Participants" which briefly described the intent of the study, the order of information to be collected, and time estimation for completion of the forms (See Appendix B). A separate form, Test Results, was given to the participants; the respondents who completed this form were sent the summary and the results of this study (See Appendix C). All participants were given the Agreement Contract, the letter describing the study, the test results form, the Revised UCLA Loneliness Scale (See Appendix D), the Jourard Forty-Item Self-Disclosure Questionnaire (See Appendix E), the Interpersonal Dependency Inventory (See Appendix F), the Recent Life Change Questionnaire (See Appendix G), and the General Information Sheet (See Appendix H) in an envelope. Volunteers who did not meet the specified delimitations for the study were excluded from the sample by the investigator when the investigator reviewed the data supplied by the volunteers. Information designed to elicit eligibility for the sample was given on the General Information Sheet.

The instruments were given to groups of volunteer students in a classroom setting. The investigator received permission from faculty members to elicit volunteers for the study at the beginning of class sessions. In the vast majority of instances, classroom time was used for testing. When this was not feasible, testing was done immediately following class. Thus, testing was done in the presence

of the investigator. The time estimation for completion of all questionnaires and forms was 30 minutes to 40 minutes.

All subjects received the forms and instruments in the same order; directions indicated the necessity of answering all questions in the order in which they were presented. Test results were returned to the investigator in the envelopes.

The ordering of materials and instruments was as follows: the Agreement Contract, the letter describing the study, the Test Results Form, the Revised UCLA Loneliness Scale, the Jourard Forty-Item Self-Disclosure Questionnaire, the Interpersonal Dependency Inventory, the Recent Life Change Questionnaire, and the General Information Sheet. The decision for the proposed ordering was based primarily on a separation of the Revised UCLA Loneliness Scale and the Interpersonal Dependency Inventory since these two instruments appear to ask searching, introspective questions of the subjects. Also, due to the similarity in the style of questions for these two instruments, the respondents may experience fatigue and boredom if these two tests were administered sequentially, thus decreasing attention to the content of the questions.

### The Instruments

#### The UCLA Loneliness Scale

Russell, Peplau, and Ferguson (1978) developed the initial UCLA Loneliness Scale. Their intent in the development of a loneliness instrument was to develop a general or global measure of loneliness, based on the belief that the loneliness experience, while varying from person to person, has certain central themes which can be included in a general loneliness measure (Russell, Peplau, and Cutrona, Note 4).

Based on the results of an early study of UCLA undergraduate students, a 20 item loneliness scale that had very high internal consistency, with coefficient alpha = .96, and a test-retest correlation over a two month period of .73 was developed. Concurrent and preliminary construct validity was reported for the original UCLA Loneliness Scale. The correlation between the subjective self-report question about current loneliness and the loneliness scale score was highly significant ( $r(45) = .79, p < .001$ ). Loneliness scores of lonely students who volunteered for a three week clinic/discussion program differed from scores of students in a comparison group who were tested concurrently. The mean loneliness scale score of clinic/discussion participants was 60.1 compared to a mean of 39.1 for the comparison sample ( $t(41) = p < .001$ ).

Scores on the UCLA Loneliness Scale to other emotional states provided further validation. In the UCLA study, scores on the UCLA Loneliness Scale correlated with participants self-ratings of being "depressed" ( $r(131) = .49, p < .001$ ) and "anxious" ( $r(131) = .35, p < .001$ ) (Russell, Peplau, & Ferguson, 1978).

Further data from the UCLA study demonstrated that loneliness scale scores were associated with low ratings of "satisfaction" ( $r = -.43, p < .001$ ) and being "happy" ( $r = -.40, p < .001$ ). Specific emotional correlates of loneliness were also confirmed. Scores on the UCLA Loneliness Scale were significantly (all  $p < .001$ ) correlated with feeling "empty" ( $r = .58$ ), "self-enclosed" ( $r = .54$ ), "awkward" ( $r = .46$ ), "restless" ( $r = .38$ ) and "bored" ( $r = .36$ ). Lonely students were more likely to describe themselves as "shy" ( $r = .45, p < .001$ ) and to rate themselves as being less "attractive"

( $r = -.30$ ,  $p < .001$ ). Loneliness scores did not correlate with adjectives such as "hard-working" and having "wide interests", thus providing some evidence of the scale's discriminant validity (Russell, Peplau, & Ferguson, 1978).

Despite evidence of the original scale's ability to measure loneliness, several problems with the scale have been of concern. One important concern was the response bias. The UCLA Loneliness Scale consisted exclusively of items worded in a negative direction. This negative wording has lead to a confounding of scale scores with social desirability. A second problem relates to the scale's discriminant validity (Russell, Peplau, & Cutrona, Note 4).

In order to remedy response bias and social desirability concerns, two studies were undertaken to address the potential problems with the original UCLA Loneliness Scale.

In the first study ( $n = 162$  students), a revised version of the UCLA Loneliness Scale was developed and tested. Like the original scale, the Revised UCLA Loneliness Scale (See Appendix D) has 20 items, half worded negatively and half worded positively. In this revised scale, items 1, 4, 5, 6, 9, 10, 15, 16, 19, and 20 should be reversed before scoring (i.e., 1=4, 2=3, 3=2, 4=1). The total scale score is the sum of all 20 items. The revised scale has high internal consistency with coefficient alpha = .94. The new scale correlated .91 with the original scale (Russell, Peplau, & Cutrona, Note 4). Test-retest reliability on the revised scale was not done since the scores on the new scale correlated so highly with the scores on the old scale (Peplau, Note 5).

The concurrent validity of the Revised UCLA Loneliness Scale was demonstrated by association of scores on the revised loneliness scale to measures of current emotional states. Scores on the revised scale were found to be significantly correlated (all correlations above .40 in magnitude) with feeling sociable, self-enclosed, depressed, hopeless, abandoned, empty, and isolated. Nonsignificant correlations were found between loneliness scores and such unrelated emotions as feeling surprised, creative, thoughtful, embarrassed, and sensitive. Scores on the revised scale were significantly correlated with scores on the Beck Depression Inventory ( $r = .62$ ) and the Costell-Comrey Anxiety ( $r = .32$ ) and Depression ( $r = .55$ ) Scale (Russell, Peplau & Cutrona, Note 6).

Study two ( $n = 239$  students) also tested the concurrent validity of the revised loneliness scale by examining the relationship between loneliness and the individual's social behavior, solitary behavior, and social relationships. A median split of scores on the revised scale (Median = 35.1) was used to define "lonely" and "non-lonely" students. For solitary activities, lonely students reported spending more time alone each day for a two week period,  $t(233) = 5.66$ ,  $p < .001$ , eating dinner alone more often in the two week period,  $t(233) = 9.31$ ,  $p < .001$ , and spending weekend evenings alone more often in the past two weeks,  $t(223) = 3.77$ ,  $p < .001$ . Students who were not lonely reported more social activities with friends,  $t(224) = 4.99$ ,  $p < .001$ . For the relationship between loneliness and social relationships strong concurrent validity was found.

Lonely students reported a mean of 2.9 close friends while non-lonely students reported having a mean of 4.6 close friends; this difference was highly significant,  $t(235) = 4.99$ ,  $p < .001$ . The relationship between loneliness and marital and dating status was examined using analysis of variance. Students were divided into three groups: those not dating at all, those dating casually, and those married or dating steadily. Using scores on the Revised UCLA Loneliness Scale as the dependent variable, significant differences were found for level of loneliness between these groups,  $F(2, 187) = 22.97$ ,  $p < .001$ . Students not dating had a mean score of 43.1 on the scale, while students dating casually and students married or dating steadily had scores of 34.0 and 32.7 respectively on the scale. Post-hoc comparisons demonstrated that students who were not dating at all were significantly lonelier than the other two groups,  $t(187) = 6.70$ ,  $p < .001$  (Russell, Peplau, & Cutrona, Note 6).

The discriminant validity of the Revised UCLA Loneliness Scale was assessed by examining the relationship of loneliness scores to scores on other measures of mood and personality. Separate scales were included in this analysis consisting of measures of depression, anxiety, social self-esteem, assertiveness, social desirability, lying, introversion-extroversion, sensitivity to rejection, affiliative tendency and self-reported loneliness. The discriminant validity of the Revised UCLA Loneliness Scale was demonstrated by the inter-correlations of loneliness scores with scores of other measures. Loneliness scores were more highly correlated with the self-report loneliness index (.7052) than with any of the other measures:

introversion-extroversion,  $-.4568$ ; social self-esteem,  $-.4932$ ; sensitivity to rejection,  $.2759$ ; assertiveness,  $-.3417$ ; anxiety,  $.3592$ ; depression,  $.5052$ ; social desirability,  $-.2026$ ; lying,  $-.0014$ ; and affiliative tendency,  $-.4518$  (Russell, Peplau, & Cutrona, Note 6).

Since the measures of mood and personality were intercorrelated, the variables were partitioned into uncorrelated factors through factor analysis. Using principal factoring with a varimax rotation four factors emerged which were labelled social risk-taking, negative affect, social desirability, and affiliative tendencies. A regression analysis was computed using scores from factor analysis for the four identified factors. All four factors were entered into the regression equation simultaneously. The social risk-taking ( $F = 25.72, p < .001$ ), negative affect ( $F = 27.97, p < .001$ ), and affiliative tendency ( $F = 52.74, p < .001$ ) factors were all significant predictors of loneliness. Forty-three percent of the variance in loneliness scores was predicted by these three factors. The social desirability factor was found to be unrelated to loneliness scores. A second regression analysis was performed to test whether the self-report loneliness index could account for any of the remaining variance in loneliness scores. The self-report loneliness index explained an additional 18% of the variance in loneliness scores from the regression analysis. The data reported above provide further discriminant validity evidence for the Revised UCLA Loneliness Scale (Russell, Paplau & Cutrona, Note 6).

A final test of the discriminant validity of the revised scale was conducted. Analyses were conducted to test whether the relationship between loneliness and social activities and social relationships could be eliminated when the variance in loneliness scores explained by social risk-taking, negative affect, and affiliative tendency factors were statistically partialled out. These analyses test whether the concurrent validity reported earlier is due to the influence of these three factors on loneliness scores. The concurrent validity tests were therefore redone using analysis of covariance to partial out the influence of social risk-taking, negative affect, and affiliative tendency factors on loneliness scores. With this statistical control included, clear evidence of the revised loneliness scale's concurrent validity was still present. Again, in relation to solitary activities, lonely students were found to spend more time alone each day,  $F(1, 165) = 5.99, p < .001$ , eat dinner alone more often,  $F(1, 165) = 8.72, p < .005$ , and spend weekend evenings alone more often,  $F(1, 165) = 3.36, p < .07$ . A tendency for lonely students to have performed fewer activities with friends was found also from the co-variance analysis,  $F(1, 165) = 2.48, p < .12$ . For social relationships, lonely students were found to have fewer friends,  $F(1, 165) = 7.62, p < .01$ , and the relationship between loneliness and current dating and marital status also continued after the co-variance analysis  $F(2, 144) = 7.36, p < .001$  (Russell, Peplau, & Cutrona, Note 6).

A comparison of measures of central tendency for scores on the original and the revised UCLA Loneliness Scale for 389 college students demonstrated that the mean score on the original scale



was 38.2 and on the revised scale, 35.1. The standard deviation on the original scale was 11.3 and on the revised scale, 10.3. The median score on the original scale was 36.9 and on the revised scale, 33.6. The range on the original scale was 20-78 and on the revised scale, 20-71 (Russell, Peplau, & Cutrona, Note 4).

In summary, the Revised UCLA Loneliness Scale is judged to be an appropriate instrument for measuring loneliness in a sample of young adults. The reliability and validity support the view that the affective experience of loneliness is being tapped in this instrument.

#### The Jourard Forty-Item Self-Disclosure Questionnaire

The Jourard Self-Disclosure Questionnaire consists of forty items (See Appendix E). The questionnaire elicits the extent that a person has talked about the item to a specific target person such as mother, father, same-sex friend, and opposite-sex friend (Jourard, 1971a). The total score on this scale is computed by adding together the target subtotal scores.

For the forty item self-disclosure questionnaire odd-even reliability coefficients had been established with a group of 56 female college students for the target subtotal and the total disclosure score: mother, .85; father, .89; opposite-sex friend, .90; same-sex friend, .75; and total score, .85 (Jourard and Richman, 1963). Test-retest reliability coefficients were obtained from two samples of 44 and 43 medical freshmen, each group tested at six month intervals. The correlations for disclosure of target persons were mother, .67 (.77); father, .84 (.94); opposite-sex friend, .55 (.80); same-sex friend, .77 (.74); and for total disclosure, .62

(.61) (Jourard & Richman, 1963).

Shapiro and Swensen (1969) studied patterns of self-disclosure among 30 married couples, ranging in age from 18 years to 35 years. Subjects were given two forms of the self-disclosure questionnaire: the first form asked the subjects whether he (she) had told his (her) spouse about himself (herself); the second form asked what the subject had been told by the spouse about himself (herself). Following the first administration the respondents were asked for specific content concerning what they said they knew about their spouse, the content of the specific knowledge they said about their spouse, what they claimed their spouses knew about them, and the content of the specific knowledge they thought their spouses knew. Correlations between stated knowledge or disclosure and accurate knowledge ranged from .74 to .85 suggesting that the self-disclosure questionnaire is a relatively valid way of ranking people on self-disclosure. This study, however, indicated that both men and women tend to overestimate how much they have disclosed and have had disclosed to them.

Jourard and Resnick (1970) studied 12 women designated as high disclosers and 12 as low disclosers from a sample of 80 female undergraduate students on the basis of scores on the forty-item self-disclosure questionnaire. A two part experiment was conducted to investigate the predictive value of the instrument at forecasting self-disclosure in a dyadic situation and whether a subject would increase or decrease predicted level of self-disclosure when paired with a partner whose level of self-disclosure differed. Results indicated that low-disclosing subjects, when paired with low disclosing subjects, disclosed less to each other ( $\bar{M} = 26.33$ , unweighted

scores; 56.17, weighted scores) than paired high-disclosing subjects ( $M = 37.87$ , unweighted scores; 84.25, weighted). This difference was significant beyond the .01 level of confidence (ANOVA unweighted scores,  $F = 9.85$ ; weighted scores,  $F = 9.49$ ). Thus the self-disclosure questionnaire used to assign subjects to "low" or "high" disclosure groups predicted disclosure and is regarded as valid for this purpose. In terms of the dyadic effect, the predictiveness of the instrument did not hold up: low disclosers were influenced by high disclosers and disclosed more to high disclosers than low disclosers. The low disclosers changes their disclosing pattern.

Jourard (1961a) studied age trends in self-disclosure on 1,020 students ranging in age from 17 years to 55 years using the forty-item self-disclosure questionnaire. The hypothesis explored was that as late adolescents grow into later maturity, they will reduce amount of information they disclose to their parents and same-sex friends, and show an increase in the extent to which they confide in the person of the opposite-sex who is closest to them. Results indicated that as people aged, a gradual decrease in disclosure to both parents and to the same-sex friend occurred. The scores for disclosure to opposite-sex friend (or spouse) showed a gradual increase with age. This data, beside showing age trends in self-disclosure, may also be viewed as evidence of concurrent validity.

Jourard (1961b) provided partial evidence of the construct validity of the forty-item self-disclosure questionnaire by exploring whether subjects ( $n = 45$ ) who have disclosed little to their mother, father, closest male and female friends (or spouses) gave fewer responses to Rorschach plates than subjects who were higher

disclosers. Results indicated that productivity on the Rorschach was correlated .37 ( $p < .05$ ) with total disclosure scores; .44 with discloser to father ( $p < .01$ ); and .35 with disclosure to same-sex friend ( $p < .05$ ). The correlations with mother and with opposite-sex friend (or spouse) were .26 and .03 respectively; neither correlation was statistically significant. These results demonstrated that there is a low but real correlation between productivity on the Rorschach test and a measure of the extent of self-disclosure to selected others. Jourard stated that low productivity on the Rorschach is viewed as one of the possible indicants of defensiveness in a subject. He further stated that it seems appropriate to regard low disclosure of self to significant others as a sign of defensiveness, an unwillingness to be known.

In summary, the Forty-Item Self-Disclosure Questionnaire appears to be an adequate instrument to measure the present level of self-disclosure in subjects. Since this study is descriptive in nature, this questionnaire is acceptable for use.

#### Interpersonal Dependency Inventory

The Interpersonal Dependency Inventory (See Appendix F) is a 48 item scale which consists of three sub-scales: emotional reliance on another person (EROP) - 18 items; lack of social self-confidence (LSS) - 16 items; and assertion of autonomy (AA) - 14 items. The items comprising each of the sub-scales in the inventory are: Emotional Reliance on Another Person: items 3, 6, 7, 9, 12, 15, 16, 19, 22, 26, 29, 33, 35, 38, 40, 43, 45, 47; Lack of Social Self-Confidence:

items 2, 5, 10\*, 13, 17, 20, 23\*, 24, 27, 30, 32, 36, 39, 41, 44\*, 46 - (on \* items - rescore by subtracting the item response from 5); Assertion of Autonomy: items 1, 4, 8, 11, 14, 18, 21, 25, 28, 31, 34, 37, 42, 48. The weighted total inventory scale score equals + .67 (Scale 1) + 1.0 (Scale 2) - 1.0 (Scale 3) (Gough, Note 1). Scores on the three sub-scales were computed for developmental subjects ( $n = 400$ ; 220 college students and 180 psychiatric patients); correlated split-half reliabilities were .87, .78, and .72 respectively (Hirschfeld et al., 1977). Intercorrelations among the three sub-scales were computed: emotional reliance on another person and lack of social self-confidence, .42; emotional reliance on another person and assertion of autonomy, -.23; and lack of self-confidence and assertion of autonomy, -.08 (Hirschfeld et al., 1977).

The discriminant validity of the sub-scales of the Interpersonal Dependency Inventory was investigated. Correlations between the three sub-scales and several variables were computed. Results were:

Age: ERAP .12,  $p < .05$ ; LSS, .04; AA, .04; Education: ERAP, -.20,  $p < .01$ ; LSS, -.21,  $p < .01$ ; AA, .10,  $p < .05$ ; General Neuroticism: ERAP, .49,  $p < .01$ ; LSS, .47,  $p < .01$ ; AA, .01; Social Desirability: ERAP, -.44,  $p < .01$ ; LSS, -.56,  $p < .01$ ; AA, -.09; Anxiety: ERAP, .34,  $p < .01$ ; LSS, .27,  $p < .01$ ; AA, .06; Depression: ERAP, .44,  $p < .01$ ; LSS, .42,  $p < .01$ ; AA, .08; Interpersonal Sensitivity: ERAP, .45,  $p < .01$ ; LSS, .53,  $p < .01$ ; AA, .17,  $p < .05$ . The correlation coefficients are large enough to indicate that variables such as neuroticism, depression, anxiety, and interpersonal sensitivity are reflected to some degree in the sub-scales for emotional reliance on another person and lack of social self-confidence. Attempts to

minimize relationships to the variables were only partially successful (Hirschfeld et al., 1977).

On a cross-validating sample of 121 normals and 66 psychiatric out-patients with mixed diagnoses, the patients scored significantly higher on emotional reliance on another person ( $p < .05$ ) and lack of social self-confidence ( $p < .01$ ). The two groups, however, were approximately the same on assertion of autonomy. Correlations between emotional reliance on another person and lack of social self-confidence was .41 for the normal sample and .62 for the patient sample; between emotional reliance on another person and assertion of autonomy the correlations were .10 and .18 respectively; between lack of social self-confidence and assertion of autonomy the correlations were .16 and .34 respectively. Split-half reliabilities on the three sub-scales for the normal sample were .86, .76, and .84 respectively and for the psychiatric out-patient sample .85, .84, .91 (Hirschfeld et al., 1977).

The consistency of the factor structure was tested through the use of FMATCH, a computer program which computes factorial invariance and coefficients of congruence. When applied to the two developmental samples, results were similar between samples (the diagonals in each of the matrices of coefficients were all above .8, while the other coefficients were almost all below .25) (Hirschfeld et al., 1977).

In a study of the construct validity of the Interpersonal Dependency Inventory by Gough & Weiss (Note 7) the sample ( $n = 70$ ; 35 males and 35 females) was chosen from the San Francisco Bay Area telephone books. They were "normals" in the sense that they were seen

outside of any clinical setting and, as far as could be determined, were more or less free of serious psychopathology. Results indicated that dependency criteria based on trait ratings (ratings of dominance, interpersonal dependency, emotional reliance, lack of social self-confidence, and assertion of autonomy) were statistically significant,  $p < .01$ , when correlated with ACL Succorance ( $r = .42$ ), Navran Dependency ( $r = .37$ ), CPI Social Presence ( $r = .40$ ), CPI Dominance ( $r = -.40$ ), MMPI Depression ( $r = .40$ ), GZTS Ascendancy ( $r = -.35$ ), and Barron Ego Strength ( $r = -.34$ ). The data add support to the construct validity of the Interpersonal Dependency Inventory.

The three sub-scales of the Interpersonal Dependency Inventory attempt to measure varying concepts. The sub-scale, emotional reliance on another person, attempts to measure attachment and dependency in nearly equal proportions. Lack of social self-confidence measures the concept of dependency almost exclusively. However, the sub-scale, assertion of autonomy, denies the need for dependency and attachment (Hirschfeld et al., 1977).

Hirschfeld et al. (1977) state that the three sub-scales can be scored separately but a fourth total score of the three sub-scales should be used.

Despite certain limitation, specifically the paucity of information on the use of the Interpersonal Dependency Inventory in research endeavors, this instrument seems to be adequate for purposes of this study. Presently, this instrument is being used in studies throughout the country but results of the studies are not yet available.

### Recent Life Change Questionnaire

The first edition of the Schedule of Recent Experience (SRE) questionnaire was developed in 1957 by Holmes and Hawkins. This instrument was designed to elicit from subjects the occurrence of various life change events in the areas of work, home, family, finances, and community over the preceding ten year interval (Hawkins, Davies, & Holmes, 1957). Rahe revised the SRE and also developed a life change scaling questionnaire (Holmes & Rahe, 1967; Rahe, Meyer, Smith, Kjaer, & Holmes, 1964).

The various versions of the SRE questionnaire attempt to measure life change incidences. Versions of the SRE have been developed to include specific questions for military populations, questions relevant to Scandinavian Samples, the addition of new life change events, and different antecedent time intervals over which life changes were gathered (Rahe, 1978).

In 1974 Rahe took the original 42 items from the 1964 SRE and added 13 new life changes and appended subjective life change scaling instructions for the events. The new instrument, Recent Life Change Questionnaire (RLCQ) (See Appendix G), was designated initially for prospective life changes and illness studies (Rahe, 1978).

The scaling instrument for the SRE is called the Social Readjustment Rating Questionnaire (SRRQ). This questionnaire used a ratio scaling methodology to arrive at mean life change scores for the life change events. Subjects were asked to rate the degree of "social readjustment" necessary to accommodate to a life event, regardless of the desirability of the event, on the basis of marriage being equivalent to an arbitrary score of 500. The Social



Readjustment Rating Scale (SRRS) is the mean score of each life event divided by 10 and ranked. The values for the life events range from 100 downward (Holmes & Masuda, 1974). The resultant mean scores are called Life Change Units (LCU) (Holmes & Rahe, 1967).

The SRE/LCU have been investigated since their inception. It has been consistently found that subjects' recent 6 month LCU scores are significant predictors of near-future illness (Rahe, 1974a).

One attempt to improve the SRE was the development of the Subjective Life Change Unit scaling system (SLCU) (Rahe, 1974b). This interval ratio scale (0 to 100) allows persons completing a life change incidence questionnaire to estimate also the amount of life change and readjustment he or she personally experienced secondary to the recent life change event. The SLCU is part of the RLCQ (Rahe, 1978).

Subjects who have completed the RLCQ can be given at least three different life change scores for analysis. First, subjects can be given a six-month life change unit (LCU) score for 42 of the 55 items; the forty-two questions comprise the SRE which is incorporated into the 55 item RLCQ. A second scoring method for subjects' recent life changes is to count all recent life changes in a six-month time period as equal. This scoring technique is called the "unit scaling method" and has proved to be as useful as the LCU method for samples of young subjects who experience very few high LCU life changes. Third, the subjective life change unit (SLCU) scoring method can be used. In this method six-month SLCU totals can be given for the original 42 SRE items and for the entire list of 55 life change items. It is recommended however, that the SCLU method

be used in prospective studies (Rahe, 1975). Rahe (1974b) stated that an "interesting problem which arises when using the LCU magnitude scale with samples of subjects who primarily report low to moderately low LCU events is that one can dispense with the LCU scale" (p. 82). Rahe found in young, single Navy samples that there generally proved to be very little difference in LCU values of the men's recent life change events. Correlations between subjects' LCU scores and simple unit scores for recent life changes have reached as high as .89.

In this study, the RLCQ was used to measure changes an individual experienced within the past six months. The unit scaling method of scoring was used. Each item checked on the RLCQ was given a value of 1; the total score equals the sum of all items checked. The decision to use this method was based on the age of the sample and the purpose for using the RLCQ, namely, to measure the number of changes.

Reliability estimates for the SRE have ranged from as high as .90 to as low as .26 (McDonald, Pugh, Gunderson, & Rahe, 1972). Rahe explains this range in reliability ratings to time intervals between administration of the SRE, the educational level of subjects, the time interval over which subjects' life changes are totalled, the wording and format of the various questions, and the intercorrelations between life change events (Rahe, 1974b).

In a study on illness relative to life situation and sick-role tendency of brewery workers in Canada, the SRE was one measuring instrument used. The test-retest reliability for a two year period was .26 (Thurlow, 1971).

In an early study of stress and tuberculosis using the SRE, a test-retest reliability of .831 was obtained for a five-month

interval on a group of newly admitted white patients with pulmonary tuberculosis between the ages of 25 and 60 years of age (Hawkins, Davies, & Holmes, 1957).

Test-retest reliability of the military version of the SRE was calculated on a sample of 663 U.S. Navy enlisted men whose mean age was 22.4 years and mean education level was 11.6 years. The average correlation for a twelve-month period was .61 (McDonald, Pugh, Gunderson, & Rahe, 1972).

Eighty-eight physicians completed and returned the SRE in 1964. In 1965 the SRE was completed again by 54 of the 88 physicians. There were 54 paired sets of the SRE with a time interval of nine months between the initial response and second response. A period of three years (1957, 1960, and 1963) was chosen for detailed investigation. A coefficient of stability (Pearson correlation) for the two administrations of the questionnaire was calculated. The correlations were high ( $\underline{r} = .669$  for 1957;  $\underline{r} = .638$  for 1960; and  $\underline{r} = .744$  for 1963), the t-test showing these correlations to be significant at the .0005 level of confidence. It was concluded from this study that it takes a period of time greater than nine months to effect the magnitude of recall (Casey, Masuda, & Holmes, 1967). The recall of life events and their saliency were studied on this sample for 33 subjects with discrepant scores for the year 1963. Some items were recalled with more consistency than others, consistency responses ranging from 36% to 100%. The items responded to more consistently had higher salient value and demonstrated a high level of significance (Pearson's  $\underline{r} = .586$ ,  $p < .005$ ) (Casey, Masuda, &

Holmes, 1967).

In a Finnish study of the SRE, 116 myocardial infarction survivors and their spouses were given the SRE. Spouses were to answer questions on the SRE as if they were the "patient". Interpair correlations were between .51 and .75 over the one to two years immediately prior to the study. The results of this study offer some support for the validity of the SRE (Rahe, Romo, Bennett, & Siltanen, 1974).

The Social Readjustment Rating Questionnaire was given to 394 subjects who differed in demographic characteristics to quantify the amount of change in life adjustment required by the life events in the SRE. From the information gathered in this questionnaire, the social readjustment rating scale (SRRS) was devised. In 16 comparisons of mean item scorings of groups different in age, sex, marital status, education and social class, generation American, religion, and race, the correlation coefficients ranged from .975 to .820. The consensus relative to the order and magnitude of the means of items has been demonstrated by the high correlation coefficients. The high degree of consensus on adjustment to life change events indicated agreement by subjects which transcends differences in demographic variables (Holmes & Rahe, 1967).

Many cross-cultural studies of the SRRS have been done. Results of some of the studies are further described.

A cross-cultural study of Japanese and Americans on their responses to the SRRS demonstrated that Spearman's rank-order correlation coefficient between the mean rankings of items by Japanese

and Americans was highly significant (.752) (Masuda & Holmes, 1967).

A further study investigated two American subculture groups - urban Blacks and Mexican Americans - in their assessment of the adjustment required by life change events on the SRRS. The mean score and rank order of the items on the SRRQ for the Mexican Americans and Blacks were compared with the scores on the white American middle-income group of Holmes and Rahe (1967). A comparison of the mean item score of the white American group and the Black group demonstrated a correlation coefficient (Spearman's rho) of .798 ( $p = .001$ ); white Americans versus Mexican Americans correlation was .735 ( $p = .001$ ); the Mexican Americans versus the Black correlation was .892 ( $p = .001$ ); showing the three groups ranked the items similarly (Komaroff, Masuda, & Holmes, 1968).

The SRRQ was given to French, Belgian, and Swiss samples. A very high concordance between the European samples was observed ( $r = .93, .94, \text{ and } .96$  respectively in the samples). The total European sample ( $n = 139$ ) was compared with a corresponding American sample ( $n = 195$ ). The correlation of rank ordering of the readjustment was  $r_s = .89$  (Harmon, Masuda, & Holmes, 1970).

Based upon the above data, the RLCQ appears to be an adequate instrument to measure life changes in samples that are fairly well-educated. Since the more recent the recall of life events, the more reliable the recall, this study will elicit life changes over a six month period.

## Chapter IV

### Analysis of Data

The purpose of this study was to investigate the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults. Volunteer students from an urban university served as subjects in this study. Of approximately 280 students approached to serve as subjects, 209 students agreed to participate. The data from two hundred and nine (209) respondents who completed the Revised UCLA Loneliness Scale (UCLA Scale), the Jourard Forty-Item Self-Disclosure Questionnaire (JSDQ), the Interpersonal Dependency Inventory (IDI), the Recent Life Change Questionnaire (RLCQ), and the General Information Sheet were analyzed using the Statistical Package for the Social Sciences (SPSS) programs (Nie, et al., 1975). The analysis of data is presented below.

#### Statistical Description of the Variables

Descriptive statistics for all variables were compiled using SPSS. Table 2 summarizes a statistical account of each variable.

The range of frequency of scores on loneliness was 20 - 68. The mean score was 37.19 and the standard deviation was 8.67. Thus, 68% of this sample, that is, those scoring between plus and minus one standard deviation of the mean scored between 29 and 46 on loneliness. Russell, Peplau, and Cutrona (Note 4) report the following measures of central tendency for the Revised UCLA Loneliness Scale: mean = 35.1;

Table 2  
Descriptive Statistics  
for Four Variables

Variable	Range	Mean	Standard Deviation	Median
Loneliness	20 - 68	37.191	8.665	36.179
Self-Disclosure	31 - 314	193.169	52.449	194.667
Interpersonal Dependency	(-4) <sup>a</sup> - 74	30.322	13.188	29.450
Life Changes	0 - 34	9.963	6.142	8.974

<sup>a</sup>A minus score is possible on the Interpersonal Dependency Inventory from the scoring formula: .67 (Scale 1) + 1.0 (Scale 2) - 1.0 (Scale 3). For example, a -4 score = .67 (21) + 1.0 (18) - 1.0 (36).

median = 33.6; standard deviation = 10.3; and the range = 20 - 71.

The mean score on self-disclosure was 193.12 while the median score was 194.67 and the standard deviation was 52.45. Thus, 68% of respondents had between 141 and 246 total self-disclosures. Jourard and Richman (1963) reported means and standard deviations for the Jourard Forty-Item Self-Disclosure Questionnaire for a sample of college students. The means were: males = 164.68, females = 197.13; the standard deviations were: males = 33.31, females = 36.71.

The mean and median scores on interpersonal dependency were 30.32 and 29.45 respectively. The standard deviation was 13.19. In this sample, 68% of the respondents scored between 17 and 44 on interpersonal dependency. Gough and Weiss (Note 7) report mean total interpersonal dependency scores for normal male and female validating subjects. The mean scores were: males = 25.06; females = 30.70. The standard deviations were: males = 11.86, females = 12.38.

In relation to life changes the mean and median scores for the respondents were 9.96 and 8.97 respectively; the standard deviation was 6.14. Thus, 68% of the sample experienced between 4 and 16 life changes during a six-month period. The means and standard deviations of life changes as measured by the RLCQ are reported in the literature as life change unit and/or subjective life change unit measurements which cannot be compared adequately to the unit scaling method as used in this study. However, Roncoli (1979) reported the mean and standard deviation on a small subsample of respondents using the unit scaling method. A mean of 20 life events with a standard deviation of 10 was reported by Roncoli.



### Reliability

To assess the reliability of three of the four instruments used in this study, a coefficient alpha was computed for each scale using SPSS. Although reported reliabilities in the literature on the instruments were adequate for justification of usage, a decision was made to appraise the internal consistency of the scales in this study. The coefficient alphas were high for the Revised UCLA Loneliness Scale (.888), for target persons on the Jourard Forty-Item Self-Disclosure Questionnaire (.934, .945, .950, .941), and for the three subscales of the Interpersonal Dependency Inventory (Scale 1: .835; Scale 2: .785; Scale 3: .743) (See Table 3). According to Anastasi (1976) desirable reliability coefficients usually fall in the .80's or .90's. Thus, the alpha coefficients for the two instruments, the UCLA Scale and the JSDQ, demonstrated reasonable consistency in test scores for the sample. The alpha coefficients for the IDI ranged from .743 to .835 showing slightly lower than desirable coefficients as set forth by Anastasi (1976). In summary, the alpha coefficients for the three instruments demonstrated acceptable levels of internal consistency in this study.

An alpha coefficient was not computed for the Recent Life Change Questionnaire because the occurrence of life events are not thought to be related to one another. The other three questionnaires attempted to assess fairly stable constructs within the personality of the subjects. Therefore, repeated estimates of subjects' level of these personality dimensions would be expected to show a high degree of consistency. Thus, in these three instruments alpha coefficients were

Table 3  
Alpha Reliability  
Coefficients for Instruments

Instruments	<u>n</u>	Alpha Coefficients
Revised UCLA Loneliness Scale	209	.888
Jourard Forty-Item Self Disclosure Questionnaire		
Target Persons:		
Mother	205	.934
Father	185	.945
Male Friend	194	.950
Female Friend	202	.941
Interpersonal Dependency Inventory		
Scale 1: Emotional Reliance on Another Person	209	.835
Scale 2: Lack of Social Self-Confidence	209	.785
Scale 3: Assertion of Autonomy	209	.743

appropriate, whereas in the RLCQ high internal consistency was neither expected nor desired.

### Hypotheses

Hypotheses 1 through 3 were tested using Pearson product-moment correlation coefficients as computed via SPSS.

#### Hypothesis 1

It was hypothesized that the lower the self-disclosure, the higher the level of loneliness. The correlation coefficient between these two sets of scores was  $r(209) = -.336$ ,  $p < .005$ . This correlation shows a significant relationship in the predicted direction between self-disclosure and loneliness. Thus, 11.3% of the variance in loneliness is explained by self-disclosure. On the basis of this finding, hypothesis 1 was supported.

#### Hypothesis 2

It was hypothesized that the higher the interpersonal dependency, the higher the level of loneliness. The correlation coefficient between interpersonal dependency and loneliness was  $r(208) = .239$ ,  $p < .005$ . This correlation showed a significant relationship in the predicted direction between the two variables. Thus, only 5.7% of the variance in loneliness is explained by interpersonal dependency. On the basis of this finding, hypothesis 2 was supported.

#### Hypothesis 3

It was hypothesized that the higher the life changes, the higher the level of loneliness. The correlation coefficient between

these two sets of scores was  $r(209) = .039$ ,  $p = .283$ . This correlation suggests little relationship between life changes and loneliness. Thus, hypothesis 3 was not supported.

#### Hypothesis 4

It was hypothesized that lower scores on self-disclosure together with higher scores on interpersonal dependency and higher scores on life changes will be a better predictor of higher levels of loneliness than any single variable alone. This hypothesis was tested by means of multiple regression analysis which analyzed all three predictors and loneliness. Results showed a multiple R which employed all three predictors and loneliness of .418, a multiple R square of .175, and an  $F$  of 14.433 with 3 and 204 degrees of freedom (See Table 4). The  $F$  was significant at the .01 level. Thus, hypothesis 4 was supported.

#### Variable Independence

In order to determine the independence of the predictor variables, correlations were computed for the variables using SPSS. The correlation coefficient between interpersonal dependency and self-disclosure was  $r(208) = .023$ ,  $p = .373$ . This correlation suggests that the two variables are relatively independent of each other. The correlation coefficient between life changes and self-disclosure was  $r(209) = -.111$ ,  $p < .06$ , suggesting a close but not significant relationship. The correlation coefficient between life changes and interpersonal dependency was  $r(208) = .117$ ,  $p < .05$ , suggesting a significant relationship. The data are presented in Table 5.

Table 4  
Summary of Multiple Regression  
Analysis for Loneliness

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Criterion Variable:	Loneliness			
Predictor Variables:	Self-Disclosure			
	Interpersonal Dependency			
	Life Changes			

---

Multiple R = .418

Multiple R Square = .175

---

Analysis of Variance	df	Sum of Squares	Mean Square	F
Regression	3	2723.533	907.844	14.433**
Residual	204	12831.543	62.899	

---

\*\* p < .01

Table 5  
Intercorrelations of the Predictor  
and Criterion Variables

	1	2	3	4
1. Self-Disclosure	1.0	.023	-.111 <sup>a</sup>	-.336***
2. Interpersonal Dependency		1.0	.117*	.239***
3. Life Changes			1.0	.039
4. Loneliness				1.0

<sup>a</sup>  $p < .06$

\*  $p < .05$

\*\*\*  $p < .005$

### Ancillary Findings

Further analyses were conducted on the four variables and the data obtained from the General Information Sheet.

#### Self-Disclosure and Loneliness

A significant relationship was found between subjects' total self-disclosure and loneliness in the predicted direction: the lower the self-disclosure, the higher the level of loneliness. In addition to a total score on the JSDQ, respondents received separate scores on disclosure to various target persons, namely, mother, father, best male friend, and best female friend. To further elucidate the relationship of self-disclosure to loneliness, a Pearson product-moment correlation coefficient was computed for disclosure to each target person and loneliness (SPSS) (See Table 6). Results indicated a significant relationship between disclosure to each target person and loneliness: the lower the disclosure, the higher the loneliness. The negative correlation of loneliness to self-disclosure with friends was substantially higher than the correlation of loneliness to self-disclosure with parents.

Since the literature suggests that high and low disclosing patterns may be indicative of varying phenomena, a decision to assess the mean loneliness scores of high and low disclosers was made. (The high self-disclosure group consisted of 28 subjects with self-disclosure scores of 255 and higher; the low self-disclosure group consisted of 28 subjects with self-disclosure scores of 128 and lower). Scores for the two groups of subjects on the Revised UCLA Loneliness Scale were compared via a t-test (SPSS). A significant

Table 6  
Correlations of Self-Disclosure  
to Target Persons and Loneliness

Self-Disclosure Target Persons	<u>n</u>	Loneliness
Mother	205	-.163**
Father	185	-.243***
Male Friend	194	-.347***
Female Friend	202	-.305***

\*\* p < .01  
\*\*\* p < .005



difference was found between the high and low self-disclosure groups such that the high self-disclosers were significantly less lonely than their low self-disclosing counterparts ( $t(27) = -4.48, p < .005, M_{\text{High}} = 40.68, M_{\text{Low}} = 31.92$ ).

#### Interpersonal Dependency and Loneliness

A significant relationship was found between interpersonal dependency and loneliness. The interpersonal Dependency Inventory consists of three subscales: Scale 1 (Emotional Reliance on Another Person), Scale 2 (Lack of Social Self-Confidence), and Scale 3 (Assertion of Autonomy). The relationship of each subscale of the IDI was correlated with the Revised UCLA Loneliness Scale (See Table 7). Each of the subscales and loneliness proved to be significantly related. The correlation of Scale 2 with loneliness was substantially higher than was the correlation of loneliness with the two other scales.

Further, intercorrelations were computed among the subscales of the Interpersonal Dependency Inventory (See Table 8). The intercorrelations for the present sample closely approximate those reported by Hirschfeld et al. (1977) as noted in Chapter III of the present study.

#### Life Changes and Loneliness

No relationship was found between life changes for a six-month period and loneliness. A Pearson product-moment correlation coefficient was computed (SPSS) for the total life changes for a one-year period and loneliness and for life changes occurring 7 to

Table 7  
Correlations of Subscales of the Interpersonal  
Dependency Inventory and Loneliness

Interpersonal Dependency Inventory Subscales	<u>n</u>	Loneliness
1. Emotional Reliance on Another Person	208	.236***
2. Lack of Social Self- Confidence	209	.448***
3. Assertion of Autonomy	208	.217**

\*\*  
p < .01  
\*\*\*  
p < .005

Table 8  
Intercorrelations Among the Subscales  
of the Interpersonal Dependency Inventory

	1	2	3
1. Emotional Reliance on Another Person	1.0	.409***	-.181***
2. Lack of Social Self- Confidence		1.0	-.108 <sup>a</sup>
3. Assertion of Autonomy			1.0

<sup>a</sup>  $p < .06$   
\*\*\*  $p < .005$

12 months ago and loneliness (See Table 9). Results indicated that regardless of the time span of the occurrence of life changes, no relationship between life changes and loneliness exists.

Further analysis of life changes was conducted through exploration of the subscales of the RLCQ and their relationship to loneliness (See Table 10). No significant relationships were noted between the subscales and loneliness.

Masuda and Holmes (1978) suggest that specific items on the RLCQ related to loss or separation delineate a separate subscale that may be a better indicator of stressful change than all the items taken together. In this study, the items related to loss of health, work, family member, separation from spouse, loss of interpersonal relationships, and loss of personal property, as identified by Roncoli (1979) (See Appendix I), were specified for the subscale. It seemed possible that a relationship between these changes and loneliness might be found. However, the relationship was not supported ( $r(209) = .088$ ,  $p = .103$ ).

Further, a t-test was calculated to investigate if there was a difference in loneliness between respondents who experienced separation and/or loss life changes within the past six months and those who experienced no loss and/or separation life changes. Results indicated that mean loneliness scores were marginally higher for the group experiencing loss and/or separation life changes than for their non-loss, non-separation counterparts ( $t(207) = -1.71$ ,  $p = .090$  (two-tailed);  $\bar{M}$  Loss Group = 37.91;  $\bar{M}$  Non-Loss Group = 35.76).

Table 9  
Correlations of Life Changes and Loneliness  
for Various Time Periods ( $n = 209$ )

Life Change Time Periods	Loneliness	Significance
For 12 month period	.004	.476
For 7 months to 12 months	-.032	.324
For 0 months to 6 months	.039	.283

Table 10  
Correlations of Subscales of the Recent Life Change Questionnaire  
and the Revised UCLA Loneliness Scale  
(n = 209)

Recent Life Change Subscales	Loneliness	Significance
Health	.042	.275
Work	-.075	.141
Home and Family	.054	.221
Personal and Social	-.012	.431
Financial	-.008	.454

### Three Predictor Variables Together and Loneliness

In order to clearly explicate the relationships of the predictor variables to loneliness a stepwise multiple regression analysis was performed using SPSS. Table 11 presents the data analyses of the three predictor variables on the criterion variable of loneliness. Variables were free to enter the equation in any order. Self-disclosure entered first and received a significant multiple R square of .113. The second variable to enter was interpersonal dependency. The  $F$  to enter was 15.12,  $p < .01$  and the multiple R square increased to .174. Entering the RLCQ failed to produce a significant increase in variance accounted for ( $F = .193$ , n.s.). Therefore the IDI resulted in a significant gain in prediction over and above the prediction of the JSDQ separately.

### Additional Findings

Two demographic factors, sex and age, were employed to form groups which were then compared on their level of loneliness, self-disclosure, and interpersonal dependency. Only group mean differences that reached statistical significance are discussed. In relation to sex differences three findings were significant. There was a difference in self-disclosure toward mother between male and female subjects ( $t(203) = -2.97$ ,  $p < .01$ ) such that females disclosed more to mother than did male subjects (See Table 12). Also, there was a difference in self-disclosure toward male friend between male and female subjects ( $t(192) = -2.21$ ,  $p < .05$ ) such that females disclosed more to male friend than did male subjects.

Table 11  
Summary of Stepwise Multiple Regression  
Analysis for Loneliness

Variable Entered	Multiple R	R <sup>2</sup>	R <sup>2</sup> Change	Simple R	F to Enter	Overall F
1. Self-Dis-closure	.337	.113	.113	-.337	29.353**	26.353**
2. Interpersonal Dependency	.418	.174	.061	.239	15.118**	21.639**
3. Life Changes	.418	.175	.001	.039	.193 <sup>a</sup>	14.433**

<sup>a</sup> n.s.  
\*\* p < .01



Table 12  
Comparison of Means for Self-Disclosure, Interpersonal  
Dependency, and Loneliness According to Sex

Variable	Mean	<u>n</u>	t-test	df	Significance <sup>a</sup>
Loneliness					
Males	37.03	89			
Females	37.30	120	-.23	207	.820
Total Self-Disclosure					
Males	185.99	89			
Females	199.49	120	-1.71	207	.089
Self-Disclosure to Mother					
Males	43.35	88			
Females	49.86	117	-2.97	203	.003
Self-Disclosure to Father					
Males	41.48	83			
Females	36.75	102	1.87	187	.063
Self-Disclosure to Male Friend					
Males	48.34	86			
Females	54.03	108	-2.21	192	.028
Self-Disclosure to Female Friend					
Males	52.38	85			
Females	55.61	117	-1.39	200	.166
Interpersonal Dependency					
Males	28.18	89			
Females	31.92	119	-2.04	206	.043
Emotional Reliance <sup>b</sup> on Another Person					
Males	41.61	89			
Females	42.52	119	-.74	206	.462

Table 12 (continued)

Variable	Mean	<u>n</u>	t-test	df	Significance <sup>a</sup>
Lack of Social Self-Confidence <sup>c</sup>					
Males	28.58	89	-1.55	207	.124
Females	30.04	120			
Assertion of Autonomy <sup>d</sup>					
Males	28.27	89	1.89	206	.061
Females	26.66	119			

<sup>a</sup> Two-tailed test

<sup>b</sup> Emotional Reliance on Another Person is a subscale of the Interpersonal Dependency Inventory (Subscale 1)

<sup>c</sup> Lack of Social Self-Confidence is a subscale of the Interpersonal Dependency Inventory (Subscale 2)

<sup>d</sup> Assertion of Autonomy is a subscale of the Interpersonal Dependency Inventory (Subscale 3)

While the literature suggests that females disclose more than males, the results of the present investigation are less clear cut. Females reported a marginally higher number of total self-disclosures than did males ( $t(207) = 1.71, .10 > p > .05$ ).

There was a difference in interpersonal dependency between males and females ( $t(206) = -2.04, p < .05$ ) such that females had a higher mean score on interpersonal dependency than did males. Further, on the subscale, Assertion of Autonomy, the males scored higher than did the females ( $t(206) = 1.89, .10 > p > .05$ ).

In relation to age differences two findings were significant. There was a difference in self-disclosure to mother between younger and older groups ( $t(203) = 2.32, p < .05$ ) such that younger subjects disclosed more to mother than did older subjects. Also, there was a difference in self-disclosure toward female friend between younger and older groups ( $t(200) = -2.00, p < .05$ ) such that older subjects disclosed more to female friend than did younger subjects (See Table 13).

Finally, the relationship between specific questions on the General Information Sheet and the Revised UCLA Loneliness Scale was investigated via Pearson product-moment correlation coefficients (See Table 14). The first question related to subjects' satisfaction with their present living situation. Approximately 70% of the respondents were living with their parents. Of all living situations, the correlation between satisfaction with living situation and loneliness was  $.169, p < .01$ , suggesting that the more dissatisfied with living situations, the higher the loneliness.

Table 13  
Comparison of Means for Self-Disclosure, Interpersonal  
Dependency, and Loneliness According to Age

Variable	Mean	<u>n</u>	t-test	df	Significance <sup>a</sup>
Loneliness					
18 - 20	37.64	123	.90	207	.370
21 - 25	36.55	86			
Total Self-Disclosure					
18 - 20	191.89	123	-.42	207	.670
21 - 25	194.99	86			
Self-Disclosure to Mother					
18 - 20	49.16	122	2.32	203	.021
21 - 25	43.99	83			
Self-Disclosure to Father					
18 - 20	39.04	109	.15	183	.880
21 - 25	38.64	76			
Self-Disclosure to Male Friend					
18 - 20	50.09	113	-1.30	192	.196
21 - 25	53.48	81			
Self-Disclosure to Female Friend					
18 - 20	52.34	119	-2.00	200	.047
21 - 25	56.98	83			
Interpersonal Dependency					
18 - 20	31.48	122	1.51	206	.132
21 - 25	28.68	86			
Emotional Reliance on Another Person <sup>b</sup>					
18 - 20	42.43	122	.58	206	.562
21 - 25	41.71	86			

Table 13 (continued)

Variable	Mean	<u>n</u>	t-test	df	Significance <sup>a</sup>
Lack of Social Self-Confidence <sup>c</sup>					
18 - 20	30.05	123	1.61	207	.109
21 - 25	28.52	86			
Assertion of Autonomy <sup>d</sup>					
18 - 20	27.05	122	-.85	206	.396
21 - 25	27.78	86			

<sup>a</sup> Two-tailed test

<sup>b</sup> Emotional Reliance on Another Person is a subscale of the Interpersonal Dependency Inventory (Subscale 1)

<sup>c</sup> Lack of Social Self-Confidence is a subscale of the Interpersonal Dependency Inventory (Subscale 2)

<sup>d</sup> Assertion of Autonomy is a subscale of the Interpersonal Dependency Inventory (Subscale 3)

Table 14  
Correlation Coefficients of Loneliness  
and Related Variables

Variable	<u>n</u>	Loneliness <sup>a</sup>	Significance
Dissatisfaction with living conditions <sup>b</sup>	207	.170	.007
Dissatisfaction with quality of friendship <sup>b</sup>	209	.455	.005
Non-closeness of family <sup>c</sup>	208	.201	.002
Non-close relationship with a loved one <sup>d</sup>	206	.191	.003
Lower number of friends <sup>e</sup>	209	-.445	.005
Lower number of brothers and sisters <sup>e</sup>	209	.092	.090
Lower number of groups and organizations <sup>e</sup>	209	-.242	.005
Degree of loneliness <sup>f</sup> (self-rated)	208	-.602	.005

<sup>a</sup> The lower the score, the less lonely; the higher the score, the more lonely.

<sup>b</sup> The lower the score on the item, the more satisfied; the higher the score, the more dissatisfied.

<sup>c</sup> The lower the score on the item, the closer the family; the higher the score, the less close the family.

<sup>d</sup> The lower the score on the item, the closer the relationship; the higher the score, the less close the relationship.

Table 14 (continued)

- <sup>e</sup> The lower the check on the item, the lower the number; the higher the check, the higher the number.
- <sup>f</sup> The lower the rating, the more lonely; the higher the rating, the less lonely.

The correlation between closeness of family and loneliness ( $r(206) = .201, p < .01$ ) was significant, suggesting that respondents whose families were not close experienced higher levels of loneliness than respondents whose families were close. Further, the data suggested that those respondents who did not have a close relationship with a loved one at the present time may experience higher levels of loneliness than respondents who had a close relationship with a loved one ( $r(206) = .191, p = .003$ ).

Although no significant statistical relationship existed between the number of brothers and sisters and loneliness, the number of friends seemed to suggest a link with loneliness: the lower the number of friends, the higher the level of loneliness ( $r(209) = -.445, p < .005$ ). Further, the respondents' satisfaction with the quality of the friendship seemed related to loneliness ( $r(209) = .455, p < .005$ ): the more dissatisfied with the quality of friendships, the higher the level of loneliness.

A relationship seems to exist between active participation in groups and organizations and level of loneliness ( $r(209) = -.242, p < .005$ ). It may be, then, that the less active the participation in groups and organizations, the higher the risk for experiencing loneliness.

Finally, participants were asked to rate themselves on the degree of loneliness they presently feel. The response to the degree of loneliness presently felt was correlated with scores on the Revised UCLA Loneliness Scale ( $r(208) = -.602, p < .005$ ). This finding suggests a relationship between a one-item measurement of perceived



degree of loneliness and actual score on a reliable and valid measure of loneliness, The Revised UCLA Loneliness Scale.

In order to explore the relationships of the predictor variables and selected related variables from the General Information Sheet to loneliness a stepwise multiple regression analysis was performed via SPSS. Variables were free to enter the equation in any order. Five variables were entered in the following order: number of friends, satisfaction with friendships, self-disclosure, relationship with loved one, and interpersonal dependency. Each variable had a significant  $F$  ratio at  $p < .01$  in the multiple regression equation (See Table 15). The five variables accounted for an  $R^2$  of .430 or 43% of the explained variance in loneliness.

Thus, Chapter 4 has presented data relative to hypotheses testing and to additional findings. The following chapter will focus upon theoretical and methodological discussions related to the hypotheses and additional findings.

Table 15  
Summary of Stepwise Multiple Regression Analysis for  
Loneliness with Hypotheses Variables and  
Additional Data

Variable Entered	Multiple R	R <sup>2</sup>	R <sup>2</sup> Change	Simple R	F to Enter	Overall F
1. Number of friends	.456	.208	.208	-.456	52.178**	52.178**
2. Satisfaction with friendships	.594	.353	.146	.449	44.602**	54.106**
3. Self-Disclosure	.620	.385	.031	-.333	10.082**	41.086**
4. Relationship with loved one	.641	.411	.027	.191	8.522**	34.122**
5. Interpersonal Dependency	.656	.430	.019	.240	6.839**	29.479**

\*\* p < .01

## Chapter V

### Discussion of Findings

This study was designed to investigate the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults. This study was based on the proposition that loneliness evolves in a person through the interaction between the person and environment. Thus, an interactive approach emphasizes personal and situational variables and factors. In this view certain qualities, traits, and/or values, such as self-disclosure, interpersonal dependency, and some situations, particularly those subject to change and/or disruption, may increase the likelihood of experiencing loneliness. In this study, then, it was hypothesized that lower self-disclosure, higher interpersonal dependency, and higher life changes would be related to loneliness. Furthermore, the additivity of these variables was expected to explain loneliness better than self-disclosure, interpersonal dependency, or life changes alone.

In this section, the findings relative to each hypothesis are discussed with consideration given to both theory and methodology. Next, the additional findings related to loneliness are explored. Finally, a general discussion of methodological considerations is posited.

#### Self-Disclosure and Loneliness

Hypothesis 1, the lower the self-disclosure, the higher the level of loneliness, was supported ( $r(209) = -.34, p < .005$ ), sug-

gesting that the theoretical framework utilized in this study offers a plausible partial explanation for loneliness. In essence, 11.29% of the variance in loneliness is accounted for by self-disclosure. Komarovsky (1976) pointed out that the desire to escape loneliness, to find support, reassurance, and appreciation generates the need to share feelings and thoughts with others. The process of disclosing oneself to another, then, may be one means of engendering a person's connectedness, relatedness to another person (Jourard, 1971b), decreasing the likelihood of experiencing loneliness.

In a study of self-disclosure and mental health by Kramer (1978) a trend was noted for normal college students to disclose less to parents than to friends. In the present study, the significant negative correlation of loneliness and self-disclosure to friends was substantially higher than the correlation of loneliness with self-disclosure to parents. That is, the relationship of self-disclosure to loneliness seems to be moderated by the status of the target person to whom the disclosure is directed. Specifically, self-disclosure directed to a friend is related to lower loneliness than is self-disclosure to a parent for the respondents in this study. The findings in the present study agree with the trends noted in an age-related study by Jourard (1961a). Jourard found that subjects tended to decrease the amount of disclosure to parents with increasing age.

The literature on self-disclosure strongly suggests that individuals who are very high disclosers may be perceived by others as maladjusted (Komarovsky, 1976; Kramer, 1978). High indiscriminate disclosure may not only be a deterrent to social bonding but has been found clinically to be an indicant of a troubled personality. In an

attempt to test this thesis in the present study, extreme groups of high and low disclosers were formed and scores on the Revised UCLA Loneliness Scale were compared via a t-test. A significant difference was found between the high and low self-disclosing groups such that the high disclosers were significantly less lonely than the low disclosers ( $t(27) = -4.48, p < .005$ ). In this study, high disclosers seemed able to relate to other individuals. However, since many variables associated with a troubled personality were not investigated in this study, extreme care should be used relative to interpretation of this finding. It should be remembered that subjects who participated in this study were 'normal'; this information was elicited through specific questions on the General Information Sheet.

The literature and research on self-disclosure strongly suggest that sex is a powerful predictor of self-disclosure. Almost without exception, females report more overall self-disclosure than males. This is true for both college (Chelune, 1975; Himelstein & Lubin, 1965; Jourard, 1971b; Jourard & Lasakow, 1958; Jourard & Richman, 1963; Kramer, 1978; Pederson & Breglio, 1968) and high school students (Dimond & Munz, 1967). In this study, as expected, women tended to self-disclose more than males. Females reported a marginally higher number of self-disclosures than males ( $t(207) = 1.71, .10 > p > .05$ ). Further, females disclosed more to mother and male friend, whereas males disclosed more to father.

### Interpersonal Dependency and Loneliness

Hypothesis 2 which asserted that higher interpersonal dependency would be related to higher level of loneliness was supported ( $r(208) = -.24, p < .005$ ), suggesting that in this study's theoretical frame

interpersonal dependency is a partial plausible explanation of loneliness. Essentially, only 5.71% of the variance of loneliness is accounted for by interpersonal dependency. As stated in the literature review in Chapter II, the construct of interpersonal dependency encompasses the concepts of attachment and dependency. Insecure or inconsistent relationships are linked to increased levels of interpersonal dependency. An imbalance of independence and dependence toward dependency is also linked to higher levels of interpersonal dependency. With loneliness conceptualized as a state in which a person is aware of not relating to other people while experiencing a need for other people, persons with experience deficits in forming secure and consistent relationships and with leanings toward dependency would be the people most likely to experience loneliness. Thus, the relationship between interpersonal dependency and loneliness would be expected. The findings of the present study are consistent with this line of reasoning.

The Interpersonal Dependency Inventory consists of three subscales. The correlations between these subscales and loneliness were all positive and statistically significant. The correlation between Subscale 1, Emotional Reliance on Another Person, and loneliness was  $r(208) = .24, p < .005$ . Hirschfeld et al. (1977) suggest that this subscale reflects the concepts of attachment and dependency in nearly equal proportions. Feelings and behaviors tapped in this subscale reflect a wish for contact with and emotional support from specific other people as well as dread of loss of that person and a wish for approval and attention from others. Thus, there appears to be a relationship between a wish for contact and support from specific

persons along with a dread of loss and a generalized wish for approval and attention from others with loneliness.

The correlation between Subscale 2, Lack of Social Self-Confidence and loneliness, was  $r(209) = .45$ ,  $p < .005$ . Hirschfeld et al. (1977) suggest this subscale almost exclusively relates to the concept of dependency. The feelings and behaviors elicited in the subscale reflect wishes for help in decision-making, in social situations, and in taking initiative. Findings in this study support the notion that a relationship between dependency and loneliness exists.

The correlation between the third subscale, Assertion of Autonomy, and loneliness was  $r(208) = .22$ ,  $p < .001$ . According to Hirschfeld et al. (1977), this subscale reflects a tendency to deny both attachment behaviors and dependency needs. Assertion of autonomy addresses the degree to which a person is indifferent to or independent of others. Thus, the findings in this study suggest that the higher the assertion of autonomy, the higher the level of loneliness.

Stendler (1954) stated that the American socialization process emphasizes the learning of both dependence and independence. In our society, standing on one's own, being able to care for oneself as well as seeking the help and support of others when necessary are valued. Successful socialization, then, may involve acquiring a culturally approved balance between dependence and independence. In view of the separate findings related to the three subscales of the Interpersonal Dependency Inventory and loneliness, the findings of the present study are consistent with the theory of the desirability of a balance between dependence and independence.

In this study, females had higher mean levels of interpersonal dependency than did males as indicated by the results of the t-test ( $t(206) = -2.04, p < .05$ ). In discussing test development results of the Interpersonal Dependency Inventory, Hirschfeld et al. (1977) did not report overall IDI score differences between males and females. However, on the subscale of the IDI, Assertion of Autonomy, normal males were reported as scoring significantly higher than the normal females,  $p < .05$ . In the present study, also, males scored higher than females on Assertion of Autonomy,  $.10 > p > .05$ . Due to the paucity of information on the utilization of the IDI in research endeavors, no further conclusions can be made at this time.

#### Life Changes and Loneliness

Hypothesis 3 stated that higher life changes would be related to higher levels of loneliness. The theory that situations that subject a person to change and/or disruption enhance the person's sense of disconnectedness and of loneliness was not upheld in this study. An additional investigation of each subscale of the Recent Life Change Questionnaire failed to substantiate a relationship between life changes in specific areas such as health, work, home, family, personal and financial, and loneliness. Further, when a subscale of undesirable life changes was delineated, according to Roncoli (1979), and correlated with loneliness, no significant relationship was found.

Contrary to what was anticipated in the theoretical rationale, there was no relationship observed between life changes and loneliness. Several plausible explanations may be explored that might account for this finding. The literature review in Chapter II suggests that life changes are related to such affective states as (reactive) depression



and anger. The relationship of life events and these affective states might be based upon transient fluctuations in these affective states; an affective state such as loneliness may not be influenced by life changes, particularly changes occurring in a recent six-month time period as used in this study. Loneliness might be a label which subjects employ as a summary statement of interpersonal relationships and support systems. A person's assessment of the adequacy of one's interpersonal relationships and support systems might be relatively impervious to the life changes which do not directly threaten the relationship and/or the support system. Perhaps, consideration of solely catastrophic events which directly threaten significant interpersonal relationships and support systems, such as the death of a spouse, would demonstrate covariation with loneliness. However, the wider range of life changes as measured by the RLCQ may dilute the significance of particular events due to overinclusiveness of events in the operational phase of the construct.

For purposes of this study disruptions and/or changes in social and interpersonal ties were conceived as influencing the person's sense of disconnectedness, of non-relatedness which leave a person at risk for experiencing loneliness. The question can be raised: Do young people, 18 - 25 years of age, perceive life changes negatively or are they so accustomed to the greatly accelerated rate of change in society that the changes have personal value to individuals? Possibly, young people view change as an opportunity for growth and development. Only further research can help answer this question.

From a methodological view, possibly there was not a wide enough variance of between person differences in life changes. Variability

was limited by having all college students in the study ranging in age only from 18 to 25. As noted in Table 2, although the range of scores on the RLCQ was 0 to 34, the median number of changes was 8.97 and the mean was 9.96. It seems, then, that many of the respondents did not experience a large number of life changes. Rahe (1974b) stated that in younger samples there is little difference in the variability of events reported as compared to older samples who report more catastrophic life events. Thus, the maximization of interpersonal differences may have been lacking in the sample in this study.

Possibly, the characteristics of the respondents may have influenced perceptions of life changes. The majority of respondents lived at home with parents and commuted to a university in a large urban city. This city has experienced many of the problems common to urban communities: high crime rates, high prevalence of chemical abuse, unstable populations, to name a few. Potentially, these participants may be subjected to more change environmentally than people who attend college in suburban and rural areas. In this sample, then, change may be the norm or expectation. This sample, to a degree, may have become desensitized to change.

Further, the RLCQ is a self-report of changes experienced by individuals within a specified time period. No provisions are included in the self-report to elicit the affective component relative to the meaning of the life changes to the individuals. Since loneliness is an affective state, an investigation of the personal interpretation of changes experienced by individuals may have lead to meaningful information about change and loneliness.

Lastly, an ancillary finding in this study suggests that subjects' experiencing loss and/or separation life changes within the past six months have a marginally higher mean loneliness score than subjects' experiencing no loss and/or separation life changes ( $t(207) = -1.71, p = .09$  (two-tailed). A further investigation of loss and/or separation life changes that occurred during childhood and adolescent years may help explain loneliness. Possibly an investigation of disruptions and/or losses in relationships, in health, and in social situations that occurred over time rather than in a six-month period could help clarify the marginal results reported above. Possibly a time lag exists between life changes and the experience of loneliness. If such a time lag is part of the process of the development of loneliness, a one time testing for life changes in the most recent six-month period would not tap aspects of the development or actual experience of loneliness.

Failures to obtain expected relationships are notoriously difficult to interpret. Further research specifically designed to probe the potential reasons for the findings reported herein relating to hypothesis 3 would be needed to ascertain the precise reason(s) for the failure to obtain the expected relationship.

### Three Predictor Variables and Loneliness

Hypothesis 4 stated that lower scores on self-disclosure together with higher scores on interpersonal dependency and higher scores on life changes will be a better predictor of higher levels of loneliness than any single variable alone. This hypothesis was supported. In order to further test this hypothesis, a stepwise multiple regression analysis was conducted. First, self-disclosure was the best single

predictor of loneliness. However, interpersonal dependency significantly added to the prediction of loneliness over and above that of self-disclosure. Inspection of Table 5 which presents zero-order correlations among the variables indicates that interpersonal dependency and self-disclosure are relatively independent of one another ( $r(208) = .022$ , n.s.). However, both are related to loneliness; self-disclosure ( $r(209) = -.34$ ,  $p < .005$ ), interpersonal dependency ( $r(208) = .24$ ,  $p < .005$ ). Therefore, it becomes necessary to consider the aspects of interpersonal dependency that are different from self-disclosure but are related to loneliness. According to Hirschfeld et al. (1977), interpersonal dependency encompasses a complex of thoughts, beliefs, feelings, and behaviors involving an individual's relationships with others. The thoughts involve views of self and relationships with others. The beliefs relate to the value placed on friendship, interdependence. The feelings reflect warmth, closeness, affiliation with others as well as separateness and aloneness from others. The behaviors involve maintenance of interpersonal closeness. Thus, a person's state of affectional bonds and the person's balance between dependence and independence emerge as significant in explaining interpersonal dependency. Konopka (1966) suggested that an unfilled need for dependency may cause a person to feel exceedingly lonely. Moreover, having insecure or inconsistent relationships as well as leanings toward dependency which may create higher levels of interpersonal dependency appear to characterize the person prone to experiencing loneliness.

An individual's disclosing tendencies reflect the process of verbally sharing information about the self to others (Jourard, 1971b).

People who find others with whom thoughts, doubts, joys, and fears can be shared (Konopka, 1966) may succeed in decreasing feelings of loneliness.

In view of the different meanings assigned to interpersonal dependency and self-disclosure, it appears that these two constructs may explain different attributes which influence the experience of loneliness.

#### Variable Independence

Intercorrelations of the predictor variables as presented in Table 5 suggest that relationships may exist between life changes and interpersonal dependency ( $r(208) = .117, p < .05$ ) and between life changes and self-disclosure ( $r(209) = -.111, p < .06$ ). Thus, independence of several predictor variables was not demonstrated. Possible explanations for the non-independence of the variables are briefly addressed.

In The Pursuit of Loneliness Slater (1970) suggested that the contemporary social situation partially defined by technological changes, mobility, and the individualistic ethos may frustrate the individual basic desire for dependency - for the opportunity to share with others responsibilities and decision making processes. Interpersonal dependency can be conceived as a need to associate closely with, interact with, and rely upon valued other people (Hirschfeld, et al., 1976). Life changes can be conceived as alterations in the individual's usual pattern of connectedness as a consequence of events in social and interpersonal interaction. Thus, changes in social and interpersonal interaction style may engender increased needs to associate more closely with and rely upon valued others. In

essence, one plausible partial explanation for the relationship between interpersonal dependency and life changes is posited.

Although the relationship between self-disclosure and life changes was not statistically significant at the .05 level, there is reason to suspect that a relationship may exist between the two variables ( $r(209) = -.111, p < .06$ ). Upon reflection, self-disclosure is defined in this study as the process of revealing oneself to another person (Jourard, 1971a). It seems reasonable to suggest that if an individual experiences alterations in social and/or interpersonal interaction the process of revealing oneself to another may decrease. Thus, the more life changes, the lower the self-disclosure.

If the above explanations about life changes as related to interpersonal dependency and self-disclosure are tenable, a further possible proposition could be generated that suggests that life changes influence interpersonal dependency and self-disclosure. Then, interpersonal dependency and self-disclosure influence the experience of loneliness.

To briefly summarize, an interactional view of loneliness was not supported in this study. Findings suggested that the personal variables of interpersonal dependency and self-disclosure limitedly explain the experience of loneliness. The environmental variable of life changes had no direct relationship to loneliness. Thus, the results of this study suggest that self-disclosure and interpersonal dependency may partially explain the experience of loneliness in a more salient manner than do life changes.

#### Additional Findings Related to Loneliness

Many interesting findings emerged from an analysis of specific

questions on the General Information Sheet and scores on the Revised UCLA Loneliness Scale. These results also lend support to theories of loneliness discussed in the review of the literature section of this paper.

Weiss (1973) purported that a person's friendships and collegial relationships help to alleviate or prevent loneliness. According to Gordon (1976), people feel lonely if they do not have an adequate social network. In the present study respondents who had fewer friends reported higher levels of loneliness ( $r(209) = -.445, p < .005$ ). Further, those respondents who reported more dissatisfaction with the quality of their friendships had higher levels of loneliness ( $r(209) = .455, p < .005$ ). A person's participation in groups and organizations was thought to be another indices of involvement in collegial relationships and social networks. Respondents indicated that the fewer groups and organizations in which they actively participated the higher the loneliness level ( $r(209) = -.24, p < .005$ ). While no definitive conclusions can be drawn from these findings, the importance of involvement with friends and active participation in groups and organizations is consistent with the data reported by Rubenstein (1979). Rubenstein (1979) found that loneliness is significantly related to the quality and satisfaction of a person's social network.

In some instances, according to Weiss (1973, p. 17), loneliness "is a response to the absence of the provisions of a close, indeed intimate, attachment". When respondents in this study were asked about the closeness of their families, they indicated a relationship between higher levels of loneliness and less closeness of family ( $r(208) = .201, p = .002$ ). Although outside the purview of this

study, a history of family relationships might add substantial information about the loneliness experience. Sullivan (1953) stated that if needs for contact, intimacy, and involvement with others are not met during a person's development, the roots for loneliness are laid. The respondents further reported that not having a close relationship with a loved one at the present time was related to higher levels of loneliness ( $r(206) = .19, p < .01$ ). The results of closeness of relationships can be viewed as providing support to Weiss' thesis of a close relationship being related to lower loneliness.

An attempt to establish concurrent validity for this study was undertaken by asking respondents to rate themselves on a one item loneliness scale which elicited the degree of loneliness felt by the subjects. A correlation coefficient of  $r(208) = -.602, p < .005$  suggests a relationship between the one item global measurement of loneliness and the Revised UCLA Loneliness Scale, offering some support for validity.

A final discussion of additional findings relates to the results of a stepwise multiple regression analysis which employed items from the General Information Sheet and hypotheses variables as the predictor variables and loneliness as the criterion variable. First, the number of friends, accounting for 21% of the variance in loneliness, was the best single predictor of loneliness. This finding gives support to Weiss' notion (1973, p. 18) that "loneliness is a response to a relational deficit", namely lack of meaningful friendships. Further, this finding adds support to results reported by Rubenstein (1979) that lonely people tend to have fewer social ties



than non-lonely people. When satisfaction with friendship was added to the regression analysis, the variance accounted for increased to 35%. As Rubenstein (1979) pointed out, the satisfaction a person experiences in social relationships is also an important determinant of loneliness. Lonely people seem to experience dissatisfaction with their social relationships (Rubenstein, 1979). Self-disclosure explained an additional 3% of the variance in loneliness above and beyond that explained by number of friends and satisfaction with friendships. With self-disclosure added to the multiple regression analysis, 38% of the variance in loneliness was explained. An in-depth discussion of self-disclosure and loneliness has been presented in this chapter. The fourth variable to enter the stepwise regression was a close relationship with a loved one, increasing the multiple R square to 41%. Again, support is presented for Weiss' theory (1973) that loneliness is a response to the absence of a close attachment. Finally, the last variable to enter the stepwise multiple regression analysis was interpersonal dependency which increased the variance accounted for to 43%. Relationships between interpersonal dependency and loneliness have been expounded in previous sections of this chapter. Thus, 43% of the variance in loneliness is accounted for by the five predictor variables entered in the stepwise multiple regression analysis. The results of the analysis suggest that explanations for loneliness are quite complex and include personal characteristics such as self-disclosure and interpersonal dependency and external support systems such as relationships with friends and loved ones.

### Methodological Considerations

All investigations undertaken in this study are subject to the limitations of correlational studies. When a researcher observes a correlation between two variables, such as self-disclosure and loneliness, it is often tempting to assume that the relationship is causal in nature. For example, it is tempting to conclude that low self-disclosure leads to (causal) higher levels of loneliness. This assumption, however, is not sound since the observed relationship might have occurred as a result of different relationships. Causal inferences require research designs that can control for rival hypotheses (Neale & Liebert, 1980).

Since this study was correlational in nature, it is subject to the usual interpretive difficulties of correlational data. That is, problems of direction of relationships and third variables remain unresolved. For example, higher levels of loneliness may produce lower levels of self-disclosure. This hypothesis may be as tenable as the hypothesis of the present study, and the data are equally consistent with either hypothesis. Further, the possibility exists that neither of the two variables involved in the correlation produced the relationship. Some unspecified variable or process may have produced the relationship (Neale & Liebert, 1980). For example, people who are interpersonally attractive may have been encouraged through the socialization process to self-disclose readily to others, thus learning to establish relationships and decreasing the experience of loneliness. Interpersonal attractiveness may be a third variable which would be responsible for the relationship between self-

disclosure and loneliness. This example points out the possibility of a spurious relationship between the variables investigated. Therefore, the reader must keep in mind that there may be alternative explanations for relationships observed in this study.

The instruments used in this study are state-of-the-art for this area of research. While many authors call for a decreased use of self-report instruments because of their reactivity to subject response and response-style effects, recent evidence suggests that self-report measures might be superior to behavioral measures because of their greater generalizability (Howard, Maxwell, Weiner, Boynton, & Rooney, 1980).

Chapter VI  
Summary, Conclusions, Implications  
and Recommendations

Summary

The loneliness literature strongly suggests that loneliness is widely distributed, severely distressing, and a painful, frightening experience (Fromm-Reichmann, 1959; Weiss, 1973). Despite the ubiquity and poignancy of loneliness, clinically observed relationships among variables associated with loneliness have had little systematic investigation. This study attempted to identify variables or factors within a person and changes and/or disruptions experienced by the person which influence the loneliness experience. The purpose of this study was to investigate the relationship of self-disclosure, interpersonal dependency, and life changes to loneliness in young adults.

In this study, loneliness is viewed as evolving in a person through the interaction between the person and the person's environment. An interactional theory, as suggested in this study, considers personal and situational variables which may contribute to the experience of loneliness.

The hypotheses that were tested were:

- (1) The lower the self-disclosure, the higher the level of loneliness;
- (2) The higher the interpersonal dependency, the higher the

level of loneliness;

(3) The higher the life changes, the higher the level of loneliness;

(4) Lower scores on self-disclosure together with higher scores on interpersonal dependency and higher scores on life changes will be a better predictor of higher levels of loneliness than any single variable alone.

Respondents for this study consisted of two-hundred and nine (209) volunteer students from an urban university between the ages of 18 and 25. To reduce extraneous variation, the sample was limited to subjects who did not take drugs known to distort emotions and perceptions. All subjects were free from a diagnosis of depression. Respondents completed the Revised UCLA Loneliness Scale, the Jourard Forty-Item Self-Disclosure Questionnaire, the Interpersonal Dependency Inventory, the Recent Life Change Questionnaire, and the General Information Sheet in the presence of the investigator. All respondents completed an Agreement Contract at the onset of the testing session. Subjects' anonymity was preserved by using coding numbers on all instruments.

The data were analyzed using Pearson product-moment correlation coefficients and multiple regression analysis. Results were acceptable at the .05 level of significance. Three of the hypotheses were supported: (1) the lower the self-disclosure, the higher the level of loneliness ( $r(209) = -.336, p < .005$ ); (2) the higher the interpersonal dependency, the higher the level of loneliness ( $r(208) = .239, p < .005$ ); and (3) lower scores on self-disclosure together with higher scores on interpersonal dependency and higher scores on life

changes will be a better predictor of higher levels of loneliness than any single variable alone ( $F(3, 204) = 14.433, p < .01$ ).

From a stepwise multiple regression analysis of the data it appears that self-disclosure was the single best predictor of loneliness. Further, interpersonal dependency significantly added to the prediction of loneliness. However, life changes did not add to the prediction of loneliness. Some of the reasons for non-support of a relationship between life changes and loneliness include overinclusiveness of life events in the operational phase of the construct of life changes, the potential growth enhanced by life changes, limited variance of between person differences in life changes, and testing for the impact of life changes on loneliness in the most recent six-month period.

Alpha reliability coefficients were computed for the Revised UCLA Loneliness Scale, the Jourard Forty-Item Self-Disclosure Questionnaire, and the Interpersonal Dependency Inventory. The alpha coefficients were above .70 on these three instruments, thus demonstrating acceptable levels of internal consistency in this study.

Additional analysis using t-tests indicated that females disclosed more to mother and male friend than male subjects. Females reported a marginally higher number of total self-disclosures than did males. Further, younger subjects (18 - 20) disclosed more to mother than did older (21 - 25) subjects whereas older subjects disclosed more to female friend than did younger subjects.

Analysis of data via Pearson product-moment correlation coefficients between specific questions on the General Information Sheet and loneliness demonstrated several significant relationships. Re-

relationships seem to exist between higher levels of loneliness and dissatisfaction with living conditions, non-closeness of family, non-closeness of a relationship with a loved one, fewer friends, dissatisfaction with the quality of friendships, and less participation in groups and organizations.

Further, from a stepwise multiple regression analysis of additional data and predictor hypotheses variables, 43% of the variance in loneliness was accounted for by number of friends, satisfaction with friendships, self-disclosure, relationship with loved one, and interpersonal dependency. The results of this stepwise multiple regression suggest that explanations for loneliness are quite complex and include personal characteristics of the person such as self-disclosure and interpersonal dependency and external support systems such as relationships with friends and loved ones.

### Conclusions

Conclusions that may be drawn from this study, based upon hypotheses testing and ancillary findings, are as follows:

- (1) There appears to be a relationship between self-disclosure and loneliness. In a sample of young adults lower levels of self-disclosure are related to higher levels of loneliness.
- (2) There appears to be a relationship between interpersonal dependency and loneliness. In a sample of young adults higher levels of interpersonal dependency are related to higher levels of loneliness.
- (3) Self-disclosure and interpersonal dependency together significantly contribute to the prediction of loneliness in a sample of young adults.

(4) There appears to be a relationship between friendship and loneliness. In a sample of young adults, having fewer friends and being dissatisfied with the quality of friendship are related to loneliness.

(5) There appears to be a relationship between active participation in groups and organization and loneliness. In a sample of young adults the fewer groups and organizations in which a person actively participates, the higher is the level of loneliness.

(6) There appears to be a relationship between non-closeness of family and absence of a close relationship with a loved one with higher levels of loneliness. These relationships were upheld in a sample of young adults.

#### Implications

Although nursing implications are addressed in this study, it must be remembered that research on loneliness is quite limited to date. In order to build knowledge upon which nursing implications can be grounded, continuing research related to loneliness should be pursued.

Since the results of the present study suggest that self-disclosure and interpersonal dependency account for 17.4% of the variance in loneliness, some tentative implications for nursing are posited. Based upon the possible links of self-disclosure and interpersonal dependency to loneliness, prevention of loneliness might be initiated through educational efforts in parenting classes, prenatal classes, and adult education courses by teaching the importance of infants' and children's needs for consistent, secure relationships with significant others. Parents may learn that the need for achieve-



ment of a balance between dependence and independence appears to be a necessary component for healthy growth and development. Knowledge related to family communication and its impact upon an individual's interaction could be another area for inclusion in prevention education. Since self-disclosure often occurs when the other person is perceived as a trustworthy person (Jourard, 1971b), the development of infant-parent and child-parent relationships may be crucial in setting present and future interactional patterns which can influence the experience of loneliness.

Relative to clinical nursing, if a nurse suspects a client is lonely, the results of the study suggest that the client would probably be a low self-discloser and have higher levels of interpersonal dependency. The low self-disclosing client probably would not be able to share feelings of loneliness with the nurse. Perhaps if a consistent nurse-client relationship is established, the client's subjective feelings associated with loneliness could be shared with the nurse. If a consistent relationship is established between the nurse and the client, the client might begin to experience security in the relationship, decreasing dependency, and thus decreasing feelings of loneliness.

Further research on loneliness and its predictors must be undertaken before definitive nursing assessments and interventions can be delineated.

#### Recommendations for Future Research

(1) Self-disclosure and interpersonal dependency in samples of children and adolescents and in samples of older people, for example, middle-aged and older-aged people, require further investi-

gation to establish their relationship to loneliness. The literature suggests that self-disclosure and interpersonal dependency develop during an individual's early years and may influence relationships in adult years. Further, the literature states that loneliness is experienced by people of all ages. The results of this study demonstrated that self-disclosure and interpersonal dependency explain, in part, the loneliness experience in a sample of young adults. Research is needed to test the present findings in samples of younger and older people in order to further test theories posited in this study.

(2) In addition to research on the personal dimensions of loneliness, the influence of the quantity and quality of an individual's social network on the experience of loneliness should be explored. Results of the present study suggest relationships between fewer friends and dissatisfaction with the quality of friendship and loneliness. The findings in this study offer beginning support for the theory that people feel lonely if they do not have an adequate social network (Gordon, 1976).

(3) The literature suggests that discontinuities and losses in relationships during an individual's early years may have adverse effects upon relationships in adulthood years. In this study a close but not significant relationship between loss and/or separation life changes within the past six months and loneliness was found. Further research is needed in order to explicate the relationship between loneliness and the impact of significant loss and/or separation over time periods within childhood, adolescent, and adulthood years.

(4) Although no relationship between life changes and loneliness was found in the present study, another investigation should be under-

taken to explore possible relationships between these variables. Since a suggested reason for non-support of a relationship between these variables relates to limited variance of between person differences, the sample in the future study should be diverse relative to age. For example, persons between the ages of 35 - 65 are at risk for experiencing many life changes elicited in the Recent Life Change Questionnaire. Thus, exploring the relationship between life changes and loneliness in this age group may show that the theory suggested in the present study is applicable to samples of older people.

(5) It is recognized by this researcher that many variables that may be associated with loneliness were not explored in this study. Variables that may be associated with loneliness are an individual's religious beliefs and practices and a person's sexual orientation and membership in a sexual minority group.

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## Appendixes

Appendix A

Agreement Contract

Agreement Contract

I, \_\_\_\_\_, willingly agree to participate in the doctoral study conducted by Noreen Mahon. I willingly agree to complete the questionnaires and forms enclosed in the envelope.

I am aware that my responses to the questionnaires and forms will be held in strictest confidence. If, while completing the questionnaires and forms, I decide to no longer participate in this study, I am totally free to discontinue my participation.

Signed \_\_\_\_\_

Dated \_\_\_\_\_

Note: Please do not include the agreement contract in the envelope with your questionnaires and information sheet. Hand the envelope and agreement contract to the investigator separately. This will insure anonymity.



## Appendix B

### Letter to Participants

Letter to Participants

Dear Participant:

The study in which you have agreed to participate is a research endeavor I have planned to fulfill requirements for a doctoral degree in nursing at New York University. Generally, the purpose of this study is to investigate how people feel about themselves, in the context of changing events, and the kinds of information people share about themselves. In order to elicit the information I am requesting that you complete the four scales and general information sheet enclosed in this packet; each scale will have a brief introduction and directions to guide you in answering the questions. Please answer all questions in the order in which they are presented. It should take you approximately 30 minutes to 40 minutes to complete the task.

I would be happy to share the results of this study with you after the study is completed. If you would like to learn more about this study, please complete the form, Test Results, and give it to me with your Agreement Contract after you have completed the scales and the general information sheet.

Thank you for your help and cooperation in this matter.

Sincerely,

Noreen Mahon

## Appendix C

### Test Results

## TEST RESULTS

I would like to learn about the study in which I participated.  
Please send me a copy of the summary and results.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

## Appendix D

### The Revised UCLA Loneliness Scale

**PLEASE NOTE:**

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

138-139

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141-144

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146-148

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150-152

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## Appendix E

### The Jourard Forty-Item Self-Disclosure Questionnaire

## Appendix F

### Interpersonal Dependency Inventory



## Appendix G

### Recent Life Change Questionnaire

Appendix H

General Information Sheet

General Information Sheet

Please check the appropriate response or write in the response as indicated by the statement. Please begin with question #5.

DO NOT WRITE  
IN THIS COLUMN

- |  |           |
|--|-----------|
| 1. I.D. number _____   | 1. _____  |
| 5. Age at the present time _____   | 5. _____  |
| 6. Sex:  | 6. _____  |
| 6.1 Male _____   |           |
| 6.2 Female _____   |           |
| 7. Marital Status:   | 7. _____  |
| 7.1 Single _____   |           |
| 7.2 Married _____  |           |
| 7.3 Widowed _____  |           |
| 7.4 Separated _____  |           |
| 7.5 Divorced _____   |           |
| 8. Race: Specify _____   | 8. _____  |
| 9. Level of education at <u>present</u> time:  | 9. _____  |
| 9.1 High school graduate _____   |           |
| 9.2 Undergraduate college student _____  |           |
| 9.3 Graduate student _____   |           |
| 10. What is your major area of study?<br>_____   | 10. _____ |
| 11. At the present time, are you on any medication?  | 11. _____ |
| 11.1 No _____  |           |
| 11.2 Yes _____ If yes, what medications are<br>you taking? _____                                   |           |
| 12. Are you presently being treated by a therapist<br>or physician for:                            | 12. _____ |
| 12.1 Depression _____  |           |
| 12.2 Mood fluctuations _____   |           |
| 12.3 Anxiety _____   |           |
| 12.4 Other: Specify _____  |           |
| 13. Do you have any health problems and/or handi-<br>caps at the present time?                     | 13. _____ |
| 13.1 No _____  |           |
| 13.2 Yes _____ If yes, please briefly des-<br>cribe your health problem and/or handi-<br>cap _____ |           |

DO NOT WRITE  
IN THIS COLUMN

14. Is your mother alive at the present time? 14. \_\_\_\_\_  
 14.1 Yes \_\_\_\_\_  
 14.2 No \_\_\_\_\_ If no, how old were you when  
 she died? \_\_\_\_\_
15. Is your father alive at the present time? 15. \_\_\_\_\_  
 15.1 Yes \_\_\_\_\_  
 15.2 No \_\_\_\_\_ If no, how old were you when  
 he died? \_\_\_\_\_
16. At the present time, which of the following 16. \_\_\_\_\_  
best describes your living arrangements:  
 16.1 I live alone \_\_\_\_\_  
 16.2 I live with my parent(s) \_\_\_\_\_  
 16.3 I live with a roommate \_\_\_\_\_  
 16.4 I live with my spouse \_\_\_\_\_  
 16.5 I live with my child(ren) \_\_\_\_\_  
 16.6 I live with my spouse and child(ren) \_\_\_\_\_  
 16.7 I live with more than 2 generations of  
 family \_\_\_\_\_  
 16.8 Other: Specify \_\_\_\_\_
17. How satisfied are you with the living situa- 17. \_\_\_\_\_  
 tion described in question 16?  
 17.1 Very satisfied \_\_\_\_\_  
 17.2 Somewhat satisfied \_\_\_\_\_  
 17.3 Neither satisfied nor dissatisfied \_\_\_\_\_  
 17.4 Somewhat dissatisfied \_\_\_\_\_  
 17.5 Very dissatisfied \_\_\_\_\_
18. Would you say your family is: 18. \_\_\_\_\_  
 18.1 Very close \_\_\_\_\_  
 18.2 Fairly close \_\_\_\_\_  
 18.3 Not so close \_\_\_\_\_  
 18.4 Not close at all \_\_\_\_\_
19. Do you have a close relationship with a loved 19. \_\_\_\_\_  
 one at the present time?  
 19.1 Yes \_\_\_\_\_  
 19.2 No \_\_\_\_\_

DO NOT WRITE  
IN THIS COLUMN

20. How many brothers and sisters do you have?
- 20.1 None \_\_\_\_\_
- 20.2 One \_\_\_\_\_
- 20.3 Two \_\_\_\_\_
- 20.4 Three \_\_\_\_\_
- 20.5 Four \_\_\_\_\_
- 20.6 Five or More \_\_\_\_\_

20. \_\_\_\_\_

21. How many friends do you have that are not relatives?
- 21.1 None \_\_\_\_\_
- 21.2 1-2 \_\_\_\_\_
- 21.3 3-4 \_\_\_\_\_
- 21.4 5-6 \_\_\_\_\_
- 21.5 7-8 \_\_\_\_\_
- 21.6 More than 8 \_\_\_\_\_

21. \_\_\_\_\_

22. How satisfied are you with the quality of friendships that you have?
- 22.1 Very satisfied \_\_\_\_\_
- 22.2 Somewhat satisfied \_\_\_\_\_
- 22.3 Neither satisfied nor dissatisfied \_\_\_\_\_
- 22.4 Somewhat dissatisfied \_\_\_\_\_
- 22.5 Very dissatisfied \_\_\_\_\_

22. \_\_\_\_\_

23. How many groups or organizations do you actively participate in?
- 23.1 None \_\_\_\_\_
- 23.2 One \_\_\_\_\_
- 23.3 Two \_\_\_\_\_
- 23.4 Three \_\_\_\_\_
- 23.5 Four \_\_\_\_\_
- 23.6 Five or more \_\_\_\_\_

23. \_\_\_\_\_

Using the following scale, how important are each of the following to you? Scale: 1 = Not at all important; 2 = Slightly important; 3 = Moderately important; 4 = Very important. (Circle your response)

24. To have many friends                      1   2   3   4

24. \_\_\_\_\_

25. To have one close friend                      1   2   3   4

25. \_\_\_\_\_

26. To be able to depend on  
another person                      1   2   3   4

26. \_\_\_\_\_

DO NOT WRITE  
IN THIS COLUMN

27. Rate yourself on the following loneliness  
scale - that is, the degree of loneliness  
you feel:

- 27.1 Very lonely \_\_\_\_\_  
27.2 Fairly lonely \_\_\_\_\_  
27.3 Not so lonely \_\_\_\_\_  
27.4 Not lonely at all \_\_\_\_\_

27. \_\_\_\_\_

## Appendix I

Subscale of the Recent Life Change Questionnaire as  
Delineated by M. Roncoli: Items Related to Loss

Subscale of the Recent Life Change

Questionnaire: Items Related to Loss

A. Health

1. an illness or injury which:
  - (a) kept you in bed a week or more, or took you to the hospital?

B. Work

12. experienced being:
  - (a) fired from work?
  - (b) laid off from work?

C. Home and Family

18. the death of a spouse?
19. the death of a:
  - (a) child?
  - (b) brother or sister?
  - (c) parent?
  - (d) other close family member?
20. the death of a close friend?
25. a separation from spouse:
  - (a) due to work?
  - (b) due to marital problems?
27. a divorce?
31. a child leaving home:
  - (a) due to marriage?
  - (b) to attend college?
  - (c) for other reasons?
32. wife having a miscarriage or abortion?

D. Personal and Social

47. a "falling out" of a close personal relationship?
49. a loss or damage of personal property?

E. Financial

54. experienced a foreclosure on a mortgage or loan?
55. experienced a major change in finances:
  - (a) decreased income?