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Adult loneliness: Individual and interactive relationships of the perception of family of origin, current social network, marital status, and gender

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The Ohio State University, 1994
Adult Loneliness: Individual and Interactive Relationships of
The Perception of Family of Origin, Current Social Network,
Marital Status, and Gender.

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Keith Gilmore Lindeman, B.S., M.S.W.

The Ohio State University
1994

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This study examined the loneliness of 30-to-40 year old college-educated, full-time employed men and women who were either single, married, or divorced. The independent variables were perceptions of family of origin experiences, interaction behavior, current social network, satisfaction with current social network, marital status, and gender.

Nonparametric statistical procedures were used to analyze the data. The results substantiate previous research reporting that current social network satisfaction and having an intimate partner decrease loneliness. Less adult loneliness was significantly related to family of origin experiences for two groups, adults who expressed greater satisfaction with their relationship to their parents at time of leaving home and adults whose perception of parental marriage was positive and who expressed greater satisfaction with current social network. A log-linear analysis found two variables to have the greatest effect on loneliness: satisfaction with current social network and having an intimate partner. Having an intimate partner had the greater effect.

The current study failed to find any significance between perceptions of parental marriage and loneliness, but did indicate the importance of an adult's current satisfaction with their relationship.
with their parents at the time of leaving home. Thus, along with an adult's current social situation and having an intimate partner, perception of satisfaction with parental relationship at time of leaving home is predictive of their loneliness.
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CHAPTER I.
INTRODUCTION

Background

From the beginning of recorded history, loneliness has been a major theme of many different written works: e.g., Greek mythology, the Bible, the Koran, and Shakespearean plays (Hancock, 1986). Loneliness has been portrayed as a tragic experience, a romantic interlude, or as an existential experience considered by some to be the natural condition of humans (Mijuskovic, 1985; Moustakas, 1961). Loneliness has been found to affect more people than almost any other problem (Rubinstein & Shaver, 1982a). Loneliness has been cited as a warning that an individual's social relationships are deficient in some important way (Peplau & Goldston, 1984). Important psychological needs, companionship, emotional closeness, and a meaningful place in society, are going unmet when there is loneliness, according to Rubinstein and Shaver (1982a). A number of loneliness researchers (e.g., Cultrona & Russell, 1984; Rook, 1984; Rubinstein & Shaver, 1982a; Weiss, 1973) believe that intimacy and friendship are the solutions to these psychological needs. Loneliness is thought to be more prevalent in the last 20 to 30 years, than in the past, due to family mobility and changes in family interaction (Hancock, 1986). Large national representative surveys, conducted during the late 1960's through the early 1980's, have
have found that loneliness has affected as much as 25% of the population (Bradburn, 1969; Perlman & Peplau, 1981; Weiss, 1973). It is possible, with the increase in divorce and with the delay in first marriages, that more people are experiencing loneliness than when these surveys were taken. One thing appears to be certain, few people escape the painful experience of loneliness as social relationships begin, change, and end (Rubenstein & Shaver, 1982a).

Loneliness can be experienced by people during any of the developmental stages in their lives. Loneliness occurs among teenagers, young adults, and older people (Kastenbaum, 1992; Medora & Woodward, 1986; Page & Cole, 1991; Rubenstein & Shaver, 1982a). Even infants are not spared distressing anxiety as the experience of separation from loving caretakers is comparable to adult feelings of loneliness (Peplau & Perlman, 1982).

Loneliness is such a prevalent problem that numerous enterprises have appeared that promise relief. For example, current newspapers offer a number of computer-arranged dating services that supposedly offer a means of locating happiness and avoiding loneliness by finding just the right person. Dating bureaus, singles' clubs, and personal columns in newspapers and magazines are some of the other enterprises offering hope to lonely people. Advertising of all types is directed toward a person's changing their image and improving their chances of a satisfactory relationship. Observers of these activities to relieve loneliness speak of a "loneliness industry" (Weiss, 1984).
Antecedents

There are a number of personal and situational factors that increase vulnerability to loneliness. It is helpful to distinguish between predisposing factors that contribute to this vulnerability and precipitating events that trigger it. Perlman and Peplau (1984) suggest that predisposing factors can include characteristics of the individual (e.g., low self-esteem, shyness, lack of social skills), characteristics of the situation (e.g., social isolation, competitive interaction), and general cultural values (e.g., individualism). Hojat (1982) in a study of college students found that anxiety, low self-esteem, depression, extraversion, and external locus of control were significant predictors of loneliness. In a study exploring explanations for the persistence of loneliness among college students, Jones, Freemon, and Goswick (1981) found that lonely subjects reported themselves to be more self-conscious, more shy, lower in self-esteem, less acceptable to others, as well as less attractive to the opposite sex than nonlonely subjects.

People experiencing loneliness share some personality characteristics with people experiencing alienation. Included among the more common characteristics are: anxiety, low-esteem, lack of confidence in self-worth, and social isolation (Sexton, 1983). Alienation, like loneliness, may be viewed as a reaction to inadequate interpersonal relationships and demonstrates a weakness in a person's capacity to deal with the demands and conflicts involved in social living (Sexton, 1983)
Precipitating events or negative relationship situations emphasize deficits in the environment as causes of loneliness, the breakup of a love relationship or moving to a different community (Weiss, 1973). The characteristics of a person's actual social network (e.g., number, quality, and frequency of friendship contact) are the most obvious determinants of loneliness (Perlman & Peplau, 1984). There are a number of other possible situational causes: impersonal, crime-ridden cities; a high divorce rate; the substitution of home videotape-viewing and television for face-to-face communication, bureaucratic procedures, fax machines, and letter-writing personal computers that increasingly influence personal relationships.

In a study of the antecedents of loneliness, Rokach (1989) developed a model of loneliness from the content analysis of verbatim reports of loneliness by 526 subjects. The model depicts three conceptual clusters: relational deficits, traumatic events, and characterological and developmental variables. Relational deficits include social alienation, inadequate social support system, and troubled relationships. Traumatic events refer to mobility/change, loss through death or relational breakup, and crisis (abrupt or significant change in a person's world and/or awareness of life's limitations and structure). Characterological and developmental variables include developmental deficits and personal shortcomings.

An individual's beliefs about their situation and why they are lonely may influence whether their loneliness results in a temporary state or an enduring trait (Jones, Rose, & Russell, 1990). Measures
of loneliness have been inversely related to self-reported measures of acceptance of others; belief in a just world; beliefs in the trustworthiness, altruism, and favorability of human nature; and feelings of acceptance from one's family, friends, and other relationships (Jones, Rose, & Russell, 1990). In a study of male college students, Frankel and Prentice-Dunn (1990) found that lonely people may be in a cycle with their self-schemata negatively affecting the processing of self-relevant information and validating their original self-views.

Research on loneliness and relationships indicates that people who are lonely lack relationships with which they are satisfied more than they lack social ties (Jones, 1989). Wheeler, Reis, and Nezlek (1983) studied college students who provided information about every social interaction. They reported that the strongest overall predictor of loneliness for both males and females was the meaningfulness of a person's interactions and the more meaningful a person's interactions the less lonely they were. While meaningfulness was the most critical variable in interactions with males, for interactions with females, it was second to time spent. The more an individual interacted with females, the less lonely they were. Interaction with female partners, in general, seemed to be beneficial in preventing loneliness, while interactions with male partners needed to be meaningful to be prevent loneliness (Wheeler, Reis, & Nezlek, 1983).
Consequences

Research on loneliness indicates that from seven to 10% of the general population experience persistent and severe loneliness (Bragg, 1979) as opposed to 25% experiencing transient or situational loneliness (Bradburn, 1969; Perlman & Peplau, 1981; Weiss, 1973). Adults experiencing persistent loneliness are likely to suffer not only the negative emotions connected to loneliness, but negative physical consequences. Lynch (1977) found that loneliness was linked to an increased rate of disease and a startling rise in the frequency of premature death. This study by Lynch (1977) focused on heart disease, but it was argued that coronary heart disease was no different from any other cause of death and that cancer, accidents, suicides, and mental disease were all influenced by lack of human companionship. Berkman and Syme (1979) studied 8023 adults in Alameda County, California over a nine-year period and found that people with the most social connections had the lowest mortality rates and people with the least social connections had the highest mortality rates. These results were the same for every age group examined.

Loneliness research has also found a positive relationship between experiencing loneliness and impaired mental health (e.g., Bragg, 1979; Jones, Carpenter, & Quintana, 1985; Perlman & Peplau, 1984; Rosenbaum & Rosenbaum, 1973; Rubinstein & Shaver, 1982a). In a poll of patients who had sought psychiatric help, more than 80% stated that loneliness was the principle reason (Rosenbaum & Rosenbaum, 1973). Perlman and Peplau (1984) offered the
explanation that both general psychopathology and loneliness are associated with interpersonal problems resulting from a lack of satisfying social relationships.

Loneliness not only affects peoples' mental and physical health, it has been linked to a number of social behavior problems. Research has connected loneliness to male aggressive behavior (Check, Perlman, & Malamuth, 1985; Marshall, 1989). Brennan and Auslander (1979) in study of adolescents concluded that loneliness was linked to adolescent delinquent behavior. In a study on loneliness and alcohol abuse, Sadava and Thompson (1986) found that loneliness was significantly related to alcohol problems, but not to the quantity of alcohol consumed. According to Rosenbaum and Rosenbaum (1973), most of the people attending any meeting of Alcoholics Anonymous will attribute the start of their drinking to loneliness. Diamont and Windholtz (1981) found a correlation between loneliness and suicide intent or the potential for suicide. In a study done by the Los Angeles Suicide Prevention Center, it was discovered that the most common factor shared by persons in their teens and twenties, who attempted suicide, was loneliness (Rosenbaum & Rosenbaum, 1973). Kastenbaum (1992) studied suicide among older adults and found that elderly adults with little opportunity or inclination to get involved in relationships with others were a high risk for suicide.

**Research issues and trends**

Despite the religious and philosophical interest in loneliness, it has only been recently that loneliness has become the subject of
scientific inquiry. Weiss's 1973 book on loneliness is credited with stimulating interest in the subject and in establishing loneliness as a valid problem for research (Murphy, 1991; Paloutzian & Janigian, 1989; Peplau & Perlman, 1982). Loneliness research expanded rapidly during the 1980's. Shapurian's and Hojat's (1989) selected loneliness bibliography listed 268 published works from 1580 until 1987; most (67%) were published between 1980 and 1986. A recent search of loneliness articles from the Pysch-Lit Data base resulted in a total of 593 published articles, in English, from January 1987 through December 1993. There are several explanations for this growth. Research conducted since the early 1970's documented the pervasiveness of loneliness and that loneliness undermined psychological, physical, and social well-being (Perlman, 1989). Conferences, numerous convention symposiums, and special journal issues devoted to loneliness contributed to the growth of interest in loneliness research (Perlman, 1989). Another reason has been the increase of interest in relationships in general with new publications on relationships appearing (Perlman, 1989). Research on loneliness has also been assisted by the network of cooperative scholars who have kept in touch with emerging developments through the circulation of pre-prints and bibliographies (Perlman, 1989).

One of the most influential advancements in loneliness research was the hypothesis that there was a distinction between emotional and social loneliness (Perlman, 1989). This hypothesis became part of a general search for identifying types of loneliness
(Paloutzian & Janigian, 1989) and differential consequences. Weiss (1973) was the first to theorize that loneliness had an emotional isolation component and a social isolation component. This typology was confirmed in a study of social and emotional loneliness by Russell, Cutrona, and Yurko (1984).

Both the loneliness of emotional isolation and of social isolation refer to a lack of intimacy in different situations. Weiss (1989) suggests that the loneliness of emotional isolation is the result of the lack of an attachment figure and that the loneliness of social isolation comes from the lack of social contacts, such as not having friends to talk with and share activities. Adults need a social network to provide social engagement and an attachment figure to provide emotional security. The benefits of social integration are different from those of attachment in that one cannot be substituted for the other for very long (Weiss, 1973). For brief periods of time, either emotional intimacy or social intimacy can prevent feelings of loneliness, but over longer time periods both are believed necessary to prevent loneliness (Weiss, 1989).

The concept that loneliness can be classified by its duration as either situational or chronic (Weiss, 1989) has also contributed to research on causes of loneliness. Situational loneliness usually results from an external cause, such as the termination of an intimate relationship, the lack of time to make friends or money to participate in activities with friends (Perlman & Peplau, 1984). Chronic loneliness is more likely to have an internal cause, including personal characteristics, family of origin experiences, or cultural
determinants (Perlman & Peplau, 1984). Hojat (1983) considered chronic loneliness to be that which persists for more than one year or has always existed. Young (1982) stated that loneliness of two years duration or longer was chronic. Young (1982) added the time component of transient loneliness to situational and chronic loneliness. Transient loneliness is experiencing very brief and occasional lonely feelings, such as going alone to a function because a friend or partner is unable to attend.

Loneliness indicates there is a problem in a person's network of relationships, lack of intimacy or community (Rubinstein & Shaver, 1982a). The presence of intimacy and companionship needs are seen as emerging during certain stages of development (Sullivan, 1953). Adolescence is the stage of development where intimacy and companionship needs make their first significant appearance (Buhrmester & Furman, 1987). Intimacy with one or more persons is missing in the emotional isolation component of loneliness (Weiss, 1989). Like loneliness, intimacy is a subjective relational experience and the core components of intimacy are trusting self-disclosure with communicated empathy the response (Wynne & Wynne, 1986). The social isolation component of loneliness is lack of intimacy of community or friendship (Weiss, 1989).

One of the difficulties with conducting research on loneliness is that loneliness is a very personal, subjective experience with no completely objective measures available (Peplau & Perlman, 1982). Since it is not ethically possible to design a true experiment to manipulate and measure loneliness, researchers have had to develop
innovative methods to compensate for the non-experimental nature of loneliness research. For example, Weiss (1989) induced the experience of emotional isolation in members of an undergraduate class by instructing them to close their eyes and imagine they were living alone with no one to share their life and that it would remain that way. The development of innovative methods such as Weiss's have contributed significantly to the field (Perlman, 1989).

A problem of contemporary loneliness research is the tendency to consider loneliness as a substitute measure of the quantity and quality of a person's relationships (Jones, 1989). Asking someone about their relationships provides useful information about their expectations, perceptions, and experiences, but reveals nothing about the other person in the relationship or about the relationship itself. In this respect, the study of loneliness is the study of a person's internal state and not the study of relationships (Jones, 1989). Another problem of loneliness research is the lack of diverse methods and populations for investigating loneliness (Paloutzian, & Janigian, 1989). Questionnaire scales have been extensively relied upon. Approximately 80% of the research published between 1980 and 1987 used college students (Paloutzian, & Janigian, 1989). The original or the revised UCLA Loneliness Scale was used in approximately 80% of the studies as the main measure of loneliness. Other scales assess different features of loneliness. For example, the Differential Loneliness Scale (Schmidt & Sermat, 1983) assesses loneliness across four types of relationships: friendship, family, romantic, and group/community.
Theoretical approaches

A number of theoretical models have been used in the study of loneliness utilizing either a cognitive approach or an affective approach. The cognitive approach includes the cognitive model, the social role model, and the attribution model. The affective approach includes the social needs model, the social reinforcement model, the attachment model, and the family systems model. The cognitive model emphasizes a person's cognitive awareness of a discrepancy between desired relationships and perceived relationships (Chelune, 1977; Jones & Moore, 1989; Perlman, 1989; Rook, 1984; Wintrob, 1989). The social role model emphasizes that an individual's concept of self and criteria for self-worth evaluation is made in response to ongoing social demands (Schultz & Moore, 1988).

The attribution model takes a cognitive approach to understanding loneliness as it looks at how people generate causal explanations for observed events. It focuses on attribution-related questions: (a) How do people explain events that happen to themselves or others? (b) What effects do different attributions have on subsequent emotions, beliefs, or behaviors? (c) What factors determine if an attribution is made? (Anderson & Arnoult, 1985). People are most likely to engage in an attribution response to events that are important, unusual, concrete, or surprising (Pyszczynski & Greenberg, 1981; Wong & Weiner, 1981). Attribution theory suggests a model that is helpful in explaining why people experiencing loneliness frequently fail to attempt to resolve their problem
Anderson & Arnoult, 1985). These people attribute their loneliness to their lack of ability.

The social needs model stresses the affective aspect of loneliness and that loneliness results from unfulfilled needs for companionship and a meaningful place in the world (Cohen, 1980; Hartog, 1980; Leiderman, 1980). According to the social reinforcement model, social relations are a particular class of reinforcement and the type and quantity of contact found satisfying is dependent on the person's reinforcement history (Peplau & Perlman, 1982).

Attachment theory is one of the most widely used theories for explaining loneliness. The attachment model takes a developmental approach as well as an affective one and stresses the importance of the infant-mother attachment on subsequent adult relationships, adjustments and loneliness (Shaver & Hazan, 1989). The adult attachment figure is not necessarily an intimate or confidant, but instead a person that provides a feeling of security through a perceptual and emotional sense of linkage (Weiss, 1989). The feeling of security provided by this attachment figure helps to prevent loneliness.

The attachment explanation of loneliness is based on research done by Bowlby (1969) who observed that a child separated from its mother responds with a predictable reaction. Ainsworth (1978) identified three major emotional reactions a child makes to separation from their mother: secure, anxious/ambivalent, or avoidant. Secure attachment is characteristic of children whose
primary caregiver is usually available and responsive to the child's needs. Secure attachment, during childhood, is thought to lead to capacities for warmth and closeness in social bonds during adulthood (Perlman, 1989). Anxious/ambivalent attachment is characteristic of a child whose primary caregiver is somewhat out of touch with the child's needs, being sometimes available and responsive and at other times not being available or responsive. Avoidant attachment is characteristic of a child whose primary caregiver is usually unresponsive and often rejecting. A general assumption of attachment theorists is that avoidant and anxious/ambivalent attachment as a child leads to interpersonal difficulties (including loneliness) as an adult (Perlman, 1989).

The attachment model is useful in explaining the types of attachment a child may experience with their primary care-giver and how childhood attachment may thus influence adult attachment. Attachment theory also helps to explain feelings of loneliness in adulthood when there is an absence of an attachment figure. Recently, it has been suggested that the attachment approach should be considered within the family system's model (Stevenson-Hinde, 1990).

Stevenson-Hinde (1990) classified, in a table, verbatim transcripts from Main's Adult Attachment Interview. The data from the table suggests a framework for cross-generational influences on an individual's development. She proposed that this framework must be set in the context of the family system, since each individual's
model of close relationships is likely to have been derived from his/her family of origin.

Until the early 1950's behavior interaction between all family members was not considered from a system's prospective. The mother's interaction with the child was thought to be the only source of influence that needed to be considered, but then therapists discovered that other family interactions had to be taken into account. Therapists working with schizophrenic patients found that as their patients improved other family members began to show signs of pathological stress (Bateson, 1959; Bowen, 1978; Haley, - 1959; Jackson, 1970). Therapists became aware that the family was more than just a collection of individuals; it was a system and had an identity of its own that was more than the sum of individual family members.

The family systems' model has been almost ignored in explaining adult loneliness. An extensive literature search of loneliness and family of origin issues resulted in the location of 17 articles. Only two mentioned systems theory. One superficially touched upon systems theory as an explanation for loneliness (Large, 1989). The other suggested that a system's perspective that focused on the interactions of family members would be helpful in understanding how a person's development of intimacy occurred through family interactions (Yelsma, Yelsma, & Hovestadt, 1991).

**Problem Statement**

Loneliness is a complex phenomenon with a number of different variables influencing it. A number of studies have researched
loneliness and a person's social network (Jones & Moore, 1989; Mahon, 1982; Rokach, 1989; Stokes, 1985) and several have considered family of origin experiences and loneliness (Andersson, Mullins, & Johnson, 1987; Hojat, Borenstein, & Shapurian, 1990; Medora & Woodward, 1986; Murphy, 1991). Rubinstein's and Shaver's (1980) study considered the relationship of each variable to loneliness, but didn't compare the effects of a person's social network and loneliness to perception of family of origin in degree of loneliness among adults. Marital status's relationship to loneliness has been studied and differences in loneliness scores between single and married adults observed (Page & Cole, 1991; Tornstam, 1992), and two published studies were found that compared never-married adults to divorced adults (Page & Cole, 1991; Medora & Woodward, 1986). None of these studies, however, considered the influence of family of origin.

This study examined whether loneliness was affected by the following: (a) divorce of parents, (b) perceptions of the family of origin experiences, (c) satisfaction with parental relationship at time of leaving home, (d) current social network, (e) interaction behavior, (f) satisfaction with their relationships, (g) gender, and (h) marital status. Marital status was expected to contribute to loneliness, with married adults being less lonely than either never-married adults or divorced adults. Divorced adults were expected to be the most lonely group. Gender was not expected to make a significant difference for never-married adults, but married women were expected to be lonelier than married men (Tornstam, 1992).
Previous studies individually focused on marital status, gender, social network, family of origin experiences and their relationship to loneliness, while this study considered the relative contributions of each variable.

**Summary of previous studies.**

Some loneliness studies have examined the effects of family of origin experiences. One early study that reported on loneliness and family of origin experiences was a large representative survey on loneliness by Rubinstein and Shaver (1980). They found that adults, who had supportive parents as children, were less likely to be lonely than adults whose parents were not supportive when they were children. Another study was Bergenstal's (1981) dissertation on father availability and support of adolescent boys. He found lower levels of loneliness for boys with supportive fathers. Lobdell's and Perlman's study (1986), on the intergenerational transmission of loneliness from mothers to daughters, found a significant correlation between the loneliness scores of college females and the loneliness scores of their mothers.

There has been some question as to whether family of origin experiences or current situational factors contribute most to loneliness. Perlman (1989) expressed a belief that while childhood roots matter, a person's social network could exceed childhood or personality factors in accounting for loneliness. However, no study was found that compared the perception of family of origin experiences to an individual's current social network on the frequency of loneliness.
Of the journal articles published on loneliness, during the period from 1980 until 1987, approximately 80% used college students as subjects, precollege youth and older adults were each subjects approximately 10% of the time (Paloutzian & Janigian, 1987). This left a large segment of the population, young and middle aged adults, virtually ignored in loneliness studies during that period.

**How this study improves on previous studies.**

One purpose of this study was to determine if there would be greater loneliness for adults who had unfavorable family of origin experiences. The second purpose was to determine if loneliness occurs less frequently among adults with favorable family of origin experiences who have high social satisfaction scores compared to adults with unfavorable family of origin experiences who have low social satisfaction scores. The third purpose was to determine if interaction behavior is related to loneliness. The fourth purpose was to determine if satisfaction with current social network related to loneliness. The fifth purpose was to determine if loneliness was greater for divorced adults than for never married adults with similar family of origin experiences. The sixth purpose was to determine if loneliness for married women was greater than for married men, and if family of origin experiences or current social network satisfaction had greater effect on loneliness.

**Conceptual Framework**

General systems theory provides the general conceptual framework used in this study. General systems theory represents an
attempt by von Bertalanffy (1969) to provide a comprehensive theoretical model embracing all living systems and one that would be relevant to all behavioral sciences. In this respect, general systems theory can appropriately be described as a "metatheory" as it provides a metacognitive framework for a broad and far-reaching shift in human perception and conception (Schwartz, 1988). Von Bertalanffy (1928) believed that the exclusive reliance on the reductionistic-mechanistic approach (i.e., explanation of events through a linear series of stepwise cause and effect equations) seriously hampered development of explanations in the biological sciences (Steinglass, 1978).

General systems theory, applied to the field of human behavior, is a way of looking at families as systems having a wholeness or identity that goes beyond the individual family member's characteristics. The nuclear family is seen as a rule-governed system composed of individual members acting among themselves in an organized, repetitive way (Slipp, 1988). It is a set of continuing relationships between and among family members (Goldenberg & Goldenberg, 1985). Bowen's Family Systems Theory was chosen for this study because of the emphasis it placed on the influence of family of origin issues and the differentiation of self. Family of origin experiences make a major contribution to an individual's development throughout his/her life (Brown, 1991) and the relationship behavior learned by children in their family of origin provides the model for their relationships as adults (Slipp, 1988; Givelber, 1990; Wachtel, 1982).
Hypotheses

The purpose of this study was to examine perceptions of family of origin experiences, interaction behavior, current social networks, satisfaction with social networks, marital status, gender and their relationship to the loneliness of college-educated, professionally-employed adults in the 30-to-40 year age range.

Specifically, it was hypothesized that:

Hypothesis One: Family of origin experiences, perception of those experiences, and satisfaction with relationship with parent at time of leaving home are related to loneliness.

a) Adults whose parents divorced during pre-teen or teenage years are lonelier than those adults whose parents remained married.

b) Adults who perceive that their parents had a conflictual marriage and/or marriage with little sharing are lonelier than those adults who perceive that their parents had a sharing and/or affectionate marriage.

c) Adults who were satisfied with the relationship they had with their parents before leaving home are less lonely than those adults who were dissatisfied.
Hypothesis Two: Interaction behavior is related to loneliness and satisfaction with relationships.
a) Adults with greater interaction behavior are less lonely than adults with less interaction behavior.
b) Adults with greater interaction behavior express more satisfaction with (a) friends, (b) co-workers, (c) spouse/dating, and (d) neighbors than adults with less interaction behavior.

Hypothesis Three: Current social experiences and satisfaction are related to loneliness.
a) Adults with intimate partners (married or exclusively dating) are less lonely than those adults without an intimate partner, casually dating or not dating.
b) Adults expressing satisfaction with their relationship with an intimate partner (married or exclusively dating) are less lonely than those adults expressing dissatisfaction.
c) Adults with more friends are less lonely than adults with less friends.
d) Adults expressing satisfaction with friends are less lonely than those adults expressing dissatisfaction.
e) Adults expressing satisfaction with their relationships with neighbors and co-workers are less lonely than those adults expressing dissatisfaction.

Hypothesis Four: There are relationships among perception of family of origin experiences, current social network, and loneliness.

a) Adults, whose parents divorced during their preteen/teenage years or who they perceive as having had little interest and participation in each others' activities and/or whose marriage thrived on tension, conflict, and arguments express less satisfaction with their current social network than adults with parents who they perceive as having experienced a sharing and/or affectionate marriage.

b) Adults, whose parents had little interest and participation in each others' activities and/or whose marriage thrived on tension, conflict, and arguments and who express dissatisfaction with their current social network are lonelier than adults with parents who they perceive as having experienced a sharing and/or affectionate marriage and who express satisfaction with their current social network.
Hypothesis Five: Marital status and gender are related to loneliness.

a) Never married adults are less lonely than divorced adults.
b) Married males are less lonely than married females.

Research Question

Despite the theoretical expectation that perception of family of origin experiences contribute to and influence adult relationships, there is little empirical support for a specific hypothesis on loneliness and perception of family of origin experiences. Therefore, the following research question was proposed: Is perception of family of origin experiences, interaction behavior, current social experiences, satisfaction with relationships, marital status, or gender, most predictive of current loneliness among adults?

Definitions

Loneliness - Constitutive definition

Loneliness is a global term used to identify the feeling a person experiences when they perceive a lack in their social and/or emotional relationships.
Loneliness - Operational definition

Loneliness was measured by the use of the question, "Are you ever lonely?" There were five responses ranging from never (1), to always (5).

Family of origin experiences - constitutive definition

Family of origin is the term used to identify the family in which a person grew up. The family usually consists of a mother and father and may include one or more siblings. Experiences in the family of origin consist of a respondent's perception of their parent's relationship and respondent's satisfaction with their relationship with their parents at time of leaving home.

Family of origin experiences - operational definition

Family of origin experiences was measured by three questions. The first question related to the marital status of the parents, whether a divorce or death of a parent occurred during the years the respondent was living at home. A second question defining family of origin experiences was the description of the parent's marriage with five choices ranging from conflict and tension (1), to sharing of all aspects and enthusiastic mutual participation (5). A third question defining family of origin experiences was a question of satisfaction with the relationship with parents before leaving home and responses range from extremely satisfied (1), to extremely dissatisfied (7).
Interaction behavior - constitutive definition

Interaction behavior is the amount of interaction both expressed and wanted from others.

Interaction behavior - operational definition

Interaction behavior was the sum score of the total expressed and wanted behaviors of inclusion, control, and affection as measured by the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) scale (Schutz, 1960).

Intimate relationship - constitutive definition

Intimate relationship is a term used to define a current intensely emotional relationship with a significant other.

Intimate relationship - operational definition

Intimate relationship was measured by two questions. The first question was about involvement in an exclusive relationship and the possible future of that relationship. A second question was about the nature of the current dating relationship with responses ranging from casual (1), to intense and enduring with potential for long-term commitment (5).

Current social network - constitutive definition

Current social network is a term used in reference to the existence of current social relationships and the respondent's satisfaction about current relationships.
Current social network - operational definition

Current social network was measured by questions on current dating activity (e.g., Are you currently dating? How frequently do you date? Nature of current dating relationships?) and number of close friends. Satisfaction was measured by the total score of a satisfaction scale in which respondents indicate how satisfied or dissatisfied they are with current social network covering twelve major subject areas and responses can range from extremely dissatisfied (1), to extremely satisfied (7). The following subject areas were utilized in these analyses: (a) Co-workers. (b) Relationship with your spouse (married respondents). (c) Dating relationship (never-married and divorced respondents). (d) Relationship with your parents. (e) Relationship with your neighbors. (f) Relationship with your friends.

Limitations

There are a number of limitations to this study. First, the results are based on a selected sample of college-educated, never-married, married, and divorced adults between 30 and 40 years of age and employed full-time, thus the results are generalizable only to those sharing the characteristics of the sample. Second, the data came from a secondary analysis of an existing data set and the objectives of that research did not specifically address the issue of the respondent's differentiation from their family of origin and loneliness. Third, this study was correlational in design, implying
any causal relationship must be cautiously made. Fourth, this study used a single measure of loneliness. Males are more likely to score lower when using a single question loneliness scale than they are when using multiple question loneliness scales (Borys & Perlman, 1985). Last, the quality of family of origin experiences was based on the respondent's perception of those experiences a number of years after the respondent left home. While there are some studies that suggest early memories relate to current interpersonal behavior, these studies are not without methodological flaws (Watkins, 1992).
CHAPTER II
LITERATURE REVIEW

This chapter reviews the scientific literature on several different features of loneliness: (a) definitions based on different theoretical orientations; (b) possible causes; (c) the physical and mental health consequences; (d) types of loneliness; and (e) personality characteristics linked to loneliness. This chapter discusses the theory on which this study was based and provides the rationale for the hypotheses and variables.

A scientific approach toward loneliness did not appear until Zilboorg's (1938) article on loneliness (Hojat & Crandell, 1989). Hojat and Crandell (1989) reported that Zilboorg's (1938) article initiated the theoretical discussion of loneliness by behavioral scientists. Eddy's (1961) doctoral dissertation utilizing objective measures of loneliness has been given credit for starting empirical investigations on loneliness (Hojat & Crandell, 1989). Widespread scholarly interest in loneliness appeared after the 1973 publication of Weiss's book on loneliness (Paloutzian & Janigian, 1989; Peplau, 1989; Perlman, 1982; Rubin, 1979). A recent search of the PsychLit Data base for journal articles on loneliness resulted in a total of 675 articles published in the last seven years. Independent variables ranged from mental disorders to immigrants. Scholarly interest in loneliness is continuing to increase.
Definitions of loneliness

Peplau and Perlman (1982) suggested that different definitions of loneliness reflect different theoretical orientations. One orientation emphasizes an inherent human need for intimacy. Chelune (1977) stated that loneliness could be defined as a perceived lack of interpersonal intimacy. Loneliness is a natural sign that people are lacking closeness, companionship, or a meaningful place in the world. Rubinstein and Shaver (1982a) suggested that loneliness was a display of a healthy hunger for intimacy and companionship. Wintrob (1989) believed that loneliness was the result of being without a significant other with whom the most personal aspects of one's life can be shared. Cohen (1980) described loneliness as the pervasive gnawing feeling people experience when something is missing in their lives.

A second orientation emphasizes cognitive processes concerning a person's perception and evaluation of their social relationships (Peplau & Perlman, 1982). Perlman (1989) stated that loneliness was the discrepancy between one's awareness of their desired level of social contact and their achieved level. Loneliness was described by Jones and Moore (1989) as the psychological condition resulting from a cognitive awareness that there was a discrepancy between the ideal relationship and the perceived relationship. Rook (1984) stated that loneliness was an enduring condition of emotional distress that arose when a person was misunderstood, felt estranged from, or rejected by others. Loneliness was defined by Horowitz (1984) as a composite of
certain thoughts, feelings, and maladaptive behavior. Leiderman (1980) described loneliness as an affective state in which a person was aware of the feeling of being separate from others, along with having experienced a vague need for other people.

A third orientation identifies insufficient social reinforcement as the major deficiency lonely people experience (Peplau & Perlman, 1982). Rook (1984) suggested that loneliness occurs when a person lacks appropriate social partners for desired activities, particularly activities that provide a sense of social integration and opportunities for emotional intimacy.

De Jong-Gierveld and Raadschelder (1982) studied major dimensions of loneliness by obtaining data from a sample of 129 single, 128 divorced, 168 married, and 128 widowed adult men and women from age 25 to 75. Three dimensions of loneliness were used to classify people into four major loneliness clusters: (a) the hopeless lonely who are very dissatisfied with their relationships, (b) the periodically and temporarily lonely, and (d) the nonlonely. They hypothesized that there are three major dimensions of loneliness: how persons evaluate their social situation, the social deficit experienced, and the time element. For example, an individual may evaluate aloneness as solitude and benefit from it, while another individual may evaluate aloneness as being lonely and experience depression or anxiety.

There is no class of people that is immune and probably few people escape the painful experience of loneliness (Peplau & Perlman, 1982). Bradburn's 1969 national survey found that over
25% of the people were very lonely or remote from other people. Studies, in the early 1980's, have found that loneliness rates had not decreased, but still affected 25% or more Americans at any one time (Perlman & Peplau, 1981; Rubinstein & Shaver, 1982b). For most Americans loneliness does not last for long periods of time, but it has been estimated that as much as 10% of the population suffer persistent and severe loneliness (Peplau & Perlman, 1982).

Loneliness is considered, by some sociologists, to be a symptom of social decay or a lack of social interaction (Peplau & Perlman, 1982). The lack of family and community ties of previous generations is seen as existing to a greater extent in modern times and contributing to loneliness (Hancock, 1986). However, loneliness also can happen to anyone whenever an important relationship is lost and almost everyone is lonely from time to time (Rubinstein & Shaver, 1982a).

Loneliness is experienced by people in many different ways. According to Sadler and Johnson (1980), loneliness is highly subjective, intensely personal and often unique. Loneliness is at one end of the relationship continuum and intimacy at the other (Rubinstein & Shaver 1982a). Rubinstein and Shaver (1982a) believe that when adults experience loneliness, especially loneliness involving lack of physical closeness and touching, childhood memories of intimacy emerge into consciousness awareness. A person's intimate history, beginning as an infant, could possibly explain vulnerability to loneliness. The results from a number of studies indicate cold, less nurturing parents are more likely to have
children who grow up to be adults who have problems with intimacy and are likely to be lonely (Bergenstal 1981; Brennan & Auslander 1979; Lobdell & Perlman, 1986; Stewart, Stewart, Friedley, & Cooper, 1987).

Intimacy can be considered to be an hierarchy of three interrelated levels: the first level is intellectual, the second level is physical, and the highest level is emotional (Dahm, 1972). The first and/or second levels would more likely be present in friendships and all three levels present in relationships with a significant other. Greenberg and Johnson (1986) see intimacy as primarily emotional and occurring when an individual displays a need for ready access to their partner, desires closeness, is willing to risk vulnerability, and feels better when in the company of the partner. Self-disclosure is a highly significant determinant of intimacy levels, contributing, in a study by Waring and Chelune (1983) 50% of the variance of rated levels of intimacy. Self-disclosure has also been found to be a significant factor in loneliness with higher levels of self-disclosure inversely related to loneliness (Stokes, 1987).

Consequences

Loneliness can be an indication to the individual of the status of his/her relationships. It is not a natural condition, as the biological drive of humans to establish relationships with other humans is one of their primary imperatives (Hartog, 1980; Mijuskovic, 1985). Loneliness contributes to mental health problems and although basically different from depression,
loneliness frequently overlaps it. Hartog (1980) suggests that loneliness contributes to feelings of depression and that depression contributes to loneliness. A correlation between loneliness and depression and low self-esteem was found by Jackson and Cochran (1988) in their study of loneliness and psychological distress.

Persistent and severe loneliness has the potential to cause a number of health problems (Berkman & Syme, 1979; Lynch, 1977). Lynch (1977) documented the fact that there is a biological basis for a person's need to form loving human relationships and that the lack of fulfillment of that need is reflected in the physical condition of a person's heart. Lynch (1977) reported that the U. S. mortality rates for all causes of death, including heart disease, was consistently higher for single, divorced, and widowed individuals of both sexes and all races than it was for married individuals.

Berkman's and Syme's (1979) study of 8023 adults found that social isolation negatively affected an individual's health. The survey did not specifically ask about loneliness, but four sources of social contact were examined: (a) marriage, (b) contacts with close friends and relatives, (c) church membership, and (d) informal and formal group associations (Berkman & Syme, 1979). The researchers constructed a Social Network Index that considered the number of social ties and their relative importance. For example, intimate contacts were weighted more heavily than group memberships and church affiliations. People with the most social connections had the lowest mortality rates and people with the least social connections had the highest mortality rates for every age group examined. For
men, the age adjusted mortality rate was 2.3 times higher for those with the fewest connections than for those with the most connections. For women, the age-adjusted mortality rate was 2.8 times higher for those with the fewest connections than for those with the most. The network index was also found to be related to four separate causes of death: cancer, ischemic heart disease, cerebrovascular and circulatory diseases, and a category including all other causes of death, e.g., diseases of the respiratory and digestive system, accidents, and suicides (Berkman & Syme, 1979).

In this study the relationship between social networks and mortality was found to be independent of socioeconomic status, self-reported physical health at the time of the survey, year of death, and such health behaviors as physical inactivity, obesity, smoking, alcohol useage, and low utilization of preventive health services (Berkman & Syme, 1979). Looking at the effects of psychological factors they found that in all cases social networks predicted mortality independently of psychological status.

**Types of Loneliness**

The best known of the social deficit typologies is Weiss's (1973) distinction between emotional and social loneliness. There is general agreement among most researchers on loneliness on these two categories of loneliness (De Jong-Gierveld & Raadschelder, 1982; Paloutzian & Janegian, 1989; Rubin, 1979; Russell, Cutrona, Rose, & Yurko, 1984; Shaver & Rubinstein, 1980). Shaver and Rubinstein (1980) published an 84-item closed-ended questionnaire on loneliness in several Sunday newspapers in large American cities.
A factor structure of 16 reasons, given by respondents for loneliness, included two factors that corresponded well with Weiss's distinction between social and emotional isolation and which together accounted for 66.7% of the common variance.

Data, gathered by Russell, Cutrona, Rose, and Yurko (1984) from a broad sample of college students at the University of Iowa, confirmed that there was a significant, but small, correlation between social and emotional loneliness. Questionnaires were mailed to members of each class and graduate students; approximately 50% responded with no significant differences in the distribution of responses by college class. The two types of loneliness were assessed by separate scales and it was found that social loneliness was more strongly associated with the lack of friendship relationships and emotional loneliness was more strongly associated with the lack of satisfying romantic relationships.

Weiss (1987) suggested that the loneliness of emotional isolation was an expression of an emotional-cognitive-perceptual system that was an adult development of childhood attachment. Weiss (1989) observed that the loneliness of social isolation or a lack of friends, was like being on your own in a dangerous world. Weiss (1989) found that friendships provided a community of shared interests and a sense of belonging. Depression tended to be associated with emotional isolation, but anxiety with social isolation (Weiss, 1987).

Weiss (1989) believed that it is necessary to understand the functioning of the attachment system in order to truly understand
the loneliness of emotional isolation. Weiss (1989) suggested that the attachment system in adults undergoes modification during adolescence so that the individual is able to replace the parents with new attachment figures. The adult expression of separation distress is thought to be virtually identical to that of children.

The relationship between a child and their mother is considered to be a complex interweaving of expectations and behaviors that form the basis for later relationships (Parkes & Stevenson-Hinde, 1982). Freud was among the early psychologists who believed that very young childhood experiences had a profound influence upon adult thoughts, feelings, and behavior. Weiss (1982) suggested that adult relationships display the secure, anxious/ambivalent or avoidant behavior found in young children.

Adult attachment, however, is found to differ from attachment in infants in three important ways. First, attachment in adults usually appears in relationships with their peers and when that attachment figure is missing the result is loneliness (Weiss, 1989). Second, adult attachment or lack of attachment does not overwhelm other behavioral systems nearly as much as it does in infancy. Adults experiencing loneliness may not display any outward sign of that loneliness (Weiss, 1989). Third, adult attachment is frequently directed toward a partner in a sexual relationship who responds with attachment and the experience of emotional involvement by both partners contributes to feelings of intimacy.

An attachment figure is someone that provides feelings of security because of an emotional and perceptual sense of linkage to
that figure (Weiss, 1989). Weiss (1989) hypothesized that when an adult is feeling under threat, feeling vulnerable, insecure, and anxious, the attachment system in the adult will be triggered and will began to dominate feelings and motivations. However, it is important not to place all the attention on just one factor about loneliness because of its complexity. For example, according to Perlman (1989), the attachment view may divert attention from concurrent and situational factors leading to loneliness.

Existential loneliness is another form of being alone and can be seen as an innate condition, proceeding from the human need to resolve the extremes of existence, birth, maturity, and death (Moustakas, 1961). Moustakas (1961) believes that people are ultimately and forever lonely whether their loneliness is the sense of absence caused by the death of a loved one, the exquisite pain of an individual living in isolation, or the piercing joy experienced in triumphant creation. Moustakas (1961) expressed the belief that loneliness enables a person to sustain, extend, and deepen their humanity. Mankind's inevitable and infinite loneliness is not solely a terrible condition of human existence, but also the instrument through which people can experience new compassion and new beauty (Moustakas, 1961).

Mijuskovic's (1985) picture of loneliness is much darker as he sees man as continually needing to fight to escape the prison of loneliness. According to Mijuskovic (1985), man's escape from loneliness can only be temporary, never permanent or even longlasting. Man's consciousness contributes to his experience of
loneliness as he becomes aware of his loneliness and attempts to move beyond his mental prison through communication with another person (Mijuskovic, 1985).

**Predisposing factors**

Research has identified a set of personal characteristics consistently linked to loneliness: shyness, introversion, reluctance to take social-risks, self-deprecation, and low self-esteem (Peplau & Perlman, 1982). Shaver and Hazan (1989) found loneliness to be strongly and negatively correlated with self-esteem. In a study of the relationship between loneliness and self-esteem, for 186 ninth-grade students, Inderbitzen-Pisaruk, Clark, and Solano (1992) found a correlation of $r = -0.599$. For college students, the relationship between self-esteem and loneliness, was found to range from a correlation of $r = -0.27$ (Davis et al., 1992) to a correlation of $r = -0.52$ (Hojat, 1982). Overholsen's (1993) survey of 323 college students found a correlation of $r = -0.57$. In Tornstam's (1992) survey of a general population of married respondents 20 to 49 years of age, a correlation of $r = -0.48$ was found between loneliness and self-esteem.

Leary (1990) believes that social exclusion theory provides a valid explanation of the relationship between loneliness and self-esteem. According to Baumeister and Tice's (1990) social exclusion theory, people seek to attain and maintain membership in selected groups (family, peer, social, and occupational). When individuals perceive that their inclusionary status is below the level they desire in most of their relationships, a negative affective state,
such as loneliness, is experienced (Leary, 1990). Self-esteem may be thought of as an internal, subjective "marker" that indicates an individual's assessment of his or her inclusionary status (Leary, 1990). Thus, according to social exclusion theory, self-esteem is the result of a cognitive function that contributes to the presence of affective states such as loneliness (Leary, 1990).

A study of college students by Horowitz, French, and Anderson (1982) on the main characteristics of a lonely person, found that characteristics could be grouped into three major sets. The largest set described feelings and thoughts of being separate from others, different, isolated, inferior, unloved. The next largest set included a lonely person's actions that brought about loneliness: isolating themselves from other people and avoiding social contacts. The smallest set covered paranoid feelings, including feeling angry and depressed. Horowitz's and French's (1979) empirical research, on the major interpersonal problems of lonely people, found that the most common types of problems were those concerning difficulties in socializing. The one problem that occurred most frequently had to do with difficulty in making friends in a simple, natural way.

**Duration of Loneliness**

An important dimension of loneliness is its duration over time. Young (1982) distinguished among three time periods of loneliness: transient, situational, or chronic. Transient loneliness is that experience characterized by brief and occasional lonely feelings. Situational or transitional loneliness is experienced by people who were part of a satisfying relationship until the relationship changed.
The change could be the result of natural development such as leaving home, or a specific crisis such as one partner wanting to terminate the relationship or the death of a partner. Situational loneliness can be a very distressing experience and may lead to a severe and chronic experience. Chronic loneliness is relationship dissatisfaction that lasts for two or more years (Young, 1982).

People who are chronically lonely display particular personality characteristics. A study by Jones et al. (1985) indicated that chronically lonely people were non-responsive, self-absorbed, negativistic, and ineffective during interactions with strangers. Feelings of loneliness may be a sign of a general tendency to perceive situations negatively (Jones, Freeman, & Goswick, 1981). They found that lonely people had a more negative outlook on human nature and a more negative view of specific others they interacted with than did people who were not lonely.

**Family systems theory and loneliness**

The general theoretical structure for family systems theory comes from general systems theory (Slipp, 1988). Family systems theory came into prominence in the second half of this century replacing the mechanistic, reductionist theories of the stimulus-response type that were dominant in psychology during the first part of the century (Nichols, 1984). Two major theoretical changes were fundamental in the family systems oriented approach to behavior: a change from linear to circular causality and a change from mechanical to systems theory (Nichols, 1984). Linear causality implies that event A causes event B and ignores other influences.
Circular causality not only considers the influence of A upon B, but B upon A and the influence of other factors upon both A and B. These mutual influences are made possible by the process of feedback, either negative or positive. Negative feedback serves to maintain a status quo within the system and positive feedback contributes to systems changes (Steinglass, 1978).

There are a number of family systems theories and they share at least two features: (a) the belief that the general principles of systems are true for personal relationships as well as for organisms and societies; and (b) the view that relationships are an interacting collection of individuals that are more than sum of each individual (Aron & Aron, 1986). According to Okun and Rappaport (1980), family system theories can be grouped into two general categories: those emphasizing communication among system members and those emphasizing the dynamic structure of the system. Bowen's family system theory is one of the latter and was chosen for this study because of the emphasis it placed on the influence of family origin issues and differentiation of self.

Dependent Variables

Family of Origin

Family of origin experiences are a major influence throughout an individual's life (Brown, 1991) and the blueprint of relationship behavior learned by children in their family of origin provides the pattern for their relationships as adults (Slipp, 1988; Givelber, 1990; Wachtel, 1982). Slipp (1988) observed that the emotional issues that a person brings into a relationship from their family of
origin tend to influence interactions in current relationships. Givelber (1990) suggested that the acceptance of oneself and others relates to the amount of acceptance a person experienced as child from their parents. Acceptance of another is an important component of intimate relationships (Wynne & Wynne, 1986) and the absence of intimate relationships results in loneliness (Rubinstein & Shaver, 1982; Weiss, 1973).

The extended family systems approach was developed by Bowen through observational research involving many families, over a number of years, with a broad range of problems (Papero, 1990). There are eight interrelated concepts in Bowen's Family Systems Theory that make up the structure and function observed in families. Three concepts are useful in providing explanations of how loneliness may be affected by the influence of an individual's family of origin: differentiation of self, triangles, and emotional cutoff.

The concept of differentiation of self is an important concept in family systems theory. An understanding of it comes from viewing the family as an emotional unit with an emotional center, a nucleus to which family members are attached (Papero, 1990). From this perspective, the family system can be defined as a number of subsystems composed of individuals who experience emotions and are connected to the same emotional nucleus. The term attachment is frequently used to describe the emotional connection between a child and parent in their subsystem. The development and maintenance of attachment in dyadic relationships can be understood
within the context of a family system's approach (Stevenson-Hinde, 1990).

It is important to consider attachment behavior because patterns of attachment behavior appear to be related to patterns of family functioning (Stevenson-Hinde, 1990). When family functioning is adaptive, the primary caregiver is sensitively responsive and reads signals from the child appropriately. The result is a child that is able to form a secure attachment with their primary caregiver. The child and primary caregiver subsystem is important because of its influence on the attachment behavior of the child (Stevenson-Hinde, 1990). Attachment behavior is present from birth and predictably results in a person achieving and maintaining physical proximity and communication with some preferred individual.

There also appears to be an intergenerational pattern to attachment behavior as a mother's current model of close relationships influences how she interacts with her child, which affects how the child comes to use the mother as a "secure base" (Stevenson-Hinde, 1990). This, in turn, forms the basis for the child's own model of relationships. The behavior pattern also involves other subsystems of the family as the husband may fail to meet the attachment needs of his wife and she looks to one of her children to meet those needs (Scarf, 1987; Stevenson-Hinde, 1990. Thus, the relationship between the mother and child is inverted which affects the child's ability to differentiate as he or she get older. Parents must allow the child emotional autonomy so that the
child develops emotional maturity and higher levels of differentiation, thus becoming capable of sustaining intimacy in adult relationships (Papero, 1990). The maintaince of differentiation is strongly influenced by the emotional climate of the family and the emotional system of the individual which forms their internal guidance system (Papero, 1990).

Bowen's concept of differentiation has both an intrapersonal and interpersonal feature (Anderson & Sabatelli, 1990). Intrapersonal differentiation refers to the separation of a person's emotional from cognitive functioning within the individual and degree of choice that individual has over which type of functioning governs one's behavior. Interpersonal differentiation refers to the state of being emotionally connected to another individual or family without being enmeshed. Lack of emotional connection results in excessive distance in the relationship while enmeshment results in excessive closeness and lack of individual identity (Papero, 1990). Both enmeshment and lack of emotional connection reduce differentiation (Williamson, 1982) and can handicap the development of intimacy.

Bowen also used the term differentiation to refer to the emotional patterns and amount of fusion present in the nuclear family (Aylmer, 1986). The family's level of differentiation plays a significant role in the developmental changes of individual family members (Fleming & Anderson, 1986). The higher the differentiation level of the family the better able the family members are to engage in adaptive, age-appropriate tasks. One important age-appropriate
task for adolescents is the development of individuation (Anderson & Sabatelli, 1990).

Anderson and Sabatelli (1990) suggest that what Bowen refers to as intrapersonal differentiation should be more appropriately called individuation. Individuation results in the person having the ability to direct his or her own thoughts and feelings (Anderson & Sabatelli, 1990). When a person has achieved that ability he or she has developed personal authority and are able to express their thoughts and feelings or not express them (Reid & Anderson, 1992). They have the maturity to evaluate and accept the consequences of their behavior. They can move out of a relationship, if that is desired, because they have both an openness of personal boundaries and respect for other people's personal boundaries (Williamson, 1982).

The independence of being that is inherent with personal authority allows the individual to discover meaning in life (Frankl, 1963). Meaning in this context refers to finding sense in our existence and to a sense of structure and coherence about that existence (Reker, Peacock, & Wong, 1987). Individuals with personal authority know who they are, what they value, and what should be done with those values and meanings. Personal authority and meaning in life relate to loneliness because of the effect meaninglessness has on loneliness. Meaninglessness has been found to significantly correlate with loneliness, especially adolescent loneliness (Brennan & Auslander, 1979).
An obvious example of a person's individualization is the reactivity of a person to other people or to their environment. Reactivity can range from the subtle to the overt and is automatic in many cases. The level of a person's reactivity is believed to be determined by the development process of humans over time, by recent experiences of the family in past generations, and by interactions with others in the immediate past (Bowen, 1978; Papero, 1990). The basic level of a person's differentiation is believed to develop and become fixed at an early age (Bowen, 1978).

The basic level of differentiation is shown by how much an individual is able to keep thinking and feeling systems separate (Papero, 1990). The separation of thinking and feeling systems contributes to relationship formation and the prevention of loneliness. The basic level of differentiation is solid and resistant to relationship variables and usually remains constant over a person's lifetime. The functional level of differentiation of self refers to shifts within the person's emotional system and is influenced by relationship variables (Papero, 1990). The functional differentiation level can improve or deteriorate in reaction to relationship variables. Such shifts of functional level reflect the presence or absence of personal anxiety and the way a person absorbs the anxiety (Papero, 1990).

The concept of the triangle focuses on the effects of anxiety on parents and how they respond to it. A relationship involving two people behaves in automatic and predictable ways when anxiety is experienced by one or both partners (Papero, 1990) and the concept
of the triangle explains that automatic, predictable behavior. The two-person relationship becomes unstable when tension or anxiety is experienced by one of the individuals. When the tension exceeds a tolerable level in a person they will automatically move to involve a significant third person to reduce the tension (Papero, 1990). In a typical triangle there is one anxious relationship and two relatively calm relationships. In a family a child is usually the significant other that is involved and if this involvement is intense and frequent then the child's level of differentiation of self is adversely affected then and in future relationships (Bradshaw, 1990; Papero, 1990; Scarf, 1987). Whenever parents are absorbed in their own emotional issues they won't be there for their children (Horney, 1970). Bowen systems theory suggests that the child most affected by inclusion in the parental emotional system will operate with greater emotional intensity or less differentiation as an adult in their relationships. This lower level of differentiation can directly affect ability to achieve satisfactory levels of intimacy as an adult.

The concept of emotional cutoff relates to the way in which children attempt to handle the emotional attachment to their parents and significant others (Papero, 1990). A child may resort to internal methods or external methods to deny attachment. The use of internal or intrapsychic method allows the individual to remain in physical contact while remaining psychologically insulated (Papero, 1990). The external method requires physical separation. Although emotional cutoff seems to manage the relationship with parents, the child remains vulnerable to other intense relationships as an adult.
As an adult they will have difficulty relating to others except though emotional or physical distancing making it almost impossible to develop relationship intimacy and avoid loneliness

A large number of therapists (Ackerman, 1970; Bradshaw, 1990; Framo, 1992; Freud, 1939; Guerin, 1982; Haley, 1959; Hendricks & Hendricks, 1993; Lantz, 1987; Satir, 1967; Waring, 1988; and Williamson, 1982) stated that experiences in the family of origin affect people as adults. Family systems theory has been utilized extensively in the treatment of adults, but it has been used very little in explaining loneliness, although it is an approach that describes loneliness as both an individual and an interpersonal experience (Large, 1989).

The relationship between a child and the primary care-giver is a complex interweaving of reciprocal expectations and behaviors that serves as a starting point for later relationships (Parkes & Stevenson-Hinde, 1982; Rubinstein & Shaver, 1982b; Weiss, 1973). Studies have found that loneliness is related to the quality of relationship with both parents. Rubinstein and Shaver (1982b) found that the adults least vulnerable to loneliness were those that grew up with supportive parents.

Supportive parents were also found to relate to less loneliness in a study by Franzoi and Davis (1985) of 226 male and 216 female high school students. Franzoi and Davis (1985) determined that males with nurturing, loving mothers reported less loneliness. In contrast, they found that peer disclosure was significantly associated with loneliness for females but not for males.
Bergenstal (1981) found that adolescent boys with fathers who provided emotional support and boys whose fathers encouraged autonomy reported lower levels of loneliness. In a study of the intergenerational transmission of loneliness, Lobdell and Perlman (1986) surveyed 130 female undergraduates and their parents. They concluded that the loneliness score of mothers significantly correlated with loneliness score of their daughters. The parental relationship was not a variable considered in the above studies.

Loneliness in adults has been found to relate to parental divorce in childhood (Murphy, 1991; Rubinstein & Shaver, 1982a). In studies conducted by Rubinstein and Shaver (1982a) it was consistently found that poor parent-child relationships and the experience of parental divorce early in the respondent's life correlated with loneliness. Research has shown that parental divorce in childhood relates significantly to reported mourning behaviors and adult levels of loneliness (Murphy, 1991). Murphy (1991) interviewed 22 male and 64 female volunteers whose parents had divorced during their childhood and found that the experience of parental divorce and age at time of separation were significant explanations of loneliness. She concluded that there was a significant correlation between loneliness and the respondent's age at time of separation.

Childhood stress has been found to be associated with adult social functioning. Chiriboga, Catron, and Weiler (1987) surveyed 134 male and 199 female, randomly selected adults, who had filed divorce petitions. During interviews averaging, about three hours in
length, respondents were asked about childhood stress using questions derived from a life evaluation chart and a life events questionnaire. Chiriboga et al. (1987) concluded that disruptions experienced in the family of origin constituted a risk factor for adults experiencing social bond disruptions.

**Current Social Network**

Current social networks influence loneliness through an individual’s experience of either emotional isolation or social isolation (Weiss, 1973). Studies have shown that a common cause of loneliness is the ending of a close emotional relationship (Perlman & Peplau, 1981). Although the relationship may have ended in one of three different ways (i.e., separation, divorce, or death), the result is still loneliness. Loneliness from social isolation may result from changes in an individual’s position within a group or organization as friends or co-workers feel uncomfortable with a person’s new position and leaves them alone (Perlman & Peplau, 1981). The environment may also contribute to loneliness as the individual who lives or works in a physically isolated location may have difficulty meeting potential friends and tend to experience the loneliness of social isolation.

In a study of loneliness and social networks by De Jong-Gierveld (1986) data was obtained from a sample of 556 adults stratified according to sex and marital status. De Jong-Gierveld (1986) reported significant correlations for both men and women between loneliness and the overall evaluations of the social networks. For men, feelings of loneliness related to the absence of
close contacts in their neighborhood and low intimacy ratings of their most important relationship. For women, there was a significant correlation between feelings of loneliness and dissatisfaction with relationships in general and with the friendliness of neighbors.

Another study looked at the relation of individual difference variables and social networks to loneliness (Stokes, 1985). Stokes (1985) used data obtained from 97 male and 82 female undergraduate students taking an introductory psychology course. Five social network variables were considered: total number of people listed, number of people subject could confide in, percentage of network people who were relatives, and density (proportion of total number of relations that exist among network members). Three individual difference variables were tested: extraversion, neurotisism, and willingness to self-disclose. Results showed that of the five social network variables, network density was related most strongly to loneliness and extraversion and neuroticism were the individual difference variables most strongly related.

Social network density was also found to relate to loneliness in a study by Jones and Moore (1987) on loneliness and social support. They collected data on 142 beginning college male and female students. Male network density, percentage of males in network, and smaller proportion of reciprocal relationships were the only gender differences. Results indicated that satisfaction with the social network, size of the network, and network density were inversely related to loneliness.
Satisfaction or dissatisfaction with relationships has been found to influence loneliness. In the process of developing the Differential Loneliness Scale, Schmidt, and Serma (1983) sampled 306 undergraduate students and 953 nonstudents. As one result of their research, they concluded that dissatisfaction with friendship relationships was a good predictor of pervasive loneliness. Loneliness appears to derive more from dissatisfaction with social and intimate relationships than from actual social isolation (Jones, Rose, & Russell, 1990). In a study by Austrom (1984) comparing single and married adults, he found that social support was a better predictor of life satisfaction than marital status.

Interpersonal Behaviors

Interpersonal behavior is affected by loneliness. In a study of 136 male college students and 157 male non-students Check, Perlman, and Malamuth (1985) found that lonely males behaved aggressively towards a confederate who was rejecting of them. They concluded that lonely men, in general, showed a tendency to verbally express hostile attitudes, especially toward women. The association between loneliness and aggressive behaviors has also been documented in a number of other studies (Diamant & Windholz, 1981; Loucks, 1975; Serma, 1980).

Loneliness has been linked to sexual assault. In developing a general theory of sexual assault, Marshall and Barbaree (1989) suggest that the failure to develop the capacity for intimacy, necessary for the establishment of effective emotional relationships, is an important issue in understanding sexual
offenders. Loneliness is one reason why only a small percent of males exposed to much of the same array of socio-cultural messages, attitudes or images, and to similar situational events respond by adopting antisocial behavior (Marshall & Barbaree, 1989).

Loneliness is one response to being alone, solitude is another. In terms of the general conception, there is not a clear enough understanding of the difference between solitude and loneliness (Mijuskovic, 1985; Rosenbaum & Rosenbaum, 1973). Mijuskovic (1985) considers loneliness to be mankind's natural state and solitude an attempt to preserve our cognitive sense of who we are.

Solitude can be a period of personal restoration and creativity, positive in both its action and its effect during the time when body, mind, and spirit are renewed (Rosenbaum & Rosenbaum, 1973; Thoreau, 1980). Many times a person's interpretation of being alone determines whether they experience it as loneliness or solitude. "By a conscious effort of the mind we can stand aloof from actions and their consequences; and all things good and bad, go by us like a torrent." (Thoreau, 1980, pg. 565).

**Marital Status**

Among the variables considered in loneliness research have been marital status, gender, sex role orientation, age, race, and socioeconomic status. Of these variables Page and Cole (1991) found that marital status was the variable found most significantly related to loneliness. They considered the effects of marital status on loneliness, along with seven other variables: household income, gender, educational attainment, age, employment status, occupation,
and race/ethnicity. The sample of 8,634 came from households selected through a random-digit dialing method. Page and Cole (1991) found that marital status had twice the predictive ability of the other seven variables combined in determining loneliness scores. Aside from marriages in name only, Weiss (1973) suggested that the marital state tends to prevent the loneliness of emotional isolation regardless of whether or not the marriage is satisfying.

Marital status has a definite effect on the loneliness of each gender, but there is conflicting data as to whether males or females are lonelier. In a study of the loneliness of single adults and married adults, Tornstam (1992) found no significant differences in loneliness scores between single men and women in the age range from 20 to 80 years. He did find significant differences between married men and women between the ages of 20 to 49, with married women being lonelier. Rubinstein and Shaver (1982a) found that single and divorced males were lonelier than their female counterparts and males living alone were lonelier than females living alone.

Bradburn (1969) suggested that not being married had a greater negative impact on men. He observed that divorced men were more likely than divorced women to report that they were not happy. Loneliness was probably a factor contributing to their unhappiness. In contrast, Wallerstein and Kelly (1980) reported that after being divorced 18 months, 66% of the women described themselves as being lonely in comparison to 40% of the men. Since the typical divorced woman gets remarried after 3.9 years and the
typical divorced man after 3.6 years (DeWitt, 1992) the difference in loneliness must result from something other than men's earlier remarriage. Wallerstein and Kelly (1980) suggested that this difference in loneliness resulted from divorce affecting women in different ways than men. Divorce seems to lead to growth and a wide range of psychological changes among women that may contribute to greater loneliness when there is a lack of intimate relationships (Wallerstein, 1986).

McAdams and Bryant (1987) looked at data on intimacy motivation from over 1,200 adults in a representative nationwide sample. They found that women, living alone and with a high need for intimacy, reported less satisfaction and greater uncertainty than did those women with a low intimacy motive.

For men, the perceived quality of their relationship with one person, a female partner, strongly relates to their degree of loneliness (De Jong-Gierveld, 1986). Due to their socialization to be emotionally independent (May, 1990; Stewart, Stewart, Friedley, & Cooper, 1987), it appears that men are usually hesitant to get involved in emotionally demanding relationships, except the intimate bond with a live-in partner. For women, the subjective evaluation of their social network in general was strongly associated with loneliness. For example, there was a significant relationship between women feeling lonely and agreement with the statement that neighbors are not friendly (De Jong-Gierveld, 1986). Studies that compared the loneliness of single adults to married adults have found married adults to be less lonely (Bradburn, 1969;
De Jong-Gierveld, 1986; Rubinstein & Shaver, 1982a; Page & Cole, 1991; Tornstam, 1992; Wallerstein & Kelly, 1980). Although studies have found never-married adults to be lonelier than married adults, few comparisons have been made between never-married adults and divorced adults. One study by Medora and Woodward (1986) found that divorced adults were lonelier than never-married adults.

**Gender**

Findings from studies that considered the relationship between gender and loneliness have been conflictual. Some reported a gender difference with women being lonelier (Page & Cole, 1991; Sundberg, 1988), while some reported men as being lonelier (Franzoi & Davis, 1985; Schultz & Moore, 1986). Others have reported no significant gender differences on loneliness scores (Berg & Peplua, 1982; Borys & Perlman, 1985; De Jong-Gierveld, 1986; Jackson, 1987; Russell, 1980; Saklofske, Yackulic, & Kelly, 1986).

Page and Cole (1991) obtained data from households in a southwestern urban county where female respondents were found to be significantly more lonely than male respondents. Schultz and Moore (1986) studied the loneliness experience of college students and reported that male students rated themselves lonelier on the revised U.C.L.A. loneliness scale than their female counterparts and that male loneliness was more likely to relate to negative personal and affective self-evaluations. In contrast, Sundberg (1988) used the Likert-type Loneliness Inventory developed by Woodward to study 209 incoming freshman. She reported that female college freshman appeared to be significantly lonelier than their male
counterparts. Berg and Peplau, using the U.C.L.A. Loneliness Scale, tested 219 college students in an introduction psychology class and found no significant difference in overall loneliness scores in their sample of 102 male and 117 female students.

An explanation for the conflictual nature of gender loneliness scores has been suggested by Borys and Perlman (1985), who classified 39 existing data sets and found that significant gender differences were usually not found with the UCLA Loneliness Scale, but when they were, men scored higher. In the opinion of Borys and Perlman (1985), women are more likely to admit to loneliness and will score higher on studies requiring respondents to label themselves as lonely. Tornstam (1992) observed that almost all studies which found no gender differences or where men had higher loneliness scores were based on samples of students. Almost all studies where women scored higher on loneliness were larger population studies.

Tornstam's (1992) study was based on a simple random sample of all Swedes from 15 to 80 years of age. All Swedish inhabitants are registered in a population file and representative samples can be drawn by computer. Tornstam used a loneliness measure that assessed loneliness through a series of 11 questions which referred only to feelings of loneliness and not whether someone was isolated or not. Respondents were separated into six age groups (i.e., 20-29, 30-39, 40-49, 50-59, 60-69, and 70-80); no significant differences in the quality or intensity of loneliness were found between never-married women and never-married men. A significant difference,
however, did appear between married women and married men in the three groups, 20 to 29, 30 to 39, and 40 to 49. The difference was most significant in the 20 to 29 age group.

Wittenberg and Reis (1986) studied 37 male and 32 female pairs of first-year college students and investigated the relationship of loneliness to the students' social skills, their social perception of others, and degree of masculinity and femininity. They determined that there were no systematic differences between sexes for the correlation of loneliness and any of the variables.

**Age**

Sullivan (1953) wrote that the first component which culminates in the experience of loneliness appears in infancy as the need for contact and the final component appears in preadolescence as the need for intimate exchange with another person. Sullivant (1953) believed that loneliness reached its full significance in the preadolescence period and continued relatively unchanged throughout life. Fromm (1959) also suggested that the longing for interpersonal intimacy stayed with a person from infancy throughout life.

Loneliness varies, to some degree, at the different stages of life. Empirical evidence indicates that adolescents and young adults are the loneliest of any age group (Medora & Woodward, 1986; Page & Cole, 1991; Rubinstein & Shaver, 1982a; Schultz & Moore, 1989). Studies of preadolescents and adolescents, 10 to 18 years old, have found that over half were lonely (Rubinstein & Shaver, 1982a). Schultz and Moore recruited 137 female and 137 male subjects from...
three age levels (i.e., high school students, college students, and retirees). They found that the overall generalizability of loneliness was highest for high school students, intermediate for college students, and non-significant for retirees. They suggested that factors which influence loneliness may change across developmental periods. This conclusion appears unanimous, during the adolescent and young adult years people are exceptionally vulnerable to loneliness ((Medora & Woodward, 1986; Rubinstein & Shaver, 1982).

In every city they studied, Rubinstein and Shaver (1982a) found that loneliness declined with age. People over 60 had a firmer sense of identity and higher self-esteem and were significantly less lonely than younger respondents. Peplau, Bikson, Rook, and Goodchildset (1982) reported that loneliness was not representative of the typical experience of older adults. Mellor and Edelmann (1988) surveyed 36 subjects, 67 to 97 years of age, 16 of the subjects lived in their own home and 20 lived in residential homes. They suggest that age by itself is not related to loneliness, but that increased physical impairment and the lack of a confiding relationship are related.
CHAPTER III
METHODOLOGY

Introduction

The data used for this study was originally collected for a comparative study of college educated, fulltime employed, never-married, divorced, and married men and women on life satisfaction, interpersonal relations, and personality attributes conducted by Professor Rosemary Bolig. Comprehensive questionnaires were completed by subjects providing information on demographics, loneliness, family of origin experiences, and 11 to 13 domains of life satisfaction as well as standardized measures of rigidity, locus of control, and interpersonal relations behaviors.

Approximately 80% of the previous studies on loneliness have focused exclusively on the high school and college student population. One recent exception is Tornstam's (1992) study using a representative sample of 2795 Swedes, 15 to 80 years of age. He grouped his respondents into six age groups with the largest difference in quality and intensity of loneliness, between never married adults and married adults, occurring in the 30-39 age group.

This current study investigated the loneliness of college-educated, fulltime employed, men and women between 30 and 40
years of age. Marital status was considered as never married, married, and divorced adults were included.

Methods

Subjects

The sample was comprised of 178 college-educated men (n=88) and women (n=90) between 30 and 40 years of age and employed full-time. Married (i.e., first marriage and married a minimum of five years), never married, and divorced (i.e., first divorce and divorced a minimum of two years) subjects were sampled through reputation and snowball methods. Sixty-one subjects were never-married (males, n=28; females, n=30), 58 divorced (males, n=28; females, n=30), and 59 married (males, n=30; females, n=29). Subjects were obtained from the Columbus, Ohio metropolitan area.

Procedures

The original investigator contacted the presidents of social groups and church organizations to explain the nature of the study to request their support. Permission was asked to either use their membership lists or to announce the study and request participants at regularly scheduled meetings. After obtaining the names of potential participants, the subject was interviewed individually at organization meetings or contacted by phone. Members were asked to name themselves if they met criteria and/or provide names of friends, relatives, or co-workers who met criteria for inclusion. Potential subjects were informed of the nature of the study, the procedure for their participation (i.e., completing a questionnaire, which required approximately 30 to 45 minutes), and how their name
was obtained (if referred by someone). Their verbal permission was requested and an opportunity given to ask questions. If the person was willing to participate, they were either given the questionnaire or mailed one within a few days. If questionnaires were not returned within two weeks, the potential participants were called and reminded. Very few (9%) of the suggested participants did not consent to participate, usually because their marital status was different from what the nominator knew. Six percent of those who consented to participate did not return their questionnaires.

**Instrumentation**

There were five questions regarding family of origin experiences. The first question related to the marital status of the parents, whether a divorce or death of a parent occurred during the years the respondent was living at home. The second question was a description of the parent's marriage with five choices ranging from conflict and tension (1), to sharing of all aspects and enthusiastic mutual participation (5). This question was used to assess differentiation. A study by Bray and Harvey (1992) found that subjects who saw their parents as bonded together in a well-functioning parental relationship reported higher differentiation scores. The third question regarded satisfaction with the relationship with parents before leaving home and responses range from extremely satisfied (1), to extremely dissatisfied (7).

Several questions were used to determine the presence of an intimate relationship. There were seven relationship questions for never-married adults and divorced adults: 1.) Are you in an exclusive
relationship with someone of the opposite sex? If so answer the following, if not go to question 2. (a) How long have you been involved in this relationship? (b) Are you sharing a residence with this person? (c) What future does this relationship have? (responses included; marriage, living together, continue as is, break-up, other). 2.) Are you currently dating? 3.) How frequently do you date/meet? (responses ranged from one time per month to more than one time each week) 4.) How would you describe the nature of your current dating relationships? (Responses ranged from casual to intense and enduring with the potential for long-term commitment.)

The survey included a series of questions about current social relationships: (a) number of close friendships, (b) current dating situation, (c) presence of an intimate partner (seven possible responses ranged from extremely unimportant to extremely important). A satisfaction scale with different relationships was also included (seven possible responses ranged from extremely dissatisfied to extremely satisfied). The six current relationship satisfactions considered in this study were: (a) relationship with parents, (b) relationship with co-workers, (c) relationship with neighbors, (d) relationship with friends, (e) relationship with spouse, and (f) relationship with dating.

The life satisfaction scale covered 12 to 13 domains, dependent upon marital status and having/not having children, with seven possible responses ranging from extremely dissatisfied (1), to extremely satisfied (7). The following subject areas were utilized in these current analyses: (a) Your co-workers. (b) Your relationship
with your spouse (married respondents). (c) Your relationship with your parents. (d) Your relationship with your neighbors. (e) Your relationship with your friends. (f) Your dating relationships (single and divorced respondents). A social satisfaction score resulted from the total score of these satisfaction questions. Qualitative measures, (e.g., degree of satisfaction) of social networks appears to be better predictors of loneliness than social network size or the amount, type, or frequency of social contact (Jones & Moore, 1989).

There was one question on loneliness: "Are you ever lonely?" There were five possible responses: (a) never, (b) rarely, (c) sometimes, (d) frequently, and (e) always. The results of studies on loneliness have been found to be approximately the same whether using a single item, self labeling measure of loneliness or a carefully developed measure like the UCLA scale (Perlman, 1989).

Interpersonal behavior was measured by the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) scale, a 54-item instrument consisting of six Guttman scales measuring the types of behavior individuals express toward others and how they want others to behave toward them in each of three interpersonal domains (Schutz, 1960). Interaction behavior in this study was the total score of the three scales of the FIRO-B. The total score indicated the strength of the preference for taking the initiative in relationships, with greater the score the stronger the preference. The three domains of inclusion, control, and affection were defined as the need to maintain satisfactory relationships as regards association, power, and love, respectively. Each of these three areas
was composed of behavior desired from others and behavior expressed to others. The difference between wanted and expressed inclusion scores indicates the strength of the preference for initiating inclusion behavior with a higher score indicating greater strength. The difference between wanted and expressed control scores indicates the strength of the preference for giving orders rather than taking them. The difference between wanted and expressed affection scores indicates the strength of the preference for initiating affection over receiving it.

The FIRO-B total score was used to test the expectation that lonely subjects would report less of a tendency to initiate social interactions than nonlonely subjects. Gilligan (1973) assessed reliability of the FIRO-B by using a random sample of 296 students enrolled in an introductory psychology course. More than 90% of the students take the basic psychology course and the sample appears to be fairly representative of university freshman. The highest test-retest correlation (r of .81) was found in the overall sum of the six scales (Gilligan, 1973). The overall sum of the six scales was used in this study to determine the level of interaction behavior.

Data Analysis

Nonparametric statistic procedures were used to analyze the data. Generally, parametric procedures are more prevalent than nonparametric because of the concept of robustness (Royeen, 1986). The claim of robustness to violations of assumptions seems to have been overgeneralized beyond special situations (Royeen, 1986). David and Perez (1960) suggest that the rationale for using
nonparametric procedures is strengthened because it will usually yield the same answer as a parametric test.

Descriptive statistics on demographic variables were computed. Differences in demographics between groups (e.g., never-married, divorced, married, men and women) were investigated in two-way tables using the following nonparametric tests: Kruskal-Wallis (KW), Jonckheere-Terpstra (JT), and Fisher's (FI) Exact tests.

In order to determine the relative strength of family of origin factors, interactional behavior and current social network, a multidimensional cross classification table was used. Models of uniform order were fit to discover the general order of the best candidate model. The best fitting model included terms in between the main effects model and the model that included all two-factor interactions. Relationships, among the categorical variables in the cross classification table, were modeled by a log-linear model fitted to the cell frequencies. The goodness of fit of the log-linear model was tested using the likelihood ratio statistic to compare expected frequencies with observed frequencies.
CHAPTER IV

RESULTS

Introduction

The purpose of this study was to examine past and present family and social experiences, interpersonal behaviors, and their relationship to the loneliness of adult men and women. The foci of this research study were to assess whether: (a) adults whose perception of family of origin experiences were negative would be lonelier than adults whose experiences were positive; (b) current interaction behavior would affect loneliness; (c) current social network satisfaction affects loneliness; (d) adult's current social network and their satisfaction with current social relationships, effect on loneliness; and (e) gender and marital status affect loneliness.

Data Analyzes

Nonparametric statistic procedures were used to analyze the data to respond to the hypotheses. A nonparametric procedure was chosen for several reason: (a) nonparametrics are assumption freer; (b) some of the data was rank ordered; and (c) some of the data was from small samples. Nonparametric procedures will usually yield the same answer as a parametric test (David and Perez, 1960). When data on the individual hypotheses were considered some data were extremely sparse, with few observations in many cells and
collectively, in a stepwise procedure, to fit the "best" loglinear model, adding terms at each step for which the P-value was smallest.

Nonparametric Jonckheere-Terpstra, Kruskal-Wallis, and Fisher's Exact tests were performed on 2-dimensional summaries of the data (See Table 1.) The Jonckheere-Terpstra test was used to determine whether ordered categories in the first dimension of the table were distributed identically over the categories of the second dimension of the table. Jonckheere-Terpstra tests were performed on the current social network satisfaction variables to determine whether respondents in each of the categories experienced loneliness in the same proportions. Kruskal-Wallis tests were performed when categories in the first dimension of the table had no natural order. For example, a Kruskal-Wallis test was used to determine if marital status had an effect on loneliness since the variable marital status had no natural order within its levels of never-married singles, married, and divorced. Fisher's Exact test was used to determine whether proportions over the rows of 2-by-2 tables were identical.
TABLE 1.

Asymptotic Inference Tests (based on Chi-square distribution) on 2-Dimensional Summaries of the Data.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Number</th>
<th>Mean Score</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Adults whose parents were divorced are lonelier than adults whose parents remain married.</td>
<td>167</td>
<td>1260</td>
<td>p = .1006</td>
</tr>
<tr>
<td>1b. Adults who perceived their parent’s marriage as negative are lonelier than adults whose perception is positive.</td>
<td>165</td>
<td>1261</td>
<td>p = .2487</td>
</tr>
<tr>
<td>1c. Adults satisfied with their parental relationship when leaving home will be less lonely than those dissatisfied.</td>
<td>130</td>
<td>2293</td>
<td>p = .0247*</td>
</tr>
<tr>
<td>2a. Adults with greater interaction behavior are less lonely than adults with less interaction behavior.</td>
<td>177</td>
<td>1075</td>
<td>p = .1225</td>
</tr>
<tr>
<td>2b. Adults with more interaction behavior express greater social network satisfaction than those with less.</td>
<td>98</td>
<td>929.1</td>
<td>p = .3288</td>
</tr>
<tr>
<td>3a. Adults with intimate partners are less lonely than those without an intimate partner.</td>
<td>177</td>
<td>6497</td>
<td>p = .0001*</td>
</tr>
<tr>
<td>3b. Adults satisfied with intimate partner relationships are less lonely than those dissatisfied. **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3c. Adults with more friends are less lonely than adults with few friends.</td>
<td>168</td>
<td>338</td>
<td>p = .0367*</td>
</tr>
</tbody>
</table>

* significant
** insufficient data
"Table 1 (continued),"

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Number</th>
<th>Mean Score</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3d. Adults satisfied with friend's relationship are less lonely than those dissatisfied.</td>
<td>177</td>
<td>1628</td>
<td>.0032*</td>
</tr>
<tr>
<td>3e. Adults satisfied with neighbor and co/worker relationships are less lonely than those dissatisfied.</td>
<td>126</td>
<td>698.5</td>
<td>.0182*</td>
</tr>
<tr>
<td>4a. Adults who perceived parental marriage as negative express less satisfaction with social network than adults with positive perception.</td>
<td>91</td>
<td>1846</td>
<td>.0455*</td>
</tr>
<tr>
<td>4b. Adults whose perception is negative and who express less satisfaction with social network are lonelier than those with positive perception and are satisfied with social network.</td>
<td>57</td>
<td>301.0</td>
<td>.0003*</td>
</tr>
<tr>
<td>5a. Never married adults are less lonely than divorced adults.</td>
<td>119</td>
<td>3660.0</td>
<td>.3988</td>
</tr>
<tr>
<td>5b. Married males are less lonely than married females.</td>
<td>58</td>
<td>885.0</td>
<td>.1514</td>
</tr>
</tbody>
</table>

* significant
To answer the research question, the relationship between loneliness and four independent variables was studied in a multi-dimensional cross classification table. Log-linear model analysis was used to analyze the table. A log-linear model expresses the natural logarithm of the expected cell frequency as a linear combination of main effects and interactions in a process similar to the usual analysis of variance model (Brown, 1992). The goodness of fit was tested by the likelihood ratio statistic because it is additive under partitioning for nested models (Brown, 1992).

Explanation of Missing Data. Of the original 178 respondents for this current study, one case was dropped because of an incorrect loneliness score. There were 167 sets of data considered for Hypothesis 1a; 10 other sets were dropped because of the parent's divorce after the respondent's teenage years. There were 165 sets of data considered for Hypothesis 1b; 12 other sets were dropped because of responding more than once to the type of parental marriage or because of not responding at all.

There were 170 sets of data considered for Hypothesis 4a; seven other sets were not considered because the respondent did not report on parent's marriage or reported more than once. There were 136 sets of data considered for hypothesis 4b; 41 other sets of data were not considered because respondents either reported their parents' marriage as negative, but reported satisfaction with their current social network or reported their parents' marriage as positive, but reported dissatisfaction with their current social network.
Subjects

The data used for this study was originally collected for a comparative study of the life satisfaction, interpersonal relations, and personality attributes of college-educated, fulltime-employed, never-married, divorced, and married men and women. The sample was comprised of 178 adults between 30 and 40 years of age, 90 females and 88 males. The average age of the females was 34.22 and the average age of the males was 35.02. Fifty-eight were never-married (28 males and 30 females). Fifty-nine were in their first marriage and married a minimum of five years (30 males and 29 females). Fifty-eight had been divorced once for a minimum of two years (28 males and 30 females). Differences in social position were computed by the Hollingshead 2-Factor Index (See Table 2.). Education level and occupation are the two factors used to determine social position. The range of computed scores is from 11 to 77 and high scores reflect college education levels and executive or professional level occupations. Never-married men and divorced women were below the mean and differed significantly from their opposite sex counterparts (never-married women, divorced men).

Marital status also made a difference in loneliness scores. Married adults were significantly less lonely ($\bar{x} = 2.26$) than either single adults ($\bar{x} = 3.00$) or divorced adults ($\bar{x} = 2.98$). Gender did not make a difference between the loneliness of married men ($\bar{x} = 2.17$) and married women ($\bar{x} = 2.34$). The mean, standard deviation, and observed range of all the independent variables is found in Table 3.
<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>OCCUPATION</th>
<th>2-FACTOR-SES</th>
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</thead>
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<td>NEVER-MARRIEDS</td>
<td>33.47 (s.d. 2.43)</td>
<td>5.98 (s.d. .79)</td>
<td>63.12 (s.d. 7.59)</td>
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<tr>
<td>MEN</td>
<td>33.53 (s.d. 2.46)</td>
<td>5.90 (s.d. .76)</td>
<td>61.00 (s.d. 7.12)</td>
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<tr>
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<td>6.06 (s.d. .81)</td>
<td>65.31 (s.d. 7.51)</td>
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<tr>
<td>MARRIED</td>
<td>43.32 (s.d. 3.07)</td>
<td>6.02 (s.d. .84)</td>
<td>64.02 (s.d. 5.88)</td>
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<tr>
<td>MEN</td>
<td>34.97 (s.d. 3.11)</td>
<td>5.93 (s.d. 1.11)</td>
<td>64.20 (s.d. 6.56)</td>
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<tr>
<td>WOMEN</td>
<td>33.66 (s.d. 2.91)</td>
<td>6.10 (s.d. .41)</td>
<td>63.83 (s.d. 5.20)</td>
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<tr>
<td>DIVORCED</td>
<td>36.10 (s.d. 3.04)</td>
<td>6.05 (s.d. .82)</td>
<td>62.39 (s.d. 7.99)</td>
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<tr>
<td>MEN</td>
<td>36.57 (s.d. 2.64)</td>
<td>6.21 (s.d. .78)</td>
<td>64.46 (s.d. 7.37)</td>
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<tr>
<td>WOMEN</td>
<td>35.60 (s.d. 3.35)</td>
<td>5.60 (s.d. .84)</td>
<td>60.43 (s.d. 8.18)</td>
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TABLE 3.  
Descriptive statistics on study variables.

<table>
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<tr>
<th>Variable</th>
<th>n</th>
<th>Loneliness Scores Mean</th>
<th>S.D.</th>
<th>Observed Range</th>
<th>Possible Range</th>
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<td>Parent's Marital Status</td>
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<td>3.00</td>
<td>.730</td>
<td>2 - 4</td>
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<tr>
<td>married</td>
<td>152</td>
<td>2.71</td>
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<td>Total</td>
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<tr>
<td>Perception of Parent Marriage</td>
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<td>conflictual</td>
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<td>lack sharing</td>
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<td>.793</td>
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<td>1 - 5</td>
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<td>affectionate</td>
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<td>2.76</td>
<td>.761</td>
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<td>1 - 5</td>
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<td>Satisfaction with Parent Relations at leaving home</td>
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<td>Comparison of Low, Med &amp; High Interact. Behav.</td>
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<td>2.73</td>
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<td>.770</td>
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<td>1 - 5</td>
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<td>.778</td>
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<td>1 - 5</td>
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<td>.738</td>
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### Table 3 (continued)

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<thead>
<tr>
<th>Variable</th>
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<th>S.D.</th>
<th>Observed Range</th>
<th>Possible Range</th>
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<td>.816</td>
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<td>1 - 5</td>
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<td>.452</td>
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<td>.694</td>
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<td>1 - 5</td>
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<td><strong>TOTAL</strong></td>
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"Table 3 (continued),"

<table>
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<tr>
<th>Variable</th>
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<th>Mean</th>
<th>S. D.</th>
<th>Observed Range</th>
<th>Possible Range</th>
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<tr>
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<td>58</td>
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<td>.709</td>
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<td>1 - 5</td>
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<td>2.98</td>
<td>.682</td>
<td>1 - 5</td>
<td>1 - 5</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>177</td>
<td></td>
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<td></td>
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<td><strong>Effect of Gender with Marriage</strong></td>
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<td>.650</td>
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<td>females</td>
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<td>2.17</td>
<td>.758</td>
<td>2 - 5</td>
<td>1 - 5</td>
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<td><strong>Total</strong></td>
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<td><strong>Interaction Behavior &amp; Current Social Network Satisfaction</strong></td>
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<tr>
<td>Low Interactive Behavior</td>
<td>40</td>
<td>(75%)</td>
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<td>13 (25%)</td>
<td>53</td>
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<tr>
<td>Moderate Interactive Behavior</td>
<td>13</td>
<td>(65%)</td>
<td></td>
<td>7 (35%)</td>
<td>20</td>
</tr>
<tr>
<td>High Interactive Behavior</td>
<td>21</td>
<td>(84%)</td>
<td></td>
<td>4 (16%)</td>
<td>25</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>74</td>
<td></td>
<td></td>
<td>24</td>
<td>98</td>
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<td>Dissatisfied</td>
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<td><strong>Current Social Network Satisf. Based on Type of Parent Marriage</strong></td>
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<td>Satisfied</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
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<td>(64%)</td>
<td></td>
<td>14 (36%)</td>
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<tr>
<td>Positive</td>
<td>43</td>
<td>(83%)</td>
<td></td>
<td>9 (17%)</td>
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<td><strong>TOTAL</strong></td>
<td>68</td>
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</table>
Findings Related to the Hypotheses

Hypothesis One: Family of origin experiences, perception of those experiences, and satisfaction with relationship with parent at time of leaving home are related to loneliness.

a. *Adults whose parents divorced during pre-teen or teenage years are lonelier than those adults whose parents remained married.* To test this hypothesis, the Wilcoxon Rank Sum Test was used to determine the strength of the relationship between the loneliness of adults whose parents divorced during pre-teen or teenage years and adults whose parents remained married. The one-sided p-value obtained from this analysis was not significant (p = .1006) and the hypothesis was not supported. (See Figure 1.)

b. *Adults who perceive that their parents had a conflictual marriage and/or marriage with little sharing are lonelier than those adults who perceive that their parents had a sharing and/or affectionate marriage.* The Jonckheere-Terpstra test, a distribution-free test for ordered alternatives, was used to determine the strength and direction of the relationship between the
loneliness of adults who perceive that their parents had a conflictual marriage or marriage with little sharing and adults who perceive that their parents had a sharing and affectionate marriage. The p-value obtained from this analysis was not significant (p = .2487) and the hypothesis was not supported. (See Figure 2.)

c. Adults who are satisfied with the relationship they had with their parents before leaving home are less lonely than those adults who are dissatisfied. The Wilcoxon Rank Sum Test was used to determine the strength and direction of the relationship between the loneliness of adults who are satisfied with the relationship with their parents when leaving home and adults who express dissatisfaction. The p-value was significant (p = .0247) and the hypothesis was supported. (See Figure 3.)
Figure 1. The Effect of Parent's Marital Status during Childhood on Adult Loneliness

Percent

<table>
<thead>
<tr>
<th>Loneliness Variables</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>divorced parents</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>15</td>
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<td>married parents</td>
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<td>49</td>
<td>75</td>
<td>19</td>
<td>1</td>
<td>152</td>
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<td>23</td>
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p = .1006
Figure 2. The Effect of Perception of Parents' Marriage on Adult Loneliness.

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Confictual marriage</td>
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<td>28</td>
<td>45</td>
<td>14</td>
<td>0</td>
<td>91</td>
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<td>8</td>
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<td>84</td>
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p = .2487
Figure 3. Satisfaction with Parental Relationship at Time of Leaving Home Compared to Adult Loneliness

<table>
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<th>Frequency</th>
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<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
</tr>
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<td>Dissat.</td>
<td>0</td>
<td>11</td>
<td>14</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>7</td>
<td>30</td>
<td>49</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>55</td>
<td>88</td>
<td>25</td>
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</table>

p = .0247
Hypothesis Two: Interaction behavior is related to loneliness and satisfaction with relationships.

a. Adults with greater interaction behavior are less lonely than adults with less interaction behavior. The Jonckheere-Terpstra test was used to determine the strength of the relationship between low, medium, and high interaction behavior and loneliness. The one-sided p-value was not significant (p = .1225) and the hypothesis was not supported. (See Figure 4.)

b. Adults with greater interaction behavior express more satisfaction with current social network: (a) friends, (b) co-workers, (c) spouse/dating, and (d) neighbors than adults with less interaction behavior. The Jonckheere-Terpstra Test was used to determine the strength of the relationship between low, medium, and high interaction behavior and satisfaction with current social network. The p-value was not significant (p = .3288) and the hypothesis was not supported. (See Figure 5.)
Figure 4. Comparison of the Loneliness of Adults with Low, Medium, and High Interaction Behavior.

<table>
<thead>
<tr>
<th>Variable</th>
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<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
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</thead>
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<td>17</td>
<td>25</td>
<td>7</td>
<td>0</td>
<td>51</td>
</tr>
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<td>26</td>
<td>52</td>
<td>15</td>
<td>1</td>
<td>98</td>
</tr>
<tr>
<td>High I.B.</td>
<td>2</td>
<td>12</td>
<td>11</td>
<td>3</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>55</td>
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</table>

p = .1225
Figure 5. Comparison of Interaction Behavior and Satisfaction with Current Social Network.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Dissatisfied</th>
<th>Satisfied</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Social Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level of Behavior</strong></td>
<td><strong>Dissatisfied</strong></td>
<td><strong>Satisfied</strong></td>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td>Low Interactive Behavior</td>
<td>13</td>
<td>40</td>
<td>53</td>
</tr>
<tr>
<td>Moderate Interactive Behavior</td>
<td>7</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>High Interactive Behavior</td>
<td>4</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
<td>74</td>
<td>98</td>
</tr>
</tbody>
</table>

p = .3288
Hypothesis Three: Current social experiences and satisfaction are related to loneliness.

a. Adults with intimate partners (married or exclusively dating) are less lonely than those adults without an intimate partner, casually dating or not dating. The Wilcoxon Rank Sum Test was used to determine the strength of the relationship between loneliness and having an intimate partner. The one-sided p-value was significant ($p = .0001$) and the hypothesis was supported. (See Figure 6.)

b. Adults expressing satisfaction with their relationship with an intimate partner (married or exclusively dating) are less lonely than those adults expressing dissatisfaction. There was an insufficient number who expressed dissatisfaction with their intimate partner relationship to be able to accurately analyze this data.

c. Adults with more friends are less lonely than adults with few friends. The Jonckheere-Terpstra Test was used to determine the strength of the relationship between the number of friends and loneliness. The p-value was significant
(p = .0367) and the hypothesis was supported. (See Figure 7.)

d. **Adults expressing satisfaction with friends are less lonely than those adults expressing dissatisfaction.** The Jonckheere-Terpstra Test was used to determine the strength of the relationship between loneliness and satisfaction with friends. The one-sided p-value was significant (p = .0032) and the hypothesis was supported. (See Figure 8.)

e. **Adults expressing satisfaction with their relationships with neighbors and co-workers are less lonely than those adults expressing dissatisfaction.** The Wilcoxon Rank Sum Test was used to test the strength of the relationship between loneliness and satisfaction of the relationship with co-workers and neighbors. The one-sided p-value was significant (p = .0182) and the hypothesis was supported. (See Figure 9.)
Figure 6. The Loneliness of Adults with an Intimate Partner Compared to Adults without an Intimate Partner.

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate partner</td>
<td>8</td>
<td>38</td>
<td>23</td>
<td>4</td>
<td>0</td>
<td>73</td>
</tr>
<tr>
<td>No intimate partner</td>
<td>0</td>
<td>17</td>
<td>65</td>
<td>21</td>
<td>1</td>
<td>104</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>55</td>
<td>88</td>
<td>25</td>
<td>1</td>
<td>177</td>
</tr>
</tbody>
</table>

p = .0001
Figure 7. The Loneliness of Adults with few Friends Compared to Adults with more Friends

Frequency

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 friends</td>
<td>2</td>
<td>12</td>
<td>30</td>
<td>10</td>
<td>1</td>
<td>55</td>
</tr>
<tr>
<td>4-7 friends</td>
<td>3</td>
<td>22</td>
<td>36</td>
<td>11</td>
<td>0</td>
<td>72</td>
</tr>
<tr>
<td>8 or more</td>
<td>3</td>
<td>17</td>
<td>11</td>
<td>3</td>
<td>0</td>
<td>35</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>51</td>
<td>77</td>
<td>24</td>
<td>1</td>
<td>162</td>
</tr>
</tbody>
</table>

p = .0367
Figure 8. Comparison of Loneliness of Adults Expressing Satisfaction With Friends to Adults Expressing Dissatisfaction.

![Graph showing frequency of loneliness for satisfied and dissatisfied adults]

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissat.</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Satisfied</td>
<td>6</td>
<td>39</td>
<td>54</td>
<td>16</td>
<td>0</td>
<td>115</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7</td>
<td>40</td>
<td>58</td>
<td>21</td>
<td>0</td>
<td>126</td>
</tr>
</tbody>
</table>

p = .0032
Figure 9. The Loneliness of Adults Satisfied with Neighbor and Co-Worker Relationships Compared to Those Dissatisfied.

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissat.</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Satisfied</td>
<td>6</td>
<td>41</td>
<td>58</td>
<td>17</td>
<td>1</td>
<td>123</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7</td>
<td>45</td>
<td>65</td>
<td>23</td>
<td>1</td>
<td>141</td>
</tr>
</tbody>
</table>

p = .0182
Hypothesis Four: There are relationships among perception of family of origin experiences, current social network, and loneliness.

a. Adults, whose parents divorced during their preteen/teenage years or who they perceive as having had little interest and participation in each others' activities and/or whose marriage thrived on tension, conflict, and arguments express less satisfaction with their current social network than adults with parents who they perceive as having experienced a sharing and/or affectionate marriage. The Fisher's Exact Test was used to test the strength of the relationship between a respondent's perception of their parent's marriage and the respondent's satisfaction with their current social network. The one-sided p-value was significant (p = .0455) and the hypothesis was supported. (See Figure 10.)

b. Adults, whose parents had little interest and participation in each others' activities and/or whose marriage thrived on tension, conflict, and arguments and who express dissatisfaction with their current social network are lonelier than adults with parents who they perceive as having experienced a sharing and/or affectionate marriage.
and who express satisfaction with their current social network. The Jonckheere-Terpstra Test was used to determine the strength of the relationship between the loneliness of adults who were dissatisfied with their current social network satisfaction and whose parents had negative marriages and the loneliness of adults who were satisfied and whose parents had positive marriages. The one-sided p-value was significant (p = .0003) and the hypothesis was supported. (See Figure 11.)
Figure 10. Comparison of Current Social Network Satisfaction Between Adults Who Perceived Their Parent’s Marriage as Negative and Adults Who Perceived It as Positive.

<table>
<thead>
<tr>
<th>Type of Marriage</th>
<th>Current Dissatisfied</th>
<th>Social Network Satisfied</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>14</td>
<td>25</td>
<td>39</td>
</tr>
<tr>
<td>Positive</td>
<td>9</td>
<td>43</td>
<td>52</td>
</tr>
</tbody>
</table>

TOTAL 23 68 91

p = .0455
Figure 11. The Loneliness of Adults Who Perceived Their Parents Marriage as Negative and Who Express Dissatisfaction with Current Social Network Compared to Adults Who Perceived Their Parents Marriage as Positive and Who Express Satisfaction with Current Social Network.

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative &amp; Dissatisfied</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Positive &amp; Satisfied</td>
<td>2</td>
<td>19</td>
<td>19</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2</td>
<td>19</td>
<td>29</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

p = .0003
Hypothesis Five: Marital status and gender are related to loneliness.

a. **Never married adults are less lonely than divorced adults.** The Jonckheere-Terpstra Test was used to determine the strength of the relationship between the loneliness of never married adults and divorced adults. The one-sided p-value was not significant \( (p = .3988) \) and the hypothesis was not supported. (See Figure 12.)

b. **Married males are less lonely than married females.** The Jonckheere-Terpstra test was used to determine the strength of the relationship between the loneliness of married men and married women. The one-sided p-value was not significant \( (p = .1514) \) and the hypothesis was not supported. (See Figure 13.)
Figure 12. Loneliness of Never-married Adults and Divorced Adults.

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1</td>
<td>11</td>
<td>36</td>
<td>13</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
<td>10</td>
<td>37</td>
<td>9</td>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2</td>
<td>21</td>
<td>73</td>
<td>22</td>
<td>1</td>
<td>119</td>
</tr>
</tbody>
</table>

\[ p = .3988 \]
Chart 13. Comparison of Loneliness Between Married Males and Married Females.

### Frequency

<table>
<thead>
<tr>
<th>Variable</th>
<th>never</th>
<th>rarely</th>
<th>sometimes</th>
<th>frequently</th>
<th>always</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married Males</td>
<td>2</td>
<td>17</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Married Females</td>
<td>4</td>
<td>17</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6</td>
<td>34</td>
<td>15</td>
<td>3</td>
<td>0</td>
<td>58</td>
</tr>
</tbody>
</table>

$p = .1514$
Findings related to the research question.

The following research question was proposed: Is perception of family of origin experiences, interaction behavior, current social experiences, satisfaction with relationships, marital status, or gender, most predictive of current loneliness among adults? The results of the log-linear analysis indicate that current social network satisfaction and lack of an intimate partner were the variables most predictive of loneliness. (See Table 4.) Having an intimate partner had a greater contribution than current social network satisfaction to predictions of current loneliness.

Initially, models of uniform order were fit, to discover the general order of the best candidate model for the log-linear model, by looking at a main effects model and then adding two-factor interactions. The results of this procedure suggested that the following main effects were important: (a) current social network satisfaction, (b) intimate partner, (c) interaction behavior, and (d) parental marriage. (See Table 5.)

The second step of the screening process was to add terms to the main effects model in a stepwise fashion, until conditional tests for new terms ceased to be important at the .05 level. The two-factor candidate models suggested were: (a) loneliness-current social network, (b) current social network-intimate partner, (c) loneliness-intimate partner (d) interactive behavior-intimate partner, (e) interactive behavior-parent's marriage, and (f) current
TABLE 4.

Comparison of Fit of Models Involving Loneliness, Current Social Network Satisfaction, and Intimate Partner.

<table>
<thead>
<tr>
<th>Model</th>
<th>DF</th>
<th>Likelihood Ratio Chi Square</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.</td>
<td>15</td>
<td>136.14</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>16</td>
<td>153.63</td>
<td>0.0000</td>
</tr>
<tr>
<td>I.</td>
<td>15</td>
<td>142.17</td>
<td>0.0000</td>
</tr>
<tr>
<td>L,C.</td>
<td>14</td>
<td>115.01</td>
<td>0.0000</td>
</tr>
<tr>
<td>C,I.</td>
<td>14</td>
<td>121.05</td>
<td>0.0000</td>
</tr>
<tr>
<td>I,L.</td>
<td>13</td>
<td>103.55</td>
<td>0.0000</td>
</tr>
<tr>
<td>L.C.</td>
<td>12</td>
<td>98.35</td>
<td>0.0000</td>
</tr>
<tr>
<td>L.I.</td>
<td>9</td>
<td>45.20</td>
<td>0.0000</td>
</tr>
<tr>
<td>C.I.</td>
<td>12</td>
<td>105.49</td>
<td>0.0000</td>
</tr>
<tr>
<td>L,C.I.</td>
<td>10</td>
<td>66.88</td>
<td>0.0000</td>
</tr>
<tr>
<td>C,L.I.</td>
<td>8</td>
<td>24.08</td>
<td>0.0022</td>
</tr>
<tr>
<td>I,L,C.</td>
<td>10</td>
<td>65.76</td>
<td>0.0000</td>
</tr>
<tr>
<td>L,C,L.I.</td>
<td>6</td>
<td>7.41</td>
<td>0.2844*</td>
</tr>
<tr>
<td>L,I,C.I.</td>
<td>6</td>
<td>8.53</td>
<td>0.2020*</td>
</tr>
<tr>
<td>C,I,L.C.</td>
<td>8</td>
<td>50.21</td>
<td>0.0000</td>
</tr>
<tr>
<td>L,C,L.I,C.</td>
<td>4</td>
<td>1.90</td>
<td>0.7543*</td>
</tr>
</tbody>
</table>

L. = loneliness
C. = current social network satisfaction
I. = intimate partner
* significant effect
TABLE 5.

Multi-Dimensional Table:
Intimate Partner, Parental Marriage-type, Current Social Network Satisfaction, Level of Interaction Behavior, and Loneliness.

<table>
<thead>
<tr>
<th>Int Part</th>
<th>Par Mar</th>
<th>CSN</th>
<th>Int Beh</th>
<th>Freq</th>
<th>Sometims</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Observed</td>
<td>Expected</td>
</tr>
<tr>
<td>yes</td>
<td>neg</td>
<td>diss</td>
<td>low</td>
<td>0 (0.2)</td>
<td>2 (0.9)</td>
<td>1 (1.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mod</td>
<td>1 (0.2)</td>
<td>0 (0.8)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.1)</td>
<td>0 (0.4)</td>
<td>1 (0.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sat</td>
<td>0 (0.2)</td>
<td>3 (1.9)</td>
<td>8 (5.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>0 (0.1)</td>
<td>2 (1.5)</td>
<td>5 (4.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.1)</td>
<td>0 (0.9)</td>
<td>4 (2.4)</td>
</tr>
<tr>
<td>pos</td>
<td>diss</td>
<td></td>
<td>low</td>
<td>0 (0.1)</td>
<td>0 (0.4)</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>0 (0.0)</td>
<td>0 (0.1)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.1)</td>
<td>0 (0.3)</td>
<td>0 (0.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sat</td>
<td>0 (0.4)</td>
<td>5 (4.0)</td>
<td>9 (11.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>0 (0.1)</td>
<td>2 (1.2)</td>
<td>3 (3.4)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>high</td>
<td>1 (0.3)</td>
<td>3 (3.6)</td>
<td>9 (9.7)</td>
</tr>
<tr>
<td>no</td>
<td>neg</td>
<td>diss</td>
<td>low</td>
<td>5 (4.5)</td>
<td>10 (8.8)</td>
<td>1 (1.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>3 (2.6)</td>
<td>6 (5.2)</td>
<td>0 (0.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.7)</td>
<td>0 (1.4)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sat</td>
<td>0 (1.0)</td>
<td>3 (5.9)</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>1 (0.6)</td>
<td>2 (3.5)</td>
<td>0 (0.9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.2)</td>
<td>2 (0.9)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td>pos</td>
<td>diss</td>
<td></td>
<td>low</td>
<td>3 (1.9)</td>
<td>4 (3.8)</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>0 (0.4)</td>
<td>2 (0.8)</td>
<td>0 (0.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>0 (0.6)</td>
<td>1 (1.1)</td>
<td>0 (0.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sat</td>
<td>4 (2.3)</td>
<td>16 (12.9)</td>
<td>3 (3.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>med</td>
<td>0 (0.5)</td>
<td>3 (2.8)</td>
<td>2 (0.7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>high</td>
<td>2 (0.7)</td>
<td>5 (3.8)</td>
<td>1 (1.0)</td>
</tr>
</tbody>
</table>
social network-parent's marriage. A log-linear model analysis was used to simultaneously study the influence on loneliness of these variables. (See Table 2.) In that analysis, the logarithm of the proportions was modeled as a function of these variables and their interactions. Asymptotic likelihood ratio tests were used to assess the fit of a model and to perform conditional tests for the importance of terms conditional on a model's fit.

The validity of these tests depend on sufficient counts per cell in the cross classification. It was necessary to decrease the number of cells and this was done by selecting a subset of variables to study. The selected subsets interacting with loneliness were: current social network satisfaction, intimate partner, interaction behavior, and parental marriage. The results of this procedure indicated that the best model was the model that included main effects and the following two-factor interactions: (a) loneliness-current social network, (b) loneliness-intimate partner, and (c) current social network-intimate partner. (See Table 5.) The finding suggests that the association between any two variables is constant over the levels of the remaining variable. The finding also suggests that no pair of these variables is conditionally independent given the third variable. (See Tables 6. & 7.) For example, loneliness and current social network satisfaction are not independent at any fixed level of intimate partners. (See Table 8.) Also, loneliness and intimate partners are not independent at any fixed level of current social network satisfaction. (See Table 9.)
### TABLE 6.

Three-way Frequency Table: Intimate Partner, Current Social Network Satisfaction, and Loneliness.

<table>
<thead>
<tr>
<th>Int Part</th>
<th>CSN</th>
<th>Lonely</th>
<th>Freq Observed (Expected)</th>
<th>Sometimes Observed (Expected)</th>
<th>Rarely Observed (Expected)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>dissat</td>
<td>1 (1.2)</td>
<td>2 (6.1)</td>
<td>7 (8.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>satisfd</td>
<td>1 (0.8)</td>
<td>15 (10.9)</td>
<td>39 (38)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>dissat</td>
<td>11 (11.3)</td>
<td>23 (19.2)</td>
<td>3 (1.9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>satisfd</td>
<td>7 (6.7)</td>
<td>31 (34.8)</td>
<td>8 (9.1)</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 7.

Percentage of Loneliness Depending on Presence of Intimate Partner and Current Social Network Satisfaction.

<table>
<thead>
<tr>
<th>Int Part</th>
<th>CSN</th>
<th>Lonely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>frequently</td>
<td>sometimes</td>
</tr>
<tr>
<td>yes</td>
<td>dissatisfied</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>satisfied</td>
<td>2%</td>
</tr>
<tr>
<td>no</td>
<td>dissatisfied</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>satisfied</td>
<td>13%</td>
</tr>
</tbody>
</table>
### TABLE 8

Percentage of Loneliness According to CSN Satisfaction

<table>
<thead>
<tr>
<th>Intimate Partner</th>
<th>Lonely frequently</th>
<th>Lonely sometimes</th>
<th>Lonely rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissatisfied</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>8%</td>
<td>32%</td>
<td>60%</td>
</tr>
<tr>
<td>no</td>
<td>32%</td>
<td>59%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Satisfied</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>2%</td>
<td>25%</td>
<td>73%</td>
</tr>
<tr>
<td>no</td>
<td>13%</td>
<td>70%</td>
<td>17%</td>
</tr>
</tbody>
</table>

### TABLE 9.

Percentage of Loneliness by Intimate Partner.

<table>
<thead>
<tr>
<th>CSN</th>
<th>Lonely frequently</th>
<th>Lonely sometimes</th>
<th>Lonely rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>8%</td>
<td>32%</td>
<td>60%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>2%</td>
<td>25%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>32%</td>
<td>59%</td>
<td>9%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>13%</td>
<td>70%</td>
<td>17%</td>
</tr>
</tbody>
</table>
In order to determine which variable contributed most significantly to loneliness, having an intimate partner or satisfaction with current social network, an exact nonparametric conditional inference was performed on the odds ratios between each variable and loneliness. The result indicates that moving from having no intimate partner to having an intimate partner increased the odds ratio by 6.584 (CI 2.25-21.15) that the respondent would be rarely lonely as compared to frequently lonely. The result indicates that moving from dissatisfied with current social network to satisfied increase the odds by 1.487 (CI 0.59-3.79) that the respondent would be rarely lonely as compared to frequently lonely. (See Table 10.) Thus, having an intimate partner has the greatest affect on respondents’ loneliness.

**TABLE 10.**

Comparison of Loneliness Local Odds Ratios: Having an Intimate Partner versus Current Social Network Satisfaction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Status</th>
<th>Status</th>
<th>Lonely Odds Ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate Partner</td>
<td>No</td>
<td>Yes</td>
<td>6.584 (CI 2.245, 21.15)</td>
</tr>
<tr>
<td>Current Social Net.</td>
<td>Dissat.</td>
<td>Satisfied</td>
<td>1.487 (CI 0.594, 33.794)</td>
</tr>
</tbody>
</table>
Summary of the Findings

There were five general hypotheses: (a) Family of origin experiences, perception of those experiences, and satisfaction with relationship with parent at time of leaving home are related to loneliness, (b) Interaction behavior is related to loneliness and satisfaction with relationships, (c) Current social experiences and satisfaction are related to loneliness, (d) There are relationships among perception of family of origin experiences, current social network, and loneliness, and (e) Marital status and gender are related to loneliness. There were 14 sub-hypotheses, seven sub-hypotheses were supported and seven were not.

Family of origin experiences. Five sub-hypotheses concerned child/adolescent experiences and perceptions of family of origin. Three of these were supported: (a) satisfaction with the relationship with parents at time of leaving home and respondent's current loneliness; (b) negative perception of parental marriage and the respondent's satisfaction with their current social network; and (c) parent's marriage and respondent's current social network satisfaction on the respondent's current loneliness. Adults, who were satisfied with their relationship with their parents at the time of leaving home, were less lonely than adults who were dissatisfied. Adults, who had a positive perception of their parent's marriage, were more satisfied with their current social network than adults whose perception was negative. Adults whose perception of their parent's marriage as positive and who were satisfied with their current social network were less lonely than
those adults whose perception was negative and who were
dissatisfied. Two hypothesis were not supported: (a) parent's
marital status during childhood/teenage years did not correlate to
the respondent's current loneliness and (b) parent's negative
marriage had no significant effect on the respondent's current
loneliness.

Current social network. Five sub-hypotheses concerned the
respondent's current social network. Four sub-hypotheses were
supported: (a) Having an intimate partner will affect a respondent's
loneliness, (b) Number of close friends will relate to a respondent's
loneliness, (c) Satisfaction with friends will affect a respondent's
loneliness, and (d) Satisfaction with neighbor/co-worker relation-
ships will affect a respondent's loneliness. One sub-hypothesis,
satisfaction with their intimate partner would relate to loneliness,
had insufficient respondents to analyze.

Seventy-three of the 177 respondents indicated they were in a
relationship with an intimate partner. Fifty-eight of these were
married, two were never-married singles, and thirteen were
divorced. The type of parental marriage perceived by the
respondents had no affect on whether a respondent did or did not
have an intimate partner. The level of respondent interaction
behavior made a significant difference on whether they were in an
intimate relationships as adults with low interaction scores were
less likely to be in an intimate relationship.

Satisfaction with the relationship with parents at time of
leaving home had a significant effect on loneliness and current
satisfaction with the relationship with parents also had a significant effect. Of the 95 respondents who were satisfied with their relationship with their parents at time of leaving home, 91 were currently satisfied. Of the 35 who were dissatisfied at time of leaving home, 21 were currently dissatisfied.

**Interaction behavior.** The two sub-hypotheses on the respondent's interaction behavior were not supported: (a) the relationship of the level of the respondent's interaction behavior to respondent's loneliness; and (b) the relationship of the level of the respondent's current interaction behavior and their satisfaction with current social network.

Interaction behavior was the total score of the three scales of the FIRO-B. The total score indicated the strength of the preference for taking the initiative in relationships, the higher the score the stronger the preference. The FIRO-B measured a person's characteristic behavior toward other people in three areas; inclusion, control, and affection. Each of these three areas was composed of behavior desired from others and behavior expressed to others.

The difference between wanted and expressed inclusion scores indicates the strength of the preference for initiating inclusion behavior with a higher score indicating greater strength. The difference between wanted and expressed control scores indicates the strength of the preference for giving orders rather than taking them. The difference between wanted and expressed affection scores indicates the strength of the preference for initiating affection over receiving it.
In order to determine the effect of the respondent's inclusion, control, and affection scores on their total FIRO-B score, their total FIRO-B score was separated into the respective individual scores and the difference between wanted and expressed behavior scores in each of these three areas computed. The results indicated that a large majority of the respondents expressed little preference for initiating inclusion, giving orders, and initiating affection (95% had a 0-4 point difference between wanted and expressed inclusion, 89% had a 0-4 point difference between wanted and expressed control, and 98.9% had a 0-4 point difference between wanted and expressed affection).

Marital status, gender, and loneliness. The general hypothesis considered the relationship of marital status and gender to loneliness. The sub-hypothesis that never-married single adults were less lonely than divorced adults was not supported. The sub-hypothesis that married males are less lonely than married females, was not supported. However, the marital status of the respondents made a significant difference in loneliness scores. Married adults had the lowest mean loneliness score ($\bar{x} = 2.26$), but there was no significant difference between the loneliness scores of never-married adults ($\bar{x} = 3.00$) and divorced adults ($\bar{x} = 2.98$).

Research Question

The research question asked which of the following variables was most predictive of loneliness among adults: (a) perception of family of origin experiences; (b) interaction behavior; (c) current social experiences; (d) satisfaction with relationships; (e) marital
status; or (f) gender? The results of the log-linear analysis indicated that current social network satisfaction and lack of an intimate partner were the variables most predictive of loneliness; having an intimate partner was more predictive than current social network satisfaction.

Summary

Consistent with previous research, this study confirmed the results of previous studies on three features of loneliness. First, this study confirms results of previous research that found that positive family of origin experiences correlated to lower levels of loneliness (Bray & Harvey, 1992; Roberts, 1987). Second, this study supported previous research (Hojat, 1982; Wittenberg & Reis, 1986; Vaux, 1988), that demonstrated the multidimensional characteristic of loneliness (See Table 5.). For example, current social network satisfaction and having an intimate partner could be considered social and emotional isolation components of loneliness (Weiss, 1973). Third, this study supports previous research (De Jong-Gierveld, 1986; Jones & Moore, 1989; Stokes, 1987) on the importance of a person’s current social network on their experience of loneliness.
CHAPTER V
DISCUSSION AND RECOMMENDATIONS

Introduction

The purpose of this study was to determine whether perception of family of origin experiences, current interaction behavior, current social network satisfaction, marital status, or gender impact adult loneliness. The relative contributions of parental divorce during pre-teen or teenage years, nature of parents' marriage, satisfaction with the relationship with parents before leaving home, level of interaction behavior, presence of intimate partners (i.e., married or exclusively dating), number of friends, satisfaction with their relationships with neighbors and co-workers, and marital status (i.e., never married adults and divorced adults), and gender (married males and married females) were analyzed for their prediction of loneliness.

This current study finds that the relationship with parents at time of leaving home was related to adult loneliness, although it failed to find an influence of parental divorce during childhood years and type of parental marriage on adult loneliness. Adults who were satisfied were less lonely than those who were dissatisfied. The presence of an intimate partner, number of friends, and level of satisfaction with current social network were also found to be
significant, contributing a greater proportion to current loneliness than family of origin factors.

The data for this study was originally collected for a comparative study on the life satisfaction, interpersonal relations, and personality attributes of never-married, divorced, and married men and women. The reputational sample for this study consisted of 177 men (n=88) and women (n=90) between the ages of 30 and 40 years, college-educated, and employed full-time. The majority of the sample lived in a midwestern metropolitan area. Respondents were of a similar socioeconomic status and efforts were made to select "stable" never-married, married, and divorced persons. This was done by only including persons married more than five years and persons divorced more than two years. Efforts were made through control of education to insure a middle class (or above) sample. The educational level and occupational level of the subjects was above average. According to the Hollingshead 2-Factor Index of Social Position, all of the respondents were in the top social class group.

The sample for this study was not as lonely as samples from the general population. A previous study by Bragg (1979) reported that 10% of the population considered themselves to be chronically lonely, yet in this study only one of 177 respondents (0.56%) considered him/herself to be always lonely. Studies have found that as much as 25% of the population reported experiencing loneliness at any one time (Bradburn, 1969; Perlman & Peplau, 1981). In this sample over 85% responded that they were never, rarely, or only sometimes lonely.
Implications of Supported Hypotheses

Seven of 14 hypotheses were supported. Three of the hypotheses had to do with family of origin experiences and loneliness and four had to do with the current social network, satisfaction with current social network relationships, and loneliness. A discussion of these supported hypotheses follows.

Hypothesis 1c. Adults who were satisfied with the relationship they had with their parents before leaving home are less lonely than those adults who were dissatisfied. The Jonckheere-Terpstra Test provided support for this research hypothesis. In this current study respondents who had satisfactory childhood relationships with parents at the time of leaving home were significantly less lonely than respondents who were dissatisfied. This finding is consistent with the results of a study by Hojat, Borenstein, and Shapurian (1990) who reported that perceptions of childhood dissatisfaction with parents was associated with severe and chronic feelings of loneliness as an adult.

A possible explanation for the correlation between childhood satisfaction with parents and adult loneliness can be found in family systems theory. It is a general assumption of family systems theorists, as well as others, that childhood experiences are likely to contribute to adult relationships. Maccoby and Martin (1983) stress that a child's overall emotional and cognitive development are influenced by their parents' sensitivity and responsiveness. Having supportive parents as a child was found to correlate inversely with
adult loneliness in the study by Rubinstein and Shaver (1980). In contrast, feeling a lack of support from parents can lead to stress symptoms as an adult. This can contribute to interpersonal difficulties (including loneliness) as an adult (Perlman, 1989).

**Hypothesis 3a.** Adults with intimate partners (married or exclusively dating) are less lonely than those adults without an intimate partner, casually dating or not dating. The Wilcoxon Rank Sum Test provided support for this research hypothesis. This finding was also consistent with that of previous studies (De Jong-Gierveld, 1986; Snodgrass, 1987) which found that people with intimate partners had lower loneliness scores than people without intimate partners. Subjects in this study who listed their relationship as intimate were six times less likely to be lonely than respondents who were exclusively dating, but did not list their relationship as intimate.

Another independent variable, current social network satisfaction, influenced the loneliness of subjects with intimate partners. The loglinear analysis of the multi-dimensional cross classification table indicated that the loneliness of an individual having an intimate partner was affected by the individual's satisfaction with his/her current social network.

**Hypothesis 3c.** Adults with more friends are less lonely than adults with few friends. The Jonckheere-Terpstra Test was used to determine the strength of the relationship between the number of friends and loneliness, and the hypothesis was supported. It was hypothesized that having friends would reduce loneliness and as the
number of friends increased the level of loneliness decreased. This finding was consistent with previous research that has shown loneliness to be related to the number of friends (Schmidt & Sermat, 1983; Wittenberg & Reis, 1986). Lonely people have been found to have social skills deficits that may make it difficult for them to form and maintain friendships (Perlman & Peplau, 1981).

**Hypothesis 3d.** Adults expressing satisfaction with friends are less lonely than those adults expressing dissatisfaction. The Linear-By-Linear Association Test provided support for this research hypothesis, but this variable was not included in the multidimensional cross classification table because it did not interact with loneliness in the marginal analysis. The results of the testing of this hypothesis were consistent with previous research on loneliness that indicated that friends play an important part in determining loneliness (Jones & Moore, 1987).

Satisfaction with the quality of relationships is an important factor in influencing loneliness. Loneliness appears to relate more with dissatisfaction with social and intimate relationships than from actual social isolation (Jones, 1990). Schmidt and Sermat (1983) researched loneliness and relationship satisfaction and concluded that dissatisfaction with friendship relationships was a good predictor of pervasive loneliness. Schmidt and Sermat (1983) suggest that the existance of satisfactory friendships is a valid measure of a person's ability to relate to others in rewarding and mutually satisfying ways.
Current social network satisfaction contributed significantly to lower loneliness scores. The six current relationship satisfactions considered in this study were: (a) relationship with parents, (b) relationship with co-workers, (c) relationship with neighbors, (d) relationship with friends, (e) relationship with spouse, and (f) relationship with dating. The relationship satisfaction with neighbors and with dating were the two relationships that had no significant correlation with loneliness.

An analysis of variance of total current social network satisfaction scores with loneliness, for each of the three groups (i.e., never-married, married, and divorced), resulted in a significant correlation for divorced respondent ($p = .001$), but not for never-married singles ($p = .2081$) or for married respondents ($p = .6078$). This may have resulted from the way in which current social network satisfaction was analyzed. For a comparison of the total current social network satisfaction with loneliness the total satisfaction score was averaged and scatter plots created to determine if a relationship existed. Due to the sparseness of the data when one of the current social network relationships was considered, (i.e., few observations or zero observations in many cells), the seven levels of dissatisfaction/satisfaction were collapsed into three. The three levels were classified as dissatisfied for categories 1 to 3 (extremely dissatisfied, dissatisfied, and somewhat dissatisfied), neutral for category 4 (mixed), and satisfied for categories 5 to 7 (somewhat satisfied, satisfied, and extremely satisfied).
Hypothesis 3e. Adults expressing satisfaction with their relationships with neighbors and co-workers are less lonely than those adults expressing dissatisfaction. The Wilcoxon Rank Sum Test provided support for this research hypothesis, but this variable was not included in the multidimensional cross classification table because it did not interact with loneliness in the marginal analysis.

The support for this hypothesis was consistent with previous studies that found a relationship between loneliness and satisfaction with neighbor and co-worker relationships. In a study of loneliness and social networks De Jong-Gierveld (1986) reported significant correlations for both men and women between loneliness and the overall evaluations of the social networks. For men, feelings of loneliness related to the absence of close contacts in their neighborhood and low intimacy ratings of their most important relationship. For women, there was a significant correlation between feelings of loneliness and dissatisfaction with relationships in general and with the friendliness of neighbors.

An explanation for these gender differences may come from the way men and women structure their same-sex relationships. Male feelings of loneliness may come from the desire for companionship that is an important part of male same-sex friendships (Buhrmester & Furman, 1987) and without this companionship men are likely to feel lonely. Female relationships are based more on the sharing of intimate topics with close same-sex friends than just companionship (Aries & Johnson, 1983) and
without this intimate sharing feelings of loneliness can be expected (Weiss, 1973).

**Hypothesis 4a.** Adults, whose parents divorced during their preteen/teenage years or who they perceived as having a negative marriage express less satisfaction with their current social network than adults with parents who they perceived as having a positive marriage. The Fisher's Exact Test provided support for this hypothesis. This was consistent with previous research that found that the type of marriage experienced by the parent had an affect on the child when they became an adult (Murphy, 1991; Rubinstein & Shaver, 1980). Emery et al. (1984) suggested that when the emotional climate between parents is negative, parenting is often compromised. The stepwise screening procedure suggested that this variable be considered in log linear analysis of the multidimensional cross classification table, but it was not found to have a significant correlation with loneliness when considered with other variables.

Bowen's Family System Theory views the family as an emotional unit with emotional issues involving one member also affecting other family members. One example of the effects of the emotional system is how a person reacts to other people and is believed to be determined by family of origin experiences (Papero, 1990). Support for this hypothesis indicates that adults were affected by whether they perceived their parents as having experienced a positive or negative marriage; however, the family of origin questions used in this study did not assess the parent-child
relationship and it was not possible to determine how the respondents were being affected.

**Hypothesis 4b.** Adults, whose parents had a negative marriage and who were dissatisfaction with their current social network, are lonelier than adults whose parents experienced a positive marriage and who were satisfaction with their current social network. The Jonckheer-Terpstra Test provided support for this hypothesis, but this variable was not included in the multidimensional cross classification table because it did not interact with loneliness in the marginal analysis. In a study of the antecedents of loneliness, Rokach (1989) developed a model of loneliness that depicted three conceptual clusters: characterological and developmental variables, relational deficits, and traumatic events. Experiences as a child were thought to contribute to characterological shortcomings and developmental deficits.

According to Bowen's Family Systems Theory (Papero, 1990), a relationship involving two people, such as a marriage, behaves in automatic and predictable ways when anxiety is experienced by one or both partners. As a person's level of tension exceeds their tolerance level they will automatically move to involve a third person to reduce the tension. If there are children present in the family one of those children is likely to become involved. This involvement in situations regarding parental anxiety can have negative effects on the child's ability to develop healthy adult relationships that are satisfactory to them.
Hypotheses not supported.

It was also hypothesized that these additional variables would affect adult loneliness: (a) parent's divorce during the respondent's pre-teen or teenage years, (b) parent's conflictual marriage and/or marriage with little sharing, (c) interaction behavior, (d) satisfaction with an intimate partner relationship, (e) having friends, (f) divorced respondents and never married respondents, and (g) married females and married males. Contrary to conceptual indications that these variables would contribute to loneliness and social network satisfaction, these factors were not significant. A brief discussion of these hypotheses follows.

**Hypothesis 1a.** Adults whose parents divorced during pre-teen or teenage years are lonelier than those adults whose parents remained married. It was hypothesized that adults whose parent's divorced during their developmental years would be lonelier than adults whose parent's remained married during that time. There were only a few respondents whose parents divorced during their developmental years and this low number probably contributed to the lack of statistical significance. For example, of the 10 cells in this table, five had four or less respondents.

**Hypothesis 1b.** Adults who perceive that their parents had a conflictual marriage and/or marriage with little sharing are lonelier than those adults who perceive that their parents had a sharing and/or affectionate marriage. It was hypothesized that the type of parental marriage experienced by respondents as children influenced their level of loneliness as adults. No studies were found that
considered the effects of a negative parental marriage, other than parental divorce, on an adult's level of loneliness, but the results from a number of other studies indicated that cold, less nurturing parents were more likely to have children who grew up to be adults having problems with intimacy and more likely to be lonely (Bergenstal 1981; Brennan & Auslander 1979; Lobdell & Perlman, 1986; Stewart, Stewart, Friedley, & Cooper, 1987). It was expected that the adults in this study, who perceived their parents' marriage as negative, would be lonelier than adults who perceived their parent's marriage as positive, but it didn't.

One possible reason for this lack of relationship may have been the sample's self-esteem. Perlman and Peplau (1984) suggest that predisposing factors that contribute to loneliness can include characteristics of the individual; for example, low self-esteem. High self-esteem has been reported to inversely relate to loneliness (Hartog, 1980; Hojat, 1982; Jones, Freemon, & Goswick, 1981; Perlman & Peplau, 1982; Shaver & Hazan, 1989). While self-esteem was not measured, this sample ranked very high on the Hollingsworth 2-Factor SES scale and possibly had a healthy self-esteem due to their occupation level. Several previous studies have reported a significant relationship between occupation level and self-esteem (Gecas & Seff, 1989; Kanchier & Unruh, 1987; Mortimer & Finch, 1986).

One group that did appear to be affected by a negative perception of their parent's marriage were the divorced males. Sixty-two percent of the divorced males thought that their parents'
marriage was negative compared to 38% of the single males. A possible explanation is that the divorced males, in this study, were more likely than single males to have had a stressful family life. According to Bowen's Family System Theory, when stress or anxiety affects the marital dyad the relationship can become unstable. When the stress exceeds a person's toleration level they automatically move to involve a significant third person and thereby reduce the stress (Alymer, 1986; Papero, 1990). If a child is the third person involved then the child's level of differentiation may be adversely affected then and in future relationships (Bradshaw, 1990; Papero, 1990)

Hypothesis 2a. Adults with greater interaction behavior are less lonely than adults with less interaction behavior. It was hypothesized that interaction behavior would relate to loneliness. The theory behind the FIRO-B measurement of interaction behavior is predicated on the belief that all human interactions may be grouped into three categories: issues surrounding inclusion, issues surrounding control, and issues surrounding affection. High scores indicate a preference for a great deal of interaction with people in all areas. Low scores indicate a desire to be alone and uninvolved. It was therefore expected that low interaction behavior scores would relate to loneliness, but they did not.

Separating the respondent's total FIRO-B score into the wanted and expressed behavior scores in each of the three areas of inclusion, control, and affection provided some information about how differentiation of self may have been an influence on
respondents who showed little difference between wanted and expressed behavior. The results indicated that the large majority of the respondents expressed little preference for initiating inclusion, giving orders, and initiating affection (95% had a 0-4 point difference between wanted and expressed inclusion, 89% had a 0-4 point difference between wanted and expressed control, and 98.9% had a 0-4 point difference between wanted and expressed affection).

The respondents in this study with low interaction behavior scores may neither want or express much interaction from others. A possible explanation from Bowen's Family Systems Theory is the concept of emotional cutoff. This concept relates to the way in which children attempt to handle stress that comes from the emotional attachment to their parents and significant others. A child may resort to internal methods by denying what they are feeling or external methods by putting physical distance between themselves and others and thus remain psychologically insulated (Papero, 1990).

**Hypothesis 2b.** Adults with greater interaction behavior express more satisfaction with their current social network than adults with less interaction behavior. It was hypothesized that the level of interaction behavior would relate to satisfaction with a respondent's current social network, but this hypothesis was not supported. One possible explanation is that adults, with low interaction behavior, learned to use physical distancing as children to deny attachment (Papero, 1990). These adults would then feel
more comfortable with low levels of interaction behavior because of their experiences in physical distancing as children.

**Hypothesis 3b.** Adults expressing satisfaction with their relationship with an intimate partner (married or exclusively dating) are less lonely than those adults expressing dissatisfaction. It was hypothesized that satisfaction with the intimate partner relationship would relate to loneliness. There were only three respondents who expressed dissatisfaction with the relationship with their intimate partner and thus this number was too small to allow for a valid statistical analysis.

**Hypothesis 5a.** Never married adults are less lonely than divorced adults. It was hypothesized that divorced adults would be lonelier than single never-married adults, but this hypothesis was not supported. Previous studies had shown that never-married adults are not necessarily lonely while divorce has been found to be a major cause of adult loneliness (Page & Cole, 1991; Rubinstein & Shaver, 1982a). Two studies were found that made a direct comparison between never-married adults and divorced adults. In the study by Page and Cole (1991) that compared single-never married and divorced they stated that 20.4% of the divorced in their survey reported being lonely in the previous year, compared to only 14.5% of the never married. In studies reported by Medora and Woodward (1986), that used the Woodward Loneliness Inventory, one looked at never-married adults and one looked at divorced adults. A comparison of both studies showed that the mean loneliness scores
were higher for divorced adults than for never-married adults, but no explanation was given for that difference.

One possible reason why there was not a difference between single never-married adults and divorced adults in this current study is that divorced adults had to be divorced at least two years and they may have had time to develop another relationship with a significant other. This appeared to be the case, as more than six times as many divorced respondents had an intimate partner as did single never-married respondents.

No hypothesis was made concerning loneliness and the three marital status groups (never-married singles, married, and divorced) since a number of previous studies had reported married adults to be the least lonely of the three (Berg, et al., 1981; Page & Cole, 1991; Rubinstein & Shaver, 1982; Weiss, 1975). An analysis of the three groups was run; married respondents were found to be significantly less lonely than either single never-married or divorced respondents ($x = 2.26$ for married, $x = 2.98$ for divorced, and $x = 3.00$ for single, never-married). This finding was consistent with two other studies (Page & Cole, 1991; Tornstam, 1990) that compared the three groups.

**Hypothesis 5b.** Married males are less lonely than married females. The results of the Wilcoxon Rank Sum Test did not support this hypothesis. Previous research had shown that marital status has a definite relationship with the loneliness of each gender. Tornstam (1992) found significant differences in loneliness scores between married men and women between the ages of 20 to 49, with married women being lonelier. In his discussion, Tornstam
suggested that a process of learning to overcome differences and unrealistic expectations took place and that it reduced feelings of loneliness among the older age groups. Since this sample population is highly educated and well-employed the married women in it may have overcome differences and unrealistic expectations earlier than the married women in Tornstam's sample which was taken from the general population. Meaning in life may also have been a factor. It has been reported to be inversely related to loneliness (Brennan & Auslander, 1979) and since the married women in this current study were employed in highly skilled positions, they may be finding meaning in their occupations.

Recommendations

The recommendations of this research will be divided into three sections: research, theory, practice and policy. Several factors, as mentioned previously, must be considered when discussing the implications of this study. First, the results are based on a selected sample of college-educated, never-married, married, and divorced adults between 30 and 40 years of age and employed full-time. There were 90 females and 88 males in the sample. The average age of the females was 34.22 and the average age of the males was 35.02. Fifty-eight were never-married, (28 males and 30 females) Fifty-nine were in their first marriage and married a minimum of five years, (30 males and 29 females) Fifty-eight had been divorced once for a minimum of two years, (28 males and 30 females).
Differences in social position were computed by the Hollingshead 2-Factor Index. Education level and occupation are the two factors used to determine social position. The range of computed scores can go from 11 to 77 and in Table No. 1 high scores reflect college education levels and executive or professional level occupations. According to Hollingshead's social class grouping, the respondents in this study all fell into the upper social class. Caution must be used in making generalizations beyond this type of sample.

Second, the data came from a secondary analysis of an existing data set and the original objective of that research was not to specifically address the issue of loneliness and differentiation from the family of origin. Third, this study was correlational in design and care must be taken to avoid implying any causal relationship. Last, the quality of family of origin experiences was based on the respondent's perception of those experiences a number of years after the respondent left home. Specific recommendations resulting from these findings follow.

Research Areas

Measurements. Much family of origin information, in the current study, was based on an individual's perception of what was experienced a number of years earlier and may vary from sibling to sibling. Differentiation is a family of origin concept thought to affect current feelings of loneliness, but it was not directly measured in this study. A self-report measure of differentiation such as "The Differentiation In The Family System Scale" (Anderson & Sabatelli, 1992) is recommended for future studies on loneliness
and differentiation. The DIFS scale focuses on reciprocal patterns of interaction to assess differentiation. In three studies that used the DIFS scale subscale reliability ranged from alphas of .84 to .94 (Anderson & Sabatelli).

Loneliness has been shown to be influenced by both social isolation and emotional isolation. For example, this study found that having an intimate partner and satisfaction with current social network were two major variables that correlated with loneliness. This is an indication that two different types of loneliness were being measured by the single loneliness question. Shaver and Rubinstein (1980) also found that to be the case in their study of a large metropolitan population.

The loneliness question used in this current study was "Are you ever lonely?" There were five possible responses: (a) never, (b) rarely, (c) sometimes, (d) frequently, and (e) always. It is recommended that two loneliness measurements be used. One, such as the NYU Loneliness scale (Rubinstein & Shaver, 1980), that includes a measure of past and present loneliness and one, such as the scale developed by Russell, Cutrona, Rose, and Yurko (1984) that measures both emotional and social isolation. The Social and Emotional Loneliness Scale for Adults (DiTommaso & Spinner, 1993), would also measure both the emotional isolation component and the social isolation component of loneliness.

Sample Selection. The sample of this study were college educated, professionally employed adults from 30 to 40 years of age. Subject responses to the loneliness question indicated a lower
percentage of loneliness than for a sample from the general population. For example, only 14% of the subjects responded as frequently lonely compared to 25% of the general population (Bradburn, 1969; Perlman & Peplau, 1981) and less than 1% of the subjects responded as chronically lonely compared to 7% of a general population sample (Tornstam, 1992).

The lower percentage of loneliness experienced by this sample may have contributed to the lack of significance found for subject's perceptions of negative family of origin experiences. A major purpose of this study was to determine whether perception of family of origin experiences impacted loneliness, but it was found that two family of origin variables had no effect on the loneliness of this college-educated and professionally-employed sample. Therefore, it is suggested that for another study on loneliness and family of origin experiences, a sample more representative of the general population be used. This would increase the probability that, if family of origin influences relate to loneliness, findings would be more robust.

This study was unique in that it looked at the loneliness of well-educated and professionally-employed adults between the ages of 30 and 40. It is important to consider the nature of this sample when applying the results of this study to the general population of adults between the ages of 30 to 40. One suggestion for future study would be to sample the same age population, but to include several different socio-economic groups. Other types of studies could contribute to the field of knowledge on family of origin
experiences and loneliness. For example, a longitudinal panel study would permit observation of any changes taking place in the sample population over a period of time.

**Confounding Variable.** A variable that might contribute to loneliness is self-esteem. Self-esteem, with social discomfort and a negative orientation to using support resources, is one of the personal characteristics thought to promote loneliness (Perlman & Peplau, 1981; Vaux, 1988). A number of studies of college students have found the correlation between loneliness and self-esteem to range from \( r = -0.27 \) (Davis & et. al., 1992) to \( r = -0.57 \) (Overholser's, 1993). In a study of the relationship between loneliness and self-esteem, for 186 ninth-grade students, Inderbitzen-Pisaruk, Clark, and Solano (1992) found a correlation of \( r = -0.599 \). According to Davis (1971) this is a substantial correlation. In Tornstam's (1992) survey of a general population of married respondents 20 to 49 years of age a correlation of \( r = -0.48 \) was found between loneliness and self-esteem. While \( r = -0.48 \) is considered a moderate correlation (Weinberg & Goldberg, 1979), the amount of loneliness variance in the population that can be accounted for by self-esteem is only 23.05\% \( (r^2 = 0.2305) \). Over 75\% must be accounted for by other variables.

According to Leary (1990), social exclusion theory provides an explanation for the relationship between self-esteem and loneliness. Self-esteem may be thought of as an internal, subjective "marker" that indicates an individual's assessment of his or her inclusionary status and loneliness occurs when individuals perceive their inclusionary status to be below the level they desire in most of
their relationships (Leary, 1990). Thus, according to social exclusion theory, self-esteem is the result of a cognitive function and loneliness is an affective state.

A young adult's self-esteem may be low at the time of leaving home because of negative family of origin experiences, but self-esteem can change over time. In a study by Main, Kaplan, and Cassidy (1985) there was strong evidence that some adults who experienced severely disturbed relationships with parents during childhood functioned very well when they were older. It was suggested that this transformation related to their ability to reorganize their mental models of self and relationships. It is recommended that future research into family of origin effects on loneliness consider the mitigating influence of improved self-esteem through the use of a measure such as Rosenberg's (1965) Self-Esteem Scale.

Theory

Bowen's Family Systems Theory provided the theoretical framework for the hypotheses in this study. Differentiation was one concept utilized to provide explanations of how family of origin experiences affected adult loneliness. A previous study by Bray and Harvey (1992) found that subjects who saw their parents as bonded together in a well-functioning parental relationship reported higher differentiation scores. Differentiation being defined as the ability to maintain autonomy in a relationship system (Bowen, 1978). To understand the concept of differentiation it is necessary to see the family as an emotional unit. In this context emotional refers to pressures or forces deeply ingrained in an individual and between
the individual and his/her environment. The emotional system of the individual forms his/her internal guidance system and strongly influences the extent to which they can maintain differentiation. Lack of emotional connection results in excessive distance in the relationship while enmeshment results in excessive closeness and lack of individual identity. Both enmeshment and lack of emotional connection can handicap the development of intimacy and increase probability of loneliness.

Enmeshment and lack of emotional connection describe the condition of a couple's relationship boundary; boundary is a principle associated with General Systems Theory's first major tenet, organization (Steinglass, 1987). Another principle of organization is wholeness and this concept contributes to understanding the multi-dimensional nature of loneliness through its proposal that no single individual within a system, family or community, can be thought of as acting independently. This was apparent in this study as a respondent's loneliness was effected by his/her relation with others. The third principle related to organization, hierarchical organization, is useful in viewing the intimate partner system as a subsystem of a larger system: the respondent's current social network.

The concept of control is the second major tenet in General Systems Theory that relates to the family system. Control refers to the intricate and delicate series of available mechanisms that keep the elements of a dynamic interaction within an acceptable set of limits and which permit controlled adaptation (Steinglass, 1987). In
the context of family systems, controlled adaptation is important to issues of growth and development that lead to an individual's differentiation.

A number of theories about loneliness exist, but there is, at present, no theory about differentiation and loneliness. A suggested hypothesis would be that adults with low levels of differentiation would have difficulty in forming lasting relationships and those adults would experience higher levels of loneliness than adults with high levels of differentiation. Another suggested hypothesis would be that people who experienced childhood in a dysfunctional family would more likely function at a low level of differentiation than people who experienced their childhood in a more functional family.

**Practice and Policy**

This study has shown, for this sample, that having an intimate partner and simultaneously being satisfied with current social network are important assets in avoiding loneliness. Also, current social network satisfaction was found to correlate with the respondent's positive perception of their parents' marriage. A counselor working with people who experience loneliness needs to be aware of the relationship between past experiences that may contribute to loneliness as well as present factors. Studies on the causes of loneliness have shown that loneliness can result from both limited opportunities for social involvement and from deficient social skills (Rook, 1984).

Loneliness needs to be considered as a possible co-existing factor for therapists working with clients exhibiting signs of
depression. Studies have not shown that loneliness causes depression, but it has been found to correlate with depression (Anderson & Arnoult, 1985; Jackson & Cochran, 1988; Russell, Peplau, and Cutrona, 1980). As much as 25% of the population experiences loneliness at any one time and as many as 10% experience it chronically. As a risk factor, chronic loneliness has been associated with depression, suicide, and other forms of psychopathology (Blai, 1989).

Counselors also need to be knowledgeable about treatment approaches to assist clients in improving their intimate relationships and increasing satisfaction with social networks. Three treatment approaches have been effective in assisting people experiencing loneliness: cognitive-behavioral therapy, social skills training, and the development of social support networks (Rook, 1984). Young (1982) has developed a cognitive-behavioral therapy specifically for loneliness that has been found to be effective. An important feature of the cognitive-behavioral model is helping clients to identify automatic thoughts and consider them hypothesis to be tested rather than just accepting them as facts. The testing of automatic thoughts aids clients in discovering inconsistencies in their assumptions and in developing alternative interpretations (Young, 1982).

Social skills training programs can be used to help people improve their current social network satisfaction. These training programs have been found to be effective in helping individuals develop new interpersonal skills when compared to individuals not
in a program (Rook, 1984). However, one problem with social skills training programs is that they emphasize skills for initiating social contract, but neglect skills for handling the transition to greater intimacy which increases the possibility of satisfaction with an intimate partner relationship. Counselors using a combination of cognitive-behavioral approaches and social skills training can be more effective than using either treatment separately (McWhirter, 1990).

Satisfaction with their social network can come from the development of social support networks which provide people with a sense of community and belonging to a group (Strokes, 1985). Counselors, working with lonely people, can help clients improve their social support networks and thus increase opportunities to use their social skills. One way counselors can do this is by assisting in starting self-help groups for the lonely as a first step in helping clients develop social support networks.

Family life educators need to be aware that skills used in developing a supportive social network that contributes to social network satisfaction are thought to begin at an early age (Weiss, 1973). Grade school is the first social environment for many young children. There they have the opportunity to interact with a number of children from outside their immediate neighborhood. However, elementary schools are often competitive, unfriendly places (Aronson, Blaney, Stephan, & Snapp, 1978) and thus don't provide an atmosphere that would encourage young children to develop social skills.
Conclusion

This study focused on an age group, 30 to 40, that had been virtually ignored in previous loneliness research (Paloutzian & Janigian, 1987). However, the subjects in this study reported a lesser degree of loneliness than found in previous studies that included this age range (Perlman & Peplau, 1981). This result may be caused by the well-educated and professionally employed status of the respondents (Bell, 1990). No previous studies were found that controlled for the influence of socio-economic status on loneliness of this age group.

The results of this study indicate that loneliness results from both objective and subjective experiences. The objective experience of having an intimate partner and greater number of friends contributed to lower levels of loneliness. The subjective experience of satisfaction with current social network and with parental relationship at time of leaving home also contributed to lower levels of loneliness. Weiss' (1973) theory of the emotional and social isolation components of loneliness was supported by the two variables that were the major predictors of loneliness in this study, lacking an intimate partner and current social network dissatisfaction.

Current experiences were found to be more important than past experiences, but this study did find that family of origin experience can affect adult loneliness. Satisfaction with parental relationship, at time of leaving home, was significantly related to loneliness. Perception of the quality of parental marriage was hypothesized to
relate to adult loneliness, but was not supported; however, it did indirectly affect loneliness. The perception of parental marriage as negative correlated with current social network dissatisfaction and perception of parental marriage as negative and dissatisfaction with current social network were significantly related to loneliness.

The results of this study confirm the positive influence on loneliness of having an intimate partner and satisfaction with current social network which was found in previous studies. The presence of an intimate partner has the strongest influence. Since the concept that family of origin experiences continue to exert influence throughout the life span on loneliness is a relatively new perspective on loneliness, it was encouraging to find that there was an indirect relationship between family of origin experiences and loneliness. Also, the results of this study suggest that being well-educated and professionally employed may influence the degree of loneliness experienced. Controlling for the effects of these two variables in future studies could lead to research that will strengthen the systemic approach to the study and treatment of loneliness.
List of References


