REVIEW OF LITERATURE
CHAPTER II

REVIEW OF RELATED LITERATURE AND FORMULATION OF HYPOTHESES

With a view to seek some guidelines\(^1\) from the previous researches which could be helpful in formulating the present investigation, the results of some of the representative studies are discussed below. The review of studies has been used for the formulation of hypotheses. The present review is by no means exhaustive; it is an attempt to indicate the main trends in research and theory which have a direct or indirect bearing on the present problem.

The related studies have been reviewed under the following headings:

(A) Loneliness among adolescent’s;
(B) Age and sex differences in loneliness;
(C) Depression and loneliness;
(D) Social support and loneliness;
(E) Self-esteem and loneliness;
(F) Family environment and loneliness;
(G) Locus of Control and loneliness;
(H) Guidelines for the formulation of hypotheses of the present study.

Psychologists have long been interested in the topic of loneliness (Fromm-Reichmann, 1959; Sullivan, 1953). The lack of adequate measures and the considerable gap between theoretical conceptions of

\(^1\) What is already known, what others have attempted to find out, what problems remain to be solved, what methods of attack have been promising or disappointing, the techniques and methodology followed by earlier investigators, etc
loneliness and its operational orientations have seriously hampered research in this area. Only recently, however, loneliness has become the subject of substantial research. The flurry of research on loneliness in the last few years has been impressive. One impetus for the new interest is the realization that loneliness is a serious and widespread problem, and the study of loneliness has much potential for helping to understand traditional topics such as a need for affiliation and interpersonal attraction. Another reason is that only recently efforts have been made to develop objective scales of rating loneliness. One reason for the neglect of loneliness has been the lack of adequate measures. Recent work on scale development has produced several measures of loneliness that are reliable, valid and avoid social desirability problem (Loucks, 1980; Rubenstein & Shaver, 1980; Russell, Peplau, & Cutrona, 1980; Russell, Peplau, & Ferguson, 1978). Similarly, Solano (1980) concluded that with these advances being made in the development of loneliness measures, psychologists should be able at last to undertake a long delayed empirical study of loneliness. Shaver and Rubenstein (1980) have investigated the childhood antecedents of adult loneliness; two edited volumes have appeared (Hartog, Audy, & Cohen, 1980; Peplau & Perlman, 1982); and Peplau, Russell, & Heim (1979) have proposed an attributional theory of loneliness. The development of objective scales of rating loneliness generated momentum for the empirical study of loneliness (de Jong Gierveld, 1987; Colford, 1987; Marcoen, Goossens & Caes, 1987, Medora & Woodward, 1986, Schultz & Moore, 1986; de Jong Gierveld, 1986; Winttenberg & Reis, 1986; Borys & Perlman, 1985, Eisemann, 1984(a), 1984(b); Moore & Schultz, 1983; Peplau & Perlman, 1982; Russell, Peplau, & Cutrona, 1980; Weeks, Michela, Peplau, & Bragg, 1980). Denzin (1970) has provided a conceptual analysis of loneliness. Likewise, de Jong-Gierveld (1987) has presented a model of loneliness that incorporates characteristics of the social network, background
variables, personality characteristics, and evaluative aspects.

In the current research, loneliness has been considered a distinct, subjective state that a person can self-label and report to others (Shaver & Rubenstein, 1980). According to Wheeler, Reis, & Nezlek (1983): “Loneliness appears to be distinct psychological experience” (p.943). This state includes cognitive, emotional, behavioral, and motivational components (Ellison, 1978). The definition used in most of the recent research and used as a basis for popular UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) has emphasized the cognitive and emotional components. The cognitive aspect is the person’s conclusion that he or she has fewer or less initial social relationships than desired or expected. Furthermore, this conclusion is associated with a negative emotional tone ranging from mild discomfort to intense pain (Fromm-Reichmann, 1959). Using this definition, loneliness has been differentiated from other psychological constructs such as introversion and depression (Russell et al., 1980; Weeks, Michela, Peplau, & Bragg, 1980) as well as from sociological ones such as alienation and anomie (Solano, 1980). Seligman (1983), however, referred to loneliness as “one of the least satisfactorily conceptualized psychological phenomena” and explained the paucity of research in this area by the failure of the scientific community to recognize loneliness as a separate and unique entity.

(A) Loneliness Among Adolescents:

Adolescence has been viewed by some theorists as an artifact of culture (e.g., Mead, 1928) and by others as a phenomenon determined by psychobiological forces within the individual with “storm and stress” as the inevitable and universal consequence (e.g., Freud, 1958). Erikson (1963,1968) has come closest to integrating these divergent approaches , he regards adolescence as a time of maturational crisis but takes into account the influence of social and
biological forces. Thus while the identity crises of adolescence are postulated to be universal, its modes of resolution and implications for adult psycho-social maturity may vary from culture to culture. In attempts to clarify the impact of cultural forces on adolescent adjustment, researchers have compared groups of adolescents in different countries or geographically separated areas (Offer, Ostrov, & Howard, 1977) or have observed behaviors of special groups such as primitive tribes, making implicit comparisons with westerns adolescents (Mead, 1928). Different cultures favor different child-rearing practices, which may in turn be reflected in adolescent patterns of adjustment.

More precisely speaking, the development during adolescence has been of concern to philosophers, psychologists, sociologists and educators for centuries. Over the past two decades, considerable research has sought to identify factors associated with adolescents’ development. The literature reveals that adolescence is a particularly significant developmental period for examining loneliness.

There appears in the literature a number of theoretical statements on loneliness which specifically address loneliness in adolescents or can be applied to adolescents. These statements include discussions of various forms of loneliness, psychological, developmental and environmental/social theories of loneliness, and how humans cope with loneliness. Very few studies have dealt with the phenomenon of loneliness among adolescent’s although a number of writers have suggested that loneliness is especially felt as a painful experience during adolescence. Data from few available studies suggest that loneliness is especially felt as a painful experience during adolescence. Data from few available studies suggest that loneliness is a painful and widespread problem among adolescents. Jerisald (1963), Konopka (1964), Tanner (1973), Gaev (1976), Gordon (1976), Ostrov &
Offer (1978), Brennan & Auslander (1979), Rubenstein & Shaver (1979), Moore & Schultz (1983), Williams (1983), Medora & Woodward (1986) and Schultz & Moore (1986) indicated that the problem of loneliness in adolescence is extremely critical and deserves attention. Goswick & Jones (1982) pointed out that available evidence indicates that, as a group, adolescents are more vulnerable to loneliness than older populations.

The phenomenon of loneliness in different populations has been investigated extensively by Woodward (1967). Since 1967, fifteen research projects have been conducted under the supervision of Woodward at the Department of Human Development at the University of Nebraska-Lincoln.

The population of these studies included divorced (Zabel, 1970), housewives (Visser, 1971), never-married (Swanson, 1971), older persons (Woodward, 1971), college students (Seevers, 1972), rural high school students (Otto, 1973), low income single parents (Joern, 1973), older adults in nursing homes (Wythers, 1974), low income single adolescent mothers (Bauermeister, 1978), elderly American Indians (Luck, 1979), older urban widows (Hornung, 1980), and alcoholic subjects in rehabilitation centers (Medora, 1986).

Medora & Woodward (1986) studied loneliness among adolescent college students at a Midwestern University. The study was descriptive and aimed at investigating the extent of loneliness experienced by the late adolescent college students, the relationship of loneliness to certain variables and the differences between this and other previously studied groups. The first objective of the present study was to investigate the extent of loneliness experienced by the late adolescent college students who were enrolled in two human development courses at the University of Nebraska-Lincoln. The second objective was to assess the loneliness scores in relation to the

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2Cf. Medora & Woodward (1986)
numerous variables: sex, socioeconomic status, religiosity, number of siblings, ordinal position in the family, number of close friends, degree of happiness experienced during the past year, self-rated happiness experienced during childhood, and the subjects' self-perception of how lonely they were. The third objective was to examine mean differences in the extent of loneliness in the sample under investigation and those in previous studies conducted by Woodward and his research group.

The sample comprised of 92 white (34 males, 58 females), single, undergraduate college students enrolled in two separate human development courses offered at the University of Nebraska-Lincoln. The subjects were 18 to 23 years of age. Socio-economic status was determined according to father's occupation. The total sample was divided into four classifications: upper socio-economic status group (n=23), upper-middle (n=35), middle (n=16), and lower (n=18). With regard to religious beliefs, 44 subjects stated that they were Protestants, 28 were Catholic, and 20 were Jewish. 44 respondents indicated that they were born and raised in urban area; 48 respondents indicated that they were born and raised in a rural area.

A questionnaire was used to collect data. It consisted of two parts. Part I comprised of the background information items; and Part II consisted of the loneliness inventory constructed by Woodward (1967). The inventory contained 75 questions which asked subjects to indicate whether they were (a) almost always lonely (b) often lonely (c) sometimes lonely (d) rarely lonely or (e) never lonely, under various circumstances and conditions.

The late-adolescent subjects in this research study attained a mean loneliness score of 1.816. The highest loneliness score that could be attained was 4 and the lowest was 1. The Loneliness Questionnaire used in this study was also used by Woodward and his group to study thirteen other populations, the loneliness scores in
these thirteen studies ranged from .78 to 2.06. The adolescents were the sixth loneliest group out of thirteen previously studied groups.

The obtained mean loneliness score of 1.816 in the present study is somewhat lower than one obtained by Seever’s (1972) freshman college students (Mean=1.90). Although not significant, the difference could be attributed to the fact that the adolescent group in this study was older than those in Seever’s study. The mean loneliness scores and sizes of samples of research conducted by Woodward and his group are summarized below: (cf. Medora & Woodward, 1986).

<table>
<thead>
<tr>
<th>Population under Consideration</th>
<th>Number</th>
<th>Mean Loneliness Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income single adolescent mothers</td>
<td>31</td>
<td>2.06</td>
</tr>
<tr>
<td>(Bauermeister, 1978)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcoholic Subjects</td>
<td>152</td>
<td>1.93</td>
</tr>
<tr>
<td>Freshman College students (Seevers, 1972)</td>
<td>345</td>
<td>1.90</td>
</tr>
<tr>
<td>Low-income single parents (Joern, 1973)</td>
<td>90</td>
<td>1.89</td>
</tr>
<tr>
<td>Freshman and Senior class</td>
<td>382</td>
<td>1.89</td>
</tr>
<tr>
<td>Students in rural high schools (Otto, 1973)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescent College students (1984)</td>
<td>92</td>
<td>1.86</td>
</tr>
<tr>
<td>Undergraduate College Students (Medora &amp; Woodward, 1986)</td>
<td>92</td>
<td>1.82</td>
</tr>
<tr>
<td>Divorced Adults (Zabel, 1970)</td>
<td>60</td>
<td>1.59</td>
</tr>
<tr>
<td>Elderly American Indians (Luck, 1979)</td>
<td>64</td>
<td>1.36</td>
</tr>
<tr>
<td>Never-married young adults (Swanson, 1971)</td>
<td>103</td>
<td>1.26</td>
</tr>
<tr>
<td>House-wives (Visser, 1971)</td>
<td>102</td>
<td>1.21</td>
</tr>
<tr>
<td>Older – Urban Widows (Hornung, 1980)</td>
<td>80</td>
<td>1.03</td>
</tr>
<tr>
<td>Elderly in homes for elderly (Wythers, 1974)</td>
<td>145</td>
<td>0.83</td>
</tr>
<tr>
<td>Elderly (Woodward,1971)</td>
<td>390</td>
<td>0.78</td>
</tr>
</tbody>
</table>

The mean loneliness scores for the various populations studied ranged from .78 to 2.06. The higher score tended to center around the low income single adolescent mothers, followed closely by the
alcoholics, the freshman college students, freshman and seniors in rural high school, and adolescent college students. The lower loneliness scores are more apparent in studies focussing on the elderly i.e., the elderly had the lowest loneliness scores. These studies clearly emphasize that adolescents in comparison to older populations have higher loneliness scores.

(B) Age and Sex Differences in Loneliness

Age and sex differences in loneliness have long been a point of concern to scholars of adolescent development. But up to the present, research on both age and sex differences in adolescent loneliness failed to reveal consistent results. Rather, a whole body of equivocal results has been produced. Some authors, e.g., found the expected increase, in loneliness between ages 12 and 18 (Ostrov & Offer, 1978), whereas others failed to confirm this finding (Avery, 1982). Likewise the question of gender differences in loneliness has not been resolved.

Age Differences in Loneliness

Research on age and loneliness has produced inconsistent findings. Ostrov & Offer (1978) conducted a study of adolescent loneliness using (a) 12 samples of normal boys and girls in 2 age groups (younger and older) in the US, Australia and Ireland, (b) 2 samples (boys and girls) of disturbed adolescents in US, and (c) 2 samples of disturbed, delinquent adolescents in US. The Offer Self-image Questionnaire was administered. Analysis of responses showed that among normal American subjects the younger boys and girls both reported more loneliness than older groups. Normal American boys in the younger age group reported more loneliness than their counterparts in Australia and Ireland. Normal girls in the younger group differed little in three countries. Young normal American boys did not differ significantly from young normal American girls, nor did
the normal American boys and girls reported themselves lonelier than the delinquents, and the delinquents felt more lonelier than the normals.

Fischer & Phillips (1982) found that loneliness increases with age. "All else being equal, older people were at greater risk of isolation (p. 32). Other authors such as Rubenstein & Shaver (1982), for example, have concluded that “contrary to popular expectation, age has been negatively correlated with loneliness in every city...... surveyed” (p.217). Both children (Brennan & Auslander, 1979) and adults can experience strong feelings of loneliness. Avery (1982) conducted a study to assess the relationship between sex-role orientation and loneliness in adolescence. Two hundred and twenty five junior and senior high school students completed the Bem Sex Role Inventory, Short Form (Bem, 1981) and the UCLA Loneliness Scale (Russell et el., 1978). Results indicated no main effect for age, $F(6,224) = 0.865$ (insignificant). Moore and Schultz (1983) study provides much needed empirical data on the adolescent loneliness experience. The authors found that age did not relate to loneliness (p. 99). Various studies conducted by Woodward and his research group (Cf. Medora & Woodward, 1986; p. 401) revealed that the higher loneliness scores tended to center around the low-income single adolescent mothers, the alcoholic subjects and adolescent college students; while the lower loneliness scores were more apparent in studies focusing on elderly. de Jong-Gierveld (1987, p. 121) pointed out that age and loneliness are largely independent factors. One should view association between the two factors as being produced by intermediate variables, such as social participation (as indicated by the descriptive characteristics of social network). Clark & Anderson (1980) have expressed similar notions. They observed that "in very old age (persons over 80), those, in relatively good physical and mental
health... are just as outgoing and involved as the younger members of our samples (the 60 to 65 years olds)" (p. 276). Another study (Marcoen, Goossens, & Caes, 1987) making use of Louvain Loneliness Scale for Children and Adolescents (LLCA), a Dutch 48 item scale with 444 children and adolescents from grades 5-11 found that age effects did emerge on all scales.

**Sex Differences in Loneliness**

Research focusing on sex differences in loneliness at adolescence has been limited. Most studies of sex differences in loneliness have examined only quantitative differences in loneliness. Quantitative differences refer to sex differences in the magnitude of loneliness on various indices. Few studies have examined sex differences in the correlates of loneliness.

Several studies using somewhat different indices of loneliness, have addressed the issue of quantitative sex differences in loneliness among college students. Excellent reviews of sex differences in loneliness experience of college students have been given by Borys & Perlman (1985), and Schultz & Moore (1986).

With regard to studies using the UCLA scale, Borys & Perlman (1986) after reviewing 28 studies emphasized that only a few (4 of 28) showed a statistically significant gender affect. In all of these cases, however, males had higher loneliness scores. A number of studies, using various versions of the UCLA Loneliness Scale, reported no gender differences (Berg & Peplau, 1982(R); Jones, Hobbs, & Hockenbury, 1982(0); Check & Busch, 1981(R) ; Hojat, 1981(R); Jones, Freeman, & Goswick, 1981(0); Maroldo,1981(0);Mc Cormack & Kahn, 1980 (R) Perlman, Gerson, & Spinner, 1978 (OS); Russell, Peplau, & Ferguson, 1978 (O).
A study by Solano (1980) compared UCLA Loneliness Scale and the Belcher Extended Loneliness Scale. 258 undergraduate subjects (151 males and 107 females) at Wake Forest University participated. Results indicated that males were significantly lonelier than females on several indices of loneliness. However, on UCLA Loneliness Scale (0), the difference was not significant (Males: 40.6, Females: 38.7). Also, the analyses showed that both scales were highly internally consistent and both scales produced scores which were significantly correlated with self-reported loneliness. In comparison with the multidimensional Belcher, the unidimensional UCLA Scale specifically identified loneliness due to a lack of social interaction. The author concluded that with these advances being made in the development of loneliness measures, psychologists should be able at last to undertake a long delayed empirical study of loneliness. Booth (1983) found men (Mean: 41.54) to be significantly more lonely than women (Mean: 36.27). The range of loneliness scores, however, was larger for women than for men.

Schultz and Moore (1986) have emphasized that the revised UCLA Loneliness Scale has certain psychometric advantages over its predecessor which may augment its sensitivity to gender differences. On the revised UCLA Loneliness Scale, Russell, Peplau, & Cutrona (1980); Moore, Schultz, & Ellenberg (1982); Wheeler, Reis, & Nezlek, (1983); and Dufton (1984) found males to be lonelier than females. Wheeler, Reis, & Nezlek (1983) found the mean loneliness score for 53 female and 43 male university students to be 41.7 and 45.8 (F :1, 94=3.0, p <.103). Russell et al. (1980) also found males to be more lonely (p< .001) in their study 1 but suspected a sampling bias because sex differences are not usually found. They considered their

\[\text{A 1-5 response format was used for the UCLA Scale (revised) rather than the original 1-4 format for comparability with the other scales. Thus, the loneliness means are correspondingly higher than in previous studies.}\]
data from study 2, showing no sex differences to be normative. Wheeler et al. (1983) concluded that the marginal sex difference is not inconsistent with previous results.

Five excellent publications with respect to sex difference in the loneliness experience of adolescents deserve mention.

Solano, Batten, & Parish (1982) examined loneliness and patterns of self-disclosure. 37 male and 38 female undergraduates rated themselves on the UCLA Loneliness Scale (original) and the Jourard Self-Disclosure Questionnaire. The first analysis concerned sex differences on the UCLA Loneliness Scale. The mean loneliness score was 42.7 for males and 38.4 for females. The difference by sex approached significance, t (73) = 1.81, p <.07.

The purpose of another study (Williams, 1983) was to investigate the phenomenon of loneliness in delinquent adolescents with regard to types of delinquency offenses committed, demographic characteristics, and personality characteristics in the areas of interpersonal needs for inclusion, control and affection. The demographic variables examined were age, sex, race, family rank or birth order, family income level, religion, and geographic locale. A sample of 98 adolescents ranging in age from 12 to 18 was obtained from juvenile detention facilities in three metropolitan areas in the United States. The types of delinquency offenses were categorized as burglary, runaway, drugs, assault and incorrigible.

Subjects were asked to complete the Loneliness Questionnaire as a self-reported measure of loneliness. The Loneliness Questionnaire consisted of 14 items and utilized a Likert-type scale for responses to items. The score possibilities ranged from 14 to 84, with higher scores equated with high amounts of loneliness and lower scores with low amounts of loneliness. A Spearman Rank-correlation coefficient of .87 was found between Loneliness Questionnaire and original UCLA Loneliness Scale.
Loneliness Scale when administered to 10 pilot study subjects ranging in age from 10 to 18 years. This was done to test the concurrent validity of the Loneliness Questionnaire. Subjects also completed the Fundamental Interpersonal Relations Orientation - Behavior (FIRO-B) Questionnaire, which measured interpersonal needs for inclusion, control, and affection. The results revealed no significant differences in loneliness with regard to any of the demographic variables when the effect of each (e.g., age, sex, income, birth order, religion) was considered alone. Sex and age in relationship to interpersonal needs for control, however, were associated with loneliness; for example, males with medium needs to express control over others had higher mean scores on loneliness than the females with medium needs to express control over others.

Borys and Perlman (1985, p. 71) emphasized that men tend to score higher on the UCLA scale but women are more apt to label themselves as lonely. The later conclusion though not of immediate interest in the present study is in accord with Robert Weiss (1973) who in his classic book presented survey evidence showing that women are more apt to be lonely than men. The authors concluded (p. 63) that statistically significant sex differences are not usually found with the UCLA scale, but, when they are found, males typically have higher loneliness scores; in terms of self-labeling, women more frequently than men admit being lonely.

Another study (Schultz & Moore, 1986) examined sex differences among college students in the quantitative and qualitative aspects of loneliness. The Revised UCLA Loneliness Scale (Russell et al., 1980), Self-Esteem Scale (Rosenberg 1965), the Spielberger State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Cushene, 1980), the Zung Depression Scale (Zung, 1965), an eight-item Social Risk-taking Scale (Sermat, 1980), seven-point Self-rating Scales of likeability,
happiness, and life satisfaction, and a seven-level rating scale of loneliness frequency ranging from an average of less than once per month to an average of more than 20 times per month were administered to 53 female and 59 male undergraduates attending a large Southeastern university and recruited from two large introductory psychology classes.

Results indicated that males ($M = 38.13$, $SD = 10.16$) were lonelier than females ($M = 33.22$, $SD = 7.12$) on the Revised UCLA Loneliness Scale. Differences between males ($M = 3.33$, $SD = 1.24$) and females ($M = 3.13$, $SD = .88$) for frequency of loneliness expressed in bouts per month, however, did not attain statistical significance. The authors concluded that the results for the more established UCLA Loneliness Scale give further credence to the view that among college students, males tend to be lonelier than females. These results provide further support for the position that among college students males are lonelier than females.

Another study (Medora & Woodward, 1986) aimed at investigating the extent of loneliness experienced by the late adolescent undergraduate college students, who were single (18 to 23 years of age), the relationship of loneliness to certain variables, and the differences between this and other groups studied by Woodward and his research group. The sample comprised 92 white (34 males, 58 females), single, undergraduate college students enrolled in two separate human development courses offered at the University of Nebraska-Lincoln. To test 10 hypotheses, a questionnaire was used to collect the data. It consisted of two parts: Part I comprised of background information items; and Part II consisted of the Loneliness Inventory (Woodward, 1967). Analysis of hypothesis I indicated that females had a higher mean loneliness score than males. The mean female loneliness score was 1.89; the mean for males was 1.55. These
results are supported by the findings from various studies conducted by Woodward and his research group at the Department of Human Development and the Family at the University of Nebraska-Lincoln (Woodward, 1971; Seevers, 1972; Otto, 1973; Gladbach, 1976; Medora, 1983). Another study (Marcoen, Goossens, & Caes, 1987) making use of Louvain Loneliness Scale for Children and Adolescents (LLCA), a Dutch 48 item scale, with 444 children and adolescents from grades 5-11 found that no sex differences emerged for either scale (parental relations, loneliness in peer relations, affinity for aloneness; and positively experienced aloneness or aversion to aloneness). The authors concluded that the expectations on age and sex differences in adolescent loneliness have not been confirmed.

The above review of studies does not settle the question of quantitative sex differences in loneliness. The conclusion concerning sex differences appear to be measure related. In those studies which made use of UCLA scale, statistically significant sex differences are not usually found, but, when they are found, males typically have higher loneliness scores. Medora & Woodward (1986) making use of Loneliness Inventory (Woodward, 1967) found adolescent females to be more lonely than adolescent males.

A few studies also provide some evidence of sex differences among college students in the qualitative aspects of loneliness, that is, differences in the correlates of loneliness. Several studies suggest that there are sex differences in the generalizability of loneliness, in contributing factors to loneliness, and in the psychological consequences of loneliness. Jones, Freeman, & Goswick (1981) found gender differences in the experience and effects of loneliness, with lonely men being particularly likely to perceive themselves negatively.

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1Medora & Woodward (1986)
Corty & Young (1981) found, for male undergraduates only, that loneliness and the amount of social contact were significantly correlated. Schill, Troves, & Ramaniah (1980) reported a gender by locus of control interaction with male external locus of control subjects being least affected, and male internal locus of control subjects being most affected by loneliness. Berg & Peplau (1982) found loneliness to be significantly and inversely related to self-disclosure for women, but not for men. Two studies, however, failed to find overall gender differences among college students in loneliness correlates. Goswick & Jones (1981) found no evidence that the relationship between UCLA Loneliness and self-concept was differentially affected by gender. Moreover, Maroldo (1981) reported that gender did not interact with correlations between the UCLA Loneliness Scale and the Stanford Shyness Survey (Cf. Schultz & Moore, 1986).

Berg & Peplau (1982) found evidence of larger negative correlations between loneliness indices and self-disclosure indices among college women than among college men. These results appear incongruent with Schultz & Moore’s (1986) findings of uniformly higher loneliness variable correlations among males than among females. In Schultz & Moore’s (1986) study, however, there were no measures of general self-disclosure tendencies and the key measure of loneliness differed from that used by Berg & Peplau (1982). Thus, this cross-study contrast merely reveals the specificity of personal skills that tend to vary across gender and moderate the loneliness experience. An important point, however, is that both lines of research show that gender and related personal and emotional variables can be important moderating factors in the loneliness experience.
(C) Depression and loneliness

The flurry of research on loneliness in the last few years has been impressive. For more than half a century, researchers have been interested in studying the correlates and consequences of loneliness (Heinrich & Gullone, 2006; Weiss, 1973). Although loneliness – the painful experience of being alone and of not fulfilling basic interpersonal and social needs (e.g., intimacy, belonging) is a universal human experience, it has been found that, when chronic and intense, it is likely to go hand in hand with maladjustment during childhood and adolescence (Heinrich & Gullone, 2006; Rotenberg & Hymel, 1999).

Researchers are divided on the etiological factors that determine loneliness. Some consider the phenomenological experience of loneliness to be the function of one's social interaction (Brennan, 1982; Russell, Peplau, & Cutrona, 1980). Studies have shown that individuals reporting feelings of loneliness tend to spend more time alone and to participate in fewer social activities than non lonely individual. Other results suggest that lonely and non lonely people differ in terms of quality, rather than quantity of social interactions (Cutrona, 1981; Jones, 1981; Chelena, Sultan, & Williams, 1980; McCormack & Kahn, 1980). Associations between loneliness and poorer social interaction quality have also been demonstrated (Hawkley et al., 2003, Segrin, 1998; Rotenberg, 1994; Wheeler et al., 1983, Jones et al., 1982). For example, Hawkley et al. (2003) found loneliness to be related to less positive and more negative feelings during social interactions. More specifically, loneliness was significantly correlated with less intimacy, comfort, and understanding, and more caution, distrust, and conflict. Importantly, Hawkley et al. also demonstrated that these effects of loneliness on social interaction quality were present after controlling for depressed
affect and neuroticism. Lonely and nonlonely people have been found to not differ significantly in their activities, or the amount of time spent with other people (Hawkley, Burleson, Berntson, & Cacioppo, 2003; Wheeler, Reis, & Nezlek, 1983). Therefore, social contact does not necessarily buffer one against loneliness because the experience of loneliness seems to have more to do with an individual's perceptions of the quality of social interactions (Wheeler et al., 1983).

There are two factors that foster loneliness: situational factors and characterological factors (Weiss, 1973). The situational factors that foster loneliness are life situations, such as divorce, separation, the social situations of hospitalized individuals, acute or chronically ill children or family members, and those who have recently moved into a new neighbourhood or school system. Situational factors may also include coping with recent losses of significant attachment figures (Weiss, 1982). The characterological factors that foster loneliness are personality traits such as introversion, shyness, and low self-esteem (Weiss, 1982). Numerous studies have indicated that the social behaviour of lonely individuals is marked by inhibited sociability and ineffectiveness. For example, lonely people are typically shy (Qualter & Munn, 2002; Cacioppo et al., 2000; Jackson, Soderlind, & Weiss, 2000; Dill & Anderson, 1999; Anderson & Harvey, 1988; Hojat, 1982a; Cheek & Busch, 1981), introverted (Kalliopuska & Laitinen, 1991; Cutrona, 1982; Hojat, 1982a; Jones et al., 1981), less affiliative/sociable (Cacioppo et al., 2000; Cutrona, 1982), and less willing to take social risks (Moore & Schultz, 1983; Hojat, 1982a; Jones et al., 1981). Lonely people also seem to be less assertive than nonlonely people (Bell & Daly, 1985; Sloan & Solano, 1984; Cutrona, 1982; Hojat, 1982a; Jones et al., 1981; Sermat, 1980). However, Cacioppo et al. (2000) have revealed that despite feeling more anxious and less comfortable about being assertive, lonely individuals do not necessarily differ from the nonlonely in their reports of the likelihood of engaging
in assertive behaviour. Nonetheless, using general social skill indexes, loneliness has also been found to be associated with social skill deficits (Inderbitzen-Pisaruk et al., 1992; Solano & Koester, 1989; Jones et al., 1981; Russell et al., 1980). For example, Horowitz and French (1979) have shown that the lonely often have difficulties with introducing themselves, being friendly, making friends, taking part in groups, enjoying parties, and in surrendering control. Furthermore, lonely people may display inappropriate patterns of self-disclosure. For example, loneliness has been linked to diminished self-reported self-disclosure (Sippola & Bukowski, 1999; Davis & Franzoi, 1986; Bell & Daly, 1985; Franzoi & Davis, 1985).

Personality research has shown that loneliness is associated with depressive symptoms, shyness, neuroticism, and low self-esteem, optimism, conscientiousness, and agreeableness (Marangoni & Ickes, 1989). Early studies suggested that behavioural and personality correlates of loneliness tend to be true only for chronically lonely individuals, not for “state-lonely” individuals whose loneliness is adequately explained by potent situational factors (e.g., widowhood, geographical relocation) (reviewed in Marangoni & Ickes, 1989). More recently, however, loneliness has been observed to operate like a trait even when induced in an acute fashion. Under hypnotic suggestion, young adults were made to feel lonely and then socially connected (or vice versa, in a counterbalanced order) by recalling a time when they felt rejected and like they didn’t belong, or accepted and like they belonged. Measures of affect, social factors, and even personality traits mirrored and tracked the acute changes in loneliness induced by the hypnotic manipulation. Relative to their baseline levels of loneliness, individuals made to feel lonely reported significantly more negative mood and lower self-esteem, optimism, social skills, social support, sociability, extraversion, and agreeableness, and greater shyness, anxiety, anger, fear of negative evaluation, and neuroticism (Cacioppo,
Hawkley, et al., 2006). These results place loneliness as a potential causal factor in characteristics such as self-esteem, depressive symptomatology, shyness and so forth.

Although there have been a number of different models and measures of loneliness, most researchers agree that loneliness represents a distressing situation in which one has limited social relationships and holds the perception of being isolated from others (Peplau & Perlman, 1982b). **Consistent with this definition, studies have shown that loneliness is strongly associated with psychological maladjustment, including depressive symptoms (Heinrich & Gullone, 2006).**

Researchers in the recent past have also shown that depression and loneliness are both characteristic problems of the adolescent period. Moreover, contrary to popular belief and depictions, loneliness more frequently occurs during earlier developmental periods compared to old age (Perlman & Landolt, 1999; Peplau, Bikson, Rook, & Goodchilds, 1982). Perlman and Landolt (1999) concluded that the prevalence of loneliness appears to peak during adolescence, drop between young adulthood and middle age, and then perhaps rise slightly in old age. Joiner (1997), Upmanyu, Upmanyu, & Dhingra (1993), Brennan (1982); and Rubeinstein & Shaver (1980) have also found evidence for the fact that loneliness and depression are both characteristic problems of adolescent period.

**Loneliness is sometimes viewed as a subtype of depression that is more restricted to interpersonal problems. Loneliness is considered primarily a social problem, whereas depression can be non-social or a mixture of social and non-social problems.** Although loneliness is a much circumscribed phenomenon than depression (a clinical disorder characterised by disturbances in affect,
cognition, motivation and physical functioning), the two concepts referring to loneliness and depression share a number of common features. According to Peplau & Perlman (1982), the three essential characteristics of loneliness are (1) that it results from deficiencies in social relationships (2) that it represents a subjective experience (that is, it is not necessarily synonymous with social isolation as one can be alone without feeling lonely or lonely when in a group of people), and (3) that it is unpleasant and emotionally distressing. Features two and three share obvious similarities with depression. Not only is depression unpleasant and uncomfortable but also is often related to the subjective, rather than objective, evaluation of one’s circumstances. Although deficiencies in social relationships are not included in the definition of depression, the current conceptualisations of the aetiology and maintenance of depression have placed a strong emphasis on the role of social skills deficit and dysfunctional interpersonal behaviours. Loneliness and depression may seek to share some common causes such as poor social skills, shyness and a maladaptive attributional style (Dill and Anderson, 1999). Yet despite the overlap in common features of depression and loneliness (Koenig & Abrams, 1999), in distinguishing between the two, it has been noted that whereas loneliness involves appraisals across social domains of one’s life, depression is a more global and heterogeneous condition involving appraisals across multiple domains (Boivin et al., 1995).

Loneliness, described by Weiss (1973) as a gnawing chronic disease without redeeming features, has long been recognized as a strong correlate of depressive symptoms (Cacioppo, Hawkley, Ernst, Burleson, Novriani, & Spiegel, 2006; Segrin, 1998; Duck, Pond, & Leathan, 1994; Yang & Clum, 1994; Shaver & Brennan, 1991; Mullins & Dugan, 1990; Levin & Stokes, 1986; Anderson &
Arnoult, 1985). Numerous studies have demonstrated substantially sized correlations (coefficients ranging from .40s to .60s) between loneliness and depression in adolescents (Chang, Sanna, & Bodem, 2008; Mahon, Yarcheski, Yarcheski, 2001; Koenig & Abrams, 1999; Koenig, Isaacs, & Schwartz, 1994; Kirkpatrick - Smith, Rich, Bonner, & Jams, 1991; Moore & Schultz, 1983), including those studies using high school students e.g., \( r = .66 \) between Zung Depression Scale and the Revised UCLA Loneliness Scale (Moore & Schultz, 1983).

Loneliness is generally considered to have a significant influence on mental health and well-being (e.g., Blai, 1989; Page, Wyre, & Cole, 1986), including neuroticism, self-esteem, depression, anxiety, psychosomatic concerns, aggression, and paranoia. One explanation for this observation is the possibility that both loneliness and general psychopathology are associated with interpersonal difficulties that result in a lack of rewarding social relationships.

Dill and Anderson (1999), for instance, have posited that the threat to or loss of a cherished interpersonal relationship or the inability to establish a satisfying interpersonal relationship may elevate loneliness and subsequently lead to depressive symptoms. Allen and Badcock (2003), however, have argued that depressed states have evolved to minimize risk in social interactions in which an individual perceives their social value is low relative to their social burden. According to this formulation, depressive symptoms may cause people to reduce their social activities or impair the quality of these activities, thereby elevating the person’s feelings of loneliness. It is also possible that reciprocal determinism between loneliness and depressive symptoms exists. The social and emotional strain of prolonged loneliness could contribute to the development of depression (Brage & Meredith, 1994). Given the interpersonal
problems often experienced by people with depression, it is reasonable to assume that loneliness may be the ultimate consequence of their relational distress. Depression has a direct effect on loneliness through poor relational well-being and negative cognitions and perceptions. The interactional theory posits that depression leads to deterioration of close relationships and further predicts that deterioration contributes to loneliness. Depression can also contribute to loneliness in a way that depressed people repeatedly seek reassurance from their friends and family. After a while such constant reassurance seeking from their friends and family may become so annoying that it harms the positive relationships that initially existed. Individuals with high scores on loneliness may become distressed by the perception that they remain interpersonally isolated. This, in turn, may lead those individuals to begin and engage in a self-critical ruminative process that leads to the development and maintenance of depression and other negative affective conditions (Nolen-Hoeksema, 2000).

Moore & Schultz (1983), conducted a research to determine how adolescents react to, interpret, and cope with their loneliness. Subjects were 45 male and 54 female adolescents ranging in age from 14 to 19 years (M=17, S.D.=0.98) recruited from a local high school.

The following measures were given to each subject in one of four randomly assigned orders: 1) The UCLA Loneliness Scale (Russell et al., 1980); (2) the Self-esteem Scale (Rosenberg et al., 1965); (3) the State - Trait Anxiety Inventory (Speilberger et al., 1980) (4) Locus of control measure (Levenson, 1974); (5) a measure of self-consciousness (Fenigstein et al., 1975); (6) the Zung Depression Scale (Zung, 1965); (7) Self-rating scales of attractiveness, likability, happiness and life satisfaction; (8) eight items designed to measure social risk taking (Sermat, 1980); and (9) measures developed by the authors from a pilot
study to assess the frequency, duration, characteristics, and perceived causes of loneliness, as well as coping strategies and reactions to loneliness.

The results revealed that lonelier the adolescents, the more likely he or she was to be anxious, depressed, show an external locus of control, high levels of public self-consciousness and social anxiety, and exhibit low levels of happiness and life satisfaction. In addition, loneliness was associated with a reluctance to take social risks. These characteristics serve to put the lonely adolescent in a vulnerable social environment. As Peplau & Perlman (1979) point out, the likelihood of loneliness is increased by personal characteristics that undermine either the initiation or maintenance of relationships (e.g., low levels of self-disclosure or shyness).

Conoley and Carber (1985) examined the effects of reframing in decreasing loneliness and depression in college students. Reframing was compared with a treatment consisting of self-control directives and a waiting list control. Subjects included 57 depressed and lonely college students who were randomly assigned to one of three groups. The treatment groups met for two weekly half-hour interviews. Interviewer responses in the reframing group focused on ways to experience loneliness more positively, whereas self-control responses involved encouraging subjects to overcome loneliness. All the three groups were administered a loneliness scale, depression inventory, and controllability measure at pre-treatment, post-treatment, and 2-weekly follow-up. Results indicated that the subjects in the reframing groups experienced a more significant reduction in depression than in the self-control or control groups. All the subjects became less lonely over time, but no treatment was more effective than another in reducing loneliness.
Hsu, Hailey & Range (1986) examined the relation between loneliness and depression and the distinction between emotional and social loneliness by administering the UCLA Loneliness Scale, the Belchar Extended Loneliness Scale (BELS), the Beck Depression Inventory, and self-report questions about social and emotional loneliness to the four groups: (a) foreign (Chinese-descent) students in American Universities, and (b) American students in Taiwanese Universities, and (C) American students in American universities, and (d) depressed American clients. Depressed clients reported not only more depression but also more overall loneliness than did any of the other groups; they also were more likely to report emotional loneliness or both emotional and social loneliness than did any of the other groups. Foreign students, in contrast, reported more social loneliness than did Taiwanese students. Results substantiate the view that loneliness is not a unitary concept and suggest that the UCLA Loneliness Scale and the Belcher Extended Loneliness Scale emphasize emotional rather than social loneliness and emotional loneliness is a greater component of depression than social loneliness.

Jackson and Cochran (1990) examined associations between psychological symptoms assessed by the symptoms check list – 90 (SCL - 90; Derrogatis, Lipman & Covi, 1973) and loneliness measured by the UCLA –R loneliness scale (Russell, Peplau, & Cutrona, 1980), in college students. Participants were 147 women and 146 men from working class backgrounds ranging in the age of 17 to 26 years old (median age = 19 years) attending a large predominantly undergraduate teaching University in South California. Most were freshman as sophomores. There was no significant difference between men and women in age or years in school.

Overall, self reported psychiatric symptoms were strongly associated with perceptions of loneliness when zero order correlations
were evaluated. Given the number of correlations being evaluated, a significant level of .01 was used for this and all further analysis.

When relationship between psychopathology and loneliness were examined separately for men and women, results indicated similar strong overall relationships between symptomatology and loneliness. Statistical comparisons of the strengths of associations between responses given by men and women failed to reveal significant sex differences. In addition, men (M=37.9, S.D. =10.1) and women (M=36.4, S.D=8.9) also reported equivalent levels of loneliness on the ULCA-R loneliness scale, t (290)=1.27, p>0.10. The authors concluded: results of the current study support previous findings that low self esteem and depression are associated with the experience of loneliness in young adults (Jones et al., 1980; Young, 1982; Weeks et al., 1980). In contrast, other psychiatric symptoms, including general and phobic anxiety, obsessive – compulsiveness, hostility, and paranoia did not appear to be related to loneliness when confounding covariance of general psychological distress was removed.

A further conundrum regarding the relationship between depression and loneliness is the pattern of their occurrence when examined by gender (Koenig, Isaacs, & Schwartz, 1994). Among adolescents, boys experience the same or greater loneliness relative to girls; depression and loneliness are highly correlated for both boys and girls; but girls experience greater levels of depression than boys. In order to examine this more closely, Koenig et al. (1994) administered scales of loneliness (UCLA Loneliness Scale) and depression (Beck Depression Inventory) (Beck et al., 1961) to 397 high school males and females and found that although the level of depressive symptoms was higher in girls than in boys, the association between loneliness and depressive symptoms was comparatively stronger in boys than girls. This gender difference is interesting in light of the higher levels of depressive symptoms in women than in
men in prior studies (e.g., Federal Interagency Forum on Aging-Related Statistics, 2004; Heikkinen & Kauppinen, 2004). These results suggest that the causes of depressive symptoms, or the weighting of the causes of depressive symptoms, differ for men and women, with loneliness a more frequent or powerful cause of depressive symptoms in men than in women. Consistent with this suggestion, both cross-sectional and longitudinal studies confirm that both men and women show increased depression following divorce or bereavement, but men appear to show more deleterious effects of bereavement or divorce than women (Lucas, Clark, Georgellis, & Diener, 2003; Stroebe, Stroebe, & Schut, 2001). Moreover, this longitudinal study (Koenig et al., 1994) indicated a directional relationship, from T1 (Time1) loneliness to T2 depression (when T1 depression was controlled for).

Ruchkin, Eiseman, & Haglof (1999) conducted a research to examine the interrelations between loneliness, hopelessness, self-esteem and personality in a sample of delinquent adolescents (n = 187) and controls (n = 103). The age of the delinquent adolescents group ranged from 15 to 18 years (mean age = 16.6, SD = 0.8) and the age of the control group ranged from 14 to 18 years (mean age = 15.0, SD = 0.9).

The following measures were given to each subject in both the groups:

1. The Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980)
2. Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974)
3. Self-Esteem Scale (Rosenberg, 1965)
4. Temperament and Character Inventory (Clonenger et al, 1994)
5. Social Desirability Scale (Crowne & Marlowe, 1960).
Results revealed that the scales of loneliness and hopelessness were highly interrelated both among delinquents \((r = .39; \ p < .000)\) and controls \((r = .55; \ p < .000)\). Self-esteem was neither related with loneliness nor with hopelessness in the delinquent group, but in the control group it was negatively related with both loneliness \((r = -.44; \ p < .000)\) and hopelessness \((r = -.52; \ p < .000)\). Age was not related to any of the other variables. In contrast to previous findings (Howard, 1981), no difference was found between delinquents and controls in the levels of hopelessness and loneliness (which often have been considered as core characteristics of depression). Furthermore, in previous research loneliness and hopelessness were shown to be related with such personality traits as shyness and introversion (Kalliopuska & Laitinen, 1991), sensitivity (Kashani, Nair, Rao, Nair, & Reid, 1996), and submissive qualities (Mehrabian & Stefl, 1995) and the results of the correlations between loneliness and hopelessness in the present study correspond with the aforementioned personality descriptions and further expand them.

After controlling for initial symptoms, loneliness during mid-adolescence has been shown to predict an increase in depression two and half years later (Koenig & Abrams, 1999). The association between loneliness and depression has been found to remain significant even after controlling for social support (e.g., Hagerty & Williams, 1999; Russell, Kao, & Cutrona, 1987; unpublished paper cited in Shaver & Brennan, 1991). Hagerty & Williams (1999) reported a significant association between loneliness and depressive symptoms in sample of undergraduates and patients with major depressive disorder after controlling for social support, social conflict and sense of belonging.

Kim (2001) examined the sex differences in reports of social support (network size and satisfaction), loneliness, and depression
among Korean college students and examined whether measures of
social support and loneliness predicted depression scores. The sample
were 452 college students enrolled in four universities in Korea. The
women reported a larger social support network size and being less
satisfied with their support than the men. Women reported higher
scores on the Revised UCLA Loneliness Scale and the Beck
Depression Inventory than men. Social support satisfaction
scores and network size on the Social Support Questionnaire-6
and scores on the Loneliness Scale predicted scores on
depression in both the groups. Loneliness was the largest
predictor of depression for either sex. The amount of variance in
Depression accounted for by loneliness was 35% for women and
24% for men.

Cacioppo, Hughes, Waite, Hawkley, & Thisted (2006) conducted
a longitudinal research to examine the extent to which loneliness is a
unique risk factor for depressive symptoms in 2 population based
studies of middle aged to older adults, and the possible casual
influences between loneliness and depressive symptoms were
longitudinally examined. In study 1 higher level of loneliness were
associated with more depressive symptoms, net of the effects of age,
gender, ethnicity, education, income, marital status, social support,
and perceived stress. In Study 2, detailed measures of loneliness,
social support, perceived stress, hostility, and demographic
characteristics were collected over a 3-year period from a population-
based sample of adults ages 50–67 years from Cook County, Illinois.
Loneliness was again associated with more depressive symptoms,
net of demographic covariates, marital status, social support,
hostility, and perceived stress. Latent variable growth models
revealed reciprocal influences over time between loneliness and
depressive symptomatology. These data suggest that loneliness
and depressive symptomatology can act in a synergistic effect to diminish well-being in middle-aged and older adults.

Mounts, Valentiner, Anderson, & Boswell (2006) tested a path model in an ethnically diverse sample of college students in which the relation between shyness, sociability, and parental support for college transition and adolescents social relationships were examined. Subjects were three hundred and fifty college freshman recruited from a introductory level classes at a large Midwestern university. Eighty five percent of the participants were 18 year old and remaining 15 % were 19 year old. Sixty four percent of the sample was female and 36% was male. The sample was 19% African American, 5% Asian, 8& Latino, 1% Middle Eastern,1% Pacific Islander, 61% White, and 5% Multi racial.

The following measures were given to each subject in groups of 10 to 25 students per group.

(1) Shyness scale (Cheek & Buss, 1981), (2) Sociability scale (Check & Buss, 1981), (3) Revised UCLA loneliness scale (Russell etal.,1980), (4) Friendship Questionnaire (Mendelson and Aboud,1999), (5) Beck Anxiety Inventory (Beck etal.,1988); and (6) Beck Depression Inventory (Beck etal.,1961).

Results revealed that high levels of shyness, low levels of sociability, and low levels of parental support were related to high levels of loneliness. Multiple regression analysis suggested that loneliness but not the friendship quality were related to adolescent’s anxiety and depression. In addition there was a significant relation between loneliness and depression such that higher levels of loneliness were related to higher levels of depression.

Channa, Sang, & Bodem (2008) proposed and tested an integrative model involving perfectionism (Hewitt & Flett, 1991) and
loneliness as predictors of depressive and anxious symptoms in 383 college students (117 men & 266 women). For this sample, ages ranged from 18 to 30 years, with a mean age of 19.65 \((SD = 1.25)\) years. The following measures were given to each subject: (1) The Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991) (2) Revised UCLA Loneliness Scale (R-UCLA; Russell, Peplau, & Cutrona, 1980). (3) Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). (4) Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988).

As expected, loneliness was found to be a stronger predictor of depressive symptoms than anxious symptoms (Russell et al., 1980). The association between R-UCLA and BDI scores \((r = .59)\) was significantly greater than the association between R-UCLA and BAI scores \((r = .36)\), \(t(380) = 6.76, p < .01\). Loneliness was found to account for a significant 28% to 34% of additional variance in depressive symptoms, and for a significant 8% to 13% of additional variance in anxious symptoms. Results of a multivariate analysis of variance indicated that there were no significant multivariate sex differences between men and women on the present study measures; therefore, all analyses were based on collapsing across sex. Given the present findings, it appears that although different dimensions of perfectionism may involve significant positive associations with depressive and anxious symptoms, the presence (vs. absence) of loneliness functions to strengthen these maladaptive associations.

(D) Social Support and loneliness

Social support has been defined as those social interactions or relationships that provide individuals with actual assistance or that embed individuals within a social system believed to provide love, care or sense of attachment to a valued social group or dyad.
Social support is broadly defined as living with companionship, social contacts, participating in a society and feeling valued and supported member of a friendship or group or community (Heinrich & Gullone, 2006; Victor, Scambler, Bond, & Bowling, 2000).

Social support is a multidimensional construct that can be conceptualized in various ways. For example, social support can be given and received (Bertera, 1997), and it can be formal or informal (Antonucci, Ajrouch, & Janevic, 1999). Social support can be enacted, as in the cases where what is measured is what people actually get, or support can be perceived, as in situations where personal perceptions are measured (Finch, 1998; Buunk & Hoorens, 1992).

Social support can be characterized into two broad types: structural support and functional support. The former constitutes the quantity of support and includes properties such as size, range and density of social network. The latter refers to quality of social support and includes instrumental (tangible), emotional and informational support (Berkman et al., 2000).

House (1981) integrated the ideas of previous social support researches by distinguishing four basic types of support: emotional support (actions that convey esteem), appraisal support (feedback about one’s behaviour or views), informational support (advice or information that facilitates problem solving), and instrumental support (tangible assistance). These or closely related distinction have gained widespread acceptance among social support researchers (Barrera & Ainlay, 1983; Cohen & Hoberman, 1983; Leavy, 1983). Emotional support includes attachment, reassurance, and being able to rely on and confide in a person. Tangible support involves financial aid, material resources, and needed services (Schaefer, Coyne, & Lazarus, 1981). Social network is the set of relationships of a
particular person or a set of linkages among a set of persons.

Social support plays an important role in enhancing and maintaining physical as well as mental health (Dalgard, Bjork, & Tambs, 1995; Phillips & Murrell, 1994). Over the past 10-15 years, there has been virtual explosion of research demonstrating the role of social support in psychopathology. The breadth and consistency of the research on the beneficial effects of social support are impressive. Ranging from animal laboratory studies to large scale epidemiologic investigations of psychopathology, diseases and mortality, the majority of the work documents that social support concepts, involving ties and transactions between individuals over time, represent a fundamental component of stress and disorder theory. Either through direct protective effects or by buffering the adverse consequences of the life stresses, social support is associated with a decreased likelihood of development disorders. The presence of supportive people in one’s life enhances both physical and emotional well-being. Supportive relationships can help individuals meet basic social needs by providing socio-emotional aid such as acceptance, affection, emotional understanding, empathy, and esteem. Positive social support is also influential in maintaining health and preventing or ameliorating illness (Glass et al., 2000). There is accumulating evidence that supportive personal relationships are associated with greater psychological adjustment (e.g. Cramer, 1991, Henderson & Brown, 1988). There is substantive evidence for a small negative association between psychological distress and variously defined indices of social support (e.g Henderson & Brown, 1988; Biegel, McCardle, & Mendelson, 1985; Cohen & Syme, 1985). Although this relationship is usually taken to indicate that social support reduces psychological distresses, it is equally compatible with the view that psychological distresses decrease social support, or that the
relationship between these two variables is either reciprocal or spurious. Because of the problem of realistically manipulating social support, most of the researches in this area is of a non experimental nature. Consequently, the causal nature of the observed association is difficult to ascertain.

The relationship between social support and loneliness has been studied extensively. Most definitions of loneliness emphasise perceived deficits in social relationships that provide opportunities for emotional intimacy and companionship. These definitions imply that the characteristics of the social network of lonely and non lonely people may differ.

Russell, Peplau, & Cutrona (1980) discovered that loneliness correlated with college student’s reports of the number of close friends. The authors found that loneliness correlated with college students’ self-reports of time spent alone each day, number of times dinner was taken alone, number of week and evenings spent alone, and number of close friends. Cutrona (1982) found a relation of loneliness to number of contacts with friends among college students, although the author also found that ratings of satisfaction with contacts explained a greater proportion of variance of loneliness scores than did objective measures of frequency. The amount of time spent with females was negatively related to loneliness for both males and females in a study by Wheeler, Reis, & Nezlek (1983). Jones (1981) did not find a significant difference in the amount of social contact between lonely and non lonely subjects; he did, however, find evidence relating loneliness to diversity of social contacts. The interactions of lonely subjects occurred with more different people. Cutrona (1982) identified a relation of loneliness to the number of confidents in a respondent’s social network and from the density or interconnectedness among members of the network. People with
denser networks reported themselves to be less lonely. However, being an ‘internal emotional state’ (Asher & Paquette, 2003, p. 75), it is important to note that loneliness is influenced by quantitative or objective characteristics of social relationships (such as frequency of social relationships, such as satisfaction with the relationship or perceived social acceptance (Asher & Paquette, 2003; Wheeler et al., 1983; Cutrona, 1982; Jones, 1982). For example, Fischer & Phillips (1982) have shown that not all people with small social networks are lonely, and Jones (1982) has demonstrated that a person’s total number of friends is not a good predictor of their loneliness.

There is considerable evidence for gender differences in the quality or nature of relationships and social interactions. One consistent finding from a number of studies of children’s play is that girls tend to interact more in small groups, particularly dyads, whereas boys tend to interact more in larger groups (Waldrop & Halverson, 1975; Laosa & Brophy, 1972). Eder & Hallinan (1978) discovered that most of the girls were more inclined than boys to form exclusive dyadic relationship with best friends and were less likely to include a third person. Bell (1981) also reported that women overwhelmingly form dyadic relationships, whereas men tend to include three or more people.

When the quality as opposed to the quantity of social support has been assessed, the findings consistently support an inverse relationship between perceived social support and loneliness in sample of college students. Thus perceived social support should be inversely related to loneliness in early adolescents.

Mahon and Yarcheski (1988) examined alternate explanations of loneliness in early adolescents. Two alternate explanations of loneliness by Weiss (1973), the situational theory and the characterological theory were tested in a sample of 112 boys and girls.
between the ages of 12 to 14. In addition to responding to the Revised UCLA Loneliness Scale, participants completed instruments measuring variables linked to either the situational or the characterological explanations of loneliness. Using hierarchical analysis of sets, the results indicated that the set of variables used to test the situational theory explained more variance in loneliness when entered first (62%) or second (34%) in the analyses than did the characterological set when entered first (33%) or second (5%) in the analysis. The findings suggested that the situational explanation played a more significant role than the characterological explanation in understanding loneliness in early adolescents.

Stokes and Levin (1986) examined relation of network density to loneliness. Network density is an index of the degree to which members of a social network have relationships with one another. In a network of low density, most members are unacquainted with one another. In a high density network, network members are highly interconnected. Because men’s friendship are group oriented and focused on shared interests and activities, the authors predicted that friends of men would likely be friends of one another; that is, that male social networks would be denser than female social networks. Moreover, to the degree that being part of a group or gang is important in alleviating feelings of loneliness for men, the relation of network density to loneliness should be stronger for men than for women.

Two samples were used to explore gender differences, sample 1 comprised of 97 male and 82 female undergraduate students in an introductory psychology course who participated to help fulfill a course requirement. Most of these students were freshman (58%) or sophomores (23%) who had never married (92%) and who lived at home with their families of origin (83%). Sample 2 was obtained in hope that it would be more representative of the general population
than were college students in sample 1. Eighty percent of the sample 2 respondents attended evening classes at various community colleges; 20% were recruited from the same introductory psychology classes as sample 1, with the restriction that they be older than 25 years. This sample had a mean age of 29 and consisted of 82 women and 32 men. About half were single, 33% married, and 14% were divorced. Forty-three percent lived with a spouse or lover, 5% with a roommate, 35% with their family of origin, and 17% lived alone.

Respondents in both samples completed three instruments:

1. Social network list.
2. Inventory of Socially Supportive Behaviour (ISSB; Barrera, Sandler, & Ramsay, 1981)
3. UCLA Loneliness Scale.

The results from these studies indicate that social network characteristics are better predictors of perceived loneliness for men than they are for women. In each of three samples, the percentage of variance in loneliness that can be attributed to network characteristics was almost twice as great for men as it was for women. Although sex differences in any one sample were not overwhelming, the consistency of this finding across three independent samples attests to its reliability.

Density was more highly related to loneliness for men than for women in all three samples. This gender difference was not always large, but it was consistently present and was especially pronounced in sample 2 of study 1, after the effect of network size and the percentage of relatives had been controlled statistically.

The authors concluded, “Men tend to be more group oriented in their friendships than women. Women, on the other
have a stronger interest in developing close, dyadic social ties. As a result, it is possible that men and women use different standards for evaluating satisfaction with their current relationships. Dense networks seem to provide a degree of social integration that the more group oriented men may use to evaluate whether he is lonely. Women may focus more on the nature of close, intimate one to one relationship when evaluating loneliness.

Oskoo Kim (1999) examined mediation effect of social support between ethnic attachment and loneliness in older Korean immigrants. The sample for this study was selected from a roster of 927 older Korean immigrants who were registered in Korean American Senior Association (KASA) in a mid western city. The mean age of the sample was 72.85 years (SD=6.25) with a range of 60-87. The majority were females (n=110; 63.2%), married (n = 103; 59.2%), and had a mean educational level of 7.32 years (SD = 5.12) with a range of 0-26. Residency duration in the United States ranged from 4-40 years (M =14.14, SD = 5.33). The majority reported that they could not speak English at all (n = 104; 59.8%), whereas only 15 (8.6%) could speak English very well or pretty well.

Research instruments included the Revised UCLA Loneliness Scale (RULS), the Ethnic Attachment Questionnaire, and the Revised Social Support Questionnaire (RSSQ). Korean versions of the RUCLA and RSSQ were prepared using translation and back translation procedures (Chaman and Carter, 1979).

Ethnic attachment had both a direct and indirect effect on loneliness through emotional and tangible social network size and satisfaction. As expected, older Korean who had stronger ethnic attachment had more emotional and tangible supporters, were more satisfied with their supports, and had a lower level of loneliness. It is
possible that older Koreans who have a strong ethnic attachment tend to maintain and develop intimate relationships with Koreans, including family and non-family members, and receive a greater amount of emotional and tangible support from them. This finding supports those of Dykstra (1990), who found that the greater the amount of emotional and tangible support and the number of network members, the less lonely older adults tended to be.

Hudson, Elek, & Grossman (2000) conducted a pilot study to examine levels of depression, self-esteem, loneliness, and social support, and the relationship between these variables among adolescent mothers. The sample consisted of 21 adolescent mothers between the ages of 16 and 19 years (M = 18 years, SD = 1.14). In terms of ethnicity, 13 were Caucasian, 4 were Hispanic, 3 were African American, and 1 was Native American. Eighteen (86%) were single. Ten (48%) were attending high school, 5 (24%) were not enrolled and had not graduated from high school, 5 (24%) were high school graduates, and 1 (5%) had earned a general equivalency diploma.

The respondents completed the following three instruments:


Several significant relationships were found. There was a negative relationship between depression and social support \(r = -0.61, p < .05\). Social support was positively associated with self-esteem \(r = 0.65, p < .05\) and negatively associated with loneliness \(r = -0.50, p < .05\).
Loneliness was correlated with depression ($r = .53, p < .05$) and inversely correlated with self-esteem ($r = -.74, p < .001$). There was no significant relationship between depression and self-esteem. There were strong, significant relationships between most of the variables (depression, self-esteem, loneliness, and social support). Depression was associated with increased feelings of loneliness and decreased social support.

Hawkley, Burleson, Bernston, & Cacioppo (2003) examined loneliness in everyday life in relation to cardiovascular activity, psychosocial context and health behaviours. The data was collected on 135 undergraduate students (83 % Caucasian; 7 % African American; 7 % Asian, Asian American, or Pacific Islander; 3 % otherwise. The mean age was 19.2 years (SD = 1.0) and they had completed at least one, and on average, 3.2 academic quarters (SD= 2.8). Fifty two percent were freshman, 32 % were sophomores, 8 % juniors, and the remaining 8 % were 5 year student. Following instruments were administered to the participants:

3. Big Five personality Inventory (Goldberg., 1992).

Prior lab research revealed higher basal total peripheral resistance (TPR) and lower cardiac output (CO) in lonely than in nonlonely young adults. In this study, experience sampling was used to obtain ambulatory blood pressure; impedance cardiography; and reports of activities, appraisals, interactions, and health behaviors. Results confirmed that loneliness predicted higher TPR and lower CO
during a normal day. Loneliness did not predict differences in time spent alone, daily activities, or health behaviors but did predict higher stress appraisals and poorer social interactions. Independent of loneliness, interaction quality contributed to TPR. Loneliness differences were not mediated by depressed affect or neuroticism. Social support mediated loneliness differences in stress and threat. Concomitants of loneliness were comparable for men and women.

Ayres (2008) conducted a correlational study to examine the relationships between positive health practices and social support, optimism and loneliness, and between social support and variables of optimism and loneliness. Loneliness was also tested as a possible mediator of the relationship between social support and positive health practices. The sample comprised of 87 boys and 117 girls whose ages ranged from 15 to 17 years (M = 15.9, SD = .72).

The respondents completed the following instruments:

a) The Personal Lifestyle Questionnaire (Brown et al., 1983).


c) The Life Orientation Test (Scheier & Carver., 1987).


The results revealed a statistically significant positive correlations between social support and reported performance of positive health practices (r = .44, p < .01), social support and optimism (r = .63, p < .01) and between positive health practices and optimism (r = .54, p < .01). Negative correlations were found between social support and loneliness (r = -.76, p < .01) and between loneliness and positive health practices (r = -.39, p < .01). The results of regression analysis with loneliness as the mediating variable and social support as
independent variable and positive health practices as dependent variable revealed that social support was positively related to loneliness, $F(1,202) = 282.08$, $p < .001$ explaining 58.3% of the variance in loneliness. In the second equation, social support was positively related to positive health practices, $F(1,202) = 49.18$, $p < .001$, explaining 19.6% of the variance in positive health practices. In the third equation, loneliness did not have a statistically significant relationship with positive health practices $t = -1.31$, $p < .192$ and explained only 2% of the variance in positive health practices. Furthermore in this third regression equation, which included both social support and loneliness, social support contributed an additional 12% of explained variance in positive health practices, beyond 2% contributed by loneliness. These results indicated that loneliness is not a mediator in the relationship between social support and positive health practices.

Mahon, Yarcheski, & Yarcheski (2004) examined the relationship between social support and positive health practices in early adolescents and tested two variables, loneliness and hopefulness, as mediators of the relationship. The sample comprised of 70 girls and 64 boys in the age range from 12 to 14 years ($M = 12.9$, $SD = .58$). 81% were white; the remaining 19% were African American, Latino or Asian American.

Respondents completed three instruments:

1. The Revised Personal Lifestyle Questionnaire (RPLQ) : (Brown et al., 1983).
Results revealed that statistically significant correlations were found between social support and positive health practices (r = .57, p<.001), between social support and loneliness (r = -.69, p<.001), between social support and hopefulness (r = .62, p<.001), between loneliness and positive health practices (r = -.50, p<.001), and between hopefulness and positive health practices (r = .54, p<.001). Results of meditational model indicated that in the first regression equation, social support negatively influenced loneliness, F (1,132) = 122.96, p<.001, explaining 48% of the variance in loneliness. In the second regression equation, social support positively influenced positive health practices, F (1,132) = 63.34, p<.001, explaining 32% of the variance in positive health practices. In the third regression equation, loneliness negatively influenced positive health practices (t= 2.05, p<.04), explaining 4% of the variance in positive health practices. In the third equation which included both social support and loneliness, social support added 18% to the explained variance in positive health practices beyond the 4% contributed by loneliness. With loneliness presenting the proportion of variance in positive health practices accounted for by social support was reduced from 32% to 18% and the standardized coefficient decreased from .57 to .43. These results indicated that loneliness is one partial mediator in the relationship between social support and positive health practices in early adolescents.

(E) Loneliness and Self Esteem

Self-esteem is described as a pattern of beliefs that individuals possess regarding their self-worth and is often based on perceptions of personal experiences and feedback from significant others (Meggert, 1989). The term self-esteem sometimes is used interchangeably with terms such as self-confidence, self-efficacy, and even self-concept (Borgatta & Montgomerg, 2000).
According to Leavy and Down (1995), self-esteem is a sociometer, which constitutes a psychological measure of one’s social connectedness. According to Kazdin (2000), self-esteem refers to evaluation a person makes and maintains with regard to him or herself. It is the global evaluation reflecting our views of our accomplishment and capacities, our values, our bodies, other responses to us and our possessions.

An individual with high self-esteem evaluates himself positively and has good relationships. Low self-esteem causes mental diseases such as depression, anxiety, feelings of alienation and decrease in interpersonal relationships and exposure to high level of stress (Stein, 1997).

Low self-esteem is perhaps one of the most prominent cognitive characteristics of lonely people. Low self-esteem is often rooted in an interrelated set of self-defeating cognitions and behaviours that impair social competence, which predisposes a person for loneliness. Another causal process is that severe and prolonged loneliness can decrease a person’s self-regard. The social network mediation model (Levin & Stokes, 1986) explains that people with low self-esteem have difficulty in establishing and maintaining social relationships and therefore are lonely. The cognitive bias model (Levin & Stokes, 1986) suggests that self-reports of loneliness are more a function of intrapersonal negative cognitive processes. Anderson and Riger (1991) presented a cyclic process of negative self-beliefs begetting poor self-esteem that begets social withdrawal, which deprives people of close relationships resulting in loneliness that produces still low self-esteem and thus forms a vicious cycle. Leary’s sociometer theory (Leary & Baumeister, 2000; Leary, Tambor, Terald, & Downs, 1995) suggests that self-esteem, an internal psychological system that gauges the degree to which an individual feels included versus excluded by other people, is influenced by loneliness.
Since social relationships constitute a major aspect of people’s self-conceptions (Parkhurst & Hopmeyer, 1999; Peplau, Miceli et al., 1982; Sippola & Bukowski, 1999), and given its meaning with social relationship deficiencies, loneliness may lead to negative self-conceptions, thereby undermining one’s self-regard and resulting in a vicious cycle wherein low self-esteem and loneliness reinforce one another. Yet, despite the typically lower self-esteem of lonely people, Cacioppo et al. (2000) have reported that lonely people have no less social capital to offer than nonlonely people.

However, perhaps most pertinent to the issue of psychosocial problems is the consistent finding that loneliness is associated with low self-esteem (Larson, 1999; Brage, Meredith, & Woodward, 1993; Kamath & Kanekar, 1993; Riggio et al., 1993; Olmstead, Guy, O’Mally, & Bentler, 1991; Hymel, Rubin, Rowden, & LeMare, 1990). Loneliness has been consistently linked to self-esteem in studies with adolescents (McWhirter, Besett- Alesch, Horibata, & Gat, 2002; Pernstein & La Greca, 2002; Larson, 1999; Brage & Meredith, 1994; Brage et al., 1993; Inderbitzen- Pisaruk et al., 1992; Olmstead et al., 1991). However longitudinal investigations (e.g., Brage & Meredith, 1994; Olmstead et al., 1991) have suggested that since low self-esteem plays a casual role in development and maintenance of loneliness, it is likely that a reciprocal relationship exists between loneliness and self-esteem (Peplau, Miceli et al., 1982).

Loucks (1980) found that loneliness was significantly correlated with self-criticism, weak self-esteem and uncertainty about self-view. Rubenstein & Shaver (1980) reported that self-depreciation, including the sentiments of no longer being attractive, being stupid, and feeling shameful correlated with loneliness. Russell, Peplau, & Cutrona (1980) reported a correlation of -.49 between scores of UCLA Loneliness Scale and the Texas Social Behaviour Inventory, which they used as self-esteem measure. According to Peplau, Miceli, & Morasch (1982) loneliness, especially when severe and prolonged, may
diminish a person’s self-esteem. Peplau & Perlmen (1982) reported that the relation between loneliness and weak self-esteem is one of the most consistent results of research on loneliness, although the reasons for this association are still unclear.

Moore and Schultz (1983) examined loneliness at adolescence. The first goal of the study was to determine more comprehensively which personal characteristics relate to adolescent loneliness. Guided by previous research on adolescent social development and loneliness, various personal characteristics were assessed. A second goal of the study was to determine how adolescents react to, interpret, and cope with their loneliness.

Subjects were 45 male and 54 female adolescents ranging in age from 14 to 19 years (M= 17, SD=0.98) recruited from a high school. The following measures were given to each subject in one of the four randomly drawn assigned orders: (1) The UCLA Loneliness Scale (Russell et al.,1980); (2) the Self-esteem Scale (Rosenberg et al.,1970); (3) the State- Trait Anxiety Inventory (Speilberger et al.,1980); (4) Locus of control measure (Levenson,1974); (5) a Measure of Self-Consciousness (Fenigstein et al.,1975); (6) the Zung Depression Scale (Zung,1965); (7) self-rating scales of attractiveness, likability, happiness and life satisfaction; (8) eight items designed to measure social risk taking (Sermat,1980); and (9) measures developed by the authors from a pilot study to assess the frequency, duration, characteristics, and perceived causes of loneliness, as well as coping strategies and reactions to loneliness.

Loneliness was positively related to state and trait anxiety, an external locus of control, depression, self consciousness, and social anxiety and negatively related to self-reported attractiveness, likability, happiness, and life satisfaction. The results further revealed that lonely adolescents were also less willing to take social risks. Adolescents most often attributed loneliness to boredom and most often coped with loneliness by watching TV or listening to music.
Joshi, Garon, & Lechasseur (1984) conducted a study to examine the relation between self-esteem and loneliness among unemployed women. A sample of 40 unemployed women from Quebec metropolitan area agreed to participate in a study of the effects of unemployment on personality. Another sample of 40 women with permanent work participated in the study as a control group. In the unemployed group, 13 women were married or lived with spouses, 22 were unmarried, and 4 were separated or divorced. In the control group, 22 women were married or lived with spouses, 17 were unmarried and one was divorced. The material used for this study consisted of French adaptation of Revised UCLA Loneliness Scale and Social Self-esteem Inventory (Lawson, Marshall, & McGrath, 1979) adapted in French for the Quebec population (Gauthier, Samson, & Turbine, 1980). The results indicated no significant differences in self-esteem and loneliness of 40 unemployed women and 40 working women. A negative Pearson's correlation (-.49) was obtained between loneliness and self-esteem for both groups. The authors attributed non significant results to the sample size.

Ouellet and Joshi (1986) reported correlations of $r = -.72$ between loneliness and self-esteem, indicating that higher levels of self-esteem were related to lower levels of loneliness. Other studies exploring these relationships have yielded slightly weaker correlations between self-esteem and loneliness, with values of approximately $r = -.50$ (Haines, Scalise, & Ginter, 1993; Russell et al., 1980). Ginter & Patricia (1994) investigated relationship between loneliness (duration), self-esteem, and performance in academic assistance courses for high-risk students. Frequency and intensity of affects of loneliness correlated inversely with self-esteem. Individuals who are lonely for long durations of time, in contrast to those who are lonely for only a short time, score higher on loneliness, possess lower self-esteem, and carry a better grade point average.
To further explore the nature of the relationship between self-esteem and loneliness, other researchers have explored the relationship over time and across the different elements of loneliness. Self-esteem has been shown to be more predictive of intimate loneliness than social loneliness (McWhirter, 1997). In this the correlation of self-esteem with global loneliness was $r = -.51$, but the correlation of self-esteem with intimate loneliness was $r = -.50$ and the correlation with social loneliness was $r = -.42$. These findings suggest that self-esteem is more strongly related to an internal, affective deficit, as is suggested by the self-worth component of self-esteem, than to the more external, social ability component of loneliness.

McWhirter, Besett-Alesch, Horibata, & Gat (2002), examined the relationships among types of loneliness, empathy, coping skills, and self-esteem among a sample of high risk adolescents enrolled in a high school and the results of two forward-selection multiple regression analyses with intimate loneliness and social loneliness serving as criterion variables, and with self-esteem, empathy, perspective taking, and five types of coping serving as predictor variables, revealed that low self-esteem and low social coping significantly predicted high intimate and high social loneliness. Low emotional coping also significantly predicted high intimate loneliness but not high social loneliness.

To measure the effects of this relationship over time Nurmi, Toivonen, Salmela-Aro, & Eronen (1997) measured self-esteem and attribution strategies in beginning university freshman, who were in the process of establishing new friendships in a new environment, and then asked them to complete a measure of loneliness one year later. In this study, the researcher found that self-esteem was significantly predictive of loneliness following the college adjustment period. This suggests that the relationship between self-esteem and loneliness is
stable over time, and more importantly, it suggests a causal relationship, with self-esteem predicting loneliness when all participants began with few friends in their environment.

A recent study (Herman & Betz, 2006) further added the evidence that in a model that included loneliness as well as depression as dependent variables, self-esteem was significantly related to both. This model indicated that problems in self-esteem accounted for 56% of the variance in loneliness and 41% of variance in depressive symptoms.

Ruchkin, Eiseman, & Haglof (1999) conducted a research to examine the interrelations between loneliness, hopelessness, self-esteem and personality in a sample of delinquent adolescents (n = 187) and controls (n = 103). The age of the delinquent adolescents group ranged from 15 to 18 years (mean age = 16.6, SD = 0.8) and the age of the control group ranged from 14 to 18 years (mean age = 15.0, SD = 0.9).

The following measures were given to each subject in both the groups:

1. The Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980)
2. Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974)
3. Self-Esteem Scale (Rosenberg, 1965)
4. Temperament and Character Inventory (Clonenger et al., 1994)
5. Social Desirability Scale (Crowne & Marlowe, 1960).

Results revealed that the scales of loneliness and hopelessness were highly interrelated both among delinquents (r = .39; p = .000) and controls (r = .55; p = .000). Self-esteem was neither related with loneliness nor with hopelessness in the delinquent group, but in the control group it was negatively related with both loneliness (r = -.44; p
= .000) and hopelessness (r = -.52; \( p = .000 \)). Age was not related to any of the other variables. In contrast to previous findings (Howard, 1981), no difference was found between delinquents and controls in the levels of hopelessness and loneliness (which often have been considered as core characteristics of depression). Furthermore, in previous research loneliness and hopelessness were shown to be related with such personality traits as shyness and introversion (Kalliopuska & Laitinen, 1991), sensitivity (Kashani, Nair, Rao, Nair, & Reid, 1996), and submissive qualities (Mehrabian & Stefl, 1995) and the results of the correlations between loneliness and hopelessness in the present study correspond with the aforementioned personality descriptions and further expand them.

Hudson, Elek, & Grossman (2000) conducted a pilot study to examine levels of depression, self-esteem, loneliness, and social support, and the relationship between these variables among adolescent mothers. The sample consisted of 21 adolescent mothers between the ages of 16 and 19 years (\( M = 18 \) years, \( SD = 1.14 \)). In terms of ethnicity, 13 were Caucasian, 4 were Hispanic, 3 were African American, and 1 was Native American. Eighteen (86\%) were single. Ten (48\%) were attending high school, 5 (24\%) were not enrolled and had not graduated from high school, 5 (24\%) were high school graduates, and 1 (5\%) had earned a general equivalency diploma.

The respondents completed the following three instruments:

Several significant relationships were found. There was a negative relationship between depression and social support ($r = -.61$, $p < .05$). Social support was positively associated with self-esteem ($r = .65$, $p < .05$) and negatively associated with loneliness ($r = -.50$, $p < .05$). Loneliness was correlated with depression ($r = .53$, $p < .05$) and inversely correlated with self-esteem ($r = -.74$, $p < .001$). There was no significant relationship between depression and self-esteem. There were strong, significant relationships between most of the variables (depression, self-esteem, loneliness, and social support). Depression was associated with increased feelings of loneliness and decreased social support.

Sedikides, Rudich, Gregg, Kumashiro, & Rusibolt (2004) conducted a study on 149 (107 women, 42 men) students fulfilling an introductory psychology course option. Participants were tested in groups of 8–15. They completed, in random order, measures of narcissism and self-esteem. Next, they completed, also in random order, two measures of depression, three (later condensed to two) measures of loneliness, and two measures of subjective well-being. Following measures were administered to the participants:

1. Narcissism Personality Inventory.
2. Rosenberg Self Esteem Inventory (Rosenberg, 1965).

Firstly, self-esteem was regressed on narcissism. This relation was significant ($\beta = .34$, $p \leq .001$), a pattern consistent with past
research (W. K. Campbell, Rudich, & Sedikides, 2002; Rhodewalt et al., 1998; Emmons, 1987). Second, each psychological health index variable was regressed on narcissism. Narcissism predicted psychological health. With regard to depression, narcissism was inversely related both to CES-D ($\beta = .18$, $p \leq .04$) and (marginally) BDI ($\beta = .13$, $p \leq .10$). These findings replicate past research (Watson & Biderman, 1993; Wink, 1992). In respect to loneliness, narcissism was inversely related both to UCLA-LS and ESLS ($\beta$s = .30 and -.29, $ps \leq .001$). These findings contradict the single available study on the topic (Joubert, 1986), which reported a non significant relation between narcissism and loneliness. In reference to subjective wellbeing, narcissism was positively related both to SWLS and ABS ($\beta$s = .30 and .24, $ps \leq .01$). This result replicates a relevant finding reported by Rose (2002). Parenthetically, each psychological health index was regressed on self-esteem. With respect to depression, self-esteem was inversely related both to CES-D and BDI ($\beta$s = .58 and -.55, respectively, $ps \leq .001$). With respect to loneliness, self-esteem was inversely related both to UCLA-LS and ESLS ($\beta$s = .51 and -.40, respectively, $ps \leq .001$). With respect to subjective wellbeing, self-esteem was positively related both to SWLS and ABS ($\beta$s = .59 and .39, respectively, $ps \leq .001$). Consistent with past research (Diener, 1984; Jones et al., 1981), self-esteem predicted psychological health. The third mediational step was to regress each psychological health index on narcissism and self-esteem. If self-esteem mediates the relation between narcissism and emotional distress, this relation will decrease when self-esteem is entered into the model.

(F) Family Environment and Loneliness

Family environment is related to characteristics of adolescents’ personal development and social interactions. Although potentially different for males and females, decreased family cohesion and
increased interparental conflict can inadvertently provide family environments that are associated with increased feelings of loneliness, which may be associated with problems in adolescents’ social interactions (i.e., social anxiety and social avoidance). Family cohesion (i.e., the emotional bonding among family members and the feeling of closeness) is expressed by feelings of belonging and acceptance within the family system (McKeown et al., 1997). Wentzel and Feldman (1996) and McKeown et al. (1997) have found that adolescents’ perceptions of low cohesion within their families were associated with heightened feelings of depression and reduced social acceptance. Reinherz, Stewart-Berghauer, Pakiz, Frost, & Moeykens (1989) suggest that low cohesion, expressed by feelings of not belonging, is associated with children’s and adolescent’s feelings and behaviors that are reflective of their family environment (i.e., loneliness). However, Wentzel and Feldman report that levels of cohesion reported by male and female adolescents have different implications for their personal and social adjustment. Lower levels of family cohesion were associated with female reports of feeling excluded and depressed, whereas male reports were not associated with their perceptions of family cohesion. Furthermore, Leadbeater, Blatt, & Quinlan (1995) and Maccoby (1990) report that female adolescents are more likely to experience feelings of exclusion and isolation in response to difficulties in maintaining relationship closeness (i.e., cohesion). Although males report a desire for closeness with their parents, the level of desired closeness with parents does not approach the level of females, and they are less sensitive than females to disruptions in family closeness (Fischer, Munsch, & Greene, 1996). As a result, disruptions in the closeness of parent-adolescent relationships may be associated with higher levels of social and personal distress for females than for males, and this sensitivity may be associated with adolescent females’ reports of depression and feelings of exclusion.
**Interparental conflict.** Although children and adolescents witness conflict between their parents, research has shown that perceptions of intense interparental conflict are associated with difficulties in social and personal development for children and adolescents. Howes & Markman (1989) report that high levels of marital conflict decrease the likelihood that parents will establish strong relationships with their children. As a result, children and adolescents may experience increased feelings of rejection due to the emotional distance between themselves and their parents. In addition, Collins & Laursen (1992) state that exposure to continuously high levels of family conflict is associated with “psychosocial problems during adolescence and later in life” (p. 217). Cummings, Davies, & Simpson (1994); Harold, Fincham, Osborne, & Conger (1997); and Snyder (1998) suggest that perceptions and interpretation of intense interparental conflict may be more damaging to child and adolescent development than the act of witnessing conflict. This research shows that adolescent reports of and awareness of conflict were associated with adjustment difficulties and internalizing symptoms (i.e., anxiety, depression, worry, and withdrawal) over a 12-month period (see also Neighbors, Forehand, & Bau, 1997). Despite these associations, Neighbors et al. and Cummings et al. were unable to find a relationship between perceptions of interparental conflict and adolescent females’ reports of internalizing symptoms and general psychopathology. This evidence suggests that perceptions of interparental conflict are related to a wide range of children’s and adolescents’ personality characteristics; however, these relationships are different for adolescent males and females. Therefore, disruptions in the marital relationship may be associated with higher levels of distress for males than for females, and this sensitivity may be associated with adolescent males’ reports of internalizing symptoms and general psychopathology. Loneliness associated with disruptive
family environment may be related to difficulty in establishing and maintaining relationships in other social situations (McKeown et al., 1997; Wentzel & Feldman, 1996). Loneliness associated with adolescent reports of interparental conflict and the perception of decreased family closeness may be associated with anxiety and stress in other social situations (Wentzel & Feldman, 1996; Leadbeater et al., 1995). Evidence for this relationship is seen in work by Lau & Kong (1999), who report that feelings of loneliness are associated with self-reports of having an inadequate physical appearance, low self-concept, low emotional stability, and inadequate social skills.

Johnson, Lavoie, & Mahoney (2001) conducted a study on the non random sample consisting of 124 first-year college undergraduates (70 females, mean age = 19.69 years, range = 17 through 21 years of age; and 54 males, mean age = 19.41 years, range = 17 through 21 years of age) who were recruited from psychology classes at an urban community university. The sample was predominantly White and from middle-class backgrounds. Due to potential differences in dynamics of intact non biological families (e.g., stepfamilies or foster families) or single-parent families, only participants from intact biological families were included in the study.

The following tests were conducted on the sample:

1. Interparental Conflict Scale (CPIC) (Grych, Seid, & Fincham, 1992).
Results of t tests revealed that females reported higher levels of family cohesion, \( t(130) = 2.07, p < .01 \), and males reported higher levels of loneliness, \( t(130) = 2.85, p < .01 \); social anxiety, \( t(130) = 3.39, p < .05 \); and social avoidance, \( t(130) = 2.12, p < .05 \). No significant difference was found between males’ and females’ reports of interparental conflict.

The proposed relationship among family environment variables, loneliness, social anxiety, and social avoidance was tested using multiple regression procedures. Step 1 of the regression analyses revealed a significant association between interparental conflict and feelings of loneliness and accounted for a significant percentage of the variance, \( \beta = .15, p < .01, R^2 = .24, p < .001 \). Family cohesion and gender were not associated with feelings of loneliness. Step 2 revealed that the Gender \( \times \) Family Cohesion interaction was significantly associated with feelings of loneliness, and the increase in explained variance was also significant, \( \beta = -.44, p < .001, R^2(\text{change}) = .28, p < .001 \). Inspection of the Gender \( \times \) Family Cohesion interaction shows that as family cohesion decreased, female feelings of loneliness increased; however, little change was evident in male feelings of loneliness. The Gender \( \times \) Interparental Conflict interaction was not significantly associated with feelings of loneliness. Step 3 did not reveal a significant association between the Gender \( \times \) Interparental Conflict \( \times \) Family Cohesion interaction and adolescents’ feelings of loneliness.

**Loneliness and social anxiety and avoidance.** Multivariate regression procedures revealed that the set of predictors (i.e., gender and loneliness) accounted for a significant percentage of the variances in adolescents’ reports of social anxiety and social avoidance, Wilks’ lambda = .51, \( F(18, 348) = 6.15, p < .001 \). Univariate \( F \) tests showed a significant relationship between adolescents’ social anxiety, \( F(6, 115) \)
Loneliness was significantly associated with reports of feeling socially anxious and accounted for a significant percentage of the variance, $\beta = .24, p < .01, R^2 = .31, p < .01$. Analyses did not reveal a significant association between gender and the gender $\times$ loneliness interaction and adolescents’ reports of social anxiety. Loneliness was also significantly associated with reports of social avoidance and accounted for a significant percentage of the variance, $\beta = .22, p < .01, R^2 = .22, p < .01$. Furthermore, analyses did not reveal a significant association between gender and the gender $\times$ loneliness interaction and adolescents’ reports of social anxiety.

The association between late adolescents’ perceptions of interparental conflict, family cohesion, and their reports of loneliness, social anxiety, and social avoidance was examined in this study. Perceptions of interparental conflict and family cohesion were correlated with scores on a measure of loneliness for both males and females. This finding concurs with the conclusions reached in previous studies that have examined the relationship between interparental conflict and adolescents’ reports of internalizing symptoms and general psychopathology (e.g., Harold & Conger, 1997; Neighbors et al., 1997; Wentzel & Feldman, 1996) but also extends the association to adolescents’ feelings of loneliness and later adolescence. According to the results, the pervasive negative association between interparental conflict and family cohesion and adolescent adjustment continues across the entire adolescent period. In addition to the relationships between interparental conflict, family cohesion, and reports of loneliness, gender differences were also evident. Low family cohesion and interparental conflict were related to reported loneliness for females, demonstrating a strong family environment component, whereas only interparental conflict was found to predict reported loneliness in males. Furthermore, the relationship between loneliness,
social anxiety, and social avoidance behaviors is supported by an earlier study by Lau & Kong (1999). The current study revealed that late adolescent male and female perceptions of interparental conflict were associated with feelings of loneliness.

Unlike previous studies (Harold & Conger, 1997; Harold et al., 1997; Cummings et al., 1994) that have shown an association between perceptions of marital conflict and adolescent males' reports of other internalizing symptoms, perceptions of interparental conflict were associated with feelings of loneliness for both males and females. This association between family conflict and feelings of loneliness along with previous research that supports a relationship between loneliness and depression (i.e., Koening et al., 1994) suggests that adolescents' feelings of loneliness may explain gender differences in the psychological processes related to perceiving conflict between one's parents. The distress and rejection resulting from perceived hostile exchanges between parents (Fincham et al., 1995; Emery, 1982) and additional factors associated with adolescents' feelings of loneliness as well as other internalizing symptoms.

The association between low family cohesion and females' reported feelings of loneliness concurs with Wentzel & Feldman (1996) and McKeown et al. (1997), who found family cohesion to be strongly related to adolescent females' reports of internalizing symptoms. For females, emotional bonding and the feeling of closeness in the family appears to be a buffer against the development of internalizing disorders (McKeown et al., 1997; Wentzel & Feldman, 1996). The sense of emotional distance associated with low family cohesion is the likely product of weak family bonds and a perception of unworthiness within the family system. According to McKeown et al., females' levels of "depressive symptomatology" may be "strongly affected by the level of emotional bonding in the family" (p. 279). Therefore, perceptions of
low emotional closeness may become increasingly associated with adolescent females’ feelings of loneliness. This differential pattern of correlates of loneliness for males and females is not unusual given that internalizing behavior may have different antecedents, and the current study supports this proposition.

**(G) Locus of Control and Loneliness**

Rotter's concept of “Internal-External locus of control” has its foundation in social learning theory which is currently one of the most vastly studied variables in psychology and other social sciences. Locus of control is well known cognitive - behavioural psychological dimension used to describe a person’s characteristic way of perceiving the world. To the degree that a person’s locus of control is external, he or she will tend to perceive reinforcements as being the result of other people, luck and circumstances beyond personal control. To the extent that a person’s locus of control is internal, he or she will report more control over life circumstances, and claim more personal responsibility for outcomes. Put another way, people with a more external locus of control tend to believe that life experiences happen from the “outside in “, while those with a more internal locus of control have an inside out psychology.

In the last 30 years, there were an estimated 600 published studies examining aspects of internal versus external locus of control (Rotter, 1975). This research is based on social learning theory which contends that individual’s differ in the way they perceive environment. According to this construct at one extreme are internal processes who believe that events take place as the result of their own behaviour. At the other end of the continuum are external persons who perceive that they have little or no control over occurrences in their lives. External persons feel that fate, luck, chance or powerful others control their lives.
The literature review examining Rotter’s concept of internal and external locus of control in divided into the following areas: anxiety, adjustment, learning, ethnic groups and social class differences, achievement, self concept and personality. According to Rotter (1975), the most significant evidence for the construct validity of the internal-control variables lie in the area of personality functioning. Rotter contends that the internal–external control concept is a generalized expectancy operating across many situations for most people.

According to Lefcourt (1981), internal and external differs in numerous ways, particularly in terms of their cognitive activity and environment mastery because they are more perceptive of their situations, internal seem to exert more control over their lives in part by their knowledge of the environment. While internal more readily acquire and utilize information that is relevant to their goal situation even when it seemingly is not relevant (Phares, 1976).

A positive relation between locus of control beliefs and achievement is logical and intuitively appealing. Logically, if success is positively valued, people who feel more able to control outcomes should exert more effort. Also internals and externals should react differently to success and failure. Internals take pride in good outcomes, whereas externals experience less intense emotions (Phares, 1976). This difference should enhance the relative “attractiveness” of the success experience for the internal.

In a literature review of the relationship between locus of control (Generalized and specific expectancies) and achievement, Bar-Tal and Bar-Zohar (1977) stated that 31 of 36 studies reviewed indicated a significant relationship between locus of control and academic achievement with internals having higher achievement than externals. McGhee and Crandall (1968) investigated specific expectancies and reported as a predictor of male and female achievement.
Research has shown that having an internal locus of control is related to higher academic achievement (Findley and Cooper, 1983). Internal earn somewhat better grades and work harder. This includes spending more time on home work as, because if you believe working hard will pay off, then you are likely to do so. According to Bender (1995) continued failure inspite of continued attempts at school tasks leads to an external locus of control. Further, a high locus of control, in turn leads to lack of motivation to study in school in general. If someone has an external locus of control, he or she may feel that working hard is futile because their efforts have only brought disappointments. Ultimately, they may perceive failure as their destiny. Developing an external locus of control also makes it easier to excuse performance without hurting the individuals self esteem (Basgallu & Synder, 1988). By attributing their failure to fate, chance, or the fault of someone else, they are able to escape the potential damage that may come from attributing it to personal flaws or lack of ability. This allows dismissing the belief that is inadequate, keeping ours self esteem intact. However, if excuse is consistently used ; we may lose our motivation to improve (Basgall & Shyder, 1988).

In education, Anderman and Midgley (1997) felt that students who believe that their performance is caused by factors out of their control are unlikely to see any reason to hope for improvement. In contrast if students attribute their performance to a lack of important skill or to poor study habits, they are more likely to respond to failure by giving up hope and not trying harder, whereas those with an internal locus of control are likely to respond to failure with trying harder to improve (Anderman & Midgley, 1997). If students are taught to have a more hopeful attitude (develop an internal locus of control), their grades tend to rise (Noel, Forsyth, & Kelley, 1987).

Locus of control also have an impact on responses to success. In one study (Kernis, 1984), subjects were led to make either internal
or external attributions performed better on the same task than on a
different task when tested again, whereas those who made an external
 attribution performed better on a different task than on the same
task. This suggests that internals are more likely to continue working
at a task that they have succeeded at, while externals are likely to
stop working on the successful task and move on to a different task
(Kernis, 1984).

Research into inconclusive gender differences in some studies
providing evidence for more external locus of control in female than
male adolescents (e.g., Furnham, 1987) and others reporting no
differences (e.g., Lester, 1992), a link between self efficacy and locus of
control has been indicated by findings of significant correlations
between low self efficacy and external locus of control (Madoona,
Bailey, & Wesley, 1990; Epstein’s Komotrita, 1971).

Burns (1979) found that individuals with high self-efficacy
and positive feelings of competence had an internal locus of control,
whereas those who felt insecure, unlucky, or inadequate, reported an
external locus of control (Burns, 1979). Others have also found that
external report lower self-evaluation (Bellack, 1975) and poorer self
concept than those with an internal locus of control (Chandler, 1976).

The relationship between locus of control and career
development has been investigated by several researchers. An
individual’s locus of control was correlated with assessment of career
maturity. College students with an internal locus of control are more
likely to possess attitudes and exhibit skills indicative of higher levels
of career maturity than students with an external locus of control.

Taylor and Pomapa (1990) examined the relationship between
locus of control, career salience, career decision making, self efficacy,
and career indecision. The study utilized 407 college students. They
found that career decision making was moderately and negatively
related to vocational indecision and locus of control whereas positive
relationship was found between career decision making and
occupational self- efficacy.

Stack (2002) observed that locus of control is responsible for the
efficacy belief. He commented that people with internal locus of
control was found to be more efficacious than people with external
locus of control.

Moore and Schultz (1983) examined loneliness at adolescence.
The first goal of the study was to determine more comprehensively
which personal characteristics relate to adolescent loneliness. Guided
by previous research on adolescent social development and loneliness,
various personal characteristics were assessed. A second goal of the
study was to determine how adolescents react to, interpret, and cope
with their loneliness. Subjects were 45 male and 54 females
adolescents ranging in age from 14 to 19 years (M= 17, SD=0.98)
recruited from a high school. The following measures were given to
each subject in one of the four randomly drawn assigned orders : (1)
The UCLA Loneliness Scale (Russell et al.,1980); (2) the Self-esteem
Scale (Rosenberg et al.,1970);(3) the State- Trait Anxiety Inventory
(Spielberger et al.,1980) (4) Locus of Control measure
(Levenson,1974); (5) a measure of self-consciousness (Fenigstein
etal.,1975); (6) the Zung Depression Scale (Zung,1965); (7) self-rating
scales of attractiveness, likability, happiness and life satisfaction; (8)
eight items designed to measure social risk taking (Serma,1980); and
(9) measures developed by the authors from a pilot study to assess the
frequency, duration, characteristics, and perceived causes of
loneliness, as well as coping strategies and reactions to loneliness.

Loneliness was positively related to state and trait anxiety, an
external locus of control, depression, self consciousness, and social
anxiety and negatively related to self-reported attractiveness,
likability, happiness, and life satisfaction. The results further revealed that lonely adolescents were also less willing to take social risks. Adolescents most often attributed loneliness to boredom and most often coped with loneliness by watching TV or listening to music.

Wheeler, Reis, & Nezlek (1983) studied loneliness, social interaction and sex roles. Forty three male and 53 female college students maintained the Rochester Interaction Record for 2 weeks, providing information about every social interaction of 10 minutes or more. Subjects then completed the Revised UCLA (University of California, Los Angeles) Loneliness Scale and the Personal Attributes Questionnaire, measuring sex-role orientation. For both sexes, loneliness was negatively related to the amount of time spent with females and to the meaningfulness of interaction with males and females. Femininity was negatively related to loneliness for both sexes and partially mediated the above relationships. There were sex differences, however, in the extent to which variables overlapped in predicting loneliness. For example, a large group of nonlonely males was characterized both by having a meaningful relationships with males and by spending time with females, whereas a second group of nonlonely males was characterized simply by having meaningful relationships with males. The largest group of nonlonely females was characterized simply by having meaningful relationships with males, but another sizeable group was characterized simply by spending time with females.

George (1984) compared chronic and transient loneliness on the variables of anxiety, depression and self-esteem. His study sought to determine whether chronic and the transient loneliness are meaningful distinctions in loneliness research and to provide data to guide future investigations. The subjects were 281 students. Subjects categorized themselves as chronically lonely, transient lonely, or never
lonely on the personal history of loneliness questionnaire. Current loneliness was assessed by UCLA scale. Subjects were classified on the basis of these two instruments into five groups reflecting loneliness history and presence or absence of current loneliness. Chronically lonely people were found to have higher levels of trait anxiety and were more likely to be mildly to moderately depressed than transient lonely individuals. Chronically and transient lonely individuals did not differ on self-esteem, although they had lower self-esteem than the nonlonely people. Greatest self-esteem was found among the never lonely. The results of this study provide additional support for this conclusion that chronic and transient loneliness are two different types of loneliness and suggested a number of important leads for future research in this area.

Russell, Cutrona, Ross, & Yurko (1984) examined Weiss’s conceptualization of social and emotional loneliness. Using data from an extensive survey of undergraduate and graduate students at the University of Iowa, they measured social and emotional loneliness, students’ affective and behavioral reactions to loneliness, students’ social relationships, and their judgments of the degree to which their relationships supply the six social provisions described by Weiss. As expected, they found differences in the subjective experiences of social and emotional loneliness, although both the forms of loneliness were also characterized by a common core of experiences. The results generally supported Weiss theoretical ideas concerning the determinants of loneliness. Predictions concerning the affective and behavioral consequences associated with each type of loneliness, however, were only partly supported, although two forms of loneliness were associated with different affective reactions and coping behaviors. The investigators concluded: “the subjective experiences of loneliness of these two forms of loneliness do
appear to be qualitatively different, although both forms of loneliness are characterized by substantial common core of experiences. It may be useful to view this common core as indicating the essence of the loneliness experience, with different forms of loneliness (such as social and emotional loneliness) adding certain qualities to that common experience.(p.1320).

Mckulincer & Segal (1990) assessed the role played by locus of control in the association between loneliness and the need for intimacy. The study 1 was conducted on one hundred and four undergraduate students (73 females and 31 males ranging in age from 23 to 29) from Bar-Ban University who volunteered to participate in the study without monetary reward. Study 2 was conducted on a group of 80 undergraduate students (53 females and 27 males ranging in age from 20 to 45 years of age, mean = 28.5) from Bar-Ilan and Tel Aviv Universities. All subjects were committed to a heterosexual romantic relationship that had at least one-year duration. The two studies reported below assessed the role played by locus of control in the association of loneliness and the need for intimacy. In these studies, subjects completed the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) and were divided into lonely and nonlonely groups. The two studies differed in the techniques used for assessing need for intimacy and expectancies of control. In Study 1, we adopted a trait like approach and measured subjects' generalized expectancies of control (Rotter’s locus of control scale, Rotter, 1966) and their desires in close relationships (Sternberg’s Triangular Love Scale, 1987). In Study 2, the authors adopted a “critical incident” (Davitz, 1969) technique, in which subjects' expectancies of control and need for intimacy in a recalled loneliness episode were measured. The following tests were administered on the sample:
1. Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980).

In Study I, subjects completed the Revised UCLA Loneliness Scale, the Rotter’s Locus of Control Scale, and the Sternberg’s Triangular Love Scale in reference with their ideal love. In Study 2, subjects completed the Revised UCLA Loneliness Scale, recalled a loneliness episode, and rated their perception of control and desire for intimacy in that episode.

A preliminary two-way analysis of variance (ANOVA) assessed the effects of loneliness and locus of control on satisfaction with the current relationship. The ANOVA yielded a significant main effect for loneliness ($F(1,99) = 7.03, P < 0.01$), such that lonely persons reported less satisfaction with their current relationship ($M = 4.46$) than did nonlonely persons ($M = 4.96$). However, this main effect was qualified by a significant interaction ($F(1,99) = 5.95, P < 0.05$). A test for simple main effect (Winer, 1971) indicated that the effect for loneliness was significant only among external persons ($M = 4.19$ for lonely vs $M = 5.09$ for nonlonely), but not among internals ($M = 4.72$ vs $M = 4.76$). The multivariate ANOVA (MANOVA) performed on the subjects’ desires for an ideal relationship yielded a significant interaction for loneliness and locus of control ($F(3,96) = 5.60, P < 0.01$). This interaction reached significance for intimacy and passion ($F(1,98) = 3.95, P < 0.05$; $F(1,98) = 16.28, P < 0.01$). With regard to intimacy, a test for simple main effects yielded the following differences: among externals, lonely persons reported less desire for intimacy than nonlonely persons; among internals, no significant difference was found between lonely and nonlonely persons. With regard to passion, a test for simple main effects
yielded the following differences: Among externals, lonely persons desired less passion than nonlonely persons. Among internal subjects, lonely persons desired more passion than nonlonely persons ($P < 0.05$). ANOVA for desired commitment yielded no significant effects. The findings indicated that loneliness was related to lower desire for intimacy among persons who hold external expectancies of control. In addition, loneliness was related to higher desire for passion in love relationships and to higher desire for intimacy with strangers and acquaintances during a loneliness episode among persons who hold internal expectancies of control.

(H) Guidelines for the formulation of hypotheses of the present study

Overview

The review of related literature reveals the following points concerning research in the specific area of loneliness:

(1) Although there is a considerable agreement regarding loneliness as a common problem for the general population and client in psychotherapy particularly, the literature points out loneliness to be particularly prevalent and intense during adolescence. There appear in the literature a number of theoretical statements on loneliness, which specifically address loneliness in adolescents or can be applied to adolescents. Available evidence indicates that, as a group, adolescents are more vulnerable to loneliness than older populations. Although a number of writers suggested that loneliness is specially felt as a painful experience during adolescence, very few studies have dealt with phenomenon of loneliness at adolescence.

The present study aims at investigating loneliness among
adolescent school students.

(2) Most studies of sex differences in loneliness have examined only quantitative differences in loneliness. These studies on sex differences in loneliness appear confusing since contradictory results have been reported. One plausible explanation for contradictory results could be the use of different measures of loneliness.

(3) Many investigations (Medora & Woodward, 1986; Moore & Schultz, 1983; Goswick & Jones, 1982; Michela, Peplau, & Weeks, 1982) which attempted to study the relationship of loneliness with other variables combined the data of males and females. The pooling of data of males and females for studying the predictors of loneliness is not justified since sex happens to be an important moderating variable. Very few studies provide some evidence of sex differences among school students in the qualitative aspects of loneliness - that is, differences in the predictors of loneliness.

(4) A number of other variables: socioeconomic status, age, marital status, employment status, religiosity, number of siblings, self-esteem, self-disclosure to peers, anxiety, depression, and locus of control have been used for studying their relationship with loneliness. Furthermore, as mentioned earlier the relationship of loneliness with weak self-esteem and self-disclosure to peers is one of the most consistent results of research on loneliness.

Keeping in view what has been said in the preceding paragraph, this study includes in its purview depression, hopelessness, automatic thoughts, social support, locus of control, anxiety, and family functioning as possible predictors of loneliness.

(5) Previous studies have computed correlations for determining the
correlates of loneliness. Given the overwhelmingly likelihood that loneliness in adolescents involves multiple, interacting and intercorrelated precipitating and predispositional factors, the use of multivariate techniques is imperative keeping in view the importance of several factors underlying the construct of loneliness.

The present study attempts to make use of multiple regression analysis for identifying the predictors of loneliness.

These guidelines were used as the possible refinements in the present investigation, which attempts to study predictors of loneliness at adolescence. The above observations derived from earlier studies provided the guidelines for the formulation of the following hypotheses:

**HYPOTHESES**

1. It is expected that male adolescents would be more lonelier than female adolescents.

2. For both males and females there is a significant and positive relationship of loneliness and depression.

3. For both males and females there is a significant and positive relationship of loneliness and hopelessness.

4. For both males and females there is a significant and positive relationship of loneliness and negative automatic thoughts.

5. For both males and females there is a significant and positive relationship of loneliness with different dimensions of anxiety.

6. For both males and females there is a significant and negative relationship of loneliness and social support.

7. For both males and females there is a significant and positive relationship of loneliness and external locus of control.

8. For both males and females there is a significant and positive
relationship of loneliness and the dimension of conflict of family functioning, and there is a negative relationship of loneliness and the dimensions of cohesion, expressiveness, independence, achievement orientation, intellectual - cultural, active - recreational, moral - religious emphasis, organization and control of family functioning as perceived by the adolescents.