Loneliness and Disclosure to Peers

by Early Adolescents

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ABSTRACT

The present research was designed to investigate the differences between lonely and non-lonely early adolescents in: (a) their disclosures to familiar peers and, (b) their perceptions of their relations with familiar peers. In the study, sixty-nine early adolescents completed the Asher Loneliness Questionnaire (Asher et al., 1984). A sub-sample of males and females who were lonely and non-lonely were engaged in dyadic conversations. The subjects were required to complete pre-conversation and post-conversation ratings of: (a) liking of partner, (b) perceived liking by partner, (c) familiarity of partner, and (d) perceived familiarity by partner. As expected, same-sex patterns emerged with respect to familiarity and perceived familiarity. Although not hypothesized, same-sex patterns of liking and perceived liking were also found. It was expected that there would be differences between lonely and non-lonely early adolescents in their disclosures to peers as a function of sex. While differences between the disclosures of lonely and non-lonely subjects were found, these were not a function of sex but of partner's loneliness. Specifically, it was found that lonely male subjects disclosed less intimate information to lonely than non-lonely partners. Non-lonely male subjects did not differentially disclose to lonely and non-lonely partners.

Lonely female subjects disclosed relatively high-intimate information to both lonely and non-lonely partners compared to non-lonely female subjects. As expected, lonely subjects reported that they were less liked by partners than did non-lonely subjects. The implications for clinical work and peer relations are discussed as well as possible limitations of the study.

Introduction

Loneliness is regarded as a widespread problem in North America (Bradburn, 1969; Peplau & Perlman, 1982). Many writers propose that adolescence, in particular, is a period in which loneliness is both widespread and intense (Buhler, 1969; Gaev, 1976; Peplau & Perlman, 1982; Rubenstein & Shaver, 1979; Weiss, 1973). Brennan and Auslander (1979) reported that approximately 10 to 15% of adolescents sampled experienced intense feelings of loneliness and that over one-half experienced moderate feelings of loneliness (cited in Peplau & Perlman, 1982).

The notion that loneliness poses a problem for individuals is supported by the findings that it is associated with inhibited sociability, self-derogation, alienation, anxiety, low self-esteem, depression, suicide, and negative perceptions of self and others (Goswick & Jones, 1982; Horowitz & French, 1979; Jones, Freemon, & Goswick, 1981; Jones, Hobbs, & Hockenbury, 1982; Russell, Peplau, & Cutrona, 1980; Russell, Peplau, & Ferguson, 1978; Wenz, 1977).

Loneliness has been conceptualized as a dissatisfaction with social relationships that is accompanied by negative affect (Peplau & Perlman, 1982). A widely used measure of this conceptualization of loneliness in adults is the revised

UCLA Loneliness Scale. Specifically, the scale is designed to measure loneliness as a subjective, self-labelled state that has both cognitive and emotional aspects. This 20-item questionnaire has been shown to possess high internal consistency as well as high concurrent and discriminant validity (Russell, Peplau, & Cutrona, 1980). Asher, Hymel and Renshaw, (1984) developed a similar scale to assess loneliness and social dissatisfaction in children and adolescents. As in the adult scale, the items are internally consistent and reliable.

The bulk of the research on loneliness has been carried out on adults. The research converges in suggesting that lonely adults show: (1) limited social skills, specifically in self-disclosure; and (2) a negative view of self and others. There is a scarcity of research on whether these patterns are evident in adolescents. It is important, though, to begin by describing the adult research on these topics as a guide to considering them in adolescence.

Loneliness and Disclosure Processes in Adults

Some researchers have found, that for college students, the quality of one's social relationships play a greater role in loneliness than the quantity of time spent socializing (Chelune, Sultan & Williams, 1980; Jones, 1981). Wheeler, Reis and Nezlek (1983) found that the best predictor of

loneliness in college students was the meaningfulness of interactions with others. One facet of the meaningfulness of social relationships, is that it entails the exchange of the self-disclosure of personal thoughts and feelings.

Research indicated that lonely adults show problems in self-disclosure that would limit their ability to establish intimate and thereby, normal social relationships. Based on a sample of female college undergraduates, Chelune et al., (1980) found that loneliness was linked to a lower level of self-disclosure. Using college students, Berg and Peplau (1982) investigated the relationship among loneliness, self-reported past disclosure to same and opposite-sex friends, and willingness to self-disclose. Loneliness was found to be significantly associated with a lower level of disclosure, but only for females. Lonely females reported disclosing less in the past to same-sex friends and were less willing to self-disclose. No significant correlations between loneliness and the measures of self-disclosure were found in males.

Using a two-part study on college students, Solano, Batten and Parish (1982) investigated the link between loneliness and self-disclosure. In the first study, subjects completed the UCLA Loneliness Scale and a measure of past self-disclosure. The researchers found, that for both males and females, loneliness was significantly correlated with a self-

reported low level of intimate disclosure to opposite-sex friends. For females, this pattern was also true for same-sex friends.

In the second study, the researchers investigated the disclosures of lonely and non-lonely subjects in conversations with non-lonely partners. It was found that non-lonely subjects typically began with a low-intimate topic choice to same-sex partners and a high-intimate topic choice to opposite-sex. The reverse pattern was found in lonely subjects. Lonely subjects began with a low-intimate topic choice to opposite-sex and a high-intimate topic choice to same-sex. Furthermore, the opposite-sex partners of lonely subjects chose topics of a lower intimacy level than partners of non-lonely subjects. Therefore, the low level of intimate disclosure of lonely subjects persisted throughout the conversation with opposite-sex partners and seemingly affected the intimate disclosure of their partners.

In addition, examination of the acquaintance ratings after the conversations, indicated that the lonely subjects were not as well known as the non-lonely. Although the conversations lacked intimate content, the lonely subjects reported a higher degree of partner familiarity. Solano et al., (1982) propose that, unlike their non-lonely partners, lonely subjects were not aware that the conversations were low in intimacy.

One limitation of Solano et al., (1982) was that although they examined the conversations of lonely and non-lonely students with non-lonely partners, they only examined the intimacy of topic choice rather than intimacy of disclosure. Also, conversations the students had were always with a non-lonely partner. This in itself may affect the pattern of the conversation. To elaborate, adults have been shown to demonstrate reciprocity of self-disclosure (Altman & Taylor, 1973; Derlega & Chaikin, 1975; Miller & Kenny, 1986; Worthy, Gary & Kahn, 1965). Adults respond to others' disclosures by providing self-disclosures that are equal in intimacy. Thus, if either a lonely or non-lonely subject discloses personal information, the non-lonely partner will reciprocate in kind. However, because the conversational patterns of lonely dyads were not studied, the disclosure processes of this interaction are not known.

Finally, there is considerable evidence that lonely individuals hold negative views of themselves and others (Jones et al., 1981; Jones et al., 1982; Wittenberg & Reis, 1986). Jones, Freemon and Goswick (1981) found that lonely subjects rated themselves lower than non-lonely subjects on a number of self-evaluation measures. Lonely subjects expected others to rate them in a negative manner. Lonely subjects also tended to have negative perceptions of others.

Similarly, Hanley-Dunn, Maxwell and Santos (1985) asked samples of females (college students) and elderly to evaluate three scenarios and found that lonely individuals repeatedly described the actions and intentions of characters involved in a more negative manner than did non-lonely individuals.

Loneliness and Disclosure Processes in Children and Adolescents

The purpose of the present study is to investigate whether the relation between loneliness and disclosure processes found in adults is evident in adolescents. There are a number of reasons why this relation should be explored in the adolescent period.

Weiss (1973) proposes that the loneliness that plagues adults is likely a development of processes occurring during early childhood. It may be that the social and interpersonal dynamics underlying loneliness in the college student, originated in the student's early friendship experiences (Goswick & Jones, 1982). In a similar vein, Sullivan (1953) theorizes that loneliness first arises in the preadolescent period when the need to intimately share information with a friend emerges. The preadolescent seeks same-sex chums to share with. As the shift from preadolescence to adolescence occurs, the interest in sharing private information to an opposite-sex friend develops.

Berndt (1982) reports that the intimate relations developed during early adolescence teach social skills necessary to establish intimate relations through life. Adolescent self-reports of their relationships show that this group is more intimate with friends than younger children are (Berndt, 1982; Sharabany, Gershoni & Hofman, 1981). Females, specifically, consistently report a higher degree of intimacy in friendships (Douvan & Adelson, 1966; Rivenbark, 1971; Sharabany et al., 1981). According to Sharabany et al., (1981) the shift from same-sex to opposite-sex friendships takes place two years earlier for girls than boys. Furthermore, as children progress beyond middle childhood, they share and exchange information based on the norm of reciprocity, just as adults do (Youniss, 1980). Cohn and Strassberg (1983) found that the reciprocity of self-disclosure is evident in preadolescents. Reciprocal levels of disclosure are more noticeable in peer friendships as opposed to interaction with parents (Hunter, 1984).

As previously discussed, to evaluate the problem of loneliness, a scale was constructed by Asher et al., (1984). The scale, developed on children from Grades 3 to 6, is reported to be internally consistent and reliable (Cronbach's alpha = .90; Spearman-Brown reliability co-efficient = .91; Guttman split-half reliability co-efficient = .91). For children

from Grades 3 to 6, a modest relationship between sociometric (popularity) rating by fellow classmates was found. Similarly, using measures of sociometric status, Asher and Wheeler (1985) found that children who were rejected by their peers reported more loneliness than other groups examined. Children rated as being popular by their peers reported the least amount of loneliness. The Asher et al. (1984) scale was used to assess loneliness in the present research.

The relationship between sociometric measures and loneliness was supported by Marcoen and Brumagne (1985). In this study, the link between loneliness and perceived social sensitivity was investigated in students from Grades 5 through 9. Loneliness was measured by means of self-report. Perceptions of social sensitivity were obtained by having children rate their classmates on the extent to which they were perceived as supportive, sympathetic, and comforting. It was found that children who were lonely were rated by peers as being less socially sensitive. Therefore, it is evident that such qualitative aspects of interactions with peers are related to the experience of loneliness.

Some research has been done to investigate the relationship between loneliness in adolescents and self-disclosure (Franzoi & Davis, 1985; Davis & Franzoi, 1986).

Franzoi and Davis (1985) found that female high school students reported a greater amount of intimate disclosure to peers than their male counter-parts. Furthermore, the relationship between disclosure to peers and loneliness was found significant for females, but not so for males. Although path analyses failed to support significant sex differences regarding the relationship between peer self-disclosure and loneliness, the results suggest that loneliness in males may not be affected by intimate peer self-disclosure to the extent that it is for females. Davis and Franzoi (1986) replicated the study one year later and found causal paths closely related to those reported in the original study. There was, however, evidence some reciprocal causation existed in that self-disclosure seemed to cause loneliness and loneliness seemed to cause self-disclosure.

Recent research by Rotenberg and Whitney (1992) further examined self-disclosure processes in adolescents. Based on scores obtained on the Asher Loneliness Scale (Asher et al., 1984), preadolescent subjects were paired with peer confederates with whom they engaged in conversations. Each subject engaged in conversations with two partners (peer confederates) who provided a disclosure that was either low or high in intimate content. The topic of the conversations were those derived from Rotenberg and Sliz

(1988). Following the conversations, subjects rated, on a 5-point scale, their familiarity with their partner (1=not at all, 5= very, very, much). The intimate content of the disclosures was assessed using the IRS developed by Strassberg & Anchor (1975).

Numerous findings of interest emerged. Both lonely and non-lonely subjects showed reciprocity of self-disclosure. The lonely preadolescent males disclosed less intimate information to female partners than did the lonely females and the non-lonely males and females. The lonely female subjects disclosed a higher degree of intimate information to female partners than did the lonely males, and non-lonely males and females. Lonely subjects had a tendency to disclose higher intimate information to same-sex partners. Lonely males were seemingly unaware of low-intimate disclosure to female partners and paradoxically, they reported that their female partners were as familiar with them as they were with non-lonely females. Same-sex patterns of subject disclosure were found but only when subjects responded to high-intimate partner disclosure. The findings illustrate that, like adults, early adolescents do demonstrate difficulties in disclosure with peer acquaintances. These difficulties will be further explored in the present study.

Overview of the Present Study

The present research was designed to further explore the relationship between loneliness and self-disclosure processes in early adolescents. The basic procedure was similar to that used by Rotenberg and Whitney (1992). Early adolescents of varying degrees of loneliness were paired in conversations with a choice of topics provided by the examiner. However, the method was somewhat modified.

One of the purposes of the present study was to explore the pattern of adolescent disclosure to familiar peers. To examine this, the students were paired in conversations with familiar peers as opposed to peer confederates (strangers) used by Rotenberg and Whitney (1992). This line of investigation was guided by research that has recognized the importance of addressing the issue of familiar versus non-familiar others. For example, Sloan and Solano (1984) paired lonely and non-lonely male college students in conversations with same-sex strangers and roommates. The researchers found that the lonely male students spoke significantly less than the non-lonely males in conversations with both same-sex strangers and roommates. This finding indicates that lonely males showed inhibited self-disclosure to familiar and non-familiar others. Furthermore, by assessing the interaction of early adolescents who were

known peers, the present researchers aimed to create conditions that would simulate day-to-day peer interactions. Both conversational partners also varied in loneliness to examine all possible interactions of male, female, lonely, and non-lonely early adolescents. The conversations were also longer in duration.

One limitation of Rotenberg and Whitney (1992) was that familiarity ratings were taken only after the conversations. However, because pre-conversation and post-conversation ratings were not taken, it is unclear as to how much these ratings were affected by the actual conversations. Therefore, a pre-conversation and post-conversation rating of familiarity were taken in the present research. In addition, a pre-conversation and post-conversation measure of liking was also included.

Hypotheses

The following hypotheses are advanced in the present research:

(1) Based on the finding of Rotenberg and Whitney (1992), it is expected that strong same-sex patterns of disclosure will emerge but be stronger in lonely than non-lonely early adolescents. Furthermore, it is expected that a same-sex pattern of familiarity and perceived familiarity will be found.

(2) Based on previous literature (Cohn and Strassberg,

1983), it is expected that females would disclose a higher amount of intimate information than would males. This pattern is expected to be stronger when disclosing to same-sex peers.

(3) Based on the notion of reciprocity (see Altman & Taylor, 1973), it is expected that there would be an interaction between individuals such that pairs of lonely individuals would disclose the least and pairs of non-lonely would disclose the highest amount of intimate information.

(4) Based on the findings of Rotenberg and Whitney (1992) it is expected that lonely males would disclose a lower amount of intimate information to female partners than would non-lonely males, and lonely and non-lonely females. It is also expected that lonely females would disclose a higher amount of intimate information to female partners than would non-lonely females, and lonely and non-lonely males.

(5) Rotenberg and Whitney (1992) found a lack of correspondence between intimate disclosure and perceived familiarity for lonely males. It is expected that this pattern would also emerge in the present study.

(6) Based on research with adults, lonely people tend to have negative perceptions of others and perceive that they are not liked by others. It is expected that lonely early adolescents would show a similar pattern in that lonely

subjects would report lower ratings of partner liking than the non-lonely and would perceive themselves to be less liked by their partners than the non-lonely.

Method

Subjects

Sixty-nine early adolescents (27 boys and 42 girls) from the sixth and seventh grades served as subjects. Subjects ranged in age from 11yrs., 6 mths., to 13 yrs., 6 mths., with a mean of 12 yrs., 5 mths. The subjects were drawn from two elementary schools within the Lakehead Board of Education and one school from the Lahehead District Catholic School Board. Children were solicited for participation by parental consent forms. The parental consent form is shown in Appendix A.

Stimuli and Measures

Loneliness was measured by using the 24-item questionnaire devised by Asher et al., (1984). The questionnaire is shown in Appendix B. For each item on the scale, the children used a 5-point rating continuum to indicate the degree to which each statement described themselves (i.e., always true, true most of the time, true sometimes, hardly ever true, not true at all). The higher the score on the questionnaire, the higher the degree of loneliness.

The five conversation topics employed were those previously used in the research of Rotenberg and colleagues (Rotenberg & Chase, in press; Rotenberg & Sliz, 1988; Rotenberg & Whitney, 1992). The list of topics are shown in Appendix C. Each topic was accompanied by three examples. The topics and examples were as follows: (1) <u>descriptions of the environment-</u> "things such as where you live or what your house looks like, whether you have any pets", (2) <u>descriptions of people and activities-</u> "things such as how you get to school, if you have any brothers or sisters, or what you look like", (3) <u>personal preferences-</u> "things such as the foods you like or don't like, the games you like or don't like, things you like or don't like to do in school", (4) <u>positive personal-</u> "things you think are good about yourself such as your good behavior, your good feelings like when you are happy, or things you feel are good about your looks", and (5) <u>negative personal-</u> "things you think are bad about yourself such as your bad behaviour like when you get into trouble, some of your bad feelings when you are mad, or things you think are bad about your looks".

The Intimacy Rating Scale (Strassberg & Anchor, 1975) was used to rate the intimacy of each disclosure. The IRS is shown in Appendix D. The IRS outlines a spectrum of topics that are categorized according to the degree of intimate

content. Based on the IRS method, childrens' disclosures were assigned an intimacy rating of 1 (low-intimate), 2 (moderate-intimate) or 3 (high-intimate). The IRS has been successfully employed in research with early adolescents and self-disclosure (see Cohn & Strassberg, 1983; Rotenberg & Whitney, 1992).

<u>Procedure</u>

Testing at each of the three schools was completed in two sessions. In the first session, all students who agreed to partake in the study were administered the Asher questionnaire (Asher et al., 1984) in a group setting. Therefore, across the three schools, 69 subjects completed the questionnaire. Four sample items were constructed to familiarize children with the rating procedure (i.e., I like roller skating, I like pets, I don't like seeing movies, Mathematics is hard for me). The sample items are shown in Appendix E. Once the children understood the task, each of the 24 items was read aloud, slowly, to them providing time for their responses to be marked. The degree of loneliness of each child was determined by the scores on this questionnaire.

From the three subject pools, a subsample of 24 students were selected to participate in the second session of the study. The males and females in the subsample were those who had obtained the extreme high and low Loneliness

questionnaire scores. Males and females who had extreme high scores were classified as lonely. Males and females who had extreme low scores were classified as non-lonely. Therefore, the subsample of 24 students consisted of 6 males who were classified as lonely (3 Grade 6's, 3 Grade 7's); 6 males who were classified as non-lonely (3 Grade 6's and 3 Grade 7's); 6 females who were classified as lonely (3 Grade 6's, 3 Grade 7's); and 6 females who were classified as non-lonely (3 Grade 6's, 3 Grade 7's). A minimum difference of 12 points between the extreme high and low scores had to be obtained in order for subjects to be classified as either lonely or non-lonely and thus, selected for the second session. This 12-point minimum difference reflected the standard deviation (11.82) found in the loneliness scores reported by Asher et al., (1984).

The second session was set up between 7 and 14 days after the first. A round robin design (see Kenny & La Voie, 1984) was set up, within each school, to pair the students in conversations. Within each of the three schools, the design consisted of 8 students. Each of the 4 Grade 6 students were paired in conversations with each of the 4 Grade 7 students. The first Grade 6 subject was individually escorted by the examiner to the testing room where she/he waited for the examiner to bring in their Grade 7 partner. The children were

told that they would be meeting a child from the other grade and would engage in a conversation with them. They were told that the purpose was to have Grade 6's and 7's get to know each other better. The children were briefly introduced to each other and asked to complete a form containing the following questions pertaining to liking and familiarity: (1) How much do you like your partner? (2) How much do you think your partner likes you? (3) How much do you know your partner? and (4) How much do you think your partner knows you? Each question was answered using a 5-point rating continuum (not at all, a little bit, kind of, very much, and very, very much). These questions are shown in Appendix F.

The students were then briefed on the five topic choices for the conversations and were re-assured that confidentiality of the discussions would be adhered to. Each child was told that he/she could disclose as little or as much as possible. The conversations were tape-recorded verbatim using an audio recorder.

During each conversation, the two children took turns choosing topics and disclosing, with each having 3 turns each. Following each conversation, both the subject and partner completed the same liking and familiarity ratings as they did prior to the conversation. After the first Grade 6 student had conversations with each of the 4 Grade 7

students, he/she was escorted back to the classroom and the second Grade 6 student was escorted to the testing room where he/she waited for the examiner to bring in their first Grade 7 partner. This round robin procedure was followed for the remainder ,of testing. Counterbalancing, across grades was utilized when determining which child initiated the conversation. Counterbalancing, across loneliness was also used to determine the order in which the four Grade 7 subjects were engaged with the Grade 6's.

The children's disclosures were coded into utterances by two individuals (coders), naive to the purpose of the study. Gottman's (1983) method for defining utterances was used in which an utterance was classified as a unit of conversation that was separated from other conversation by a pause in voice or a change in thought. In order to assess inter-rater agreement, each of the coders separately scored 25% of the protocols. The inter-rater agreement was 81% (total number of agreements divided by the total number of agreements + total number of disagreements). For purposes of analyses, each coder separately assessed 50% of the protocols. In order to ensure consistent coding of the utterances, each coder received an equal distribution of the protocols based on the four combinations of male, female, lonely, and non-lonely.

The intimacy of each utterance was then rated, by the coders, using the Intimacy Rating Scale (Strassberg & Anchor, 1975). The children's disclosures were assigned an intimacy rating of 1 (low-intimate), 2 (moderate-intimate) or 3 (high-intimate). Each coder first rated 25% of the protocols. 85% agreement was found. Each coder then proceeded to rate 50% of the utterances for intimacy. After each conversation, both the subject and partner completed the same liking and familiarity ratings as they did prior to the conversations.

Results

Loneliness Scores

The mean of the loneliness scores for the entire subject sample (69 subjects), was 30.7. This was comparable to the mean found by Asher et al., (1984) (M= 32.5). Their range of scores was greater (16 to 79) than the range of 16 to 56 found in the present study. The standard deviation was 9.5 which was lower than that reported by Asher et al., (1984) (SD= 11.8). These differences likely reflect the larger sample size used by Asher and his colleagues.

It was expected that the scores of subjects who were classified as lonely vs. non-lonely would differ significantly and would also differ from the loneliness scores of subjects who served as a middle group and were not used in the

second session of the study. To determine if the groups differed as designed, a one-way Anova was done. The Anova was significant, $F(2,66) = 16.96$, $p<.01$. The mean, standard deviation, and range of scores in the lonely group was 40.5, 9.8, and 30 to 56, respectively and 21.9, 4.7, and 17 to 31, respectively for the non-lonely group. The mean, standard deviation and range of scores in the middle group was 30.4, 7.9, and 16 to 52, respectively. A comparison of the means of the three groups was done using the Fisher test. The mean of the lonely group was significantly higher than the means of each of the non-lonely and middle groups. The mean of the non-lonely group was significantly lower than that of the middle group. All p's were < .05. As expected, the scores of subjects who were classified as lonely vs. non-lonely differed significantly.

Familiarity Between Subjects and Targets

The present research was guided by the notion that subjects and targets were moderately familiar with each other prior to the conversations. Familiarity ratings before the conversations were taken using a 5-point scale (1= not at all, 2= a little bit, 3= kind of, 4= very much, and 5= very, very much). When subjects rated targets on pre-familiarity, they reported a mean of 2.58. When targets rated subjects, the mean was 2.46. Therefore, both subjects and targets were, in

fact, moderately familiar with each other prior to the conversations.

Measures

For analyses purposes, Grade 6 students were identified as <u>subjects</u>, Grade 7 students as <u>targets.</u> In the present study, the hypotheses were addressed by the analyses done on the <u>subjects.</u> The analyses were conducted on several measures. The following are the terms used to identify these measures:

(1) <u>subject disclosure to partner-</u> the information disclosed by the subject to their conversational partner, (2) <u>target disclosure to partner-</u> information disclosed by the target to their conversational partner, (3) <u>subject liking of partner-</u> subject ratings of how much they liked their partner. Ratings taken before the conversation were pre-conversation, ratings taken after the conversations were post-conversation, (4) <u>target liking of partner-</u> target ratings of how much they liked their partner. Pre-conversation and post-conversation ratings were taken, (5) <u>subject perceived liking by partner-</u> subject ratings of how much they perceived their partner to like them. Pre-conversation and post-conversation ratings were taken, (6) <u>target perceived liking by partner-</u> target pre-conversation and post-conversation ratings of how much they perceived their partner to like them, (7) <u>subject familiarity of partner-</u>

subject pre-conversation and post-conversation ratings of how much they knew their partner, (8) target familiarity of partner- target pre-conversation and post-conversation ratings of how much they knew their partner, (9) subject perceived familiarity by partner- subject pre-conversation and post-conversation ratings of how much they perceived their partner to know them, and (10) target perceived familiarity by partner- target pre-conversation and post-conversation ratings of how much they perceived their partner to know them.

Analyses

The analyses were conducted on the subsample of 24 students. The subject disclosure to partners and target disclosures to partners were each subjected to 2 (sex of subject) x 2 (loneliness of subject) x 2 (sex of target) x 2 (loneliness of target) x 3 (turn) analyses of variance with repeated measures on the last three variables. Subject liking of partner, subject perceived liking by partner, target liking of partner, and target perceived liking by partner, were each subjected to 2 (sex of subject) x 2 (loneliness of subject) x 2 (sex of target) x 2 (loneliness of target) x 2 (time) analyses with repeated measures on the last three variables. Subject familiarity of partner, subject perceived familiarity by partner, target familiairity of partner, and target perceived familiarity

by partner were analyzed using the same analyses as the liking measures. Tukey a posteriori comparisons were used to compare differences between the means. All p's were <.05. Only the significant main effects and interactions are reported.

Subject Disclosure to Partner

The 2x2x2x2x3 analyses was done on the subject disclosure to the partner. However, there was heterogeneity of variance due to one cell (disclosures of lonely male subjects to lonely male partners) that had no variance. There was also heterogeneity of co-variance in the sex of target x loneliness of target x turn interaction (Mauchly sphericity test, W = .32, Chi-square approx. = 8.05 with 2 df, p=.018, Greenhouse-Geisser Epsilon = .59). To reduce these problems, a logarithmic transformation was done that was somewhat effective in reducing the heterogeneity (Mauchly sphericity test, W = .37, Chi-square approx. = .70 with 2 df, p= .030, Greenhouse-Geisser Epsilon = .61).

Analyses of the raw and transformed means yielded most of the same effects with the exception of one effect, an interaction. Analyses of the transformed means are reported here. Analyses yielded a main effect of loneliness of target, $F(1,8)$ = 22.83, $p<$ .01. Subjects disclosed less intimate

information to lonely than non-lonely partners (means of 1.28 and 1.53, respectively). A main effect of turn, $F(2,16) = 5.87$, $p<.05$ was also found; with each turn subjects showed increases in the intimacy of disclosure to their partners (transformed means of .102, .156, and .172, respectively).

There was a three-way interaction of loneliness of subject x sex of subject x loneliness of target, $F(1,8) = 7.13$, $p<.05$. This interaction was approaching significance in the analyses of the raw means, $F(1,8) = 4.50$, $p=.067$. The raw and transformed means are shown in Table 1. Simple effects analyses yielded three significant patterns. First, a sex of subject x loneliness of target interaction was evident in the disclosure of lonely subjects to partners, $F(2,8) = 12.38$, $p<.05$. There was also a loneliness of subject x loneliness of target interaction in the disclosure of male subjects to partners, $F(2,8) = 10.66$, $p<.05$. It is evident from these patterns that lonely male subjects disclosed less intimate information to lonely than non-lonely partners ($p<.05$). The disclosures of lonely male subjects to lonely partners were also lower in intimacy than the disclosures of lonely female subjects to lonely and non-lonely partners ($p<.05$). This finding is consistent with the hypothesis that females would disclose a higher amount of intimate information than males.

Finally, there was a loneliness of subject x loneliness of

target interaction in the disclosure of female subjects to partners, F (2,8) = 5.78, $p<.05$. Non-lonely female subjects disclosed less intimate information to lonely than non-lonely partners ($p<.05$). Although none of the other differences between the means were significant, some tendencies emerged. Lonely female subjects disclosed more intimate information to non-lonely partners than non-lonely female subjects to lonely partners. Lonely female subjects disclosed more intimate information to lonely partners than non-lonely female subjects did to non-lonely partners. Contrary to the hypothesis, there were no same-sex patterns of disclosure found and no significant sex of subject x sex of target interactions.

Target Disclosure to Partner

The 2x2x2x2x3 analysis of target disclosure to partner yielded a main effect of turn, $F(2,16)$ = 5.31, $p<.05$; targets disclosed the highest amount of intimate information on the second turn (means of 1.33, 1.51, and 1.42). This was qualified by a loneliness of subject x turn interaction, $F(2,16)$ = 2.92, $p=.083$ that was approaching significance and a three-way interaction of sex of subject x loneliness of subject x turn, $F(2,16)$ = 2.86, p =.087, also approaching significance. The means are shown in Table 2 and 3 respectively. Some tendencies in the data emerged. On the first turn, targets

disclosed less intimate information to lonely male partners than non-lonely male partners. However, by the third turn, targets actually disclosed more intimate information to lonely male than non-lonely male partners ($ps < .05$).

Subject Liking of Partner

The 2x2x2x2x2 analyses of subject liking of partner yielded a sex of subject x sex of target interaction, $F(1,8) = 30.04$, $p < .01$. The means for this interaction are shown in Table 4. A same-sex pattern emerged. The male subjects reported greater liking of male than female partners while female subjects reported greater liking of female than male partners ($ps < .05$). Contrary to the hypothesis, lonely subjects did not report significantly lower ratings of partner liking than the non-lonely subjects.

Target Liking of Partner

2x2x2x2x2 analysis of the target ratings of liking of partner yielded several significant findings. There was a main effect of time, $F(1,8) = 10.67$, $p < .05$ in which the targets reported liking partners more after the conversations than before (means of 2.77 and 2.44, respectively). A main effect of sex of target was also found, $F(1,8) = 11.65$, $p < .01$. Female targets reported greater liking of the partners than did male targets (means of 3.00 and 2.21, respectively). The interaction of sex of target and sex of subject was significant,

$F(1,8)$ = 8.26. $p<.05$. The means of this interaction are shown in Table 5. Although the differences between the means were not significant, both male and female targets tended to report greater liking of same-sex partners. In addition, though, male targets reported less liking of female partners than did female targets ($p <.05$).

Subject Perceived Liking by Partner

2x2x2x2x2 analysis of the subjects' perceptions of how much their partners liked them, yielded a main effect of time, $F(1,8)$ = 6.04, $p<.05$. Subjects believed that their partners liked them more after the conversations than before (means of 2.58 and 2.31, respectively). The interaction of sex of subject x sex of target, $F (1,8)$ = $p<.05$ was significant. The means are shown in Table 4. A comparison of the means indicated that while both male and female subjects perceived that same-sex partners liked them more than opposite-sex, this difference was significant only for female subjects ($p<.05$). The same-sex pattern was somewhat revealed in that female subjects believed that the female partner (same-sex) would like them more then male subjects believed that the female partner (opposite-sex) liked them (means of 3.33 and 2.00, respectively; $p<.05$). Same-sex patterns were not qualified by time.

A significant interaction of loneliness of subject x sex of

target x time, $F(1,8)$ = 6.72, $p<.05$ was found. The means for this interaction are shown in Table 6. Simple effects analyses yielded a sex of target x time pattern for non-lonely subjects, $F(1,8)$= 5.44, $p<.05$. Non-lonely subjects perceived that female partners liked them more at post-conversation than pre-conversation ($p<.05$). As hypothesized, an a priori t-test indicated that lonely subjects thought they were less liked by partners than did non-lonely subjects (means of 2.13 for lonely subjects and 2.77 for non-lonely subjects) ($t(8)$ = 2.56, $p<.05$ for a two-tailed comparison).

Target Perceived Liking by Partner

2x2x2x2x2 analysis of the targets' perceptions of partner liking yielded a main effect of time, $F(1,8)$ = 10.81, $p<.05$. Targets perceived that their partners liked them more after conversations than before (means 2.69 and 2.27, respectively). A main effect of sex of target, $F(1,8)$ = 6.12, $p<.05$ indicated that female targets reported they perceived themselves to be more liked by their partners than male targets (means of 2.83 and 2.25, respectively).

Subject Familiarity of Partner

The 2x2x2x2x2 analysis of the subjects' ratings of familiarity with their partner yielded a sex of subject x sex of target interaction, $F(1,8)$ = 13.17, $p<.01$. The means for this interaction are shown in Table 4. As hypothesized, there was

a same-sex pattern of familiarity that emerged, subjects tended to report being more familiar with same-sex partners than with opposite-sex partners. Although the differences between the means were not significant for male subjects, female subjects were considerably more familiar with same-sex than opposite-sex partners ($p<.05$). This was further qualified by a significant interaction of sex of subject x loneliness of subject x sex of target x loneliness of target x time $F_{(1,8)} = 5.94$, $p<.05$. The means for this analyses are shown in Table 7. Analyses of simple effects yielded five significant patterns. These were: (1) for non-lonely targets a sex of target x time x loneliness of subject pattern, $F_{(4,32)} =3.84$, $p<.05$; (2) at pre-conversation ratings there was a significant interaction of sex of subject x sex of target x loneliness of target, $F_{(4,32)} =3.68$, $p<.05$; (3) at post-conversation ratings there was a significant interaction of sex of subject x sex of target x loneliness of target, $F_{(4,32)} =2.87$, $p<.05$; (4) for female targets there was a significant interaction of sex of subject x loneliness of target x time, $F_{(4,32)} =6.55$, $p<.01$; and (5) for female targets there was a significant interaction of loneliness of subject x loneliness of target x time, $F_{(4,32)} =3.92$, $p<.05$.

Although complex, four differences largely accounted for the findings: (1) familiarity of the female partner (lonely and

non-lonely) increased from pre-conversation to post-conversation; (2) male subjects (lonely and non-lonely) tended to show a decrease in familiarity of male partners from pre-conversation to post-conversation; (3) subjects tended to be more familiar with same-sex than opposite-sex partners at pre-conversation ratings of familiarity; and (4) female subjects tended to be more familiar with same-sex than opposite-sex partners at post-conversation ratings.

Target Familiarity of Partner

The 2x2x2x2x2 analysis of the targets' ratings of familiarity of partner yielded a number of significant effects. There was a main effect of time, $F(1,8) = 6.32$, $p<.05$. Targets indicated that they had become more familiar with partners after the conversations than before (means of 2.92 and 2.46, respectively). There was a significant interaction of sex of target x sex of subject, $F(1,8) = 6.32$, $p<.05$. The means are shown in Table 5. There was a significant same-sex pattern of familiarity; both female and male targets reported higher familiarity with same-sex partners ($p<.05$). Male targets also rated being less familiar with female partners than did female targets ($p<.05$).

There was also a significant interaction of sex of target x loneliness of target x loneliness of subject x time, $F(1,8) =$

6.67, $p<.05$. The means are shown in Table 8. Simple effects anaylses yielded a significant sex of target x loneliness of target x time interaction, $F(1,8) = 10.80$, $p<.05$. Male lonely targets rated familiarity of lonely partners significantly lower at pre-conversation than did male non-lonely targets and female lonely and non-lonely targets (all $ps<.05$).

Subject Perceived Familiarity by Partner

2x2x2x2x2 analysis of the subjects' perceptions of how much their partner knew them yielded a number of significant effects. There was a main effect of time, $F(1,8) = 7.96$, $p<.05$. Subjects perceived that partners were more familiar with them after the conversations than before (means of 3.10 and 2.67, respectively). There was also a significant interaction of sex of subject x sex of target, $F(1,8) = 9.89$, $p<.05$. The means are presented in Table 4. Some support was found for the hypothesis of a same-sex pattern of perceived familiarity. Although the differences between the means were not significant, male subjects tended to perceive that they were more familiar to same-sex partners than opposite-sex. However, female subjects tended to believe that they were more familiar to opposite-sex partners. In contrast to the hypothesis, female subjects believed that male partners were more familiar with them than did male subjects ($ps<.05$).

This was qualified by a significant interaction of sex of

subject x loneliness of subject x loneliness of target x time, F (1,8)= 7.84, p<.05. The means are shown in Table 9. Simple effects analyses yielded no significant patterns. However, for male subjects, a loneliness of subject x loneliness of target x time pattern approached significance. It appears that lonely male subjects tended to believe that non-lonely partners were considerably more familiar with them from pre-conversation to post-conversation (p<.05). Non-lonely male subjects tended to believe that lonely partners were considerably more familiar with them from pre-conversation to post-conversation (p<.05). However non-lonely male subjects expected non-lonely partners to become less familiar with them from pre-conversation to post-conversation (p<.05).

Target Perceived Familiarity by Partner

A 2x2x2x2x2 analysis of targets' perceptions of how much their partners knew them, yielded numerous significant findings. A main effect of time, F(1,8) = 22.05, p<.01 was found. Targets believed that subjects were more familiar with them after the conversations than before (means of 2.88 and 2.44 respectively). A main effect of sex of target also emerged, F(1,8)= 6.09, p≤.05. In comparison to male targets, female targets expected that partners were more familiar with them after the conversations than before (means of 2.23 and 3.08, respectively).

This was qualified by the interaction of sex of target x sex of subject, $F(1,8) = 5.51$, $p<.05$. The means for this interaction are shown in Table 5. Although the differences between the means were not significant, both male and female targets tended to believe that same-sex partners were more familiar with them than opposite-sex. Female targets believed that the female partners (same-sex) were considerably more familiar with them than did male targets ($p<.05$).

Another interaction emerged; loneliness of target x sex of target x time, $F(1,8) = 6.50$, $p<.05$. The means are shown in Table 10. Simple effects analyses did not yield any significant patterns. At pre-conversation, lonely male targets believed that their partners were considerably less familiar with them than did non-lonely male targets and lonely and non-lonely female targets ($ps<.05$).

Discussion

As expected, same-sex patterns of familiarity and perceived familiarity emerged. Generally, this pattern was found in both subjects and targets but was stronger for females than males. One exception was that female subjects perceived opposite-sex partners to be more familiar with them than same-sex. One potential account resides in the notion that there has been an observed tendency for the shift from

same-sex to opposite-sex friendships to occur earlier for females than males; Grades 7 and 9 respectively (Sharabany et al., 1981).

Consistent with the hypothesis, female subjects disclosed a higher amount of intimate information to partners than did male subjects. This provides support to previously cited research (Douvan & Adelson, 1966; Rivenbark, 1971; & Sharabany et al., 1981) that females report a higher degree of intimacy with friends, share more, are more expressive, and disclose a higher amount of intimate information than males (Cohn & Strassberg, 1983).

Although not hypothesized, same-sex patterns of liking and perceived liking also emerged. Both male and female subjects reported liking same-sex partners more than opposite-sex. Male and female targets also tended to report greater liking of same-sex than opposite-sex partners. Both male and female subjects also perceived that they were more liked by same-sex than opposite-sex partners. This parallels research that reports same-sex friendships to be more prevalent than opposite-sex friendships during early adolescence (e.g., Douvan & Adelson, 1966; Sharabany et al., 1981).

Despite this cited research, there was no support found for the hypothesis of same-sex patterns of disclosure. This lack

of support is of considerable interest, particularly in light of the same-sex patterns of familiarity and liking that emerged. These latter patterns were likely found because the early adolescents used in the present study were known peers and therefore, the same-sex pattern of liking and familiarity may stem from day-to-day peer interactions rather than the actual disclosures made during the study. One of the reasons why a corresponding same-sex pattern of disclosure was not found is that the early adolescents had already known a reasonable amount about each other prior to the conversation and disclosed a limited amount of new information. It may also be that the contextual constraints of the study affected the amount of intimate disclosure made.

The present research did not replicate the finding of Rotenberg and Whitney (1992) that sex of the partner was related to the disclosure pattern of early adolescents. However, loneliness of the partner was found to be related to disclosure. Lonely male subjects disclosed very low-intimate information to lonely partners. Lonely female subjects disclosed relatively high-intimate information to both lonely and non-lonely partners. These findings do somewhat parallel Rotenberg and Whitney (1992) with the exception that in the present research the loneliness, not sex, is the significant aspect of the partner. In this context, lonely male

subjects were inhibited in their self-disclosure to lonely partners. This pattern was not evident in their disclosures to non-lonely partners. Correspondingly, lonely females showed "over-eager" patterns in their disclosures to partners.

Some reciprocity of self-disclosure was also found in the disclosures of lonely male subjects to lonely partners. On the first turn, lonely male subjects disclosed very low-intimate information to partners. The partners (targets) responded by disclosing a low level of intimate information to the lonely male subjects. However, despite the continued low-intimate disclosure of lonely male subjects, the partners actually disclosed more intimate information to lonely male subjects by the third turn. It may be that the partners were compensating for the low level of intimate disclosure by the lonely male subjects and were trying to establish a more appropriate level of intimate disclosure throughout the conversation.

As found in Rotenberg and Whitney (1992) it was expected that, despite a low level of intimate disclosure to partners, lonely males paradoxically would believe their partners had incurred considerable familiarity with them. In the present study, lonely males disclosed a low level of intimate information to lonely partners. However, the lonely male subjects also expected that the lonely partners would

not be highly familiar with them at either pre-conversation or post-conversation ratings (means of 2.17 and 2.50, respectively). From this it seems that the lonely male subjects were aware of their low level of intimate disclosure to lonely partners and accordingly assumed that the lonely partners would not be very familiar with them.

This finding is not consistent with research by Rotenberg and Whitney (1992) or with research on lonely adults (Solano et al., 1982). However, these studies used unfamiliar partners (strangers) as opposed to known peers as did the present research. Although speculative, it may be that the types of distortions that lonely males had when paired with unfamiliar partners, may reflect their aspiring hope of developing a new friendship. In the present study, however, the lonely males were already moderately familiar with their partners prior to the conversation.

Finally, it was hypothesized that lonely early adolescents, like lonely adults, would report lower ratings of partner liking than non-lonely and would perceive themselves to be less liked by their partners than non-lonely. There was some support for this hypothesis in that lonely subjects thought they were less liked by their partners than did non-lonely subjects. Such perceptions may be manifested in lower self-esteem.

Clinical and Peer Relations Implications

Based on the findings of the present study, it is evident that loneliness is associated with deficits in self-disclosure. Lonely males were found to be inhibited in their intimate self-disclosure to lonely partners. However, they did not show this pattern when disclosing to non-lonely partners. It may be that the disclosures of the non-lonely partners were more appropriate in intimacy level than those of the lonely partners and therefore, evoked intimate disclosure from the lonely male subjects. Pairing dyads of lonely males and non-lonely peers, in the school and clinic setting, may help the lonely males to learn appropriate intimate self-disclosure which may also generalize to friendships with lonely others. Pairing lonely males with other lonely individuals for clinical therapy would not be beneficial in having them open up and share personal information. Therapy would then be of limited value in this situation.

Lonely females were found to be "over-eager" in their disclosures to both lonely and non-lonely others. This "over-eagerness" may pose difficulties as it violates the norm of reciprocity of self-disclosure that is important to friendship development. Lonely females may share too much intimate information early on in friendships which could possibly deter others from developing a friendship with them.

One reason for this pattern may be low self-esteem which research has linked to loneliness. Increasing the self-esteem of these lonely females may help them to be less overly-concerned with making a friend which deters others from getting to know them. Social skills training that focused on the appropriate levels of intimate self-disclosure at different stages of friendship would also likely prove useful.

Possible Limitations of the Study

(1) One possible limitation of the study was the small sample size. However, while there was a relatively small number of subjects used, the round robin design employed provided a wealth of data regarding the conversations and perceptions of the pre-adolescents.

(2) The focus of the present research was on disclosure as a function of loneliness. However a number of other variables were also explored (i.e., liking, perceived liking, familiarity, and perceived familiarity) that resulted in a large number of analyses. Chance is one factor that may have contributed to obtaining significant findings in those analyses. In the future, researchers may want to investigate the reliability of these findings.

(3) Inter-rater agreement was determined in the present study by agreement percentages. However, percentages of agreement do not account for the portion of the observed

agreement that is a result of chance alone. The agreement statistic, Cohen's kappa corrects for chance and should be considered for use in future reseach to assess inter-rater agreement.

(4) The present study involved dyadic social interaction. In these types of studies, measures derived from the interactions are not completely independant ones. This is because, in dyadic interactions, the attitudes and behaviors of individuals are mutually contigent (i.e., Person A's liking for Person B affects Person B's liking of Person A; Person A's disclosure to Person B affects Person B's disclosure to Person A)(Warner, Stoto, & Kenny, 1979). Kenny and LaVoie (1984) have developed a Social Relations Model to partition the sources of variance involved (i.e., actor, partner, relationship, and instability). The actor effect is defined as one's average behavior while in the presence of others. The partner effect is defined as the average behavioral response that one brings out from others. The relationship effect refers to the effect of adjustment one makes when in the presence of another person. Instability refers to random variation or noise. Statistical procedures such as Anova are not sensitive to the sources of variation that arise from the interactions. Therefore, the Social Relations Model should be considered for future research on dyadic social interaction.

Table 1

Raw and Transformed Means of Subject Disclosure as a Function of Loneliness of Subject, Sex of Subject and Loneliness of Target

| | | Loneliness of Target | |
| | | Lonely | Non-Lonely |
Loneliness of Subject	Sex of Subject		
Lonely	Male	.094 (1.28)	.143 (1.42)
	Female	.174 (1.55)	.194 (1.61)
Non-Lonely	Male	.114 (1.32)	.11 6 (1.32)
	Female	.131 (1.38)	.161 (1.49)

*Note: The raw means are shown in parenthesis.

Table 2

Means of Target Disclosures to Partner as a Function of Loneliness of Subject x Turn

Loneliness of Subject	First	Second	Third
	Turn		
Lonely	1.31	1.48	1.50
Non-Lonely	1.37	1.56	1.34

Table 3

Means of Target Disclosure to Partner as a Function of Sex of Subject x Loneliness of Subject x Turn

		Turn		
Sex of Subject	Loneliness of Subject	First	Second	Third
Male	Lonely	1.22	1.47	1.55
	Non-Lonely	1.47	1.54	1.33
Female	Lonely	1.39	1.48	1.45
	Non-Lonely	1.27	1.57	1.35

Table 4

Means for the Sex of Subject and Sex of Target
Interaction for Subjects on the Measures of Liking,
Perceived Liking, Familiarity, and Perceived Familiarity

Measure	Sex of Subject	Sex of Target Male	Female
Liking	Male	3.50	2.33
	Female	2.17	3.84
Perceived Liking	Male	2.54	2.00
	Female	1.92	3.33
Familiarity	Male	2.92	2.33
	Female	2.29	3.54
Perceived Familiarity	Male	3.04	2.71
	Female	3.46	3.23

Table 5

Means for the Sex of Target and Sex of Subject
Interaction for Targets on the Measures of Liking,
Familiarity, and Perceived Familiarity

Measure	Sex of Target	Sex of Subject	
		Male	Female
Liking	Male	2.54	1.88
	Female	2.67	3.33
Familiarity	Male	2.75	1.67
	Female	2.83	3.50
Perceived Familiarity	Male	2.67	1.79
	Female	2.71	3.46

Table 6

Means of Subject Perceived Liking of Partner as a Function of Loneliness of Subject, Sex of Target, and Time

		Time	
Loneliness of Subject	Sex of Target	Pre	Post
Lonely	Male	1.67	2.08
	Female	2.33	2.42
Non-Lonely	Male	2.58	2.58
	Female	2.67	3.25

Table 7

**Means of the Subject Familiarity of Partner as a Function
of Sex of Subject, Loneliness of Subject,
Sex of Target, Loneliness of Target, and Time**

				Loneliness of Target			
				Lonely		Non-Lonely	
Sex of	Loneliness of	Sex of					
		Time	Pre	Post	Pre	Post
Subject	Subject	Target					
Male	Lonely	Male	2.67	2.33	2.67	3.00
		Female	1.67	2.33	1.00	2.00
	Non-Lonely	Male	3.67	3.33	3.00	2.67
		Female	2.33	2.33	2.67	4.33
Female	Lonely	Male	1.67	2.33	3.00	2.67
		Female	3.33	4.00	2.67	3.33
	Non-Lonely	Male	2.33	2.67	1.33	2.33
		Female	3.33	4.00	4.00	3.67

Table 8

Means of the Target Familiarity of Partner as a Function of Sex of Target, Loneliness of Target , Loneliness of Subject, and Time

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			Loneliness of Subject			
			Lonely		Non-lonely	
Sex of	Loneliness of	Time	Pre	Post	Pre	Post
Target	Target					
Male	Lonely		1.33	2.17	1.83	2.67
	Non-Lonely		3.00	2.50	1.83	2.33
Female	Lonely		3.17	3.50	2.50	3.33
	Non-Lonely		2.50	3.00	3.50	3.83

Table 9

Means of Subject Perceived Familiarity by Partner as a Function of Sex of Subject, Loneliness of Subject, Loneliness of Target, and Time

		Loneliness of Target			
		Lonely		Non-Lonely	
Sex of	Loneliness of	Time Pre	Post	Pre	Post
Subject	Subject				
Male	Lonely	2.17	2.50	2.00	3.17
	Non-Lonely	2.83	4.17	4.33	3.33
Female	Lonely	2.33	2.83	2.67	2.83
	Non-Lonely	2.67	3.00	2.33	3.00

Table 10

Means of Target Perceived Familiarity by Partner as a Function of Loneliness of Target, Sex of Target, and Time

		Time	
Loneliness of Target	Sex of Target	Pre	Post
Lonely	Male	1.50	2.42
	Female	2.92	3.30
Non-Lonely	Male	2.50	2.50
	Female	2.83	3.33

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APPENDIX A

Parent Consent Form given to students

Lakehead University

Thunder Bay, Ontario, Canada   Postal Code P7B 5E1

Dear Parent/Guardian:

I would like to request your permission to allow your child to take part in a study that we (Dr. Ken J. Rotenberg and Mona Holowatuik) are conducting. The purpose of the study is to examine, during the period of early adolescence, the relation between loneliness and the willingness to disclose personal information to peers. In the study, students in sixth and seventh grades will be given the Asher measure of loneliness. Later, the students will be engaged in four ten minute conversations with participants from the other grade. The students will be asked to talk as much, or as little, as they like on five topics and their conversations will be tape recorded. Afterwards, the students will be asked to rate the liking and familiarity achieved as a result of the conversations. The student's participation in the study, and his or her continuation in the study once it has begun, will be completely voluntary. The study will take about one hour for each child and will take place in the school.

It should be emphasized that the present study is concerned with the patterns evident in children in general. Each child's conversation and answers will be kept completely <u>confidential</u> and the findings will be reported in terms of groups of children only. This study has been approved by the Lakehead University Ethics Advisory committee and the Lakehead District Roman Catholic Separate School Board.

Please fill out the attached form indicating whether or not you are willing to let your child participate in the study, and return it to your child's school. Should you have <u>any</u> questions about the study please contact us, Dr. Ken J. Rotenberg at 343-8694 and Mona Holowatuik at 343-8064.

Yours sincerely,

Ken J. Rotenberg Ph.D.

& Mona Holowatuik

NAME OF CHILD/ADOLESCENT   _____

BIRTH DATE OF CHILD/ADOLESCENT   _____

SEX OF CHILD/ADOLESCENT

        MALE   FEMALE   (Circle the appropriate one)

I WANT MY CHILD/
ADOLESCENT TO   PARTICIPATE   /   NOT PARTICPATE

       IN THE STUDY   (Circle your choice)

       SIGNED   _____

                    Signature of Parent or Guardian

       ADDRESS (If you wish to have a copy of the general findings).

       _____

       _____

PLEASE RETURN THIS FORM TO SCHOOL   PHONE _____

APPENDIX B

<u>Asher Loneliness Questionnaire</u>

Questionnaire # 1

1. It's easy for me to make new friends at school.

2. I like to read.

3. I have nobody to talk to.

4. I'm good at working with other children.

5. I watch TV a lot.

6. It's hard for me to make friends.

7. I like school.

8. I have lots of friends.

9. I feel alone.

10. I can find a friend when I need one.

11. I play sports a lot.

12. It's hard to get other kids to like me.

13. I like science.

14. I don't have anyone to play with.

15. I like music.

16. I get along with other kids.

17. I feel left out of things.

18. There's nobody I can go to when I need help.

19. I like to paint and draw.

20. I don't get along with other children.

21. I'm lonely.

22. I am well-liked by the kids in my class.

23. I like playing board games a lot.

24. I don't have any friends.

(1)= always true....(2)= true most of the time
    (3)= true sometimes....
(4)= hardly ever true....(5)= not true at all

1. (1)......(2)......(3)......(4)......(5)

2. (1)......(2)......(3)......(4)......(5)

3. (1)......(2)......(3)......(4)......(5)

4. (1)......(2)......(3)......(4)......(5)

5. (1)......(2)......(3)......(4)......(5)

6. (1)......(2)......(3)......(4)......(5)

7. (1)......(2)......(3)......(4)......(5)

8. (1)......(2)......(3)......(4)......(5)

9. (1)......(2)......(3)......(4)......(5)

10. (1)......(2)......(3)......(4)......(5)

11. (1)......(2)......(3)......(4)......(5)

12. (1)......(2)......(3)......(4)......(5)

13. (1)......(2)......(3)......(4)......(5)

14. (1)......(2)......(3)......(4)......(5)

15. (1)......(2)......(3)......(4)......(5)

16. (1)......(2)......(3)......(4)......(5)

17. (1)......(2)......(3)......(4)......(5)

18. (1)......(2)......(3)......(4)......(5)

19. (1)......(2)......(3)......(4)......(5)

20. (1)......(2)......(3)......(4)......(5)

21. (1)......(2)......(3)......(4)......(5)

22. (1)......(2)......(3)......(4)......(5)

23. (1)......(2)......(3)......(4)......(5)

24. (1)......(2)......(3)......(4)......(5)

APPENDIX C

List of Conversation Topics

Conversation Topics

1. Descriptions of the environment - "Things such as: (a) where you live or (b) what your house looks like, (c) whether you have any pets.

2. Descriptions of people and activities - "Things such as: (a) how you get to school; (b) if you have any brothers or sisters; or (c) what you look like."

3. Personal preferences - "Things such as: (a) the foods you like or don't like; (b) the games you like or don't like; or (c) things you like or don't like to do in school."

4. Positive personal - "Things you think are good about yourself such as: (a) your good behavior; (b) your good feelings like when you are happy or (c) things you feel are good about your looks."

5. Negative personal - "Things you think are bad about yourself such as: (a) your bad behavior like when you get into trouble, (b) some of your bad feeling when you are mad; or (c) things you think are bad about your looks."

APPENDIX D

Intimacy Rating Scale

Intimacy Rating Scale

General guidelines for use

1. Before selecting a rating for an item, review all categories.

2. Use a separate category (0) when no response at all is provided to an item.

3. Rate explicit content; avoid making interpretations or assumptions about the intention or motivation underlying a response.

4. The term "significant others" is meant to include family members, friends and associates with whom one is intimate.

5. If a response encompasses content subsumed by both categories I and II, give it a I rating; if both categories II and III are relevant, employ a category III rating.

I. Low Content Self-Disclosure

    A. Demographic Public Information (Name, age, religion, occupation, address, height, weight, marital status, etc.)
    B. Daily Habits and Preferences (e.g., smoking)
    C. Schooling
    D. Interests (television, sports)
    E. Hobbies and other leisure time activities
    F. Fashion (i.e., preferences)
       1. Make-up
    G. Personal hygiene, health and maintenance
    H. Physical characteristics
    I. Vocational preferences
    J. Borrowing and lending behavior
    K. Political/economic attitudes
    L. Description of events without affect
    M. Aesthetics
    N. Geography (e.g., travel plans; location description)

II. Moderately Intimate Self-Disclosure

    A. Personal ideology (with relation to how one conducts his/ her life)
       1. Religious preferences
       2. Moral perspective and evaluations (e.g., euthanasia and killing in time of war)
       3. Feelings about the future as it relates to oneself and significant others (e.g., aging and dying)
       4. Superstitions
       5. Dreams and non-sexual fantasy
       6. Annoyances
    B. Life plans
       1. Ambitions
       2. Aspirations
       3. Goals
    C. Earlier Life Events (not directly related to one's immediate life situation)
       1. School grades and performance
       2. Worries, disappointments
       3. Successes and accomplishments
       4. Rejections and losses
       5. Episodes of ridicule
       6. Lies told to, by, or about oneself
    D. Life style
       1. Financial status
       2. Discussion of certain sex-related topics
          a. Dating, kissing and fondling
          b. Swearing or being the subject of profanity from others
          c. Sex-related humor
    E. Illegal or immoral activity of significant others
    F. Child Management

G. Names and personality descriptions of self or significant others (e.g., lovers and boyfriends)
H. Admission of minor illegal or anti-social acts
   1. Traffic ticket
   2. Mistreatment of animals
   3. Experimentation with minor drugs (e.g., marijuana) and alcohol
I. Minor psychological or physical concerns
   1. Non-debilitating fears
   2. Weight problem and height
   3. Failure to take responsibility for oneself
   4. Personality characteristics such as trust, immaturity, spontaneity, impulsivity, honesty, defensiveness and warmth
J. Mild emotional states
   1. General likes and dislikes
K. Narration of events and experiences that include oneself with affect

III. Highly Intimate Self-Disclosure (tends to be self-referential in nature)

A. Sexual habits and preferences (real or imaginary)
   1. Sexual dreams
B. Major disappointments or regrets
   1. Discussion of crises in one's life (past or present)
   2. Description of counseling or therapy experience (real or contemplated)
   3. Shame
C. Admission of serious difficulties (past or present in the expression or control of behavior)
   1. Addictions (e.g., excessive use of drugs or alcohol; discussion of habitual use)
   2. Physical aggression (given or received)
   3. Abortion
D. Important and/or detailed anomalies (physical or psychological)
   1. Discussion of previous psychiatric disorder or respondent or significant others
   2. False limbs, glass eyes, toupees, etc.
   3. Serious diseases (current)
E. Important feelings and behaviors (positive and negative) relating to:
   1. Marriage and family (parents, children, brothers and sisters and significant others--e.g., lovers)
   2. Reasons for marriage or divorce
   3. Extra-marital sexual relations or desire for same (actual or intended)
   4. Discussion of parents' marriage
   5. Confidential material told to or initiated by respondent
F. Discussion of specific instances of intense emotion (directed toward self or others; in personal terms)
   1. Feelings of depression

2. Love (if discussed specifically--otherwise, if used in abstract sense, rate II)
3. Hate, bitterness and resentment
4. Anger
5. Elation
6. Fulfillment
7. Extreme fears
8. Very strong personal desires (e.g., to be better liked)
9. Jealousy

G. Discussion of important hurt, loss, or discomfort caused or received by respondent (actual or anticipated)

H. Deep sense of personal worth or inadequacy which significantly affects self-concept
1. Include serious strengths and weaknesses in absolute or relative terms.
2. Rejection by significant others

I. Admission of significant illegal, immoral, or antisocial acts or impulses or self or significant others
1. Stealing
2. Vandalism
3. Important lies

J. Details of important and meaningful relationships (i.e., why someone is your best friend; if significant other is discussed not in relation to oneself, use category I or II)

APPENDIX E

Practice Questions

Practice Questions -

1. I like roller skating.

2. I like pets.

3. I don't like seeing movies.

4. Mathematics is hard for me.

(1)= always true....(2)= true most of the time
           (3)= true sometimes....
(4)= hardly ever true....(5)= not true at all

1.   (1).......(2).......(3).......(4).......(5)

2.   (1).......(2).......(3).......(4).......(5)

3.   (1).......(2).......(3).......(4).......(5)

4.   (1).......(2).......(3).......(4).......(5)

APPENDIX F

Pre-conversation and Post-conversation ratings of Liking, Perceived Liking, Familiarity, and Perceived Familiarity

(1) = not at all... (2) = a little bit... (3) = kind of...
(4) = very much... (5) = very very much...

(A) How much do you like your partner?
    (1).....
    (2).....
    (3).....
    (4).....
    (5).....

(B) How much do you think your partner likes you?
    (1).....
    (2).....
    (3).....
    (4).....
    (5).....

(C) How much do you know your partner?
    (1).....
    (2).....
    (3).....
    (4).....
    (5).....

(D) How much do you think your partner knows you?
    (1).....
    (2).....
    (3).....
    (4).....
    (5).....

NAME OF CHILD: _____

NAME OF TARGET: _____

Time of Testing _____   Before   After