Friendship potential, knowledge, skills, and expectations of Attention Deficit-Hyperactivity Disorder and normal children

Laura A. Taylor

Follow this and additional works at: http://scholarship.richmond.edu/honors-theses

Recommended Citation
Friendship Potential, Knowledge, Skills, and Expectations of Attention

Deficit-Hyperactivity Disorder and Normal Children

Laura A. Taylor

University of Richmond

Running head: FRIENDSHIP RELATIONS OF ADHD AND NORMAL CHILDREN
Abstract

The present study assessed the differences in the friendship patterns of nonmedicated children with Attention Deficit-Hyperactivity Disorder (ADHD) and children without the disorder. 22 children with ADHD and 23 normal controls and each of their friends completed an interview designed to evaluate their friendship potential, knowledge, skills, expectations, and quality. These children were divided at age 9 years, 8 months into younger and older groups in order to assess age differences across the variables. Results illustrated that children with ADHD have lower levels of friendship potential than children without ADHD especially in terms of their degree of similarity with their friends. Children with ADHD also have deficits in their friendship skills and in their expectations of friends. Differences across intimate and total knowledge of the friend were found for the variable of age. The only interaction across variables was found for the presence of conflict in the friendship, and this interaction was contrary to the hypothesized direction. Overall, children with ADHD apparently lack the ability to develop successful relationships which aid in social development primarily due to their inattentiveness to social process and performance and their maturational lag.
Friendship Potential, Knowledge, Skills, and Expectations of Attention Deficit-Hyperactivity Disorder and Normal Children

Peer relations have been identified as playing an important role in the development of children's interactions, particularly in the development of moral thought and social adjustment, the acquisition of social and interpersonal skills, and the development of the self through mutual reflection (Asher & Coie, 1990; Hartup, 1983; Newcomb, Bukowski, & Pattee, in press). However, children with Attention Deficit-Hyperactivity Disorder (ADHD) often do not fully benefit from these developmental aspects of peer relations (Hubbard & Newcomb, 1991). As a result, the quality of their interactions is minimal, and they often suffer from rejection. The peer relations of children with ADHD need to be studied because the rejection they suffer may determine future psychological problems these children encounter. The difficulties associated with social interactions do not diminish over time and may even increase with age (Whalen & Henker, 1985).

Many investigations of the problems children with ADHD have in dyadic peer interactions have been conducted by comparing the interactions of ADHD and non-ADHD children (Clark, Cheyne, Cunningham, and Siegel, 1988; Hubbard & Newcomb, 1991; Whalen, Henker, Collins, McAuliffe, & Vaux, 1979). The results have indicated that the normal-normal dyads were able to maintain reciprocal dialogue and had better conversational skills, while the mixed dyads exhibited less reciprocal dialogue, had fewer associative interactions, and asserted more aggressive behaviors. These aggressive tendencies of children with ADHD combine with their problems in verbal exchange and with their verbal reciprocity in terms of aggression (Whalen et al., 1979). It has been indicated that these combinations of problems lead to the rejection of children with ADHD and to the limited development of their competency in
social interactions. Pelham (1980) attributed this rejection and unpopularity to the hyperactive children's elevated level of arousal in the new situation and poor social control which leads to disruptive and inappropriate behavior bordering on aggression (cited in Milich & Landau, 1982). These difficulties in peer relationships lead to frustration that furthers the children's aggression and their weaknesses in social interactions.

ADHD is characterized by difficulties with distractibility, impulse control, hyperactivity, concentration problems, and task orientation (Cunningham, Siegel, & Offord, 1985; Clark et al., 1988; Routh, 1980). Cunningham and her colleagues (1985) investigated the effects of lower levels of these characteristic behaviors on peer interactions in boys with ADHD by studying the effects of methylphenidate on interactions. Methylphenidate did improve some of these behavioral problems, including off-task behavior, hyperactivity, activity level, and controlling behavior. Peers responded to the children with ADHD with fewer controlling negative responses, and the children with ADHD lowered their activity levels and off-task behavior. However, the peers' levels of positive responses to interactions, on-task behavior, and play did not increase despite the drug-induced improvements in the children's behavior (Barkley & Cunningham, 1979; Cunningham & Barkley, 1978). The children had already acquired social skills deficits that were not reversible with medication or social skills training (Hubbard & Newcomb, 1991; Pelham & Bender, 1982).

The lack of increase in peer positive responses in Cunningham and colleagues' (1985) study is also evident in Pelham and Bender's (1982) finding that the popularity level of children with ADHD did not increase with medication. In peer nominations, children with ADHD were more likely to receive negative nominations (Milich & Landau, 1982) and less likely to receive "true friend" or positive nominations (Bower,
1969; Pelham & Bender, 1982; Klein & Young, 1979). Children with ADHD were also less likely to have reciprocal friendships (Milich & Landau, 1982).

According to Campbell and Paulauskas (1979), children with ADHD themselves attributed their primary difficulties to those they faced in peer relationships. The majority of evidence also extended this attribution to parents' and teachers' views of children with ADHD (Milich & Landau, 1982). These difficulties in peer relationships may developmentally lead to further problems in the formation of friendships. Logically, the role of peer relations in development should be less potent than the role of friendship due to the intense affective ties afforded by friendship relations which are said to provide unique social contexts (Newcomb & Bagwell, in press). Due to their unique natures, it is important to study peer and friendship relations independently. However, the area of friendships has been under-researched.

Peer and friendship relations both develop out of information exchange and common activities and involve sharing and cooperation, but there are distinctions. Peer relations are more unilateral and group oriented, while friendships are mutual and dyadic. For this reason, peer relations provide a platform for social skills which serve as a basis for intimate disclosure and mutual discovery in friendships (Newcomb et al., in press). Sullivan (1953) referred to these friendships as “chumships.” The development of a close “chumship” is of primary importance to the child’s development of interpersonal sensitivity, a sensitivity to what matters to the other person in the relationship. Before this “chumship,” the child is essentially egocentric, but through this intimate friendship, the child becomes increasingly aware of and interested in ways to contribute to the friend’s happiness and self worth.

The Piaget-Sullivan thesis described friendship as a symmetrical relationship composed of mutual respect, validation of self worth, and equal importance in every
way (Smollar & Youniss, 1982). Fine (1981) further asserted that these friendships serve as “mirrors” through which the children learn about themselves and learn to collaborate and behave with the welfare of the dyad as the focus. They also provide the necessary basis for and the primary mechanism toward social knowledge (Smollar & Youniss, 1982).

The current study investigated the friendships of children with ADHD as compared to those of children without ADHD through an interview process designed to assess their friendships. The following two sections will expand upon the four divisions of the interview: friendship potential, knowledge of the friend, friendship knowledge and skills, and friendship expectations. These divisions will evaluate the children’s ability to be a friend to another child, the children’s understanding of the qualities and skills that are necessary in a friendship, and the children’s expectations of friends within their relationships.

**Friendship Potential.** Bigelow (1977) referred to propinquity and common activities as measures which deal with the more superficial aspects of a friendship. These measures seem to provide a basis for a friendship, or friendship potential. Friends are typically similar in gender and social class, and they generally like many of the same activities and live near each other (Doyle, 1982; Furman & Bierman, 1983). Often, when the children are not near each other, they have fewer interactions, and the friendship ends (Berndt, Hawkins, & Hoyle, 1986). Therefore, proximity seems to be a basis for friendship. Zahn-Waxler, Iannotti, and Chapman (1982) also assert that friends are frequently similar in age, interests, and goals. These levels of similarity enhance the attraction of the friends, increase interaction, and ultimately aid in the development of social skills. Every friendship is said to be built, at least to some
extent, on the basis of this similarity (Rubin, 1980). Therefore, similarity seems to be a primary component of the potential for two children to become friends.

Although this research was exploratory, hypotheses were formulated based on prior research on children with ADHD and on the peer relations of children with ADHD. It was anticipated that children with ADHD may not have as many interests as children without the disorder, so they would lack the primary basis for the formation of initial friendships. The level of similarity between children with ADHD and their friends was also expected to be lower across age since children with ADHD are often known to play with younger children (Whalen et al., 1987).

**Knowledge of the Friend.** Knowledge of the friend refers to knowledge of external characteristics, preferences, and personality characteristics of the friend. Diaz and Berndt (1982) separated these forms of knowledge into external and intimate knowledge. External factors were said to be knowledge of the friend's telephone number, birthdate, parents, siblings, and club or team membership. Preferences included those for sports, hated foods, playmates, future careers, and favorite subjects, and television shows. Diaz and Berndt (1982) included reactions to teasing, sources of worry or anger, objects of pride, and ways of spending allowance and making them feel better in their category of personality characteristic knowledge. In their study, these authors found that younger children knew significantly less about their friends than older children, particularly in the categories of preferences and personality characteristics. It was anticipated that condition (ADHD, non-ADHD) would also be a factor of difference in this study. Across the two variables, it was expected that younger children and children with ADHD would display lower levels of knowledge about their friends than older children and children without ADHD. In addition, it was hypothesized that an interaction between age and condition would exist such that
younger children with ADHD will evidence the lowest levels of intimate knowledge and older controls the highest levels.

**Friendship Skills, Knowledge, and Expectations.** Children must also have a general knowledge of the necessary skills of friendship and be able to perform these skills in order to establish and maintain a friendship or a best friendship. These social skills are learned through their interactions with others who provide models of and reinforcement for proper behaviors (Kafer, 1983). In the present study, social skills and social knowledge are viewed as necessary components of friendships because a child must understand the requirements of friendship in order to be a friend or to have a friend.

According to prior research, children with ADHD have poor initial social interactions due to their aggressive tendencies, their low levels of verbal reciprocity and associative play, and their general difficulty in adapting to the demands of social situations (Hubbard & Newcomb, 1991; Whalen et al., 1979). These social interactions provide the foundation for children's acquisition of interpersonal and social skills in addition to models of socially accepted skills utilized in peer interactions (Asher & Coie, 1990; Hartup, 1983; Newcomb et al., in press). For that reason, it is hypothesized that children with ADHD will indicate lower levels of social knowledge and social skill in their friendships than children without the disorder.

The knowledge and possession of the skills of friendship provide children with a basis for devising their expectations and goals of the roles their friends should play. Bigelow (1977) defined children's friendship expectations as “those beliefs, attitudes, and values that a person expresses as being important characteristics to have in a best friend.” These expectations are often identical to the all of the aspects of social knowledge and skill. However, every component of skill and knowledge may not be
incorporated into each child's friendship expectations. Children have different expectations for their friends that reflect their needs including the valued expectations of pleasure (e.g. companionship, play, or entertainment), utility (e.g. helpfulness, critical evaluation, stability in times of stress, or assistance in dealing with problems), and virtue (e.g. loyalty, respect, or dependability) (Asher & Coie, 1990; Reisman & Shorr, 1978a, 1978b).

Disturbed children are often described as having conceptions of friendship which are often less mature than those of nondisturbed children (Selman, 1976; Hayden, Nasby, & Davis, 1977). It was hypothesized that the children with and without ADHD have these differing goals based on their varying levels of social and mental development and based on their level of concept maturity. Therefore, children with ADHD may view a best friend as a playmate or companion, but not expect the friend to be a confidant or an intimate companion.

In this study, friendship knowledge, skills, and expectations will be divided into various components. The following concepts are included in this study as components of peer relationships: cooperation, equality, respect, reciprocity, similarity, sharing, and consistency/stability. These skills guide the child to the acquisition and performance of other principles of friendships including the following: collaboration, acceptance, mutual respect, interpersonal sensitivity, intimacy, empathy, and loyalty/trust. Table 1 contains more detailed definitions of these concepts which follow those used for the purposes of this study.

Insert Table 1 about here.

It was anticipated that the children with ADHD will have deficits in the
performance of social skills, lower levels of social knowledge, and different expectations of friends which would be evident in significant differences in their friendships as compared with those of children without ADHD. The potential for general peer relationships was expected to be somewhat closer between the two groups, but the difficulties that children with ADHD have in these general peer relationships and in initial social interactions indicate a likelihood for similar difficulties to exist in friendships.

Method

Subjects

The sample included boys between the ages of 5 and 13 (M=9 years, 5 months) who were divided into the younger and older age groups at 9 years, 8 months. The 22 children with ADHD received physicians' diagnoses according to a Hyperactivity Index score greater than 15 on the parent and teacher versions of the Connor's Behavior Checklist (Goyette, Conners, & Ulrich, 1978). They were a subsample of an existing population of children with ADHD at Children's Hospital who had been part of an ongoing study of the effects of medication on the behavior of children with ADHD. None of the children were under an active dose of medication when interviewed.

The 23 normal subjects were recruited from summer day camp facilities of the Young Men's Christian Association (YMCA) and the Central Boys Club in Richmond, Virginia. These children were not previously diagnosed as ADHD. A friend of each ADHD and each normal child was selected by the subjects or their parents to participate with them in the project. To assess the mutuality of friendship, each child listed his 3 best friends on the participation forms. All participants consented to taking part in the study and received a monetary reimbursement of five dollars per child.
Procedure

The current study assessed the differences between the friendships of children with and without ADHD by implementing individual verbal interviews lasting approximately 15 to 30 minutes each. The procedure utilized within this study consisted of three steps: (1) interview development, (2) data collection, and (3) content analysis and coding of interview data.

Interview development. In preparation for conducting this interview, extensive literature review was conducted to research other interview strategies within studies that measured friendship (Bigelow, 1977; Bigelow & LaGaipa, 1975; Buhrmester, 1990; Buzzelli, 1988; Diaz & Berndt, 1982; Furman & Bierman, 1984; Kafer, 1983; Mannarino, 1978; Reisman & Shorr, 1978a, b; Sullivan, 1953; Zahn-Waxler et al., 1982). An interview was devised that evaluates children’s friendships in terms of friendship potential, knowledge of the friend, and friendship knowledge, skills, and expectations (See Appendix for a copy of the interview used).

The interview includes both open- and close-ended questions to assess the children’s free recall and recognition of the qualities of friendship. The close-ended questions were responded to on a 5-point Likert scale in which a rating of 5 will indicate always, 4 usually, 3 sometimes, 2 not often, and 1 never. The interviews were pilot tested with various children to evaluate the effectiveness and clarity of the questions.

Data collection. The children were either brought to the University of Richmond to be interviewed by one of the three interviewers, or one of the experimenters interviewed them in their homes. Consent forms were signed by both children in the dyad, and the interviews were conducted. The verbal responses were audio recorded for later coding. The children were given five dollars upon completion of the interview.
Content analysis and coding of interview data. The coding of the close-ended questions was arbitrarily established in the children's rating along the 5-point Likert scale. Coding of the open-ended questions was conducted according to a content analysis. This content analysis was conducted by the experimenters on each of the interviews to identify all possible responses to each question. These responses were later reduced to broader codes which were verified by reliability test in which a blind coder was asked to place 20 percent of the possible responses under the broader code headings. A reliability coefficient of Kappa (.79) was established.

Results

A 2 condition (ADHD, non-ADHD) by 2 age (younger, older) ANOVA was conducted across friendship potential, friendship knowledge, conflict, and friendship skills and expectations categories of the interview. A multiple response analysis was then conducted across the conflict and quality aspects in order to determine the frequency of the utilizations of each of the possible responses. The results of the ANOVAs may be seen in Tables 2 and 3.

____________________
Insert Tables 2 and 3 about here.

____________________

Friendship potential. Although an ANOVA revealed no significant differences in the proximity component of the friendship potential category across the condition and age variables, differences in potential were found in terms of similarity. A significant main effect for condition was found in terms of similarity in activity preference. Children with ADHD and their friends were less likely to have similar preferences in activities than normal children. A significant main effect was also found for age on the similarity in activity preference as younger dyads had fewer similar
preferences than older dyads. A significant main effect for condition was found in
terms of the target's similarity skills as rated by the friend such that children with ADHD
evidenced less skill than normal children. As expected, no significant differences in
skills of the friends of the target children were found. Similarity in sports preferences
approached significance across the main effect for condition such that ADHD dyads
evidenced less similarity than normal dyads. A significant main effect for condition
across similarity in hated subjects in school was illustrated contrary to the
hypothesized effect; ADHD dyads were more similar in responses than normal dyads.
No main effects existed across the similarity in club membership, preferred television
shows or playmates, future careers, or favorite subjects. No significant interactions
across any similarity responses were found.

**Friendship knowledge.** In support of Diaz and Berndt (1982), significant main
effects for age were found across total knowledge and intimate knowledge, while no
effects for the more superficial external knowledge were found. The significant effects
for age existed such that younger targets illustrated lower levels of total knowledge
and of intimate knowledge about their friends than older targets exhibited in terms of
total and intimate knowledge. However, the hypothesized main effect of condition and
the interaction between condition and age were not found across any of the three
categories of knowledge.

**Friendship skills.** As hypothesized, children with ADHD were rated lower in
friendship skills than children without ADHD. The 5-point Likert ratings recorded by
the friends of the targets were analyzed revealing a main effect for condition; children
with ADHD received significantly lower skills ratings than normal children. Also in
support of the hypotheses were the ratings of the friends' skills by the target children.
The analyses of these responses revealed no differences due to the non-ADHD status
of these friends. No main effects for age and no interactions between age and condition were found.

**Friendship expectations.** Main effects for condition were also indicated across the targets' expectations for their friends. The children with ADHD consistently rated their expectations of friendship skills lower on the 5-point Likert scale than the children without ADHD. No main effects for age or interactive effects for age and condition were found. Supporting these findings, no significant main effects or interactive effects were found based upon the friends' ratings of their expectations.

**Conflict.** On the basis of the multiple response crosstabs, no significant differences in the frequencies of conflict resolution patterns or in the frequencies of activities were evident. The only significant differences recorded for conflict patterns were uncovered in the factor analysis involving the targets' ratings of whether or not there were times when they did not get along with their friends. The responses to this question resulted in a significant interaction in which young children with ADHD and the older normal children evidenced the highest levels of conflict ratings and the older ADHD and the younger normal children the lowest.

**Quality.** Few remarkable frequency differences occurred across the dimensions of quality in the multiple response questions as well. However, some differences were notable. For instance, when the friends of the target children were asked to list the negative aspects of the target, the the friends indicated nothing about the children with ADHD (2) fewer times than about the normal children (10), and the friends responded with comments about aggressive or negative behaviors about the children with ADHD (11) more frequently than about the children without ADHD (5). Of interest as well are the results of the ANOVA of responses to the quality questions regarding how good of a friend the other member of the dyad is. No differences were found across age,
condition, or the interaction. This lack of difference suggests that all of the children see their friendships as good despite their ages or the condition of one of the dyad members.

Discussion

Children with ADHD have been shown to have many difficulties in their peer relationships due to problems associated with their disorder which affect their social interactions (Clark et al., 1988; Cunningham et al., 1985; Hubbard et al., 1991). Tyler, Taylor, and Newcomb (1993) further illustrated the problems children with ADHD have in friendship relations in their observational study looking at mutuality and intimacy in ADHD and normal boys' friendships. This observational study revealed significant differences in the mutuality of friendships based on the incongruities displayed in play and communication patterns. These incongruities appeared to hinder the acquisition of intimacy which is one of the primary distinguishing characteristics separating peer and friendship relations. The present study expanded upon these reported differences in an effort to extend the small research base on ADHD friendships and in an effort to explore the other components of friendship previously discussed.

The current study explored the differences between children with and without ADHD across potential, quality, conflict, friendship skills, and friendship expectations. These categories of friendship need to be examined in future research in order to assess the validity of the findings of this study and to explore other possible differences. The differences in condition indicated that children with ADHD to some degree lack the basis of similarity which increases the potential for friendships to develop. The significant differences in similarity existed across responses regarding preferences in activities and sports and hatred for subjects in school as well as across levels of similarity skills. If children lack this potential for friendship development to
Friendship

occur, it is veritably impossible for the children to benefit from the relationships. It would be interesting to investigate the effect of the lower potential for friendship formation. In many instances, the children with ADHD remarked that the friend who participated was their only friend or that their only friends were their relatives or their parents’ friends’ children. These differences in the number of friends the children possess and the sources of their friends could be significant in the study of the friendships of children with ADHD.

Children with ADHD also evidenced low levels of knowledge of friendship skills and expectations for friends. This deficit seemed to hinder the children’s ability to understand which behaviors are required in friendships. Bigelow (1977) grouped these expectations according to the following three groupings: (1) situational expectations evident in grades 1 - 3 (including propinquity, common activities, and evaluation), (2) normative expectations evident in grades 4 - 5 (i.e., character admiration), and (3) internal psychological expectations evident in grades 6 - 8 (including acceptance, loyalty and commitment, genuineness, common interests, intimacy potential). As illustrated in their significantly lower Likert ratings, children with ADHD seemed to lack the knowledge of necessary friendship skills to match the knowledge of skills which children without the disorder possessed. This lower level of knowledge and expectations could reflect the lower maturational level which would result in expectations falling primarily in the situational and normative categories. It would be valuable to conduct a similar study in which older subjects with and without ADHD participated in order to see if the children with ADHD evidenced higher levels of expectations with a greater age variability. The lower ratings of expectations by the
children with ADHD could also be a result of their deficient attentional capacities. However, further studies focusing on friendship expectations need to be conducted before a causality may be established.

The deficits in social understanding necessary for the proper social expectations could lead children with ADHD to have a limited possession of friendship skills deemed necessary to facilitate the performance to maintain friendships. The results of this study supported this idea. The limited skills were especially apparent in the area of similarity. Much attention needs to focused on this deficit because it may be inferred that these limitations apparently hinder the maintenance of peer relations and friendships, and ultimately lead to problems in social functioning. For that reason, it would be interesting to conduct an observational study on the effects of social skills training on the development of friendships in children with ADHD. The study could be conducted in a similar fashion to Tyler and colleagues’ (1993) study having an observational session before and after training. Imitative learning techniques for complex behaviors and shaping through adult and/or peer reinforcement could be utilized in this training. Prior to participating in the session after training, the children should have the opportunity to practice the new skills in a supportive environment which reinforces their successes and encourages reevaluation of the usefulness of their social strategies such as withdrawal, aggression, or social ineptness in order to counter these behaviors and learn the new skills (Kafer, 1983).

The differences evident across skills and expectations were not paralleled with the variable of age. However, differences were found across the variable of age primarily according to knowledge. These developmental differences support previous research conducted by Diaz and Berndt (1982) which illustrated that younger and
older children differed significantly in their knowledge about their friends. As evidenced in this study, the differences in knowledge occurred for the most part in the area of total and intimate knowledge. External knowledge resulted in little difference across groups. However, it was hypothesized that the differences would extend to the variable of condition and to the interaction of age and condition as well. It is difficult to discern the reason that the hypothesized main effect for condition did not occur based upon the relative consistency in the results in which the ADHD and younger groups and the normal and older groups paralleled. One explanation could be that the number of friends each child had was not taken into account. Based upon unrecorded observations, it appears that children with ADHD often only had one friend. It would be easier for this one friend to have high interaction frequency and thus a high knowledge base to utilize from proximity. The interactive results would not have occurred due to the lack of significance in terms of condition.

The lack of differences in the multi-responses activities and conflict questions may be due to the open-ended nature of the questions. In past research, children with ADHD and younger children have often experienced difficulty in answering these questions fully. It may be beneficial to devise a way to assess these components in a close-ended format. Consistent to this support for close-ended responses, a significant interaction was found between age and condition in the question regarding the existence of conflict in the dyads' relationships. However, the results which were found were contrary to the hypothesized outcome. Based on research which showed that children become better negotiators with age (and thus maturity), it was expected that younger children with ADHD would have the highest conflict ratings and the older children without ADHD the lowest (Downey & Walker, 1989). It is difficult to discern the cause of this variant interaction. The conflict patterns of children with ADHD and their
friends need to be explored more fully in future research in order to establish either contrary findings or to establish possible meanings for this interaction.

Many avenues for future research are available in this under-researched arena. For instance, studies looking at the differences in the number of friends maintained by members of each condition would possibly resolve the lack of significance condition illustrated in the knowledge portion of this study. Another focus could be upon the source of the friendships of children with ADHD. In many instances, the parents of the children with ADHD in this study reported that their child only had one friend or that their child was only friends with their friends' children. This report could depict a trend in which children with ADHD are only part of friendships which are somewhat arranged and are arbitrarily stable.

Further replications of this study and of the study conducted by Tyler and her colleagues (1993) should also be conducted utilizing subjects who are on medication. Medication could significantly effect both the interview responses and the activities of the children taking part in these studies. A replication of this fashion could provide a means for a validity check of the interview employed in this study and the coding scheme employed by Tyler and her colleagues (1993). These materials need to be evaluated in order to ensure the generalizability of these results.

Whether these friendships are a necessity, a hindrance, or an advantage (Newcomb et al., 1992; Newcomb et al., in press), friendships do drastically effect the development of children. Friendship is an area which must be explored more rigorously to provide insights into the treatment of children who lack the abilities to develop friendships and hence the abilities to control the effect friendships will have on their future developmental pathways. This study should provide a basis for the future exploration of this area of social development.
References


Cambridge: Cambridge University Press.


low accepted children at risk? Psychological Bulletin, 102, 357-389.


<table>
<thead>
<tr>
<th>Feature</th>
<th>Characteristics of Feature</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation</td>
<td>Goals of the individual are of less importance than goals of the dyad, and negotiation and compromise occur</td>
<td>Buzzelli, 1988; Sullivan, 1953; Zahn-Waxler, Ianotti, &amp; Chapman, 1982</td>
</tr>
<tr>
<td>Equality</td>
<td>Symmetrical relationship with equal power status and egalitarian exchange</td>
<td>Buhrmester et al., 1986; Smollar et al., 1982</td>
</tr>
<tr>
<td>Respect</td>
<td>Child gives attention and consideration to peer</td>
<td>Sullivan, 1953</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>The children share a mutuality in exchange and free response to all actions of the other, and the friends like each other</td>
<td>Bigelow, 1977; Mannarino, 1978; Piaget, 1965; Selman &amp; Schultz, 1990</td>
</tr>
<tr>
<td>Similarity</td>
<td>Peers have similar interests, share in common activities, and are the same sex</td>
<td>Bigelow, 1977; Doyle, 1982; Rubin, 1980</td>
</tr>
<tr>
<td>Sharing</td>
<td>Peers share activities, interests, and feelings and act as both givers and receivers in their exchanges</td>
<td>Grunebaum &amp; Solomon, 1982; Smollar et al., 1982</td>
</tr>
<tr>
<td>Consistency/</td>
<td>Peers actions are similar across time and situations, and peers maintain the same relationships over time</td>
<td>Furman &amp; Bierman, 1983; Horrocks &amp; Baker, 1951</td>
</tr>
<tr>
<td>Stability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>Children coordinate actions from a third person perspective and adjust their behaviors to fit needs of the other</td>
<td>Parker &amp; Asher, 1989; Selman et al., 1990; Sullivan, 1953</td>
</tr>
<tr>
<td>Acceptance</td>
<td>The child appreciates the individuality of the friend and views the friend's problems, feelings,</td>
<td>Smollar et al., 1982</td>
</tr>
</tbody>
</table>
and eccentricities as his own

<table>
<thead>
<tr>
<th>Mutual Respect</th>
<th>There is a mutual maintenance of the feelings, esteem, and prestige of the friends, and the friends place each other in high regard</th>
<th>Selman et al., 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Sensitivity</td>
<td>Child's orientation becomes focused on the friend, and the child contributes to the worthwhileness and happiness of the friend</td>
<td>Furman &amp; Bierman, 1984; Sullivan, 1953</td>
</tr>
<tr>
<td>Intimacy</td>
<td>A closeness/connectivity develops allowing the friends to share their problems and experiences and allowing for the validation of self worth</td>
<td>Bell, 1981; Berndt, Hawkins, &amp; Hoyle, 1986; Bukowski &amp; Kramer, 1986; Buhrmester, 1990; Selman et al., 1990</td>
</tr>
<tr>
<td>Empathy</td>
<td>The friends have the ability to experience the affective states of the other child and to place themselves in the affective role of the other child</td>
<td>Zahn-Waxler et al., 1982</td>
</tr>
<tr>
<td>Loyalty/Trust</td>
<td>Friends are in a mutual or reliable alliance characterized by support, openness, and honesty</td>
<td>Bell, 1981; Berndt et al, 1986; Weiss, 1974; Youniss, 1980</td>
</tr>
<tr>
<td>Codes for Condition</td>
<td>ADHD/friend</td>
<td>Normal/friend</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Friendship Potential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity</td>
<td>1.71</td>
<td>.24</td>
</tr>
<tr>
<td>Similarity in activities</td>
<td>1.41</td>
<td>.50</td>
</tr>
<tr>
<td>Similarity in clubs</td>
<td>1.27</td>
<td>.46</td>
</tr>
<tr>
<td>Similarity in sports</td>
<td>1.68</td>
<td>.48</td>
</tr>
<tr>
<td>Similarity in playmates</td>
<td>1.59</td>
<td>.50</td>
</tr>
<tr>
<td>Similarity in TV shows</td>
<td>1.14</td>
<td>.35</td>
</tr>
<tr>
<td>Similarity in careers</td>
<td>1.18</td>
<td>.39</td>
</tr>
<tr>
<td>Similarity in favorite subjects</td>
<td>1.68</td>
<td>.48</td>
</tr>
<tr>
<td>Similarity in hated subjects</td>
<td>1.37</td>
<td>.48</td>
</tr>
<tr>
<td>Friendship Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.96</td>
<td>.71</td>
</tr>
<tr>
<td>Similarity</td>
<td>3.55</td>
<td>1.26</td>
</tr>
<tr>
<td>Expectations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target total</td>
<td>4.27</td>
<td>.56</td>
</tr>
<tr>
<td>Friend total</td>
<td>4.72</td>
<td>1.22</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External</td>
<td>1.36</td>
<td>.68</td>
</tr>
<tr>
<td>Intimate</td>
<td>0.23</td>
<td>.15</td>
</tr>
<tr>
<td>Total</td>
<td>0.82</td>
<td>.27</td>
</tr>
<tr>
<td>Conflict</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurrence</td>
<td>1.27</td>
<td>.46</td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusion in target's list</td>
<td>1.73</td>
<td>.46</td>
</tr>
<tr>
<td>Inclusion in friend's list</td>
<td>1.68</td>
<td>.48</td>
</tr>
<tr>
<td>How good friendship is</td>
<td>4.59</td>
<td>.96</td>
</tr>
</tbody>
</table>

* $p < .05$

** $p < .01$
Table 3

Means, Standard Deviations, and F-values for the Friendship Potential, Skills, Knowledge, Expectations, Conflict, and Quality Codes for the Variables of Age

<table>
<thead>
<tr>
<th>Codes for Condition</th>
<th>Younger/friend</th>
<th>Older/friend</th>
<th>F (1, 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Friendship Potential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity</td>
<td>1.74</td>
<td>.33</td>
<td>1.68</td>
</tr>
<tr>
<td>Similarity in activities</td>
<td>1.42</td>
<td>.50</td>
<td>1.75</td>
</tr>
<tr>
<td>Similarity in clubs</td>
<td>1.24</td>
<td>.44</td>
<td>1.35</td>
</tr>
<tr>
<td>Similarity in sports</td>
<td>1.72</td>
<td>.46</td>
<td>1.90</td>
</tr>
<tr>
<td>Similarity in playmates</td>
<td>1.60</td>
<td>.50</td>
<td>1.65</td>
</tr>
<tr>
<td>Similarity in TV shows</td>
<td>1.20</td>
<td>.41</td>
<td>1.15</td>
</tr>
<tr>
<td>Similarity in careers</td>
<td>1.16</td>
<td>.37</td>
<td>1.25</td>
</tr>
<tr>
<td>Similarity in favorite subjects</td>
<td>1.52</td>
<td>.51</td>
<td>1.75</td>
</tr>
<tr>
<td>Similarity in hated subjects</td>
<td>1.12</td>
<td>.33</td>
<td>1.30</td>
</tr>
<tr>
<td>Friendship Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.03</td>
<td>.69</td>
<td>4.33</td>
</tr>
<tr>
<td>Similarity</td>
<td>4.52</td>
<td>1.39</td>
<td>4.15</td>
</tr>
<tr>
<td>Expectations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target total</td>
<td>4.43</td>
<td>.53</td>
<td>4.49</td>
</tr>
<tr>
<td>Friend total</td>
<td>4.54</td>
<td>1.19</td>
<td>4.66</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External</td>
<td>1.22</td>
<td>.74</td>
<td>1.19</td>
</tr>
<tr>
<td>Intimate</td>
<td>0.17</td>
<td>.13</td>
<td>0.32</td>
</tr>
<tr>
<td>Total</td>
<td>0.72</td>
<td>.24</td>
<td>1.00</td>
</tr>
<tr>
<td>Conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurrence</td>
<td>1.38</td>
<td>.49</td>
<td>1.25</td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusion in target's list</td>
<td>1.68</td>
<td>.48</td>
<td>1.75</td>
</tr>
<tr>
<td>Inclusion in friend's list</td>
<td>1.76</td>
<td>.44</td>
<td>1.75</td>
</tr>
<tr>
<td>How good friendship is</td>
<td>4.64</td>
<td>.91</td>
<td>4.90</td>
</tr>
</tbody>
</table>

*p < .05  
**p < .01
Appendix

Interviewer ________________________
Date ____________________________

1. Name of target ________________________ 1 ______
2. Birthday of target ________________________ 2 ______
3. Name of friend ________________________ 3 ______
4. Birthday of friend ________________________ 4 ______
5. How old is he? ________________________ 5 ______
6. Where does _______ live? ________________________ 6 ______
7. How close does _______ live to you? ________________________ 7 ______
8. Do you go to school with _______? Yes No 8 ______
9. Were you in the same class last year? Y N 9 ______
10. What do you and _______ do together at school? How often do you do that? ________________________ 10 ______
    ________________________ 11 ______
    ________________________ 12 ______
    ________________________ 13 ______
11. Can you talk to each other during class without getting out of your seat or yelling? Y N 14 ______
12. Tell me the things that you and _______ do together after school. How often do you do that?

   ________________________________   ____  15_____
   ________________________________   ____  16_____
   ________________________________   ____  17_____
   ________________________________   ____  18_____
   ________________________________   ____  19_____
   ________________________________   ____  20_____

13. Are there times when you and _______ don’t get along? Y  N  21_____

14. When you don’t get along, what happens?

   ________________________________   22_____
   ________________________________   23_____
   ________________________________   24_____
   ________________________________   25_____

15. How do you end your arguments?

   ________________________________   26_____
   ________________________________   27_____
   ________________________________   28_____
   ________________________________
16. What are _____'s interests?


17. Does _____ have any pets?  Y    N

If yes, what kinds?


18. Does he have his own bedroom?  Y    N

19. Does he have any brothers or sisters?  Y    N

If yes, tell me the first names of _____'s brothers and sisters.


20. What is his telephone number?  

21. Tell me the first name of his parents.


22. What clubs or teams does he belong to?

23. What are _______'s favorite sports?

24. What are the foods that he really likes?

25. What are the foods that _______ really hates?

26. Who are the kids that ______ likes to play with?
27. What are his favorite TV shows?

28. What would he like to be when he grows up?

29. What are _______'s favorite subjects at school?

30. What are his least favorite subjects in school?

31. How does _____ react when he is teased?

32. What does he worry about?

33. What things make him really mad?
34. What things make______ really proud of himself?

35. How does he usually spend his allowance?

36. When ______ is upset, what can you do to make him feel better?

37. How long have you and ______ been friends? (Were you friends at Christmas? last summer? at the beginning of the school year?)

38. How do you know that ______ is your friend?
39. Name some things that are especially good about ______.

40. Name some things that you don't like about him.

41. What do you like about being friends with him?

42. What do you not like about being friends with him?
43. What is he like? What kind of person is he?

44. What are your interests?

45. Do you have any pets? Y N
   If yes, what kinds?

46. Do you have your own bedroom? Y N

47. Do you have any brothers or sisters? Y N
   If yes, tell me the first names of your brothers and sisters.
48. What is your telephone number? ________________________
49. Tell me the first name of your parents.

__________________________________________________________
149____
__________________________________________________________
150____
__________________________________________________________
151____
__________________________________________________________
152____

50. What clubs or teams do you belong to?

__________________________________________________________
153____
__________________________________________________________
154____
__________________________________________________________
155____
__________________________________________________________
156____
__________________________________________________________
157____
__________________________________________________________
158____

51. What are your favorite sports?

__________________________________________________________
159____
__________________________________________________________
160____
__________________________________________________________
161____

52. What are the foods that you really like?

__________________________________________________________
162____
__________________________________________________________
163____
__________________________________________________________
164____

53. What are the foods that you really hate?

__________________________________________________________
165____
__________________________________________________________
166____
__________________________________________________________
167____
48. What is your telephone number? __________________________

49. Tell me the first name of your parents.

____________________________________________________

____________________________________________________

____________________________________________________

50. What clubs or teams do you belong to?

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

51. What are your favorite sports?

____________________________________________________

____________________________________________________

____________________________________________________

52. What are the foods that you really like?

____________________________________________________

____________________________________________________

____________________________________________________

53. What are the foods that you really hate?

____________________________________________________

____________________________________________________

____________________________________________________
54. Who are the kids that you like to play with?

168
169
170

55. What are your favorite TV shows?

171
172
173

56. What would you like to be when you grow up?

174

57. What are your favorite subjects at school?

175
176

58. What are your least favorite subjects in school?

177
178

59. How do you react when you are teased?

179
180
181
182
183

60. What do you worry about?

184
185
61. What things make you really mad?

187

188

189

190

191

62. What things make you really proud of yourself?

192

193

194

195

196

63. How do you usually spend your allowance?

197

198

199

200

64. When you are upset, what can your friend do to make you feel better?

201

202

203

204
Instructions for questions 65 through 78: "I'm going to ask you some questions, and you are going to answer using a scale. Remember, there are no right or wrong answers. Look at this scale. This is how you use it.

Let's pretend the question is: How good is ice cream?

If you think it is very good, then you point to #5.

If you think ice cream is sometimes good, then point to #4.

If you think it is sometimes good and sometimes not good, point to #3.

If ice cream is usually not good, point to #2.

If you think ice cream is never good, point to #1.

What is your answer? (If illogical, ask why?)

OK, let's answer some questions.

65. How good of friends are you and _____? 1 2 3 4 5 205 _____

66. How good is _____ at working together with you to solve a problem?

1 2 3 4 5 206 _____

67. How good is he at taking turns being the leader in the games you play?

1 2 3 4 5 207 _____

68. How good is he at doing things for you?

1 2 3 4 5 208 _____

69. How good is _____ at looking up to you?

1 2 3 4 5 209 _____

70. How good is he being like or being similar to you?

1 2 3 4 5 210 _____

71. How good is _____ at sharing with you?

1 2 3 4 5 211 _____
72. How good is he at being able to be counted on?  
1  2  3  4  5  
212_____

73. How good is he at liking you just the way you are?  
1  2  3  4  5  
213_____

74. How good is he at caring about your feelings?  
1  2  3  4  5  
214_____

75. How good is _____ at being someone you can share your problems and secrets with?  
1  2  3  4  5  
215_____

76. How good is he at understanding the way you are feeling?  
1  2  3  4  5  
216_____

77. How good is he at being able to be trusted to keep a secret?  
1  2  3  4  5  
217_____

78. How good is he at “sticking up” for you, if someone is picking on you?  
1  2  3  4  5  
218_____ 

Instructions for questions 79 through 91: “I’m going to ask you some more questions, using a different scale. Remember, there are no right or wrong answers. Look at this scale. This is how you use it.

Let’s pretend the question is: How important are pencils for writing? 
If you think they are very important, then you point to #5. 
If you think pencils are sometimes important for writing, then point to #4. 
If you think they are sometimes important and sometimes not important, point to #3. 
If pencils are usually not important for writing, point to #2. 
If you think pencils are never important for writing, point to #1. 
What is your answer? Why?
OK, let's answer some questions.

79. How important is it that a friend will work together with you to solve a problem? 1 2 3 4 5

80. How important is it for friends to take turns being the leader in the games they play? 1 2 3 4 5

81. How important is it for friends to do things for one another? 1 2 3 4 5

82. How important is it for friends to look up to one another? 1 2 3 4 5

83. How important is it for friends to be alike? 1 2 3 4 5

84. How important is it for friends to share with each other? 1 2 3 4 5

85. How important is it for friends to be able to count on each other? 1 2 3 4 5

86. How important is it for friends to like each other just the way they are? 1 2 3 4 5

87. How important is it for friends to care about each other's feelings? 1 2 3 4 5

88. How important is it for friends to be able to share their problems and secrets with each other? 1 2 3 4 5

89. How important is it for friends to understand the way their friend is feeling? 1 2 3 4 5

90. How important is it for friends to trust one another to keep a secret?
91. How important is it for friends to "stick up" for each other, if someone is picking on one of them?