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An assessment of the social behaviors of depressed children

Romano, Barbara Ann, Ph.D.

The University of North Carolina at Greensboro, 1989

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300 N. Zeeb Rd.
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AN ASSESSMENT OF THE SOCIAL BEHAVIORS OF
DEPRESSED CHILDREN

by

Barbara Ann Romano

A Dissertation submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
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of the Requirements for the Degree
Doctor of Philosophy

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1989

Approved by

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APPROVAL PAGE

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Current theoretical models of depression have been developed with the adult depressive in mind. Little attention has been given to the appropriateness of extending these theoretical formulations to the depressed child. Since disturbances in the child's social environment have been implicated as one of the best predictors of difficulties in psychological adjustment later in life, it seems important to take a closer look at those models of adult depression that emphasize the depressive's social context. The present study used Lewinsohn's and Coyne's models of adult depression as frameworks with which to investigate the social interactions of depressed children.

Twenty-eight boys and girls between the ages of 9 and 12 served as subjects. Based on child and parent interview, subjects were diagnosed as either depressed, conduct disordered, or normal. Each subject interacted with two other children of the same gender and age in both a free play and a competitive play condition. In addition, the subject was observed in a solitary play condition. Specific categories of play behaviors were assessed as well as peer and adult ratings of the subjects' social competency. In addition, subjects' perceptions of the interaction were examined. Furthermore, the correspondence between parent

and child reports of the child's depressive symptomatology was investigated.

Although few behavioral differences were found among the groups, they differed in ratings of social competency and in their self-perceptions. Depressed children were rated by peers as less liked and less preferred as a playmate than normal children. Conduct disordered children, however, were rated as even more disliked and less preferred as a playmate than depressed children. These peer ratings were consistent with adult ratings of the child's social competency. Moreover, depressed and conduct disordered children did not feel that others in the interaction enjoyed playing with them, whereas normal children did.

In addition, the results of the self- and parent-report measures indicated that children can validly report their depressive symptoms. A good correspondence between child and parent reports of depression on different, nonsimilar measures of depression was found.

The current results provide support for Coyne's model of depression. Furthermore, these findings are discussed as they relate to recent studies of socially isolated and rejected children. In addition, directions for future research in the social interactions of depressed children are offered.

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CHAPTER I
INTRODUCTION

Depression in the childhood years has recently begun to receive a considerable amount of attention by researchers and clinicians. Although childhood depression has been officially recognized in the third edition of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (1980), its status as a psychological or psychiatric syndrome remains unclear. Currently, there are three main perspectives on the existence and nature of depression as a clinical syndrome in children.

The first of these views holds that depressive symptoms are not directly expressed by children but must be inferred from other behaviors that mask the underlying depression (Glaser, 1968; Toolan, 1962). Proponents of this view believe that depressive symptomatology as seen clinically in the adult population is rarely seen in children. This perspective does not deny that depressive feelings are common, but holds instead that the manifestation of these feelings by children is indirect. Some of the behaviors that have been identified as masking the underlying depression, or that are depressive equivalents, are hyperactivity, aggressiveness, temper tantrums (Toolan, 1962), somatic complaints such as headaches and

stomachaches, enuresis, encopresis (Cytryn & McKnew, 1974; Sperling, 1974), and school problems (Glaser, 1968). Cytryn and McKnew (1974) suggest that the underlying depression can be diagnosed by evaluating the content of the child's dreams, fantasies, and verbal expression, as well as the child's mood and behaviors. The underlying depression is used to account for the above behaviors, even in the absence of dysphoric mood.

This perspective has not been widely accepted, and numerous criticisms have attacked its logic. One of the major criticisms is that this view has no clinical value because the behaviors identified as "masking" depression cover the range of child psychopathologies (Carlson & Cantwell, 1980; Kaslow & Rehm, 1983), and thus no basis is provided for a differential diagnosis. For example, it is not clear if the hyperactive child is "masking" depression or is simply hyperactive.

The second perspective views depressive symptoms as transitory in development, dissipating over time (Lefkowitz & Burton, 1978). The logic is that, since these symptoms are common among otherwise normal children, depression in childhood should not be considered a psychopathological disorder.

Costello (1980) and Kashani, Husain, Shelton, Hodges, Cytryn, and McKnew (1981) have been at the forefront of criticisms of this perspective. They argue that, while

single symptoms of depression may be prevalent and transient in childhood, the syndrome of depression may not be. It is important to consider the syndrome, that is, the presence of a cluster of highly correlated symptoms and not individual symptoms. For instance, a symptom of depression such as eating disturbances may be prevalent and dissipate with time in six year olds, but the presence of eating disturbances in conjunction with dysphoric mood, anergia, and low self-esteem may not be as transient. Furthermore, even if the syndrome appears to be transient in childhood, it should still be clinically addressed because little is known about the effects of childhood psychopathology on later periods of development. Recent longitudinal studies have shown evidence of the continuity of psychological disturbances. Kovacs, Feinberg, Crouse-Novak, Paulauskas, Pollack, and Finkelstein (1984) have found that children who have a depressive syndrome such as major depression or dysthymia are likely to have continuous, recurrent bouts with depression. Similarly, Chess, Thomas, and Hassibi (1983) described the poor prognosis of recurrent psychopathology in four of the six depressed children they studied.

The consensus view currently held by those researching childhood depression and by the American Psychiatric Association in DSM-III (1980) is that depression in children can be diagnosed according to the criteria used in the diagnosis of adult depression. It is also held, however,

that there may be differences in symptom expression due to the child's developmental level. In any event, the criteria for adults as well as children cover the following dimensions of depression: affective (dysphoria, weepiness, mood change, anhedonia), cognitive (low self-esteem, hopelessness, helplessness), vegetative (sleep and appetite disturbances), and motivational (anergia, decreased social interactions, avoidance).

Although this view acknowledges possible differences between childhood and adult depression, few studies have systematically investigated these differences. Furthermore, the few that have done so have produced equivocal results. For instance, Garber (1984) investigated the developmental progression of depression in 8-to-13-year-old girls and found that overall expression of depressive symptomatology was influenced by age. However, Kovacs and Paulauskas (1984) found that neither cognitive nor somatosexual development predicted either cognitive or vegetative dimensions of childhood depression. Replications and extensions of the investigations exploring differences in child and adult depression are clearly needed.

Current theoretical models of depression have been developed with the adult depressive in mind. Little attention has been given to the appropriateness of extending these theoretical formulations to the depressed child. Disturbances in the child's social environment, in

particular in peer relations, have been implicated as one of the best predictors of difficulties in psychological adjustment later in life. Therefore, it seems important to take a closer look at those models of adult depression that emphasize the depressive's social context and examine their applicability to childhood depression.

Social Skills and Depression

One behavioral theory of depression that points to the social interaction as being important in the development and maintenance of depressive behaviors has been developed by Lewinsohn (1974). Lewinsohn (1974) states that depression is a result of a low rate of positive reinforcement contingent on the person's behavior. This low rate of response-contingent positive reinforcement is a function of a) the low rate of available reinforcers in the environment; b) the diminished potency of reinforcers through biological or contextual changes; and c) the person's lack of skill (for example, social skills) in procuring these reinforcers from the environment. For Lewinsohn, the inappropriate social skills of the depressed individual reflect an underlying deficiency in the individual's behavioral repertoire.

There are data in the adult literature that support the social skills deficit hypothesis (Libet & Lewinsohn, 1973;

Youngren & Lewinsohn, 1980). When compared to normal individuals, depressed individuals were found to be less socially skilled on some behavioral measures such as emitting positive responses when interacting in a group (Libet & Lewinsohn, 1973). Youngren and Lewinsohn (1980) compared the social behaviors of depressives, psychiatric controls, and normal adults when interacting in groups and dyads. Although their results showed no differences between the two psychiatric groups on specific behavioral measures, they did differ on other measures. That is, trained observers and depressives themselves rated the depressed adults as less socially competent than the other two groups on more global measures of social competence.

This model of depression is consistent with other theoretical formulations of depression that focus on the depressive's social environment. Another model of adult depression, proposed by Coyne (1979a), suggests that depressed behavior is maintained by the depressive's interactions with others. Unlike Lewinsohn, Coyne does not hypothesize that a social-skills deficit causes depression but focuses on the variables that are thought to maintain depressive behavior in a social interaction. He suggests that the depressed person's behaviors function as aversive stimuli, which produce avoidance in other people (Coyne, 1976a). This results in a decrease in the overall amount of available social reinforcement in the depressive's

environment. Several studies have supported Coyne's formulations of the depressive's social interactions (Coyne, 1976b; 1983; Howes & Hokanson, 1979).

Social Skills and Depression in Children

The relationship between social relations and depressed mood in children has been investigated by some recent studies (Blechman, McEnroe, Carella, & Audette, 1986; Jacobsen, Lahey & Strauss, 1983; Strauss, Forehand, Frame, & Smith, 1984; Vosk, Forehand, Parker, & Rickard, 1982). The consensus finding is that self-reported depression is correlated with ratings by peers and teachers of unpopularity and social incompetence. These findings seem to confirm Lewinsohn's (1974) and Coyne's (1976) views that the social interactions of depressed children as well as of depressed adults are impaired. This conclusion, however, may not be warranted because these studies present a number of difficulties. First, in all of these studies "depression" was assessed from the child's reports of a specific symptom, not from a clinical diagnosis of the depressive syndrome. Second, there was no comparison with other "diagnostic" groups and impaired social relations are associated with a number of childhood psychopathologies (Campbell & Paulauskas, 1979; Lorber & Patterson, 1981).

To date, two studies have examined the social behaviors of children diagnosed as depressed in comparison to children diagnosed as having another psychiatric disorder (Kazdin, Esveldt-Dawson, Sherick & Colbus, 1985; Puig-Antich, Lukens, Davies, Goetz, Brennan-Quattroch & Todak, 1985). Possibly due to differences in assessment methodology used to measure the children's interpersonal behaviors, the results of these studies are equivocal. Puig-Antich et al. (1985) compared prepubertal depressed children with children who manifested other emotional disorders and with normal children on a parent-rated measure of the child's social behaviors. The results showed little difference between the two psychiatric groups although both differed from the normal groups. In contrast, Kazdin et al. (1985) found that children diagnosed as depressed differed significantly from their nondepressed psychiatric counterparts in some directly observed social behaviors. The depressed children were found to exhibit less affect-related expression and to engage in less social activity than the nondepressed psychiatric children. No difference was found between these two groups in solitary play.

Although these two studies assessed the social behaviors of a clinically diagnosed sample of depressed children, there are some limitations in both which bear on the interpretations of their results. Puig-Antich and his colleagues used only parent ratings to assess the child's

social functioning. The authors acknowledge the problems in obtaining information from this one source. First, parents of a psychiatrically ill child have a higher likelihood of suffering from a psychiatric disorder themselves, which may color the parents' evaluation of their child's behavior. Second, any single source has limited information available. The parents may have little awareness of the child's interpersonal interactions in school and with peers.

Kazdin and his colleagues point to limitations in their study which need to be considered when evaluating their results. First, the observational codes used were somewhat crude, only three categories of behavior being distinguished: solitary behavior, affect-related expression, and social activity. Second, the situations in which the coding system was used were limited. The activities and mobility of the inpatient youths were restricted while they were observed. Third, the coding system ignored possibly important information. For instance, the behaviors in each category were recorded if they occurred at any time during five-minute intervals. Thus, if one child engaged in solitary play behavior for 30 seconds and a second child engaged in this behavior for the full five-minute interval, both would be recorded as engaging in solitary play. Other parameters such as duration were not recorded. The authors state that a finer-grained analysis of each of these categories, or the observation of these behaviors under a

greater variety of circumstances, might yield different results.

The present study was designed to extend these investigations, attempting to overcome their limitations in four ways. First, the syndrome of depression was assessed on the basis of information from more than one source. Second, the children's social behaviors were observed in more varied environments. Third, the observational codes were more molecular. Last, the behaviors observed were recorded in 15-second intervals.

Conduct Disorders and Depression

It is important to compare the social behavior of depressed children to that of nondepressed, psychiatric children when evaluating the appropriateness of the applicability of adult models of depression to childhood depression. Both Lewinsohn and Coyne suggest that poor social relations maintain depressive behaviors in adult depression. These impaired interpersonal relations, however, may not be unique to the depressed child. As mentioned previously, poor social interactions have been associated with a number of childhood disorders other than depression (Campbell & Paulauskas, 1979; Lorber & Patterson, 1981). In order to make a more fine-grained comparison, however, it is necessary to choose an appropriate

psychiatric group. Nondepressed, conduct-disordered children were used as a psychiatric comparison group in the present study for two reasons. First, conduct-disordered children are a recognizable group in which poor social interactions have been found (Lorber & Patterson, 1981). Second, conduct disorder is a syndrome that is, in some sense, "opposite" of depression. That is, it is identified as an externalizing disorder while depression is identified as an internalizing disorder (Achenbach, 1978; Achenbach & Edelbrock, 1979). Empirically, the symptoms of conduct disorder are dissimilar to those of depression.

Despite these differences, an association between conduct disorders and depression in children has been suggested (Jacobsen, Lahey, & Strauss, 1983; Leon, Kendall, & Garber, 1980; Wells & Forehand, 1985). This position is similar to the "masked depression" perspective of childhood depression in that it stresses the identification of behavioral equivalents such as aggression and hyperactivity which are thought to "mask" the depression.

It is difficult to conclude from the available evidence, however, that aggression and other conduct-disordered behaviors are consistently correlated with depression. One difficulty is that the entire depressive syndrome is assessed only rarely. Jacobsen et al. (1980) have found a correlation between one symptom of depression (i.e., dysphoric mood) and other behavioral problems. This

finding is similar to other studies which have found dysphoric mood to be a correlate of other childhood disorders (Brumback & Staton, 1983; Layne & Berry, 1983; Staton & Brumback, 1981). Although it is important to assess the association between dysphoric mood and other childhood psychopathologies, that association should not be thought of as equivalent to the association between the entire depressive syndrome and other childhood disorders (Puig-Antich, 1982).

To evaluate appropriately the association between the depressive syndrome and conduct disorders, a full assessment for the syndrome of both must be conducted. Several studies have conducted this type of assessment (Carlson & Cantwell, 1980; Edelbrock & Achenbach, 1980; Puig-Antich, 1982) and identified a subgroup of children who fit the criteria for both conduct disorders and depression, as well as subgroups who fit one set of criteria but not both. In other efforts to identify childhood syndromes, Achenbach (1978) and Achenbach and Edelbrock (1979) used a multivariate analysis. The results of their analysis showed two broad-band clusters: Internalizing behaviors and Externalizing behaviors. Finer analysis of these broad groupings revealed syndromes that fall under these broader categories. Depression is classified as an internalizing syndrome while delinquency and aggression are considered externalizing syndromes. In a cluster analysis, however, which allowed

for the identification of groups of children exhibiting similar behavior patterns, Achenbach (1982) found 7.6% of his total sample to be deviant on both subscales of depression and aggression. These results help explain other findings which have not found a correlation between conduct disorders and depression (Strauss, Forehand, Frame, & Smith, 1984). For instance, when Leon et al. (1980) reanalyzed their data for a group of children who were identified in their study as "depressed only," no relationship between conduct disorders and depression was found.

At this point, the data suggest that there are some children who meet the DSM-III criteria for depression but not for conduct disorders, some who meet the criteria for conduct disorders but not syndromal depression, and some who meet the criteria for both. In light of these findings, children selected for the conduct disordered comparison group in this study fit the criteria for conduct-disorder, but not for the syndrome of depression.

Social Skills and Children

Since there is limited research in the area of interpersonal skills of depressed children, it is logical to examine research in the area of normal children's social functioning for methodological suggestions. The peer-relation literature provides a way to assess the patterns of

social behaviors in psychologically disordered children as well as identifying situations in which to observe these behaviors.

This body of literature suggests types of social behaviors that are important to measure, especially in different diagnostic groups. Gottman (1977) identifies two distinct types of social isolates: a) those who do not interact with their peers; and b) those who do but are shunned by their peers. The former type of child is referred to as the neglected child, whereas the latter type of child is referred to as the rejected child. The social behaviors of the neglected child are characterized by shyness and withdrawal, while social behaviors of the rejected child are more aggressive and disruptive (Coie, Dodge, & Coppotelli, 1982). There appear to be similarities between the behaviors of the depressed child and the neglected social isolate in that both behave in a shy and withdrawn manner. Likewise, there appear to be similarities between the delinquent and aggressive child and the rejected child in that both are disruptive and act out. So far, there are no empirical data to validate these ideas. An appropriate behavioral coding system to use in studies with both depressed and conduct disordered children would seem to need behavioral categories that include both withdrawn and disruptive behavior.

As mentioned previously, the peer-relation literature provides ideas for situations in which to assess children's social behaviors. The free play situation has been used frequently to evaluate differences in social behaviors among different types of children. This could also be a situation in which to assess the social behaviors of depressed and conduct-disordered children.

Other concerns must be taken into consideration, however, that are due to diagnosis. For instance, fatigue and insufficient motivation are considered to be characteristics of depression (Beck, 1967). Therefore, a solitary play condition was also necessary in order to control for lack of motivation. That is, differences between the depressed and conduct-disordered children's social behaviors may be due to the depressed child's overall lack of motivation as well as to the child's limited interpersonal skills.

Another situation in which differences between these two diagnostic groups and normal children were assessed was in a competitive play situation. One might consider this situation to be a mildly stressful one, frequently encountered by children. The difficulties in interpersonal relations in the two diagnostic groups may be more pronounced in this condition. Furthermore, this condition may emphasize differences between the diagnostic groups should no differences be found in the free play condition.

A medical analogy may help illustrate this point (Rush, personal communication). There may not be obvious differences between an individual with heart disease and one with a healthy heart in a resting condition. With the introduction of a stressor, such as a treadmill, however, the differences are clearly observed.

Statement of Purpose

This project was designed to evaluate the appropriateness of extending theoretical formulations of adult depression to childhood depression. Since disturbances in children's social relationships have been implicated as predictors of difficulties in psychological adjustment later in life, I examined two theoretical formulations of adult depression that focus on the depressive's social adaptiveness. Specifically, I evaluated the applicability of Lewinsohn's and Coyne's models of adult depression to childhood depression.

Lewinsohn states that depressives have a social skills deficit which prevents them from procuring reinforcement from their environment. This skills deficit is implicated in the etiology as well as the maintenance of depression. Although Lewinsohn proposes that the skills deficit causes depression, this etiological view has not been specifically tested in this study.

Like Lewinsohn, Coyne points to the importance of the social context in depression, although he does not propose that social factors cause depression. Coyne suggests that the depressive's behaviors function as aversive events which result in others' avoidance of the depressed person, thereby maintaining depression. This study was designed not to compare Lewinsohn's and Coyne's models of depression but to determine whether social relations are impaired in childhood depression, as they are in adult depression. These models of depression were intended to be used as frameworks with which to study depression in children.

Since play is an appropriate social context in which to observe children's social behaviors, three different play situations were chosen for this project: a) a solitary play condition; b) a free play condition; and c) a competitive play condition.

One hypothesis to be tested in this study was that depressed children are less socially skilled than normal children when in a free play situation with peers. Since social skills deficits have been implicated in a number of childhood psychopathologies, however, a second hypothesis was that poor interpersonal skills are not unique to depression but are evident in the peer interactions of conduct disordered children as well. Furthermore, it was hypothesized that the normal peer would find interactions

with the depressed and conduct disordered child unpleasant when compared to interactions with normal children.

Differences in types of inappropriate behaviors, however, may be evident between different psychopathologies. The peer-relation literature helps specify these types of behaviors. This body of literature suggests two types of social isolates: a) the neglected child, and b) the rejected child. To elaborate on the first and second hypotheses, it was predicted that the depressed child would exhibit behaviors similar to the neglected child in peer interactions, while conduct-disordered children would be more similar to the rejected child in peer interactions. That is, it was predicted that the depressed child would be less interactive and engage in more solitary behavior when with peers than the conduct-disordered child. Conversely, it was predicted that the conduct disordered child would engage in more inappropriate interactions and disruptive behaviors when with peers than the depressed child.

To elaborate on the third hypothesis, it was predicted that the reaction of normal peers to the depressed and conduct-disordered child would be different. There are data which show that peers perceive children who are classified as "externalizers" as more socially incompetent than those classified as "internalizers" (Rolf, 1972). Similarly, Coie, Dodge, and Coppotelli (1982) found that rejected children are actively disliked by their peers whereas

neglected children are neither liked nor disliked. Therefore, it was hypothesized that normal peers would find interactions with conduct-disordered children more unpleasant than interactions with depressed children, but that interactions with depressed children would be more unpleasant than with normal children.

Children are frequently involved in competitive social situations such as game playing. This may be considered a mildly stressful interpersonal situation. This condition may exacerbate the poor interpersonal skills of both depressed and conduct-disordered children. Therefore, a fourth hypothesis was that in the competitive play condition the depressed and conduct-disordered children would exhibit the same types of behaviors they exhibited in the free play situation, although the magnitude of differences between them would be greater. That is, it was predicted that, in the competitive play condition, the depressed child would be less interactive and the conduct-disordered child more disruptive than in the free play condition.

Since fatigue and lack of motivation are characteristics of depression, a solitary play condition was warranted. This condition does not involve interpersonal interactions; therefore, a fifth hypothesis was that no differences in solitary play would be found among depressed, conduct-disordered, and normal children. A solitary play condition was necessary in order to control for lack of

motivation and to help interpret the findings from the social situations. That is, differences between the depressed and conduct-disordered child's social behaviors may be due to the depressed child's overall lack of motivation as well as to the child's limited interpersonal skills. The purpose of the solitary play condition was to help untangle this possible confound.

CHAPTER II

METHOD

Experimental Design

The design used to test the hypotheses of this study was a 3 X 3 mixed factorial design (Keppel, 1982). The independent variables were diagnostic category (between subject) and play situations (within subject). The three levels of diagnostic category were depressed, conduct-disordered, and normal children, while the three levels of play situation were free play, competitive game, and solitary play conditions. To control for sequence effects, the play conditions were counterbalanced across subjects.

Description of Participants

Twenty-eight children served as subjects in this study: nine depressed, nine conduct disordered, and ten normal children. A description of individual subjects is provided in Table 1 (Table 1 and all subsequent tables are located in Appendix A). A summary description of the subjects follows.

All children were 9-12 years old. Studies have shown that children in this age group can cognitively as well as

behaviorally identify emotions in self and others (Harris, Olthof, & Terwogt, 1981). Furthermore, depressive symptoms among this age group are more similar to adult symptoms than are those of younger children (Aylward, 1985; McConville, Boag, & Purohit, 1973). Similarly, no differences were found within this age group on depressive symptom expression or self-report measures (Leon et al., 1980).

Children who were mentally retarded or had a severe developmental disorder (e.g., autism) were not included in the study. Socioeconomic status, race, and gender were not necessarily controlled within the sample. However, all participants in the study were white middle class children. Same gender groupings within each social situation were maintained. There were eight boys and one girl in each of the depressed and conduct-disordered groups. The normal control group comprised nine boys and one girl.

Participant Selection Procedure

The psychiatric children were referred to this project by local mental health professionals as well as by parents. Letters were sent to psychologists and psychiatrists in private practice as well as to mental health agencies (e.g., Guilford County Mental Health Center, "Willie M" program) announcing the study (Appendix B). In addition, the study was announced in the local newspaper as part of an article

on childhood depression. Similarly, it was announced by a local television station in a series on depression. The normal children were recruited from the community.

In total, forty-three children were interviewed. Eighteen of these children met the requirements to be included in either the depressed or the conduct-disordered group. After being found eligible for the study, none of the eighteen children or their parents declined participation. Although all children were diagnosed specifically for the study, some entered the study with diagnoses from current therapists. Seven of the nine children in the depressed group were currently in treatment and had diagnoses of separation anxiety, major depression, or dysthymia. In addition, eight of the nine children in the conduct-disordered group were currently in treatment, and all had diagnoses of conduct disorder.

Parents were required to provide written consent for their own and their child's participation (Appendix C). The research project was explained to the parents orally and in writing before consent was obtained. In addition, each child was required to provide written consent for his or her participation (Appendix D). The research project was explained to the child orally before consent was obtained. However, this explanation was mainly procedural so as not to compromise the hypotheses being investigated. Parents and children were informed that they could decide to end their

participation in the study at any time and for any reason without penalty. To increase incentive to participate, each child received a gift of \$2.

Separate intake interviews for the parents and children were scheduled. When possible, the parent was interviewed first. When the child was interviewed, the parent was asked to complete the parent measures in a separate room. Most of these interviews were conducted in the UNC-G Psychology Clinic. The other interviews were conducted off campus. Following the interviews, the child was invited back another day to continue participation in the remainder of the study.

Each interview was conducted using the Child Assessment Schedule (CAS) (Appendix E) developed by Hodges and her colleagues (1985). The CAS is designed to be used in clinical settings as well as for research purposes. It provides a standardized set of interview questions, response format, and set of probes.

The CAS was designed for the child with questions grouped by natural content areas (e.g., friends, school) rather than by symptom cluster. This feature of the CAS facilitates rapport between child and clinician. The questions and response items were designed to elicit information necessary in making DSM-III diagnoses for the major childhood categories including: Major Depression, Dysthymia, and Conduct Disorders. A revised version of the DSM-III (DSM-III-R) has recently been published; however, it

was not used in the present study because the CAS was designed to generate DSM-III diagnoses. The DSM-III and DSM-III-R are not substantially different in the diagnosis of Major Depression or Dysthymia, but do differ substantially in the diagnosis of Conduct Disorders.

Children who met the DSM-III criteria for major depression, dysthymia, or adjustment disorder with depressed mood qualified for inclusion in the depressed group. These children did not meet the DSM-III diagnosis for the syndrome of conduct disorder. Children in the conduct disorder group met DSM-III criteria for this diagnostic category, but not the criteria for the syndrome of depression. Children in the normal group did not meet criteria for any diagnostic category.

The CAS has a parallel form which has been developed to be administered to parents (CAS-P) (Appendix F). Most researchers agree that the diagnosis of children should be based on interviews with the parent as well as the child. What remains unclear, however, is how best to combine this information since parent and child information does not always agree. One of the approaches to combining this information outlined by Hodges (1985) and employed by others using other childhood interviews (Puig-Antich & Chambers, 1978) is to reinterview the parents and/or child to resolve discrepancies, to consider outside sources (e.g., teacher, referral source), and to depend on the clinical judgement of

the interviewer. These three methods were employed in the present study as needed.

All interviews were audiotaped. As a check on diagnostic reliability, the interview information was reviewed independently by an advanced graduate student in clinical psychology who grouped the tapes into either Depression-no Conduct Disorder, Conduct Disorder-no Depression, Normal-no diagnosis, or Mixed-depression and conduct disorders categories. Fifty percent of all interviews, including those with normal children, were randomly selected. Reliability for appropriate group assignment was 100% and was calculated using the following formula: $\text{agreements}/(\text{agreements} + \text{disagreements}) \times 100$. None of the tapes was categorized as Mixed-depression and conduct disorders.

The following child and parent measures were used to provide descriptive information elaborating the nature of the sample. These measures were not used in subject selection or in diagnosis. The data for individual subjects on these measures are provided in Table 2. Statistical analyses of these measures are included in the Results section. A summary description of these scores follows.

Each child was administered the Child Depression Inventory (CDI-C) (Kovacs, 1983) (Appendix G) to complete. The items were read to the child, and the child's verbal responses were recorded on the form. The CDI-C is a self-

report measure of depression and has been used extensively in research studies. A score of 13 has been used by these studies as the cut-off for depression. In the present study the depressed children's scores ranged from 10-28, the conduct disordered children's scores ranged from 4-17, and the normal children's scores ranged from 0-3.

The parent version of the Child Depression Inventory (CDI-P) (Appendix H) was used to assess the correlation between child and parent report of the child's depressive symptomatology. In the present study, the range of scores by the parents of the depressed children was 12-33, the range of scores by the parents of the conduct disordered children was 7-30, and the range of scores by the parents of the normal children was 0-5.

The Child Behavior Checklist (CBCL) (Achenbach, 1978; Edelbrock & Achenbach, 1979) (Appendix I) was used to assess the parent's perceptions of the child's psychopathology. It provides a scale for depression (CBCL-D), as well as a composite scale for internalizing behaviors (CBCL-I) and externalizing behaviors (CBCL-E). A score of 70 or greater represents the clinical range. A score between 55 and 69 represents the normal range. The range of scores for the depressed children was 69-95 on the CBCL-D scale, 70-90 on the CBCL-I scale, and 64-86 on the CBCL-E scale. The range of scores for the conduct-disordered children was 62-95 on the CBCL-D scale, 65-80 on the CBCL-I scale, and 65-90 on

the CBCL-E scale. The range of scores for the normal children was 55-58 on the CBCL-D scale, 55-57 on the CBCL-I scale and 55-58 on the CBCL-E scale.

Personnel

Experimenters. All diagnostic interviews were conducted by the author. In order to control for any unintentional subtle biasing effects, a graduate student other than the author was the experimenter. Coding of children's social behaviors from videotapes was done by trained undergraduate and graduate students naive to the diagnosis of the child. Reliability checks on the videotapes of the children's interactions were done by other graduate/undergraduate raters. Reliability checks were made on approximately one-half of all videotapes.

Confederates. Twenty-seven normal children were recruited as confederates. Once normal children participated as subjects in the study, they were asked to continue in the study in the role of confederate. Eight of the ten normal subjects did so. Nineteen additional children participated as confederates. A pair of confederates of the same gender as the subject played with the subject. Overall, they interacted one time with one

subject from each of the three diagnostic groups in a counter-balanced sequence. Furthermore, the confederates were only paired with the same confederate one time. The use of confederates insured the similarity in the play situations met by the target subjects.

The confederates were instructed to interact with the child as they would any other child with whom they might play at home or at school. They were, however, instructed not to initiate interactions with the child, but only to respond to the child's interactions and initiations. Prior to the onset of the study and of each session, the confederates were given the following instructions: "I'd like you to play with (name) as you would play with any other child at home or at school, except I don't want you to try to get him (her) to play. What I want you to do is to follow his (her) lead and do what he (she) wants to do". Prior to the study and as needed throughout the study, the confederates role-played a few scenarios to insure their understanding of these instructions.

Furthermore, the confederates were told that after the session, they would be asked for their opinions regarding their reactions to their interactions with the subject. Prior to the onset of the study and of each session, the confederates were given the following instructions: "Think of all the boys and girls you know. Some you like, and some you don't like. Can you name one you like and one you don't

like? Well, when you play here with these other children, some you'll like to play with, and some you will not like to play with. After you finish playing I'm going to ask you some questions about playing again with this child. I want you to answer these questions honestly. There are no right or wrong answers. I don't mind if you say you'd like to play or you wouldn't like to play with this child again. What I do want is for you to answer the questions with how you honestly feel". The children practiced by applying a rating scale to children they play with at home or at school.

Social Situations

Play conditions were counter-balanced across diagnostic groups to control for order effects. There were six possible orders of conditions. The order in which each subject experienced the conditions is noted in Table 1.

Upon arrival of the subject and the two confederates, the experimenter allowed the children approximately two minutes to become acquainted. This was done so that the children would not spend time in the first play condition getting to know one another. The subject was unfamiliar to the two confederates. The two confederates were also unfamiliar to each other. This was done to lessen the bias effects of previous experience (Cunningham & Siegel, 1987; Dodge, 1983). Each play condition was 15 minutes long.

This length is consistent with another study which evaluated the interpersonal skills of a psychiatric sample (Cunningham & Siegel, 1987).

Each play condition was videotaped. The video camera was in a corner of the play room. It was decided not to put it behind a screen since this might have drawn even more attention to the camera and the children might have spent time investigating what was behind the screen.

Free play. The play group met in a carpeted room in the UNC-G Psychology Clinic. The playroom contained a table, chairs, and a variety of games and toys (e.g., Leggos, Etch-a-Sketch, crayons, paper, nerf ball). The subject was given the following instructions: "I need to take care of a few things. While I'm gone I'd like you to go in this room. There are toys in there. (Name of confederate) and (name of confederate) are in there. I'll be back in a few minutes to get you".

Solitary play. This play environment was the same as the free play one, except that each subject was alone in the room. The child was given the following instruction: "(Name), I'd like you to go in this room while (name of confederate) and (name of confederate) fill out some forms for me. There are toys in there. I'll be back in a few minutes to get you".

Competitive game. The triad was instructed to play the card game "War". If the children did not know how to play

the game, it was taught to them. To increase the competitive nature of the task, the children were told that the winner would receive a prize in addition to the one received for participation in the study. The children were given the following instructions: "I'd like all three of you to play the game 'War' while I take care of a few things. The winner will get a prize. Remember, everyone will get a prize for coming today, but the winner of the game will get a second prize. I'll be back in a few minutes".

Dependent Variables

Social coding system (Dodge, 1980) (Appendix J). A modified version of this coding system was used. Codes which were not appropriate to the hypotheses of the study (e.g., attention to teacher) were deleted. The coding system is designed for the assessment of peer oriented behavior. Each target subject's behavior in all three conditions was coded from videotapes. The types of behaviors coded included solitary activity, interactive play, verbalizations, and physical contact with peers. The categories used in this study are marked with an * in Appendix J. Three additional behaviors were added to this coding system. They were smiling, frowning, and observing. The operational definitions of these behaviors can be found

in Appendix J. Smiling and frowning were added as reflections of affective expression and have been included in other studies examining the social behaviors of depressed children (Kazdin et al., 1985). Observing was added to the coding system as a result of pilot observations.

Interval time-sampling was used. The occurrence or non-occurrence of each behavior in each 15-second interval was recorded. The inter-observer agreement for the individual behaviors is shown in Table 3. Reliability was calculated for each behavior within the three different play conditions. The Kappa statistic as well as the traditional formula: $\text{agreements}/(\text{agreements} + \text{disagreements}) \times 100$, was used. Kappa cannot be calculated in situations in which no occurrences or no non-occurrences of behavior are recorded. In these cases, the traditional formula mentioned above was the only calculation possible.

Pleasant/Unpleasant measure (Appendix K). This measure is comprised of ten questions, assessing the pleasantness or unpleasantness of the confederate's interaction with the target subject. The confederates rated on a 4-point Likert-type scale whether he or she would choose to play with the target subject in the future. An example of a question is : "If you were forming a club, would you invite (name) to join?". This measure was administered to each confederate separately. The questions were read to them as

they recorded their responses. Reliability between the two confederates was moderate, $r(28)=.44, p<.01$.

Social Competency ratings. Ratings of subjects' general social competence were obtained from graduate and undergraduate raters who were blind to the subjects' diagnostic groupings. The ratings were on a 7-point Likert-type scale from "not at all socially competent" to "very socially competent". Reliability between two raters for 100% of the participants was moderate, $r(28)=.41, p<.02$.

Subjects' Perception ratings. Ratings of subjects' perceptions of whether or not the two confederates liked playing with them were obtained. Subjects were interviewed in an open-ended fashion after their interactions with the confederates. This was done to assess their perceptions of other children's views of them. Graduate and undergraduate raters who were blind to subjects' diagnostic groupings rated these interviews on a 4-point Likert-type scale from "did not like" to "liked very much". Reliability between raters was moderate, $r(28)=.44, p<.01$.

Forced Choice ratings. Following the completion of the study, three confederates were asked to view videotapes of interactions in which they did not participate. The children were shown the first five minutes of the free play condition of a normal child's play interaction and either a depressed or a conduct-disordered child's play interactions. They were then given the instruction: "I'd like you to tell

me which of these two children you would like to play with". The order of presentation of diagnostic groups was counterbalanced. Furthermore, same-gender groupings of confederates and videotaped children were maintained.

Stressor ratings. Ratings of the amount of stress children were experiencing in their environment were obtained. These ratings were based on information from the diagnostic interview and were made by the author. The rating used was the DSM-III's coding of the severity of psychosocial stressors. The rating is "based on the severity of the stressor itself , not on the individual's vulnerability to the particular stressor"(p.26). The DSM-III rating system was used so that ratings would not be influenced by a subject's diagnosis and would be comparably assessed across groups.

CHAPTER III

RESULTS

Differences Among Diagnostic Groups on Self- and Parent-Report Measures

Multivariate analysis. A one-way multivariate analysis of variance (MANOVA) was conducted to determine if a combination of the Child Depression Inventory-Child form (CDI-C), Child Depression Inventory-Parent form (CDI-P), Child Behavior Checklist-Depression scale (CBCL-D), Child Behavior Checklist-Internalizing scale (CBCL-I), and Child Behavior Checklist-Externalizing scale (CBCL-E) was able to discriminate among the depressed, conduct-disordered, and normal children. The groups differed significantly, Wilk's $\lambda = .049$, which is equivalent to $F(10,42) = 14.78, p < .0001$ (Table 4a).

CDI-C. A one-way analysis of variance (ANOVA) revealed a significant difference among the three groups on the CDI-C, $F(2,25) = 33.24, p < .0001$, supporting both the initial diagnostic groupings and the concept that children can report their own depressive symptomatology (Table 5a).

Furthermore, a Newman-Keuls post-hoc analysis revealed that depressed children consider themselves as significantly more depressed than conduct-disordered children, who rated themselves as significantly more depressed than normal children (Table 5b). Moreover, the mean of the CDI-C scores for the depressed group fell within the depressive range (score of 13 or above; Kovacs, 1983), whereas the means for the conduct-disordered and normal groups were below this range (Table 4b). This was consistent with the findings of Romano and Nelson (1988).

CDI-P. Turning to the parent completed measures, a one-way ANOVA indicated that the CDI-P discriminated among the three groups, $F(2,25)=36.18, p<.0001$ (Table 6a). The Newman-Keuls post-hoc test, however, revealed no statistically significant differences between the parent report of the depressed group and the parent report of the conduct-disordered group (Table 6b). The parents of both the depressed children and the conduct-disordered children reported their children as significantly more depressed than the parents of normal children on the CDI-P (Table 4b). Again, these results are consistent with Romano and Nelson (1988).

CBCL. A one-way ANOVA revealed that the CBCL-D discriminated among the three groups, $F(2,25)=30.73, p<.0001$ (Table 7a). The Newman-Keuls post-hoc analysis showed that parents of depressed children reported them to be

significantly more depressed than did parents of conduct-disordered children (Table 7b). Similarly, this latter group was seen by their parents to be more depressed than were the normal children (Table 4b).

A one-way ANOVA on the CBCL-I revealed significant differences among the three groups, $F(2,25)=50.81, p, .0001$ (Table 8a). The results of the Newman-Keuls post-hoc test showed that parents of the depressed children rated them significantly higher on the CBCL-I than parents of the conduct-disordered children or normal children (Table 8b). The latter two groups also differed significantly (Table 4b).

A one-way ANOVA on the CBCL-E revealed significant differences among the three groups, $F(2,25)=34.09, p<.0001$ (Table 9a). The results of the Newman-Keuls post-hoc test indicated no significant differences between parents' reports of externalizing in depressed children and parents' reports of externalizing in conduct-disordered children, with both reporting externalizing more than parents of normal children (Table 9b). Thus, parents of depressed children reported high levels of both internalizing and externalizing behaviors, whereas parents of conduct-disordered children mainly reported high levels of externalizing (Table 4b). These results are consistent with those of Romano and Nelson (1988).

Correlations Among Measures. In addition, the correspondence between child report and parent report of the child's depressive symptoms was analyzed. When all twenty-eight children were included, there was a significant correlation between child reports of depression on the CDI-C and parent reports of child depression on the CDI-P, $r(28)=.81, p<.0001$, on the CBCL-D $r(28)=.70, p<.0001$, and on the CBCL-I, $r(28)=.75, p<.0001$.

Behavioral Data in the Three Play Situations

A main question addressed by this study involved the types and frequencies of behaviors manifested by the different diagnostic groups in the three play conditions. Three hypotheses were proposed: (a) that no difference would be found among the groups in the solitary play condition; (b) that a difference in types of behaviors would be exhibited among the three groups in the free play and competitive play conditions; and (c) that the frequencies of these behaviors would be greater in the competitive than in the free play condition. The following behaviors were observed with sufficient frequency to be included in data analyses: solitary play-appropriate, solitary play-aimless, solitary play-disruptive, rough housing, parallel play, cooperative play, conversation, group entry, smiling, and observing. Other behaviors

included in the coding system were not observed. Data for individual children are in Table 10.

Multivariate analysis. A three-way MANOVA was conducted to determine if a combination of these behaviors was able to discriminate among diagnostic groups, orders of conditions, conditions, and their interactions. The first two of these were between-subject factors, whereas play conditions was a within-subject factor. Only the MANOVA effect for condition was significant, Pillai's trace=1.98, which is equivalent to $F(22,24)=135.54, p<.0001$ (Table 11). Thus, while differences among the groups were evident on the molar dependent variables, the molecular behavioral measures failed to indicate group differences.

Univariate analyses. There were no significant main effects for groups for any of the behaviors. In contrast to the molar dependent measures, the groups did not differ on molecular behavioral measures. There were significant interaction effects for only a few behaviors which are elaborated below.

Behaviors did differ across the three play conditions. A three-way ANOVA revealed a main effect for condition for solitary play-appropriate, $F(2,21)=134.18, p<.0001$ (Table 12); solitary play-aimless, $F(2,21)=9.99, p<.0009$ (Table 13a); parallel play, $F(2,21)=30.73, p<.0001$ (Table 16a); cooperative play, $F(2,21)=179.69, p<.0001$ (Table 17a); conversation, $F(2,21)=27.11, p<.0001$ (Table 18a); group

entry, $F(2,21)=6.66, p<.006$ (Table 19a); smiling, $F(2,21)=16.10, p<.0001$ (Table 20a); and observing, $F(2,21)=4.56, p<.022$ (Table 21a). Newman-Keuls post-hoc analyses revealed that children played alone in an appropriate manner more often in the solitary play condition than in the free play or competitive play condition (Table 12b). Moreover, there was more of this behavior in the free play than in the competitive play condition. Similarly, children walked around aimlessly more often in the solitary play condition than in either the free play or competitive play condition (Table 13b). There was no difference found between the latter two conditions. Furthermore, there was more parallel play (Table 16a), conversation (Table 18a), group entry (Table 19a), and observing behavior (Table 20a) in the free play condition than in the competitive play condition. Children either played side-by-side, talked with one another, entered a group, or watched other children playing more often when in the free play rather than the competitive play condition. There was more cooperative play and smiling in the competitive play condition than in the free play condition. Given structure or lack of structure in the conditions, these results are not surprising.

There was a significant order x condition interaction for parallel play and conversation, $F(10,21)=2.68, p<.028$ (Table 16a), and $F(10,21)=4.69, p<.001$ (Table 18a), respectively. Since only four to five subjects were

assigned a particular order, however, caution should be exercised in interpreting these results. For instance, a Newman-Keuls post-hoc analysis did not reveal a pattern for parallel play which makes any conceptual sense (Table 16c). However, post-hoc analyses for conversation reveal that children engaged in more conversation in a free play situation when it was preceded by the solitary play condition (Table 18c). In addition, they engaged in more conversation in the competitive play condition if they were given the free play condition first. If they are given the solitary play condition before free play and competitive play, however, they do not engage in more conversation in the competitive play condition. That is, conversation carried over from an unstructured, interactive setting to a structured, interactive one, only when the former setting is given first. When a solitary condition was given first, conversation did not carry-over from the free play to the competitive play condition.

A group x order x condition interaction was found for parallel play, $F(20,21)=3.95, p<.001$ (Table 16a); and for cooperative play, $F(20,21)=2.61, p<.017$ (Table 17a). Caution should be exercised in interpreting these results for the following reasons: a) only one or two subjects in a particular diagnostic group were assigned to any one order; b) out of eleven behaviors, two had significant triple interactions, which might be expected by chance; c)

three-way interactions are typically difficult to interpret. However, a few results which make some conceptual sense are presented.

A Newman-Keuls post-hoc analysis revealed that when the free play condition is given last in the sequence, depressed children play side-by-side with other children more often than they do when the free play condition occupies a different place in temporal order (Table 16d). In contrast, conduct-disordered and normal children play side-by-side more often in the free play condition when, in general, it is given first, rather than last.

Furthermore, when the free play condition is given last, depressed children engage in less cooperative play, and conduct-disordered children engage in more cooperative play than they do when the free play condition occupies a different place in the temporal order (Table 17c). In general, when conduct-disordered children experience the free play condition first or second, they engage in less cooperative play than when the free play condition is last. This pattern is not evident with normal children. Across all groups, cooperative play is more frequent during the competitive task condition than in the free play condition.

Pleasant/Unpleasant Measure

One question addressed by this study concerned the likability of the subjects by their peers, that is, the confederates. A one-way ANOVA on the confederate's Pleasant/Unpleasant questionnaire revealed a significant difference among the three groups, $F(2,25)=20.69, p<.0001$ (Table 22a). A Newman-Keuls post-hoc analysis showed that the confederates preferred playing with and would choose to play again with the normal children ($x=3.06$) rather than the depressed ($x=2.6$) or conduct-disordered ($x=1.9$) children (Table 22b). However, when choosing among the latter two groups, the confederates preferred the depressed children to the conduct disordered children.

Social Competency Ratings

These above findings are consistent with adult ratings of the depressed, conduct disordered, and normal children's social competency. A one-way ANOVA revealed a difference among the three groups on ratings of overall social competency, $F(2,25)=18.05, p<.0001$ (Table 23a). These adults rated the normal children as more socially competent ($x=5.5$) than either the depressed ($x=3.8$) or the conduct-disordered ($x=2.8$) children (Table 23b). Furthermore, depressed children were rated as more socially competent than conduct-disordered children.

Subjects' Perception Ratings

A one-way ANOVA revealed a significant difference among the three groups on ratings of the subjects' perceptions of how the confederates liked them, $F(2,25)=9.0, p<.001$ (Table 24a). A Newman-Keuls post-hoc analysis showed that normal children ($x=3.5$), more than depressed ($x=2.38$) or conduct-disordered ($x=2.77$) children, thought that their peers in the present interaction liked playing with them (Table 24b). This was consistent with the above-mentioned results of the confederates' preference of playmates. However, there was no difference between depressed and conduct-disordered children in their perceptions of peers' enjoyment of the interaction.

Forced Choice Ratings

When given a choice between playing with a normal child and a depressed or conduct-disordered child, confederates chose the normal child as their preferred playmate significantly more than the other child ($\chi^2=10.5, p<.005$) (Table 23c). That is, out of eighteen presentations of the videotaped play interactions of a normal and either a depressed or conduct-disordered child, confederates chose the normal child as the preferred playmate sixteen times.

Stressor Ratings

A one-way ANOVA did not reveal a significant difference among the three groups on ratings of the amount of stress children were experiencing in their environment, $F(2,25)=.02, p<.98$ (Table 24c).

CHAPTER IV

DISCUSSION

The present study was designed to evaluate the appropriateness of extending theoretical formulations of adult depression to childhood depression. Those formulations that focus on the depressive's social adaptiveness have been examined. Specifically, Lewinsohn's and Coyne's models of adult depression were used in the present study as a framework to evaluate the social interactions of children who are depressed. Furthermore, in order to make a more fine-grained analysis of the differences between the social behaviors of depressed children and normal children, an additional comparison group was included. Since depression is considered an internalizing disorder, conduct disordered children were chosen as the comparison group representing an externalizing disorder. Empirically, the symptoms of conduct disorders are different from those of depression (Achenbach, 1978; Achenbach & Edelbrock, 1979).

The present study examined the interactional behaviors of children who were diagnosed as depressed or conduct -

disordered and those who did not carry a diagnosis. In addition, this study assessed these children's perceptions of themselves and others' perceptions of them with respect to their social functioning.

It was predicted that depressed children and conduct-disordered children would be less socially skilled than normal children when in a free play situation with peers. Furthermore, it was hypothesized that these poor social skills would be more apparent in a competitive play situation. Moreover, differences in types of inappropriate behaviors between depressed and conduct-disordered children were predicted. Specifically, it was hypothesized that depressed children would exhibit more withdrawn, solitary play behaviors; and conduct-disordered children, more aggressive disruptive play behaviors when with peers. No differences were expected among these three groups in the solitary play condition. Lastly, it was predicted that others would perceive the depressed children as less socially competent than the normal children, but more socially competent than the conduct disordered children.

The results of this study revealed the following. In general, there were no behavioral differences among the three groups. Although there is some suggestion that adult depressives are inappropriate in their timing of self-disclosure (Jacobson & Anderson, 1982), for the most part, these results parallel the adult depression literature

in that it is difficult to pinpoint consistently the specific behaviors of depressives that result in others perceiving them as less socially competent than normal adults (cf., Youngren & Lewinsohn, 1980). Similarly, studies on the emergence of children's peer status have found that patterns of behavior consistent with group status are not readily evident in the initial sessions of play (Coie & Kupersmidt, 1983; Dodge, 1983).

This is in contrast, however, to the findings of Kazdin et al. (1985) and Altmann and Gotlib (1988) who have found differences between depressed children and their nondepressed counterparts. Kazdin et al. (1985) showed that depressed children engaged in less social activity when compared to nondepressed, psychiatric children. The composition of diagnoses in this latter group was not described by Kazdin et al. (1985). Similarly, Altmann and Gotlib (1988) found that depressed children spent more time alone in a social situation than nondepressed, normal children.

One major difference between these two studies and the present one is the composition of the play groups. In the present study, all children were unfamiliar to each other, while in the other two studies the children were known to each other. Furthermore, in the Kazdin et al (1985) and the Altmann and Gotlib (1988) studies, children were observed in settings familiar to them. Behavioral differences which

differentiate types of children seem to emerge over time and are not readily evident in the early stages of group formation (Coie & Kupersmidt, 1983; Dodge, 1983). This finding has also been obtained with adult depressives. Behavioral differences between depressed and normal adults were more evident in familiar groups than in those comprised of strangers (Libet & Lewinsohn, 1973; Youngren & Lewinsohn, 1980).

The results of the present study, which failed to identify behaviors that differentiate depressed children from other children, must be qualified to a certain extent because analyses of the data revealed significant interactions with respect to the order of presentations of conditions. When given the free play condition first, before the competitive play condition, depressed children engaged in more cooperative play and less parallel play in the free play condition than they do when given the free play condition after the competitive play condition. This finding is consistent with others who have found that, at least in the early stages of play, depressed as well as neglected children socially approach peers as much as other children (Altmann & Gotlib, 1988; Dodge, 1983). Interestingly, this pattern of findings is consistent with the results of a study which suggests that adult depressives seek more social contact with others than nondepressed adults in dealing with everyday life stressors (Coyne,

Aldwin, & Lazarus, 1981). It is possible that depressed children found meeting a new peer similar to dealing with an everyday life stressor. Anecdotally, in the present study, mothers of the depressed children, in particular, reported them to be somewhat anxious about returning to the second session.

When given the opposite order of conditions (i.e., competitive then free play), however, depressed children engaged in less cooperative play and more parallel play in the free play condition than they do when the free play condition is given before the competitive play condition. Differences in the confederates' behavior between these conditions may shed some light on these findings. In the competitive play condition, the interaction among the triad was experimentally arranged. In the free play condition, however, confederates were asked to not initiate interaction with the target child, but to wait until the target child initiated interaction before responding to them. That is, depressed children went from a situation in which children were playing with them to one in which these same children stopped playing with them. It is possible that depressed children experienced the free play as ignoring or extinction, and reacted by limiting their play interactions. Similarly, Dodge (1983) and Altmann and Gotlib (1988) found that when their initiations are met with rebuff by peers, neglected and depressed children approached peers less.

This pattern of interacting was unlike that of the conduct disordered or normal children. In fact, conduct disordered children evidenced the opposite pattern of interacting. They engaged in less cooperative and more parallel play in the free play condition when the free play condition came before the competitive play condition, and more cooperative and less parallel play in the free play condition when the competitive play condition came before the free play condition. Like conduct-disordered children, normal children engaged in more parallel play in the free play condition when given it first rather than last. There was no pattern for normal children regarding cooperative play.

Despite the very few behavioral differences among the three groups of children, the ratings of likability differentiated them. Peers as well as adults clearly differentiated the three groups with respect to social functioning. The results of the present study provide strong support for the hypothesis that a depressed peer is regarded with less liking than a normal peer. Confederates who interacted with the target child, as well as those who did not interact with the target child but viewed their interactions on a videotape, consistently chose the normal child rather than the depressed child as a preferred playmate. These findings are consistent with others which have found that children regard a depressed peer as less

likeable than a normal peer (Peterson, Mullins, & Ridley-Johnson, 1985). Furthermore, these findings parallel those in the adult depression literature, which suggest that adult depressives encounter similar interpersonal rejection (Coyne, 1976b; Howes & Hokanson, 1979).

Even though few behavioral differences were found, the behavioral coding system was a sensitive measure because it showed differences among the play conditions for many of the behaviors. It was not sensitive enough, however, to identify the behaviors which peers and adults reacted to on the more molar ratings of the interactions. The significant differences among the depressed, conduct-disordered, and normal children on the likability and social competency measures clearly suggest that there are differences in the manner in which these children interact with peers.

Alternative behavioral measures might be necessary in order to identify these differences. Since social interactions are a function of the actions and reactions of the individuals involved, sequential analyses of peers' behavior towards the target child may yield important information. Studies have found that socially impaired children do not necessarily lack appropriate social skills, but that over time these behaviors are emitted less and less because of peer reactions (Bierman, Miller, & Stabb, 1987; Dodge, 1983). A more qualitative analysis of behavior might, for example, identify who initiates or

terminates these interactions and how they might do this. Evaluating the quality of children's behaviors in an interaction might also be informative. For instance, even though there are no differences in the type of play (e.g., parallel vs. cooperative play) between depressed and conduct-disordered children, there might be differences in the way they engage in this play.

The findings of the present study also lend support to the notion that these preferences are not solely a function of psychopathology. Conduct-disordered children are liked even less than depressed children. Similarly, children find "externalizing" peers to be less socially competent than "internalizing" peers (Rolf, 1972). These findings are consistent with the peer-relation literature, in that rejected peers are less preferred as playmates than neglected children (Foster & Ritchey, 1985). Although this study was not able to identify specific differences in the interactions of depressed, conduct-disordered, and normal children, it is clear that they interact differently with their peers. It is possible that conduct-disordered children exhibited more aversive behavior than depressed or normal children. Although not statistically significant, there was some evidence that conduct-disordered children were more disruptive during the competitive play condition than the other children.

Peers' ratings of the social interactions of depressed, conduct-disordered, and normal children's interactions were consistent with adult ratings of these children's social competence. Adults rated normal children as more socially competent than either depressed or conduct-disordered children, and depressed children were rated as more socially competent than conduct-disordered children. Similarly, in another study, adults perceived depressed children as likely to function ineffectively socially when compared to their normal counterparts (Mullins, Peterson, Wonderlich, & Reaven, 1986). Although depressed children appear to elicit negative reactions from peers as well as adults with respect to their social competency, conduct disordered children seem to elicit a stronger negative reaction.

Both depressed and conduct-disordered children, however, have difficulty procuring social reinforcement from their environment. This calls into question the distinction between depression and conduct disorder. It seems that on a functional level there are similarities between the two disorders, but topographically the behaviors which describe them are, for the most part, distinct. Impaired social relations have been associated with a number of childhood psychopathologies (Campbell & Paulauskas, 1979; Lorber & Paterson, 1981). Therefore, it seems reasonable to assert that, on a functional basis, these disorders may be similar. For clinical and research progress, however, grouping

childhood disorders together on the basis of function may "muddy the waters". It is important to understand why children with different disorders present with various topographies. Our diagnostic classification system (DSM-III) is based on the topographies of the disorders because consensus was more readily achieved on topography than on function, especially given different theoretical orientations of the functions of behavior. Furthermore, research based on this system has progressed in our understanding of the different childhood psychopathologies.

The present study also supports the notion that children are accurate in assessing others' reactions to them. Ratings of normal children's perceptions revealed that they felt others enjoyed playing with them, whereas ratings of depressed and conduct-disordered children's perceptions revealed that they felt less so. Similarly, Bierman and McCauley (1987) found that emotionally disturbed children reported significantly more negative peer interactions than nondisturbed children. It seems that depressed and conduct-disordered children are aware that their behavior in social situations is not well received by other children.

Self- and Parent-Report Measures

Turning to the self- and parent-report measures, the present findings suggest that a combination of measures, namely the Child Depression Inventory-Child form, Child Depression Inventory-Parent form and the Child Behavior Checklist can discriminate among depressed, conduct - disordered, and normal children. These findings are consistent with those of Romano and Nelson (1988) who found that these measures discriminated among inpatient depressed children, inpatient children with other psychopathology, and normal children. The present results show that children can validly report their depressive symptoms. On the parent-completed measures, both measures differentiated between depressed and normal children, but only the CBCL-D and CBCL-I successfully differentiated between the depressed and conduct disordered-children. One explanation is that the CDI-P addresses more of the internal states of depressive symptomatology, while the CBCL focuses on overt behaviors of the disorders. Parents are usually not privy to these internal states. These findings also suggest that parents of depressed children perceive their children as more psychologically disturbed than parents of conduct-disordered children, rating them higher on the

CBCL-I and as high on the CBCL-E than parents of conduct-disordered children.

Although some of the parent-completed measures significantly differentiated between depressed and conduct-disordered children, there was some overlap in behaviors. The mean scores for the conduct-disordered group on the CBCL-D and the CBCL-I fell within the clinical range. This suggests that parents have difficulty discriminating their child's emotions even when children can accurately label their own emotions (cf. CDI-C).

For the most part, children learn to identify their emotions from their parents' teachings (Skinner, 1957). Parents observe their child's behavior and then verbally label what they perceive to be the accompanying emotion. For example, a parent might say a child is feeling sad in the presence of a crying child. As a child grows, however, other significant people may help the child refine these labels. At the same time, parents are no longer their child's primary instructor. This might lead to parents' increasing difficulty in identifying their child's emotions, while the child maintains this skill. Differences in parent and child report of the child's symptomatology emphasize the problems in using only one source in the diagnosis of children. Most agree that multiple sources as well as clinical judgment should be employed.

Future Directions

Certainly more research is warranted in order to more fully understand the social interactions of the depressed child. The intent of the present study was to determine whether social relations are impaired in childhood depression, as they are in adult depression, using Lewinsohn's and Coyne's models of depression as frameworks.

Although specific behaviors that differentiated depressed children from normal children could not be identified, this study did show that the social relations of child depressives are impaired. Furthermore, this study showed that the impairment in social relations was not due solely to psychopathology. Differences in the social relations between types of childhood psychopathologies were found.

It might be that this difference is based on the internalizing or externalizing nature of the psychopathology. In future research, the social relations of other types of internalizing and externalizing disorders need to be compared. Broadly classifying socially impaired children in this manner, rather than by specific disorders, might be more parsimonious in terms of treatments devised to improve their social interactions.

Since confederates only viewed the first five minutes of subjects' play in the forced choice measure, future

research might extend this to include viewing the other play conditions. It might be interesting to see if peers' perceptions of depressed and conduct-disordered children's social competency changes if they are able to see them in more than one social context.

A last point that should be considered is the correspondence between internalizing and neglected children and that between externalizing and rejected children. In future research, it might be more effective to assess this relationship using the methodology of Coie and Kupersmidt (1983) and Dodge (1983). That is, to understand the development of group status and its relationship to internalizing or externalizing disorders, groups of unfamiliar children should be observed over a number of sessions. Multiple sessions may also be necessary in order to identify behavioral differences between the two groups. Moreover, as Gurtman (1986) stresses, the evaluative dimension of rejection/ignoring must be differentiated from the behavioral reactions in these studies. That is, evaluative reactions such as liking or disliking someone may or may not lead to actual avoidance of that person.

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Appendix A

Table 1

Participant Description				Order of Play Situations ^a
<u>Depressed</u>	<u>Age</u>	<u>Gender</u>	<u>Diagnosis</u>	
1	12	M	ADDN ^b	ABC
2	9	M	MDD ^c	BCA
3	9	M	MDD	CAB
4	11	F	MDD	ACB
5	10	M	MDD ^d	BAC
6	11	M	DD ^d	BAC
7	11	M	DD	CAB
8	10	M	MDD	BCA
9	9	M	MDD	CBA
<u>Conduct Disordered</u>				
1	11	M	CD ^e	CBA
2	12	M	CD	ABC
3	9	M	CD	ABC
4	11	M	CD	ACB
5	10	M	CD	BCA
6	11	M	CD	BAC
7	9	M	CD	CAB
8	9	M	CD	BAC
9	10	F	CD	CBA
<u>Normal</u>				
1	11	F	N ^f	BCA
2	10	M	N	BAC
3	9	M	N	CAB
4	10	M	N	BAC
5	11	M	N	ACB
6	11	M	N	BCA
7	9	M	N	ACB
8	11	M	N	CAB
9	9	M	N	CBA
10	9	M	N	CAB

^asolitary (A), free (B), competitive (C)

^badjustment disorder with depressed mood

^cmajor depressive disorder

^ddysthymic disorder

^econduct disorder

^fnormal

Table 2

Subjects' Raw Scores on the CDI-C^a, CDI-P^b, CBCL-D^c, CBCL-I^d, and CBCL-E^e

<u>Depressed</u>	<u>CDI-C</u>	<u>CDI-P</u>	<u>CBCL-D</u>	<u>CBCL-I</u>	<u>CBCL-E</u>
1	10	12	75	72	76
2	19	33	95	90	83
3	13	16	81	77	68
4	28	22	88	81	83
5	22	25	82	70	74
6	21	14	69	71	64
7	14	13	78	77	69
8	17	25	80	79	65
9	13	26	95	85	86
<u>Conduct Disordered</u>					
1	17	30	75	71	88
2	14	18	69	71	86
3	7	14	68	67	84
4	9	19	95	80	77
5	4	19	88	80	90
6	4	7	71	65	65
7	8	21	75	65	72
8	4	15	62	68	76
9	14	24	68	69	77
<u>Normal</u>					
1	0	0	55	55	55
2	0	0	55	55	55
3	3	1	55	55	55
4	3	0	55	55	55
5	0	1	55	55	55
6	1	0	55	56	57
7	2	5	55	57	58
8	0	0	55	55	55
9	1	1	57	56	56
10	3	2	58	56	56

^aChild Depression Inventory-Child form^bChild Depression Inventory-Parent form^cChild Behavior Checklist-Depression Scale^dChild Behavior Checklist-Internalizing Scale^eChild Behavior Checklist-Externalizing Scale

Table 3

Interobserver Agreement for Individual Behaviors

<u>Condition</u>	<u>Behavior</u>	<u>K^a</u>	<u>range</u>	<u>T^b</u>	<u>range</u>
Solitary Play	SP-A ^c	80%	(64%-100%)	97%	(83%-100%)
	SP-Am ^d	75%	(31%-100%)	96%	(88%-100%)
	SP-D ^e	94%	(89%-100%)	97%	(93%-100%)
Free Play	SP-A	74%	(42%-100%)	90%	(81%-100%)
	SP-Am	69%	(54%-100%)	96%	(94%-98%)
	SP-D	66%	(41%-92%)	95%	(90%-98%)
	RP ^f			89%	
	PP ^g	66%	(31%-100%)	91%	(81%-100%)
	CP ^h	84%	(57%-100%)	94%	(79%-100%)
	C ⁱ	67%	(46%-100%)	91%	(81%-100%)
	GE ^j	73%	(65%-100%)	97%	(96%-100%)
	S ^k	74%	(48%-100%)	96%	(96%-100%)
	O ^l	82%	(47%-100%)	96%	(87%-100%)
	Competitive Play	SP-A	70%		92%
SP-Am				98%	
SP-D		58%		84%	(79%-90%)
RP				92%	(89%-96%)
PP		84%		98%	
CP		66%	(45%-88%)	98%	(86%-100%)
C		72%	(50%-100%)	90%	(53%-100%)
S		62%	(16%-87%)	89%	(83%-98%)
O		56%		90%	

^aKappa statistic

^bTraditional formula

^cSolitary play-appropriate

^dSolitary play-aimless

^eSolitary play-disruptive

^fRough play

^gParallel play

^hCooperative play

ⁱConversation

^jGroup entry

^kSmiling

^lObserving

Table 4a
 Multivariate Analysis of Variance of Self- and Parent-report Measures
 for Group

Source	Wilk's Lambda	df	F	p
Group	.049	10,42	14.78	.0001

Table 4b
 Means and Standard Deviations for Diagnostic Groupings

Group	CDI-C		CDI-P		CBCL-D		CBCL-I		CBCL-T	
	M	SD	M	SD	M	SD	M	SD	M	SD
Depressed	17.4	5.6	20.7	7.2	82.6	8.7	78.0	6.7	74.2	8.3
Conduct disordered	9.0	4.9	18.6	6.5	74.6	10.5	70.7	5.7	79.4	8.2
Normal	1.3	1.3	1.0	1.6	55.5	1.1	55.5	.7	55.7	1.1

Table 5a
Analysis of Variance of CDI-C for Groups

Source	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Group	2	617.32	33.42	.0001
Error	25	18.57		

Table 5b
Newman-Keuls Post-hoc Comparisons between Groups for CDI-C

	Normal (1.30)	Conduct disordered (9.00)	Depressed (17.44)
Normal (1.30)	—	*	*
Conduct disordered (9.00)		—	*
Depressed (17.44)			—

*p < .05

Table 6a

Analysis of Variance of CDI-P for Groups

Source	df	Mean Square	F	p
Group	2	1123.37	36.18	.0001
Error	25	31.04		

Table 6b

Newman-Kuls Post-hoc Comparisons between Groups for CDI-P

	Normal (1.00)	Conduct disordered (18.55)	Depressed (20.66)
Normal (1.00)	—	*	*
Conduct disordered (18.55)		—	n.s.
Depressed (20.66)			—

*p < .05

Table 7a
Analysis of Variance of CBCL-D for Groups

Source	df	Mean Square	F	P
Group	2	1852.58	30.73	.0001
Error	25	60.27		

Table 7b

Newman-Kuels Post-hoc Comparisons between Groups for CBCL-D

	Normal (55.5)	Conduct disordered (74.55)	Depressed (82.55)
Normal (55.5)	—	*	*
Conduct disordered (74.55)		—	*
Depressed (82.55)			—

*p < .05

Table 8a

Analysis of Variance of CBCL-I for Groups

Source	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Group	2	1261.08	50.81	.0001
Error	25	24.82		

Table 8b

Newman-Keuls Post-hoc Comparisons between Groups for CBCL-I

	Normal (55.5)	Conduct disordered (70.66)	Depressed (78.0)
Normal (55.5)	—	*	*
Conduct disordered (70.66)		—	*
Depressed (78.0)			—

*p < .05

Table 9a
Analysis of Variance of CBCL-E for Groups

Source	df	Mean Square	F	p
Group	2	1496.91	34.09	.0001
Error	25	43.91		

Table 9b
Newman-Keuls Post-hoc Comparison Between Groups for CBCL-E

	Normal (55.70)	Depressed (74.22)	Conduct disordered (79.44)
Normal (55.70)	—	*	*
Depressed (74.22)		—	n.s.
Conduct disordered (79.44)			—

*p < .05

Table 10

Subjects' Raw Scores for Each Behavior^a

Depressed	Condition ^b	SP-A ^c	SP-Am ^d	SP-D ^e	RF ^f	PP ^g	CP ^h	C ⁱ	GE ^j	S ^k	O ^l
1	A	100	0	0	0	0	0	0	0	14	0
	B	0	2	0	0	2	90	40	0	37	1
	C	0	0	0	0	5	96	1	0	20	3
2	A	89	1	14	0	0	0	0	0	0	0
	B	62	5	15	0	7	9	1	3	16	0
	C	0	0	0	0	0	100	7	0	14	0
3	A	85	11	0	0	0	0	0	0	0	0
	B	50	0	0	0	35	5	35	0	3	13
	C	0	0	0	0	0	100	0	0	9	0
4	A	100	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	54	30	1	1	5	15
	C	0	0	0	0	0	100	0	0	12	0
5	A	100	0	0	0	0	0	0	0	0	0
	B	9	0	0	0	0	69	9	1	14	20
	C	0	0	0	0	0	100	0	0	34	0
6	A	81	1	11	0	0	0	0	0	0	0
	B	7	0	0	0	0	98	0	0	7	0
	C	0	0	0	0	0	100	3	0	1	0
7	A	47	23	34	0	0	0	0	0	0	0
	B	0	0	1	10	75	1	21	1	0	3
	C	0	0	0	0	0	100	0	0	0	0
8	A	100	0	3	0	0	0	0	0	0	0
	B	0	1	0	1	0	85	0	0	1	5
	C	29	0	1	0	0	70	14	0	9	3
9	A	76	1	0	0	0	0	0	0	0	0
	B	0	0	1	3	0	67	0	0	30	23
	C	0	0	0	0	0	100	0	0	30	0
Conduct Disordered											
1	A	0	1	0	0	0	0	0	0	0	0
	B	18	0	10	3	9	10	40	1	3	1
	C	0	0	0	0	0	100	3	0	11	0
2	A	100	0	0	0	0	0	0	0	0	0
	B	44	3	13	0	0	24	67	3	1	1
	C	0	0	0	0	0	100	0	0	16	0
3	A	98	11	3	0	0	0	0	0	0	0
	B	43	7	0	0	27	1	60	1	5	14
	C	0	0	0	0	0	100	0	0	32	0
4	A	98	1	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	100	3	0	1	0
	C	0	0	0	0	0	100	0	0	0	0
5	A	66	16	24	0	0	0	0	0	0	0
	B	32	1	0	0	3	58	34	3	10	0
	C	16	1	9	0	0	58	14	0	25	0
6	A	100	0	0	0	0	0	0	0	0	0
	B	12	0	0	0	9	62	25	0	7	3
	C	0	0	26	3	5	13	59	0	38	13
7	A	77	6	6	0	0	0	0	0	0	0
	B	25	0	18	6	10	50	33	0	3	1
	C	8	0	1	0	0	96	0	0	17	0
8	A	100	0	0	0	0	0	0	0	0	0
	B	1	0	20	1	53	25	1	0	0	0
	C	5	0	65	0	0	27	41	0	20	0
9	A	100	0	0	0	0	0	0	0	0	0
	B	46	0	0	0	31	25	5	3	1	5
	C	0	0	0	0	0	100	16	0	16	0
Normal											
1	A	94	5	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	92	57	0	0	0
	C	0	0	0	0	0	100	3	0	20	0
2	A	100	0	0	0	0	0	0	0	0	0
	B	0	6	4	0	35	60	2	0	2	0
	C	0	0	0	0	0	100	3	0	12	0
3	A	100	0	0	0	0	0	0	0	0	0
	B	44	0	0	0	0	63	17	0	1	0
	C	0	0	0	0	0	100	0	0	12	0
4	A	98	1	0	0	0	0	0	0	4	0
	B	0	2	0	0	85	11	24	3	7	3
	C	0	0	0	0	0	100	0	0	6	0

Table 10 (continued)

<u>Normal</u>	<u>Condition</u>	<u>SP-A</u>	<u>SP-Am</u>	<u>SP-D</u>	<u>RP</u>	<u>PP</u>	<u>CP</u>	<u>C</u>	<u>GE</u>	<u>S</u>	<u>O</u>
5	A	94	8	1	0	0	0	0	0	0	0
	B	20	0	3	0	24	51	7	0	1	0
	C	0	0	0	0	0	100	0	0	20	0
6	A	85	10	0	0	0	0	0	0	0	0
	B	1	1	0	0	34	36	40	1	0	8
	C	0	0	0	0	0	100	0	0	0	0
7	A	100	0	0	0	0	0	0	0	0	0
	B	15	1	11	1	15	24	16	0	0	5
	C	0	0	0	0	0	100	0	0	0	0
8	A	60	1	0	0	0	0	0	0	0	0
	B	0	0	32	0	0	34	5	1	47	25
	C	0	0	0	0	0	78	0	0	25	21
9	A	98	7	0	0	0	0	0	0	0	0
	B	8	0	3	0	0	87	5	1	12	1
	C	7	0	0	0	0	100	0	0	23	0
10	A	100	0	0	0	0	0	0	0	0	0
	B	7	0	28	12	0	48	30	0	42	5
	C	0	0	0	0	0	100	5	0	51	0

^apercent of 15-sec intervals in which behavior was observed

^bsolitary (A), free (B), competitive (C)

^csolitary play-appropriate

^dsolitary play-aimless

^esolitary play-disruptive

^frough play

^gparallel play

^hcooperative play

ⁱconversation

^jgroup entry

^ksmiling

^lobserving

Table 11

Multivariate Analysis of Variance of Behaviors for Diagnostic Groups x
Orders x Conditions

Source	Pillai's Trace	<u>df</u>	<u>F</u>	<u>p</u>
A(group)	.78	20,26	.84	.61
B(order)	2.36	55,75	1.23	.20
C(condition)	1.98	22,24	135.54	.0001
A x B	.30	10,12	.52	.84
A x C	2.05	44,56	1.34	.12
B x C	4.08	110,200	1.25	.08
A x B x C	5.61	220,231	1.09	.25

Table 12a

Analysis of Variance of Solitary Play-Appropriate for Diagnostic Group x
Order x Condition

Source	<u>df</u>	<u>Sum of Squares</u>	<u>F</u>	<u>p</u>
A(group)	2	.22	.00	.99
B(order)	5	338.24	.13	.98
A x B	1	36.47	.07	.79
S(A x B)	9	466.0		
C(condition)	2	1074462.76	134.18	.0001
A x C	4	1024.74	.64	.64
B x C	10	3025.73	.76	.66
A x B x C	20	3369.30	.42	.97
C x S(A x B)	21	8409.16		

Table 12b

Newman-Keuls Post-hoc Comparisons between Conditions for Solitary Play-
Appropriate

	<u>Competitive</u> <u>(2.32)</u>	<u>Free</u> <u>(15.85)</u>	<u>Solitary</u> <u>(87.35)</u>
Competitive (2.32)	_____	*	*
Free (15.85)		_____	*
Solitary (87.35)			_____

* p .05

Table 13a

Analysis of Variance of Solitary Play-Aimless for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	P
A(group)	2	60.03	1.93	.20
B(order)	5	113.17	1.45	.29
A x B	1	6.64	.43	.53
S(A x B)	9	140.18		
C(condition)	2	201.72	9.99	.0009
A x C	4	2.93	.07	.98
B x C	10	101.97	1.01	.46
A x B x C	20	367.90	1.82	.09
C x S(A x B)	21	211.98		

Table 13b

Newman-Keuls Post-hoc Comparisons between Conditions for Solitary Play-Aimless

	Competitive (.03)	Free (1.03)	Solitary (3.96)
Competitive (.03)	—	n.s.	*
Free (1.03)		—	*
Solitary (3.96)			—

*p < .05

Table 14

Analysis of Variance of Solitary Play-Disruptive for Diagnostic Groups x
Orders x Conditions

Source	<u>df</u>	<u>Sum of Squares</u>	<u>F</u>	<u>p</u>
A(group)	2	8.13	.07	.93
B(order)	5	201.70	.66	.66
A x B	1	29.02	.47	.50
S(A x B)	9	553.34		
C(conditions)	2	67.28	.48	.62
A x C	4	652.55	2.32	.09
B x C	10	1349.65	1.95	.10
A x B x C	20	2358.19	1.67	.12
C x S(A x B)	21	1479.15		

Table 15

Analysis of Variance of Rough Play for Diagnostic Groups x Orders x Conditions

<u>Source</u>	<u>df</u>	<u>Sum of Squares</u>	<u>F</u>	<u>p</u>
A(group)	2	1.94	.24	.79
B(order)	5	4.92	.24	.93
A x B	1	.57	.14	.71
S(A x B)	9	36.61		
C(condition)	2	21.61	1.90	.17
A x C	4	1.54	.07	.99
B x C	10	61.03	1.07	.42
A x B x C	20	6.66	.06	1.00
C x S(A x B)	21	119.38		

Table 16a
Analysis of Variance of Parallel Play for Diagnostic Group x Order x Condition

Source	df	Sum of Squares	F	p
A(group)	2	257.79	1.25	.33
B(order)	5	412.26	.80	.57
A x B	1	227.53	2.21	.17
S(A x B)	9	927.33		
C(condition)	2	5340.38	30.73	.0001
A x C	4	14.76	.04	.99
B x C	10	2323.46	2.68	.028
A x B x C	20	6871.10	3.95	.001
C x S(A x B)	21	1824.66		

Table 16b
Newman-Keuls Post-hoc Comparisons between Conditions for Parallel Play

	Solitary (0.0)	Competitive (.35)	Free (18.14)
Solitary (0.0)	—	n.s.	*
Competitive (.35)		—	*
Free (18.14)			—

Table 16c
Newman-Keuls Post-hoc Comparisons of Parallel Play for Orders^a x Conditions^b
Free Play Condition

	O ₃ (3.8)	O ₅ (10.0)	O ₁ (15.75)	O ₆ (20.0)	O ₂ (23.25)	O ₄ (34.6)
O ₃ (3.8)	—	n.s.	n.s.	n.s.	*	*
O ₅ (10.0)		—	n.s.	n.s.	n.s.	*
O ₁ (15.75)			—	n.s.	n.s.	*
O ₆ (20.0)				—	n.s.	n.s.
O ₂ (23.25)					—	n.s.
O ₄ (34.6)						—

Order of Conditions

	O ₂ (23.25)			O ₄ (34.6)		
	A (0.0)	C (0.0)	B (23.25)	A (0.0)	C (0.0)	B (34.6)
A(0.0)	—	n.s.	*	—	n.s.	*
C(0.0)		—	*	—	—	*
B(23.25)			—			—

	O ₆ (20.0)		
	A (0.0)	C (0.0)	B (20.0)
A(0.0)	—	n.s.	*
C(0.0)		—	*
B(20.0)			—

*p .05

- ^aO₁ - ABC
- ^aO₂ - ACB
- ^aO₃ - BCA
- ^aO₄ - BAC
- ^aO₅ - CBA
- ^aO₆ - CAB

- ^bA - solitary play condition
- ^bB - free play condition
- ^bC - competitive play condition

Table 16d

Newman-Keuls Post-hoc Comparison of Parallel Play for the Diagnostic Groups^a
Orders^b x Conditions^c

Depressed in Free Play Condition						
	<u>O₄</u> (0.0)	<u>O₅</u> (0.0)	<u>O₁</u> (2.0)	<u>O₃</u> (3.5)	<u>O₂</u> (54.0)	<u>O₆</u> (55.0)
O ₄ (0.0)	—	n.s.	n.s.	n.s.	*	*
O ₅ (0.0)		—	n.s.	n.s.	*	*
O ₁ (2.0)			—	n.s.	*	*
O ₃ (3.5)				—	*	*
O ₂ (54.0)					—	n.s.
O ₆ (55.0)						—

Conduct disordered in Free Play Condition						
	<u>O₂</u> (0.0)	<u>O₃</u> (6.0)	<u>O₆</u> (10.0)	<u>O₁</u> (13.5)	<u>O₅</u> (20.0)	<u>O₄</u> (53.0)
O ₂ (0.0)	—	n.s.	n.s.	n.s.	n.s.	*
O ₃ (6.0)		—	n.s.	n.s.	n.s.	*
O ₆ (10.0)			—	n.s.	n.s.	*
O ₁ (13.5)				—	n.s.	*
O ₅ (20.0)					—	*
O ₄ (53.0)						—

Normals in Free Play Condition						
	<u>O₃</u> (0.0)	<u>O₅</u> (0.0)	<u>O₆</u> (0.0)	<u>O₂</u> (19.5)	<u>O₁</u> (34.0)	<u>O₄</u> (60.0)
O ₃ (0.0)	—	n.s.	n.s.	n.s.	n.s.	*
O ₅ (0.0)		—	n.s.	n.s.	n.s.	*
O ₆ (0.0)			—	n.s.	n.s.	*
O ₂ (19.5)				—	n.s.	*
O ₁ (34.0)					—	*
O ₄ (60.0)						—

Free Play Condition																	
<u>G₁O₁</u> (2.0)			<u>G₂O₁</u> (13.5)			<u>G₃O₁</u> (34.0)			<u>G₂O₂</u> (0.0)			<u>G₃O₂</u> (19.5)			<u>G₁O₂</u> (54.0)		
G ₁ O ₁ (2.0)	—	n.s.	*						G ₂ O ₂ (0.0)	—	n.s.	*					
G ₂ O ₁ (13.5)		—	n.s.						G ₃ O ₂ (19.5)		—	*					
G ₃ O ₁ (34.0)			—						G ₁ O ₂ (54.0)			—					
<u>G₁O₄</u> (0.0)			<u>G₂O₄</u> (53.0)			<u>G₃O₄</u> (60.0)			<u>G₃O₆</u> (0.0)			<u>G₂O₆</u> (10.0)			<u>G₁O₆</u> (55.0)		
G ₁ O ₄ (0.0)	—	*	*						G ₃ O ₆ (0.0)	—	n.s.	*					
G ₂ O ₄ (53.0)		—	n.s.						G ₂ O ₆ (10.0)		—	n.s.					
G ₃ O ₄ (60.0)			—						G ₁ O ₆ (55.0)			—					

Table 16d (continued)

Order of Conditions

Depressed

	O ₂			O ₆		
	A (0.0)	C (0.0)	B (54.0)	A (0.0)	C (0.0)	B (55.0)
A(0.0)	—	n.s.	*	—	n.s.	*
C(0.0)		—	*		—	*
B(54.0)			—			—

Conduct Disordered

	O ₄		
	A (0.0)	C (0.0)	B (53.0)
A(0.0)	—	n.s.	*
C(0.0)		—	*
B(53.0)			—

Normal

	O ₁			O ₄		
	A (0.0)	C (0.0)	B (34.0)	A (0.0)	C (0.0)	B (34.0)
A(0.0)	—	n.s.	*	—	n.s.	*
C(0.0)		—	*		—	*
B(34.0)			—			—

*p .05

^aC₁- DepressedO₂- Conduct disorderedC₃- Normal^bO₁-ABCO₂- ACBO₃- BCAO₄- BACO₅- CBAO₆- CAB^cA- solitary play condition

B- free play condition

C- competitive play condition

Table 17a

Analysis of Variance of Cooperative Play for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	p
A(group)	2	887.26	2.64	.12
B(order)	5	565.32	.67	.65
A x B	1	269.56	1.60	.21
S(A x B)	9	1511.82		
C(condition)	2	100501.05	179.69	.0001
A x C	4	1247.19	1.11	.37
B x C	10	4954.95	1.77	.12
A x B x C	20	14584.85	2.61	.017
C x S(A x B)	21	5872.51		

Table 17b

Newman-Keuls Post-hoc Comparisons between Conditions for Cooperative Play

	Solitary (0.0)	Free (47.25)	Competitive (90.64)
Solitary (0.0)	—	*	*
Free (47.25)		—	*
Competitive(90.64)			—

Table 17c

Newman-Keuls Post-hoc Comparisons of Cooperative Play for the Diagnostic Groups x Orders x Conditions

Depressed in Free Play Condition

	O ₆ (3.0)	O ₂ (30.0)	O ₃ (47.0)	O ₅ (67.0)	O ₄ (83.5)	O ₁ (90.0)
O ₆ (3.0)	—	n.s.	n.s.	*	*	*
O ₂ (30.0)		—	n.s.	n.s.	*	*
O ₃ (47.0)			—	n.s.	n.s.	n.s.
O ₅ (67.0)				—	n.s.	n.s.
O ₄ (83.5)					—	n.s.
O ₁ (90.0)						—

Conduct disordered in Free Play Condition

	O ₁ (12.5)	O ₅ (21.5)	O ₄ (25.0)	O ₆ (30.0)	O ₃ (60.0)	O ₂ (100.0)
O ₁ (12.5)	—	n.s.	n.s.	n.s.	n.s.	*
O ₅ (21.5)		—	n.s.	n.s.	n.s.	*
O ₄ (25.0)			—	n.s.	n.s.	*
O ₆ (30.0)				—	n.s.	*
O ₃ (60.0)					—	n.s.
O ₂ (100.0)						—

Table 17c (continued)

	Normals in Free Play Condition					
	<u>O₄</u> (35.5)	<u>O₁</u> (36.0)	<u>O₂</u> (37.5)	<u>O₆</u> (48.3)	<u>O₅</u> (87.0)	<u>O₃</u> (92.0)
O ₄ (35.5)	—	n.s.	n.s.	n.s.	*	*
O ₁ (36.0)		—	n.s.	n.s.	*	*
O ₂ (37.5)			—	n.s.	*	*
O ₆ (48.3)				—	n.s.	*
O ₅ (87.0)					—	n.s.
O ₃ (92.0)						—

Free Play Condition

<u>G₂O₁</u> (12.5) <u>G₃O₁</u> (36.0) <u>G₁O₁</u> (90.0)			<u>G₁O₃</u> (47.0) <u>G₂O₃</u> (60.0) <u>G₃O₃</u> (92.0)				
G ₂ O ₁ (12.5)	—	n.s.	*	G ₁ O ₂ (47.0)	—	n.s.	*
G ₃ O ₁ (36.0)		—	*	G ₂ O ₃ (60.0)		—	n.s.
G ₁ O ₁ (90.0)			—	G ₃ O ₃ (92.0)			—
<u>G₁O₂</u> (30.0) <u>G₃O₂</u> (37.5) <u>G₂O₂</u> (100.0)			<u>G₂O₄</u> (25.0) <u>G₃O₄</u> (35.5) <u>G₁O₄</u> (83.5)				
G ₁ O ₂ (30.0)	—	n.s.	*	G ₂ O ₄ (25.0)	—	n.s.	*
G ₃ O ₂ (37.5)		—	*	G ₃ O ₄ (35.5)		—	*
G ₂ O ₂ (100.0)			—	G ₁ O ₄ (83.5)			—
<u>G₂O₅</u> (21.5) <u>G₁O₅</u> (67.0) <u>G₃O₅</u> (87.0)			<u>G₁O₆</u> (3.0) <u>G₃O₆</u> (48.3) <u>G₂O₆</u> (50.0)				
G ₂ O ₅ (21.5)	—	*	*	G ₁ O ₆ (3.0)	—	*	*
G ₁ O ₅ (67.0)		—	n.s.	G ₃ O ₆ (48.3)		—	n.s.
G ₃ O ₅ (87.0)			—	G ₂ O ₆ (50.0)			—

Depressed

<u>O₁</u>			<u>O₂</u>		
<u>A</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
(0.0)	(90.0)	(96.0)	(0.0)	(30.0)	(100.0)
A(0.0)	—	*	A(0.0)	—	n.s.
B(90.0)		—	B(30.0)		—
C(96.0)			C(100.0)		
<u>O₃</u>			<u>O₄</u>		
<u>A</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
(0.0)	(47.0)	(85.0)	(0.0)	(83.0)	(100.0)
A(0.0)	—	*	A(0.0)	—	*
B(47.0)		—	B(83.0)		—
C(85.0)			C(100.0)		

Table 17c (continued)

O_5 <u>A B C</u> <u>(0.0) (3.0) (100.0)</u>							
A(0.0)	—	n.s.	*				
B(3.0)	—	—	*				
C(100.0)	—	—	—				
Conduct disordered							
O_1 <u>A B C</u> <u>(0.0) (12.5) (100.0)</u>			O_2 <u>A B C</u> <u>(0.0) (100.0) (100.0)</u>				
A(0.0)	—	n.s.	*	A(0.0)	—	*	*
B(12.5)	—	—	*	B(100.0)	—	—	n.s.
C(100.0)	—	—	—	C(100.0)	—	—	—
O_3 <u>A C B</u> <u>(0.0) (35.0) (60.0)</u>			O_5 <u>A C B</u> <u>(0.0) (21.5) (100.0)</u>				
A(0.0)	—	n.s.	*	A(0.0)	—	n.s.	*
C(35.0)	—	—	n.s.	C(21.5)	—	—	*
B(60.0)	—	—	—	B(100.0)	—	—	—
O_6 <u>A B C</u> <u>(0.0) (50.0) (96.0)</u>							
A(0.0)	—	n.s.	*				
B(50.0)	—	—	n.s.				
C(96.0)	—	—	—				
Normal							
O_1 <u>A B C</u> <u>(0.0) (16.0) (100.0)</u>			O_2 <u>A B C</u> <u>(0.0) (37.0) (100.0)</u>				
A(0.0)	—	n.s.	*	A(0.0)	—	n.s.	*
B(16.0)	—	—	*	B(37.0)	—	—	*
C(100.0)	—	—	—	C(100.0)	—	—	—
O_3 <u>A B C</u> <u>(0.0) (92.0) (100.0)</u>			O_4 <u>A B C</u> <u>(0.0) (35.0) (100.0)</u>				
A(0.0)	—	*	*	A(0.0)	—	n.s.	*
B(92.0)	—	—	n.s.	B(35.0)	—	—	*
C(100.0)	—	—	—	C(100.0)	—	—	—
O_5 <u>A B C</u> <u>(0.0) (87.0) (100.0)</u>			O_6 <u>A B C</u> <u>(0.0) (48.0) (92.0)</u>				
A(0.0)	—	*	*	A(0.0)	—	*	*
B(87.0)	—	—	n.s.	B(48.0)	—	—	*
C(100.0)	—	—	—	C(100.0)	—	—	—

*p < .05

O_1 - Depressed
 O_2 - Conduct disordered
 O_3 - Normal

O_1 -ABC
 O_2 -ACB
 O_3 -BCA
 O_4 -BAC
 O_5 -CBA
 O_6 -CAB

A- solitary play condition
B- free play condition
C- competitive play condition

Table 18a

Analysis of Variance of Conversation for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	p
A(group)	2	259.22	2.62	.12
B(order)	5	320.40	1.29	.34
A x B	1	26.54	.54	.48
S(A x B)	9	445.78		
C(condition)	2	5455.05	27.11	.0001
A x C	4	856.83	2.13	.11
B x C	10	4721.32	4.69	.001
A x B x C	20	3237.05	1.61	.14
C x S(A x B)	21	2113.05		

Table 18b

Newman-Kuels Post-hoc Comparisons between Conditions for Conversation

	Solitary (0.0)	Competitive (6.03)	Free (20.64)
Solitary (0.0)	—	*	*
Competitive (6.03)		—	*
Free (20.64)			—

Table 18c

Newman-Kuels Post-hoc Comparisons of Conversation for Orders^a x Conditions^b

	Free Play Condition					
	O ₂ (6.75)	O ₄ (7.2)	O ₅ (12.5)	O ₃ (23.4)	O ₆ (23.5)	O ₁ (51.75)
O ₂ (6.75)	—	n.s.	n.s.	n.s.	n.s.	*
O ₄ (7.2)		—	n.s.	n.s.	n.s.	*
O ₅ (12.5)			—	n.s.	n.s.	*
O ₃ (23.4)				—	n.s.	*
O ₆ (23.5)					—	*

	Competitive Play Condition					
	O ₂ (0.0)	O ₁ (.25)	O ₆ (.83)	O ₅ (4.75)	O ₄ (9.4)	O ₃ (19.4)
O ₂ (0.0)	—	n.s.	n.s.	n.s.	n.s.	*
O ₁ (.25)		—	n.s.	n.s.	n.s.	*
O ₆ (.83)			—	n.s.	n.s.	*
O ₅ (4.75)				—	n.s.	n.s.
O ₄ (9.4)					—	n.s.
O ₃ (19.4)						—

Table 18c (continued)

	Order of Conditions			Order of Conditions		
	O_2			O_3		
	A	B	C	A	B	C
	(0.0)	(.25)	(51.75)	(0.0)	(19.4)	(23.4)
A(0.0)	—	n.s.	*	A(0.0)	—	*
B(.25)		—	*	B(19.4)	—	n.s.
C(51.75)			—	C(23.4)		—
	O_6			O_6		
	A	B	C	A	B	C
	(0.0)	(.83)	(23.5)	(0.0)	(.83)	(23.5)
A(0.0)	—	n.s.	*	A(0.0)	—	*
B(.83)		—	*	B(.83)	—	*
C(23.5)			—	C(23.5)		—

* $p < .05$ ^a O_1 -ABC O_2 -ACB O_3 -BCA O_4 -BAC O_5 -CBA O_6 -CAB^bA- solitary play condition

B- free play condition

C- competitive play condition

Table 19a

Analysis of Variance of Group Entry for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	p
A(group)	2	2.70	1.97	.19
B(order)	5	3.12	.91	.51
A x B	1	1.40	2.04	.18
S(A x B)	9	6.17		
C(condition)	2	8.23	6.66	.005
A x C	4	.34	.14	.96
B x C	10	1.61	.26	.98
A x B x C	20	6.07	.49	.94
C x S(A x B)	21	12.97 ^g		

Table 19b

Newman-Kuels Post-hoc Comparisons between Conditions for Group Entry

	Competitive (0.0)	Solitary (0.0)	Free (.82)
Competitive (0.0)	—	n.s.	*
Solitary (0.0)		—	*
Free (.82)			—

*p < .05

Table 20a

Analysis of Variance of Smiling for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	p
A(group)	2	20.10	.05	.95
B(order)	5	631.10	.63	.68
A x B	1	203.62	1.01	.34
S(A x B)	9	1813.33		
C(condition)	2	3903.95	16.10	.0001
A x C	4	280.23	.58	.68
B x C	10	1161.26	.96	.50
A x B x C	20	3480.61	1.43	.20
C x S(A x B)	21	2546.83		

Table 20b

Newman-Kuels Post-hoc Comparisons between Conditions for Smiling

	Solitary (.64)	Free (9.14)	Competitive (20.10)
Solitary (.64)	_____	*	*
Free (9.14)		_____	*
Competitive (20.10)			_____

*p < .05

Table 21a

Analysis of Variance of Observing for Diagnostic Groups x Orders x Conditions

Source	df	Sum of Squares	F	p
A(group)	2	87.01	1.77	.22
B(order)	5	158.79	1.29	.34
A x B	1	8.29	.34	.57
S(A x B)	9	220.87		
C(conditions)	2	386.26	4.56	.022
A x C	4	187.37	1.11	.37
B x C	10	133.14	.31	.96
A x B x C	20	327.48	.39	.98
C x S(A x B)	21			

Table 21b

Newman-Kuels Post-hoc Comparisons between Conditions for Observing

	Solitary (0.0)	Competitive (1.42)	Free (5.42)
Solitary (0.0)	—	n.s.	*
Competitive (1.42)		—	*
Free (5.42)			—

*p < .05

Table 22a

Analysis of Variance of the Pleasant/Unpleasant Measure for Groups

Source	df	Mean Squares	F	p
Group	2	3.20	20.69	.001
Error	25	.15		

Table 22b

Newman-Keuls Post-hoc Comparisons between Groups for the Pleasant/Unpleasant Measure

	Conduct disordered (1.90)	Depressed (2.59)	Normal (3.06)
Conduct disordered (1.90)	_____	*	*
Depressed (2.59)		_____	*
Normal (3.06)			_____

*p < .05

Table 23a

Analysis of Variance of Social Competency Ratings for Groups

Source	df	Mean Squares	F	P
Group	2	17.40	18.05	.0001
Error	25	.96		

Table 23b

Newman-Keuls Post-hoc Comparisons between Groups for Social Competency Ratings

	Conduct disordered (2.88)	Depressed (3.83)	Normal (5.55)
Conduct disordered(2.88)	_____	*	*
Depressed (3.83)		_____	*
Normal (5.55)			_____

Table 23c

Chi-Square of Forced Choice Ratings for Groups

	Group	
	Normal	Disordered
Observed Frequency	16*	2*
Expected Frequency	9	9

*p < .05

Table 24a

Analysis of Variance of Subjects' Perception Ratings for Groups

Source	df	Mean Square	F	p
Group	2	3.04	9.00	.001
Error	25	.33		

Table 24b

Newman-Kuels Post-hoc Comparison between Groups for Subjects' Perception Ratings

	Depressed (2.38)	Conduct disordered (2.77)	Normal (3.55)
Depressed (2.38)	—	n.s.	*
Conduct disordered (2.77)		—	*
Normal (3.55)			—

Table 24c

Analysis of Variance of Stressor Ratings for Groups

Source	df	Mean Square	F	p
Group	2	.04	.02	.98
Error	25	2.53		

*p < .05

APPENDEX B

THE UNIVERSITY OF NORTH CAROLINA
AT GREENSBORO



Department of Psychology

January, 1988

Dear

I am writing to request your assistance in obtaining subjects for my dissertation research project. The study has been approved by the UNC-G Psychology Department Human Subjects Committee, acting in behalf of UNC-G's Institutional Review Board. I need children, boys and girls, between 9 and 12 years old who reside with at least one parent or legal guardian. I am interested in children who are shy, anxious, and withdrawn or who are disruptive, non-compliant, and acting-out.

The study involves two sessions to be held in UNC-G's Psychology Department. The purpose of the study is to examine the peer interactions of the withdrawn child and the acting-out child. The first session involves the child and his/her parent to be interviewed separately. They will also be asked to complete some questionnaires. If the child meets certain criteria, he/she will be asked to participate in the second session. This session involves the child participating in different play situations with other children.

This study does not involve psychological treatment. It is an assessment study investigating the peer interactions of different types of children in various play situations. The information obtained from this study regarding your client (patient) will be made available to you. The children will receive a small gift as a token of my appreciation for their participation in the study.

If you would agree to arrange for your clients (patients) to participate in this study, I would be most grateful. I have enclosed an information sheet for the parents. In addition, I have enclosed a consent form to be signed by the child's parent allowing me to contact them. Simply return these consent forms to me (address labels are enclosed), and I will make further contact with the parent. If you have any questions, please call me at 334-5013 or 334-5662. Thank you for your time.

Sincerely,

Barbara A. Romano

GREENSBORO, NORTH CAROLINA / 27412-5001

THE UNIVERSITY OF NORTH CAROLINA is composed of the sixteen public senior institutions in North Carolina

an equal opportunity institution

Consent form

I _____, allow Barbara Romano to contact me to further explain the Childhood Interactions Research Project. This call will be kept confidential. Consenting to be contacted does not mean I am agreeing to my or my child's participation in this study.

signature of parent

witness

date

phone number of parent

Parent Information for UNC-G Peer Interaction Study

1. This study is being conducted by Barbara A. Romano, M.A. under the supervision of Rosemary O. Nelson, Ph.D., with the approval of the UNC-G Psychology Department.
2. If you are willing to participate and agree to allow your child to participate in this study:
 - a. you will be asked to do the following:
 - 1). sign a consent form agreeing to complete two questionnaires and to participate in an interview which takes approximately 30-45 minutes.
 - b. your child will be asked to do the following:
 - 1). sign a consent form agreeing to complete one questionnaire and to participate in an interview which takes approximately 45-60 minutes.
3. If your child is eligible to be in the next part of the study, he/she will be invited back to participate in one experimental session about 45 minutes long. Your child will be in different play situations with two other children.
4. After your child participates in these play situations, he/she will be asked a few additional brief questions.

To thank your child for his/her participation in this study, he/she will receive a small gift. If you and your child would like to participate in this study or have any additional questions, please call Barbara Romano at 334-5013. After 5 p.m., please call 334-5662 and leave your name and phone number on the answering machine. Your call will be returned promptly.

APPENDIX C

Consent Form-Parent

I _____, parent (or guardian)
of _____ agree to participate in and to have my
child participate in the Childhood Interactions Research Project being conducted
at UIC-G by Barbara A. Romano, M.A. under the supervision of Rosemary O. Nelson, Ph.D.
I understand that this is a research project investigating the nature of
children's peer interactions. This project does not involve psychological
treatment. During the first part of this project, I understand that my child
and I will be interviewed and asked to fill out questionnaires. This interview
will be audiotaped and used for rating presence or absence of specific
behaviors by trained project personnel. I understand that my child will receive
a small gift such as a coupon for MacDonald's french fries for participating
in this part of the project. In addition, I understand that my child might
be asked to participate in the next part of this project. It has been
explained to me that in this part of the project my child will be videotaped
in different play situations. This will be done in order to provide a record
of my child's behavior in these situations. These videotapes will be later
viewed by trained project personnel to code my child's interactive behaviors.
I understand that my child will receive a gift of up to \$2 in value for
participating in this part of the project. I understand that no information
which could identify my child or myself will ever be made public and will
be restricted to project personnel and my child's school psychologist, guidance
counselor, and/or therapist. Therefore, I give my consent for my child
and me to participate in this study with the understanding that we may withdraw
at any time. Furthermore, to decline participation or to withdraw my consent will
in no way influence my child's being in treatment with other professionals.

signature of parent

witness

date

Confederate Consent Form- Parent

I _____, parent (or guardian) of _____ agree to have my child participate in the Childhood Interactions Research Project being conducted at UNC-G by Barbara A. Romano, M.A. under the supervision of Rosemary O. Nelson, Ph.D. I understand that this is a research project investigating the nature of children's peer interactions. This project does not involve psychological treatment. I understand that my child will be asked to interact with other children in play situations and then asked questions regarding those interactions. It has been explained to me that my child will be videotaped in these different play situations. I understand that this will be done in order to provide a record of these interactions. These videotapes will be later viewed by trained project personnel to code these interactions. I understand that no information which could identify my child will ever be made public and will be restricted to project personnel. I understand that my child will be asked to participate in these interactions three different times and will receive a gift of up to \$2 in value for participating each of these times. Therefore, I give my consent for my child to participate in this study with the understanding that he/she or I may withdraw at any time.

signature of parent

witness

date

APPENDIX D

Child Consent Form

The project that I'm working on is in two parts. In Part I, I'll be asking you some questions about yourself, your family, your friends, and school. To thank you for your participation in Part I, you'll receive a small gift like a coupon for MacDonald's french fries.

I may ask you to come back to participate in Part II. During this part of the project you'll meet some other children. At times you'll either be by yourself in a room with toys, with these other children in a room with toys, or in a room with these other children playing a game. To thank you for participating in Part II, you'll receive a gift worth up to \$2.

One of your parents has agreed to allow you to participate if you would like to. I know it may be hard for you to know if you want to work on this project with me, since you may not have done this before. Even if you say yes, and then you decide you don't like it, you can stop at any time. Would you like to work on this project with me?

I agree to work on this project.

signature of child

witness

date

Confederate Consent Form- Child

During this project you'll meet some other children. At times you'll either be with these other children in a room with toys or in a room playing a game. When this part of the project has ended, I'll be asking you some questions about whether or not you liked playing with these other children. No one will learn about your answers that you tell me. I'll be asking you to come here three different times. To thank you for your participation, you'll receive a gift worth \$2 each time you come here. One of your parents has agreed to allow you to participate if you would like. I know it may be hard for you to know if you want to work on this project with me, since you may not have done this before. Even if you say yes, and then you decide you don't like it, you can stop at any time. Would you like to work on this project with me?

I agree to work on this project.

child's signature

witness

date

APPENDIX E

INTERVIEW

CHILD ASSESSMENT SCHEDULE (CAS)

Copyright c 1985 by Kay Hodges

PLEASE NOTE:

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

These consist of pages:

- 104-140, Child Assessment Schedule (CAS)
- 142-175, Parent Form (P-CAS)
- 176-178, Children's Depression Inventory
- 179-181, Parent's Version Child Depression Inventory

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APPENDIX F

PARENT FORM (P-CAS)
CHILD ASSESSMENT SCHEDULE

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APPENDEX I

CHILD BEHAVIOR CHECKLIST FOR AGES 4-16

For office use only
ID #

CHILD'S NAME SEX <input type="checkbox"/> Boy <input type="checkbox"/> Girl AGE _____ RACE _____ TODAY'S DATE _____ CHILD'S BIRTHDATE _____ Mo. ____ Day ____ Yr. ____ Mo. ____ Day ____ Yr. ____ GRADE IN SCHOOL _____		PARENT'S TYPE OF WORK (Please be specific—for example: auto mechanic, high school teacher, homemaker, laborer, is the operator, shoe salesman, army sergeant, even if parent does not live with child.) FATHER'S TYPE OF WORK: _____ MOTHER'S TYPE OF WORK: _____ THIS FORM FILLED OUT BY: <input type="checkbox"/> Mother <input type="checkbox"/> Father <input type="checkbox"/> Other (Specify) _____
---	--	--

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

None

	Compared to other children of the same age, about how much time does he/she spend in each?				Compared to other children of the same age, how well does he/she do each one?			
	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, singing, etc. (Do not include T.V.)

None

	Compared to other children of the same age, about how much time does he/she spend in each?				Compared to other children of the same age, how well does he/she do each one?			
	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. Please list any organizations, clubs, teams, or groups your child belongs to.

None

	Compared to other children of the same age, how active is he/she in each?			
	Don't Know	Less Active	Average	More Active
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, etc.

None

	Compared to other children of the same age, how well does he/she carry them out?			
	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- V. 1. About how many close friends does your child have? None 1 2 or 3 4 or more
2. About how many times a week does your child do things with them? less than 1 1 or 2 3 or more

VI. Compared to other children of his/her age, how well does your child:

	Worse	About the same	Better
a. Get along with his/her brothers & sisters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Get along with other children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Behave with his/her parents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Play and work by himself/herself?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VII. 1. Current school performance—for children aged 6 and older:

	Falling	Below average	Average	Above average
<input type="checkbox"/> Does not go to school				
a. Reading or English	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Writing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Arithmetic or Math	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Spelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other academic subjects—for example: history, science, foreign language, geography.				
e. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Is your child in a special class?

- No Yes—what kind?

3. Has your child ever repeated a grade?

- No Yes—grade and reason

4. Has your child had any academic or other problems in school?

- No Yes—please describe

When did these problems start?

Have these problems ended?

- No Yes—when?

VIII. Below is a list of items that describe children. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	1	2				0	1	2			
0	1	2	1.	Acts too young for his/her age	18	0	1	2	31.	Fears he/she might think or do something bad	
0	1	2	2.	Allergy (describe): _____		0	1	2	32.	Feels he/she has to be perfect	
0	1	2	3.	Argues a lot		0	1	2	33.	Feels or complains that no one loves him/her	
0	1	2	4.	Asthma		0	1	2	34.	Feels others are out to get him/her	
0	1	2	5.	Behaves like opposite sex	20	0	1	2	35.	Feels worthless or inferior	50
0	1	2	6.	Bowel movements outside toilet		0	1	2	36.	Gets hurt a lot, accident-prone	
0	1	2	7.	Bragging, boasting		0	1	2	37.	Gets in many fights	
0	1	2	8.	Can't concentrate, can't pay attention for long		0	1	2	38.	Gets teased a lot	
0	1	2	9.	Can't get his/her mind off certain thoughts; obsessions (describe): _____		0	1	2	39.	Hangs around with children who get in trouble	
0	1	2	10.	Can't sit still, restless, or hyperactive	25	0	1	2	40.	Hears things that aren't there (describe): _____	55
0	1	2	11.	Clinging to adults or too dependent		0	1	2	41.	Impulsive or acts without thinking	
0	1	2	12.	Complains of loneliness		0	1	2	42.	Likes to be alone	
0	1	2	13.	Confused or seems to be in a fog		0	1	2	43.	Lying or cheating	
0	1	2	14.	Cries a lot		0	1	2	44.	Bites fingernails	
0	1	2	15.	Cruel to animals	30	0	1	2	45.	Nervous, high-strung, or tense	60
0	1	2	16.	Cruelty, bullying, or meanness to others		0	1	2	46.	Nervous movements or twitching (describe): _____	
0	1	2	17.	Day-dreams or gets lost in his/her thoughts		0	1	2	47.	Nightmares	
0	1	2	18.	Deliberately harms self or attempts suicide		0	1	2	48.	Not liked by other children	
0	1	2	19.	Demands a lot of attention		0	1	2	49.	Constipated, doesn't move bowels	
0	1	2	20.	Destroys his/her own things	35	0	1	2	50.	Too fearful or anxious	65
0	1	2	21.	Destroys things belonging to his/her family or other children		0	1	2	51.	Feels dizzy	
0	1	2	22.	Disobedient at home		0	1	2	52.	Feels too guilty	
0	1	2	23.	Disobedient at school		0	1	2	53.	Overeating	
0	1	2	24.	Doesn't eat well		0	1	2	54.	Overtired	
0	1	2	25.	Doesn't get along with other children	40	0	1	2	55.	Overweight	70
0	1	2	26.	Doesn't seem to feel guilty after misbehaving		0	1	2	56.	Physical problems without known medical cause:	
0	1	2	27.	Easily jealous		0	1	2	a.	Aches or pains	
0	1	2	28.	Eats or drinks things that are not food (describe): _____		0	1	2	b.	Headaches	
0	1	2				0	1	2	c.	Nausea, feels sick	
0	1	2				0	1	2	d.	Problems with eyes (describe): _____	
0	1	2	29.	Fears certain animals, situations, or places, other than school (describe): _____		0	1	2	e.	Rashes or other skin problems	75
0	1	2				0	1	2	f.	Stomachaches or cramps	
0	1	2				0	1	2	g.	Vomiting, throwing up	
0	1	2	30.	Fears going to school	45	0	1	2	h.	Other (describe): _____	

0 = Not True (as far as you know)			1 = Somewhat or Sometimes True			2 = Very True or Often True					
0	1	2	57. Physically attacks people			0	1	2	84. Strange behavior (describe): _____		
0	1	2	58. Picks nose, skin, or other parts of body (describe): _____								
					80	0	1	2	85. Strange ideas (describe): _____		
0	1	2	59. Plays with own sex parts in public		18						
0	1	2	60. Plays with own sex parts too much			0	1	2	86. Stubborn, sullen, or irritable		
0	1	2	61. Poor school work			0	1	2	87. Sudden changes in mood or feelings		
0	1	2	62. Poorly coordinated or clumsy			0	1	2	88. Sulks a lot	45	
0	1	2	63. Prefers playing with older children		20	0	1	2	89. Suspicious		
0	1	2	64. Prefers playing with younger children			0	1	2	90. Swearing or obscene language		
0	1	2	65. Refuses to talk			0	1	2	91. Talks about killing self		
0	1	2	66. Repeats certain acts over and over; compulsions (describe): _____			0	1	2	92. Talks or walks in sleep (describe): _____		
						0	1	2	93. Talks too much	50	
0	1	2	67. Runs away from home			0	1	2	94. Teases a lot		
0	1	2	68. Screams a lot		25	0	1	2	95. Temper tantrums or hot temper		
0	1	2	69. Secretive, keeps things to self			0	1	2	96. Thinks about sex too much		
0	1	2	70. Sees things that aren't there (describe): _____			0	1	2	97. Threatens people		
						0	1	2	98. Thumb-sucking	55	
						0	1	2	99. Too concerned with neatness or cleanliness		
0	1	2	71. Self-conscious or easily embarrassed			0	1	2	100. Trouble sleeping (describe): _____		
0	1	2	72. Sets fires								
0	1	2	73. Sexual problems (describe): _____			0	1	2	101. Truancy, skips school		
					30	0	1	2	102. Underactive, slow moving, or lacks energy		
0	1	2	74. Showing off or clowning			0	1	2	103. Unhappy, sad, or depressed	60	
0	1	2	75. Shy or timid			0	1	2	104. Unusually loud		
0	1	2	76. Sleeps less than most children			0	1	2	105. Uses alcohol or drugs (describe): _____		
0	1	2	77. Sleeps more than most children during day and/or night (describe): _____			0	1	2	106. Vandalism		
						0	1	2	107. Wets self during the day		
0	1	2	78. Smears or plays with bowel movements	35		0	1	2	108. Wets the bed	85	
0	1	2	79. Speech problem (describe): _____			0	1	2	109. Whining		
						0	1	2	110. Wishes to be of opposite sex		
0	1	2	80. Stares blankly			0	1	2	111. Withdrawn, doesn't get involved with others		
0	1	2	81. Steals at home			0	1	2	112. Worrying		
0	1	2	82. Steals outside the home						113. Please write in any problems your child has that were not listed above: _____	70	
0	1	2	83. Stores up things he/she doesn't need (describe): _____		40	0	1	2			

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS.

PAGE 4

UNDERLINE ANY YOU ARE CONCERNED ABOUT.

APPENDEX J

Activity Definitions

10** Solitary Appropriate

Describes an ongoing behavioral state. Child is playing alone for minimum of 4 seconds. Child's behavior is directed (constructive) and is in no way disruptive of the ongoing activities of the other children in the group. Child's behavior clearly does not mirror the behavior of children nearby (see parallel play). Solitary Appropriate cannot be coded if there are ongoing Adult Structured Activities in which the child does not participate (see Solitary Inappropriate).

Examples: Child plays with Frogger game during free play period.

20** Solitary
Aimless

Describes an ongoing behavioral state. Child is playing alone for minimum of 4 seconds. Child's behavior is not directed toward a particular object or activity (nonconstructive), nor is it disruptive of ongoing group activities. Child's behavior clearly does not mirror the behavior of children nearby. This activity code denotes unfocused behavior

Child may wander around room looking bored, very briefly engaging in numerous activities.

Examples: Child picks up Frogger game, then picks up boxing glove as other children play "Good Morning Judge".

30** Solitary Inappropriate-
Disruptive

Describes an ongoing behavioral state. Child is playing alone for minimum of 4 seconds. Child's behavior is nonconstructive, and may even be destructive. Child's behavior clearly does not mirror the behavior of children nearby. Child's behavior is boisterous, noisy, or threatening, and serves to disrupt the ongoing activities of other children in the group. This behavior is coded during structured and unstructured activities

Examples: As other children play a game the target child bangs a boxing glove loudly on a table

40** Parallel Play

Describes an ongoing behavioral state. Child engages in behavior or activity which mirrors or mimics the behavior or activity of nearby peer for minimum of 4 seconds. Child clearly attends to the nearby peer's behavior as an aid in the behavioral modeling. There must be no active engagement between the children, i.e., no conversation, and no exchange of objects or materials.

Examples: Two children stand side-by-side play with blocks (but do not otherwise attend to each other)

50 **Cooperative Play

Describes an ongoing behavioral state. Child interacts with one or children in the same ongoing activity for minimum of 4 seconds. May be structured by adult or unstructured (group-generated). May include conversation if activity-oriented. The nature of the game or activity must require the participation of 2 or more child.

Examples: The target child plays "Good Morning Judge" with the other children.

The target child says "Have you seen the round piece" while putting together a puzzle with another child. (Note: If this statement occurred during an already ongoing activity it would not be assigned a new code)

60 ** Conversation

Describes an ongoing behavioral state and a discrete behavior. Indicates a positive-co-neutr interactive verbalization between two or more children. Conversations are nonmanipulative and occur outside the context of activity-oriented statements during Cooperative Play.

Examples: "What's your name?" "I got one of the

70 Aggressive, Rough Play**

Describes an ongoing behavioral state. Physical interaction between two or more children lasting a period of at least 4 seconds. Includes roughhousing, jostling, good-natured wrestling or scuffling, and other forms of physical aggression. These aggressive expressions must not be accompanied with negative affect or anger.

Examples: While playing with the basketball, two children push each other aside while going for the ball.

06 Aggression: Nonangry-bullying**

Typically describes discrete behavior of relatively short duration. Domineering behavior by one child toward another (or toward the entire group). Includes intimidation (verbal and physical), taunts, teasing, and physical abuse. Not accompanied by hostility or aggression. Not in retaliation.

Examples: "Shut up fatso, or I'll slap your f.

- 03 Aggression: Angry-reactive
- (AGGRESSION: ANGRY-
REACTIVE AND OVER-
REACTIVE ARE COMBINED)
- Typically describes discrete behavior of relatively short duration. Clear displays of aggressive behavior by the child, coupled with angry, hostile verbalizations and/or behavioral cues. Aggression is exhibited in response to a stimulus provided by another (i.e., is retaliatory), and is commensurate with the intensity of that stimulus. Appropriate aggression in the sense that anger is judged to be a legitimate behavioral expression in this particular context.
- Examples: Child is hit on back of head with boxing glove and retaliates by smacking offending child in similar fashion.
- 04 Aggression: Angry-Overreactive
- Typically describes discrete behavior of relatively short duration. Clear displays of retaliatory, angry aggression by the child which is out of keeping with the stimulus provided by another child (or children), or angry aggression initiated by the child. May suggest frustration on the part of the child.
- Examples: Child screams and lunges at a child who has thrown a ball at him.
- In apparent rage, a child call another "stupid" and shoves him.
- 07** Group Entry
- An initiating behavior directed toward a child or group of children so as to attempt to engage them in play. Typically lasts a minimum of 5 seconds. Includes lingering (waiting/hovering) verbalizations, and expressions of interest. Target child must express clear interest in social contact, and not merely an interest in obtaining an object for solitary play.
- Examples: "Can I play?" "What are you guys doing?"
- 09** Response-Resistance
- Active resistance, disagreement, or noncompliance to a request or demand by another child. May be either passive resistance (stonewalling ignoring) or active defiance.
- 00** Response-Submission
- Cowering, complaining, simpering response to attempted domination by peer. "Whipping boy" or scapegoat. Allows oneself to be dominated.

- 90** Response-Compliance
Compliant, agreeable, affable behavior in response to request, demand, or simple question from peer.
- 99 No code
Cannot code because child is out of sight (either out of camera range or out of room or absent from group).
- ** Smiling
Using facial muscles to upturn the corners of the mouth and/or facial expressions of joy or pleasure.
- **Frowning
Lowering one's eyebrows or downward turning of the mouth and/or facial expressions of displeasure.
- **Observing
Watching other children play for at least three seconds; not intending to interact or join in the play; not playing with own toy or engaging in aimless behavior.

APPENDEX K

~~Pleasant/Unpleasant-measure~~

1. Would you invite (name) to your birthday party?

1-----2-----3-----4
 definitely definitely
 not would

2. Would you like (name) as a friend?

1-----2-----3-----4
 definitely definitely
 not would

3. Would you like to play with (name) again?

1-----2-----3-----4
 definitely definitely
 not would

4. Would you invite (name) home to play with you after

school?

1-----2-----3-----4
 definitely definitely
 not would

5. Would you invite (name) to a sleep-over at your house?

1-----2-----3-----4
 definitely definitely
 not would

6. If you were forming a club, would you invite (name) to join?

1-----2-----3-----4
 definitely definitely
 not would

7. Would you introduce (name) to your friends at home or school?

1-----2-----3-----4
 definitely definitely
 not would

8. Would you want to sit with (name) at lunch?

1-----2-----3-----4
 definitely definitely
 not would

9. If you were the captain of a team, would you pick (name) to be on it?

1-----2-----3-----4
 definitely definitely
 not would

10. How much did you like to play with (name)?

1-----2-----3-----4
 not much very much
 at all