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Social, Academic, and Behavioral Competence of Depressed Children: Relationship to Diagnostic Status and Family Interaction Style

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This study compared the social adjustment and academic performance of 15 psychiatrically hospitalized children with depression to 14 children with schizophrenia spectrum disorders and 20 normal community children, ages 7–14. The relationship between children's interpersonal and academic competence and the quality of direct family interactions was also examined. Analyses revealed an association between children's adaptive functioning and both diagnostic status and family transactional processes, as assessed by two 10-minute conflict-solving tasks. Major findings were as follows: (a) depressed children and children with schizophrenia spectrum disorders received similarly low ratings of social competence in comparison to normal controls; (b) academic performance of depressed children was similar to normal controls and better than children with schizophrenia spectrum disorders; and (c) children with poorer social competence and more behavioral problems were more likely to have parents who showed negative affect during family problem-solving tasks. The implications of these results for understanding the relationship between psychiatric impairment and children's social and academic development were discussed.

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INTRODUCTION

Accumulating data suggest that depression is associated with deficits in children's social functioning (Kovacs, 1989; Kovacs and Goldston, 1991). Both peers and adults have negative interpersonal reactions to depressive symptomatology in children (Connolly *et al.*, 1992; Mullins *et al.*, 1986). Children's depressive symptoms are associated with social rejection, unpopularity, and low ratings of interpersonal competence (Altmann and Gotlib, 1988; Fauber *et al.*, 1987). Enduring effects of depression on interpersonal competence is suggested by data demonstrating impairments in social functioning even after children have recovered from major depressive episodes (Puig-Antich *et al.*, 1985b).

Certain interpersonal deficits may not be specific to childhood depression, but also associated with other psychiatric disorders (Puig-Antich *et al.*, 1985a; Armsden *et al.*, 1990). However, in at least one inpatient sample, children with depression engaged in less social activity than inpatients with other diagnoses, including anxiety disorder, conduct disorder, and adjustment disorder (Kazdin *et al.*, 1985). Thus, the issue of specificity of psychiatric disorder to poor social skills is unresolved.

Depression has been linked to poor academic performance (Puig-Antich *et al.*, 1985a; Forehand *et al.*, 1987; Kovacs and Goldston, 1991). Blechman *et al.* (1986) found that children who were both socially and academically incompetent had the highest levels of depressive symptomatology. However, some studies have found no association between child depression and cognitive task performance (Kashani *et al.*, 1983; McGee *et al.*, 1986). In conjunction, data suggest that depression exerts a stronger impact on social competence than on academic performance.

Deficits in social functioning may also be related to other behavioral dysfunction. Puig-Antich and colleagues (1993) found that adolescents with depression had worse school performance and more behavior problems than psychiatrically normal peers. Teachers report more internalizing, but not externalizing, behavior problems for depressed children in comparison to nondepressed peers (Kaslow *et al.*, 1984).

A primary goal of the current study was to compare the social, academic, and behavioral competence of depressed children to that of children with schizophrenia spectrum disorders and to normal controls. Some symptoms that may contribute to impaired social and academic functioning, including poor concentration and social withdrawal, are common to both childhood depression and schizophrenia spectrum disorders, although others, such as irritability and low self-esteem, are more closely related to depression. Both disorders, however, are characterized by severity and chronicity.

Coyne's interactional theory of depression (1976) states that interpersonal characteristics of the depressed individual may contribute to social rejection, which in turn perpetuates depression. In children at risk for psychopathology, negative parental affect has been linked to poor social and scholastic competence (Hammen *et al.*, 1987). Our previous work indicates impaired interactive behavior of depressed children with their parents, with high rates of guilt induction by children and harsh criticism by parents (Hamilton *et al.*, under review). A final goal of the present study was to determine the extent to which the quality of transactional family behavior was related to children's competence across social, academic, and behavioral domains.

METHOD

Subjects

Subjects were 49 children ages 7–14 years and their parents. All children had been living with their caretaking parent/s prior to hospitalization. Inclusion was contingent on the absence of mental retardation, developmental disabilities, and coexisting major medical illness.

Psychiatric Group

The depressed and schizophrenia spectrum groups were obtained from child inpatient services at the UCLA Neuropsychiatric Institute or affiliated hospitals. These subjects were also part of a larger ongoing project (Asarnow and Ben-Meir, 1988). Families were asked to participate if their child had a primary diagnosis of either depressive disorder (major depression or dysthymia) or schizophrenia spectrum disorder (schizophrenia, SZ, or schizotypal personality disorder, SPD). Due to some overlap in diagnoses, a set of hierarchical rules for diagnostic classification was needed. A decision rule was set up based on the *Diagnostic Statistical Manual* (third edition) convention that schizophrenia takes precedence over dysthymia (2 cases). Due to the focus of the present study, depression took precedence over schizotypal personality disorder (2 cases).

The average age of the 15 children in the depressed group was 11.14 years ($SD = 1.70$). There were 11 boys and 4 girls. Forty-seven percent were from dual-parent homes, while 53% were from single-parent homes. Most children were Caucasian, and one was from a Hispanic background. Social class was assessed by the Hollingshead Four-Factor Socioeconomic Index (Hollingshead, 1975), with a mean index of 48.40 ($SD = 13.09$).

For the 14 children in the schizophrenia spectrum group the mean age was 9.57 years ($SD = 1.78$). There were 11 boys and 3 girls. Forty-three percent were from dual-parent families, while 57% were from single-parent homes. Eleven of the children were Caucasian, and three were from other ethnic backgrounds, including Black, Hispanic, and Asian. The mean Hollingshead index for the SZ and SPD group was 42.21 ($SD = 14.44$).

Control Sample

A sample of 20 subjects with no history of psychiatric disorder was recruited from the community by announcements in local school newsletters, the Neuropsychiatric Institute (NPI) staff newsletter, and the UCLA newspaper. Letters were mailed to Big Brothers of Greater Los Angeles and a church-based community organization. Telephone screening was conducted to determine whether initial respondents met criteria for inclusion in the control sample.

Ages of the 20 normal children ranged from 7–14-years-old, with a mean age of 9.83 years ($SD = 1.59$). There were 15 boys and 5 girls. Forty-five percent were from single-parent families, and 55% were from dual-parent families. The majority of the control children were Caucasian, while there were three minorities, Black, Hispanic, and Asian. The normal group had a mean SES index of 49.62 ($SD = 2.74$).

Design and Procedure

Diagnostic Information

Diagnoses for all psychiatric subjects were made on the basis of the following: (1) the K-SADS-E (Puig-Antich *et al.*, 1983), a semistructured interview conducted with the child that allows for differential diagnosis of past and present psychiatric problems, (2) direct parent interviews, and (3) comprehensive information available during hospitalization. Two clinicians agreed independently on the child's diagnosis. Estimates of interrater agreement revealed a high level of reliability on diagnostic judgments, kappas ranging from .82 to .91, $p < .001$. To exclude children with diagnosable psychiatric problems from the control group, parents of the normal control children were also administered the K-SADS-E. Two subjects who had initially passed the telephone screening were omitted from the study after the K-SADS indicated Attention Deficit Hyperactivity Disorder (ADHD) symptomatology.

Social and Behavioral Competence

Assessment of children's social adaptation and behavioral functioning in the six month period prior to the study was made using the Child Behavior Checklist (CBCL; Achenbach and Edelbrock, 1983). The CBCL includes 20 social competence items and 118 behavior problem items, which are rated by a parent. Raw scores are transformed into *t* scores normed separately by gender and age group.

Academic Performance

A measure of academic achievement was obtained for all children targeting the six month period before hospitalization using the five-point Academic Performance Rating scale (APR; Hammen *et al.*, 1987). To control for variations in grading systems across schools, the APR was compiled from all available academic data, including report cards, standardized achievement tests, and written teacher evaluations. The APR scale ranges from 1 (indicating significant academic problems, i.e., failure of grade level) to 5 (superior performance, i.e., an A average). Coding for this measure was completed by two independent raters, and yielded an interrater reliability of .80, as established on a subsample of 20 children.

Family Interaction Variables

Interaction Task

Interaction styles of children and parents were assessed by two 10-minute family conflict resolution tasks. Methodology designed at the Family Assessment and Treatment laboratory was followed (Doane *et al.*, 1985). During the family conflict task the child and parent attempt to resolve a problem that family members have identified as important. Interactions were both audio- and videotaped.

The conflict task was transcribed verbatim for coding purposes. Only statements that fit criteria were coded. Coding units were designated as up to six lines of uninterrupted speech by a family member. If dual codes applied to a speech unit, the more emotionally charged code was chosen. Transcripts were rated by advanced undergraduate students blind to the child's diagnostic status who had received extensive training. To avoid possible contextual confounds, child and parent interactional behaviors were coded by different teams of raters.

Coping Style Coding System

The coping style (CS) system (Strachan *et al.*, 1990) was used to assess children's statements. The main coding categories are (1) autonomy, (2) self-affirmation, (3) support, (4) refusal, and (5) crucial statements, including benign criticism, harsh criticism, and guilt induction. Interrater reliability for CS as established on 15 transcripts was kappa = .83, $p < .01$, ranging from .72 to .91 for individual codes. A profile approach was used to rate CS, contingent upon whether the child's dominant interaction style was (1) benign (highest response frequencies of either autonomous or neutral comments), or (2) critical (highest response frequencies of benign criticism, harsh criticism, or guilt induction).

Affective Style Coding System

Parents' affective behavior was rated using the affective style (AS) coding system (Doane *et al.*, 1989). The AS system includes the following categories: (1) support; (2) criticism, which can be either benign situational criticism or harsh personal criticism; (3) guilt induction; and (4) neutral intrusion. Interrater reliability for AS, as established on 15 transcripts, was kappa = .85, $p < .01$, ranging from .70 to .90 for individual codes. AS profiles were created according to guidelines established at the UCLA Family Project as follows: (1) benign — no harsh critical or guilt inducing comments and no more than five neutral intrusive statements; and (2) negative — at least one harsh criticism or guilt induction, and/or six or more neutral intrusive statements (Doane *et al.*, 1985).

RESULTS

Preliminary Analyses

Analyses were conducted to assess possible confounds of between group differences in child gender, age, ethnicity, family composition, and SES. Depressed children were somewhat older ($M = 11.14$, $SD = 1.70$) than either the SZ and SPD children ($M = 9.57$, $SD = 1.78$) or the normal controls ($M = 9.80$, $SD = 1.63$), $F(2, 46) = 3.83$, $p < .05$. Results of analyses yielded similar group distributions on all other demographic variables, $p > .10$.

Table I. Diagnostic Group Means for Child Competence Variables^a

	Depressed (<i>n</i> = 15)	SZ and SPD (<i>n</i> = 14)	Normal (<i>n</i> = 20)
Academic performance	3.60 _A (1.40)	2.86 _B (1.35)	4.15 _A (.59)
Social competence	33.27 _B (10.69)	30.71 _B (7.75)	56.20 _A (8.74)
Internalizing problems	75.80 _B (7.89)	72.36 _B (10.06)	51.45 _A (9.69)
Externalizing problems	71.13 _B (7.14)	75.00 _B (6.16)	50.25 _A (8.26)

^a Standard deviations are in parentheses. Means sharing the same subscripts do not differ significantly.

Diagnostic Group Differences in Behavioral Functioning

A multivariate analysis of variance (MANOVA) revealed diagnostic group differences on all study variables: (1) academic performance, $F(2, 46) = 5.47, p < .01$; (2) social competence, $F(2, 46) = 41.78, p < .0001$; (3) internalizing behavior problems, $F(2, 46) = 35.77, p < .0001$; and (4) externalizing behavior problems, $F(2, 46) = 57.28, p < .0001$; $F(8, 41) = 14.03, p < .0001$. Means by diagnostic groups are presented in Table I. The academic rating (APR) of depressed children was similar to that of normal controls, $p > .10$, and somewhat higher than ratings of SZ and SPD children, $F(1, 27) = 2.10, p < .10$. The APR of the SZ and SPD children was lower than that of normal controls, $F(1, 32) = 14.55, p < .001$. Social competence of depressed children was poorer than that of normal children, $F(1, 33) = 48.77, p < .001$, and similar to that of SZ and SPD children, $p > .10$. Rates of internalizing problems reported for depressed children did not differ from the SZ and SPD children, $p > .10$, while both psychiatric groups had higher rates than normal controls, $F(1, 33) = 63.11, p < .0001$; $F(1, 32) = 37.16, p < .001$. Finally, similar rates of externalizing problems were found for both depressed and SZ and SPD children, $p > .10$, with both psychiatric groups showing higher rates than the normal children, $F(1, 32) = 61.39, p < .0001$; $F(1, 32) = 90.20, p < .00001$.

Table II. Group Means for Child Competence Variables by Parental Affective Behavior^a

	Affective behavior	
	Benign (<i>n</i> = 13)	Negative (<i>n</i> = 36)
Social competence ^b	51.54 (16.44)	38.42 (12.98)
Academic performance ^c	4.15 (.99)	3.42 (1.25)
Internalizing problems ^b	56.38 (15.73)	67.94 (12.99)
Externalizing problems ^b	54.00 (13.90)	67.22 (11.65)

^a Standard deviations are in parentheses

^b Group differences at $p < .01$.

^c Group differences at $p < .07$.

Associations Between Child Competence and Family Interaction Style

MANOVA showed no significant effect of children's CS profile on the child competence variables, $p > .10$. However, a multivariate effect was reported for parental AS, $F(4, 44) = 2.73$, $p < .05$, as shown in Table II. Higher social competence ratings were given to children in benign AS homes relative to those in negative AS homes, $F(1, 47) = 8.45$, $p < .01$. Children from low-AS homes had lower ratings of internalizing and externalizing behavioral problems than those from high-AS homes, $F(1, 47) = 6.76$, $p < .01$; $F(1, 47) = 11.10$, $p < .01$. Children of low-AS parents tended to receive higher APR ratings than those of high-AS parents, $F(1, 47) = 3.67$, $p = .06$.

DISCUSSION

Current data indicate significant social impairment among clinically depressed children. Indeed, social competence scales for depressed children in this sample were not only notably lower than those of the normal control group, but reflected levels of impairment comparable to children with schizophrenia spectrum disorders (SZ and SPD). Symptomatology associated with childhood depressive episodes, including anhedonia, social withdrawal, and irritability, may be an important contributory factor to dysfunctional interpersonal relations.

Present findings of similar levels of social impairment among depressed children and SZ and SPD children differ from prior data regarding *premorbid* adjustment in a somewhat overlapping sample, in which Asarnow and Ben-Meir (1988) found better peer relations for children with depressive disorders, compared to those with SZ and SPD. In conjunction, these data suggest that depressive episodes are associated with deterioration in social functioning over time. The comparable ratings of social competence and behavioral problems received by depressed children and children with SZ and SPD disorders reflect the degree of impairment in this inpatient sample. Present findings suggest that severity of disorder, rather than the specific diagnosis *per se* is a more potent determinant of children's social and behavioral adaptation.

The relatively good academic performance of depressed children in our sample is congruent with previous findings of fairly normative intellectual functioning of depressed children (Kashani *et al.*, 1983; McGee *et al.*, 1986). Present data indicate that depression may exert a stronger impact on children's social adaptation than on their academic performance, similar to reports by Puig-Antich and colleagues (1985a) of post-episode adjustment. The more insidious onset and distorted thought processes among SZ and SPD children in comparison to depressed children may have contributed to greater impairment in scholastic functioning.

Results suggest a link across diagnostic groups between negative parental behavior towards the child and poor child adjustment. Children of affectively aversive parents were rated as having lower social competence and more behavior problems than were children of benign parents. Data are congruent with previous work suggesting that negative parental affect is related to poor behavioral functioning in children at risk (Hammen *et al.*, 1987). Children whose parents interact with them in a positive manner may acquire better social and behavioral competence, either by observing more adaptive parental interpersonal styles or by being reinforced through more rewarding parent-child interactions. Alternately, negative interaction patterns may emerge in response to impaired functioning in the child. Failure to find a relationship between children's social competency ratings and their interactive behavior with parents may be due in part to the CBCL's focus on peer and sibling social relationships.

Current results should be interpreted considering several limitations. First, the sample size is small due to its specialized nature. Second, measures of social and behavioral competence were obtained by parental report, and as such, may reflect parental bias. Finally, results from an inpatient sample may not generalize to outpatient or community samples.

In conclusion, current findings add to the literature indicating significant social and behavioral impairment for depressed children. Present results also underscore the notable dysfunction of children with schizophrenia spectrum disorders. By including both a psychiatrically impaired and a normal control group, the present study suggests that depressed children evidence interpersonal and behavioral characteristics that are both diagnostically specific as well as more generally tied to severe psychiatric impairment.

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