Assessing Psychopathology in Children of Psychiatrically Disturbed Parents

A Pilot Study

Helen Orvaschel, Ph.D., Myrna M. Weissman, Ph.D., Nancy Padian, M.S., and Thomas L. Lowe, M.D.

Abstract. The diagnostic status of 28 children of psychiatrically disturbed parents was evaluated using structured diagnostic interviewing procedures. We examined the relationship between children's interviews and mothers' interviews about their children, in order to determine the level of diagnostic agreement. The results of this comparison indicated a moderate level of diagnostic agreement between mothers and children on children's psychiatric disorders. A 43% prevalence of psychiatric disorders in this high-risk sample was also found. The need for obtaining and combining information from mother and child informants for optimal diagnostic assessment is stressed. The implications of these findings are discussed.

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There has been considerable interest in the offspring of parents with psychiatric disorders, particularly for the purposes of identifying risk factors and behavioral precursors to psychopathology (Anthony and Koupernik, 1974). A review of the literature on affective disorders suggests that the children of depressed parents are particularly at risk for emotional problems in childhood as well as adulthood (Orvaschel et al., 1980). Only recently, however, has direct evidence regarding the nature and extent of this increased risk been forthcoming from prospective studies of the children of

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Dr. Orvaschel is Assistant Professor, Department of Psychiatry; Dr. Weissman is Associate Professor of Psychiatry and Epidemiology and Director, Depression Research Unit, Connecticut Mental Health Center; Ms. Padian is Associate in Research, Department of Psychiatry; and Dr. Lowe is Assistant Professor, Department of Pediatrics and Psychiatry, all at the Yale University School of Medicine.

Reprints may be requested from Dr. Orvaschel, Depression Research Unit, 904 Howard Avenue, Suite 2A, New Haven, CT 06510.

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parents with affective disorders (McKnew et al., 1979; Weintraub et al., 1975; Weissman et al., 1972; Welner et al., 1977).

Research on the children of depressed parents has been hampered in the past by diagnostic controversy and methodological insufficiency. The diagnostic issues have revolved around disagreements about the existence of a depressive disorder in children (particularly prepubescent children) and the nature of the expression of this disorder (masked depression vs. classic depressive symptomatology). Methodologically, the field of child psychiatry has lacked standardized research assessment instruments suitable for the systematic evaluation of depression and other forms of behavior pathology in children.

Diagnostic issues concerning childhood depression have been addressed in several papers (Brumback et al., 1977; Kovacs and Beck, 1977; Poznanski and Zrull, 1970). Recent research has demonstrated that a diagnosis of depression in children can be established using unmodified adult criteria (e.g., DSM-III, Research Diagnostic Criteria) and that depressed children are similar to depressed adults in symptom pattern, pharmacological response, and biochemical indicators (Cytryn et al., 1979; Kovacs et al., 1977; Puig-Antich et al., 1978). In addition, the concept of masked depression has been abandoned by its principal proponent as unnecessary and diagnostically confounded (Cytryn, 1979; Cytryn et al., 1979). Therefore, most investigators are now able to agree upon some standardized criteria to diagnose depression in children. Improved techniques for ascertaining diagnostic information have also been developed and have made systematic evaluations of psychopathological behavior in children more compatible with the rigorous standards necessary for research purposes (Herjanic and Campbell, 1976; Herjanic et al., 1975; Orvaschel et al., 1979).

This paper reports the results of a pilot study of the children of psychiatrically disturbed parents. Specifically, we investigated the presence of depression and other psychiatric disorders in these high-risk children, using standardized diagnostic interviews with parents and children. This research was initiated as a prelude to a comparative study of the children of parents with major depressive disorders and the children of normal control parents, in order to assess the feasibility of such an investigation. Our presentation will focus on methodological issues raised by such a study, such as the use of structured interview techniques and the comparison of diagnostic assessments of children based on children's reports and mothers' reports about their children.

METHODS

Subjects

The subjects included 28 children between the ages of 6 and 17 years, with a mean age of 11 years. Table 1 shows the age and sex of the children. The parents of these children had at one time been subjects in a family-genetic study of affective disorders, but had been rejected for diagnostic reasons.

In order to be accepted as a proband in the family-genetic study an individual was required either to meet criteria for a *primary major depressive disorder* (major depression group), or to have no history of a psychiatric disorder (normal control group). Probands were rejected from the major depression group if: (1) they did not meet Research Diagnostic Criteria (RDC) for a diagnosis of major depressive disorder; (2) they received a diagnosis of schizophrenia, schizo-affective, manic, or hypomanic disorder; or (3) they met criteria for a nondepressive psychiatric disorder prior to the onset of their first depressive episode (e.g., alcoholism, antisocial personality, drug abuse). Probands were rejected from the normal control group if they met RDC for any psychiatric disorder.

The children of rejected probands were selected for study because they comprised a convenient group of subjects who most closely paralleled the subjects of future interest to us—namely, those children of accepted probands who meet strict diagnostic criteria—in a family-genetic study of affective disorders. The 28 children in the study were from 12 families. In 6 of the families the father had been the original proband and in the other 6 families the mother had been the original proband.

Table 2 shows the diagnostic status of the proband parent by the

Table 1

Age and Sex of Sample

	Age				
	6–11	12–17	Total	Mean Age	Age Range
Male	7	11	18	10.8	6–16
Female	5	5	10	11.6	6–17
Total	12	16	28	11.1	

NOTE: The 28 children in the study represented 12 families. In 6 of the families the father was the proband and in 6 families the mother was the proband. Three of the fathers and one of the mothers were originally in the normal control group. Three children were not directly interviewed.

sex of the proband, as well as the number of children in the sample from each family. As is evident from the table, all of the parent probands had current or past psychiatric disorders. Depression and alcoholism were frequent disorders among these individuals, and multiple diagnoses were quite common.

Psychiatric Assessments

The psychiatric status of the child was assessed using both interview and self-report techniques. Information about the results of the self-report measures is reported elsewhere (Weissman et al., 1980).

Diagnostic interview. A structured psychiatric interview was administered to each child and to the mother of each child; the mothers' interviews were about their children. The interview used was the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS) developed by Puig-Antich and Chambers (1978). This interview was originally designed to assess symptoms of psychiatric disorders during current episodes of illness. For the purposes of this study, the K-SADS was modified so that it could ascertain symptoms of current and past psychopathology. The information collected was then used to classify the child

Table 2

Description of Children's Parents

Parent Proband	Diagnosis of Parent Proband	Number of Children in Study
Father		
(N = 6)	General anxiety disorder	2
	Major depression, Antisocial personality	4
	Alcoholism	2
	Depression secondary to medical illness	3
	Intermittent hyperthymia	3
	Depression, Alcoholism	4
Mother		
(N = 6)	Major depression, Panic, Phobia, Drug abuse	3
	Depression, Alcoholism, Intermittent cyclothymia	1
	Depression, Alcoholism, Cyclothymia, Panic, Phobia, Drug abuse	1
	Minor untreated depression	1
	Hypomania	2
	Major depression, Drug abuse, Antisocial personality	2
Total 12		28

diagnostically, using unmodified RDC or DSM-III criteria for disorders not included in the RDC (APA, 1980; Spitzer et al., 1978).

For this study, three diagnostic evaluations were made: one on the basis of information provided by children about themselves; one on the basis of data obtained from mothers' interviews about their children; and one on the basis of combined information from all sources, representing a best estimate summary diagnosis. All psychiatric assessments of the child were made by an interviewer who was blind to the specific psychiatric status of the child's parent.

Additional diagnostic information. A detailed history of psychiatric treatment was obtained as part of the interview assessment. For children who had previously been in treatment or were currently in treatment, medical records were obtained from the treatment facility and this information was used to augment or confirm diagnostic decisions determined on the basis of the interview assessment.

Results

Interviews with both mother and child were obtained for 25 of the 28 children in the study. For the remaining 3 children, information was obtained only from mothers. We were unable to interview these 3 children for the following reasons: (1) A 9-year-old boy was autistic, and although he was seen and assessed in an unstructured manner, no structured interview was possible. Treatment records were obtained for him in addition to his mother's interview. (2) A 16-year-old female was not living with her mother at the time of the study because her parents were separated and she was living with her father. (3) A 16-year-old boy refused to be interviewed. Treatment records were obtained for him in addition to his mother's interview.

Diagnostic Assessments of Children: Mother's and Children's Reports

Mother and child were questioned independently about the child so that we could compare the information obtained from each informant. The results of this comparison are presented in table 3. Obviously, only those children are included for whom both mother and child interviews were available, so that cases 2, 14, and 21 are omitted from the table. Of the 25 children who met this criterion, 10 children (40%) were diagnosed to have a disorder of some kind

on the basis of either the child's interview, the mother's interview, or both. The remaining 15 children were rated on the basis of both interviews to have no mental disorder. The ages in the table reflect each child's age at the time of the interview. The diagnostic categories listed were applicable either at the time the interviews were conducted or at any time in the child's life prior to the interview. For example, child 19 received a diagnosis of major depression and separation anxiety for past episodes and a diagnosis of minor depression for a current episode on the basis of the mother's interview. No specific mention is made in this table of current or past disorder, since this was always consistent across informants if the diagnoses were in agreement.

Table 3

Diagnoses of Children Based on Mother's and Children's Interviews

Case	Age of Child	Sex of Child	Diagnosis from Mother about Child	Diagnosis from Child
1	16	Male	No mental disorder	No mental disorder
3	14	Male	Major depression	Separation anxiety
4	14	Male	Attention deficit disorder Conduct disorder	Attention deficit disorder Conduct disorder
5	14	Male	Attention deficit disorder Conduct disorder	Attention deficit disorder Conduct disorder
6	13	Male	No mental disorder	No mental disorder
7	13	Male	No mental disorder	No mental disorder
8	12	Male	No mental disorder	No mental disorder
9	12	Male	Attention deficit disorder	No mental disorder
10	12	Male	No mental disorder	No mental disorder
11	12	Male	No mental disorder	No mental disorder
12	11	Male	No mental disorder	No mental disorder
13	11	Male	No mental disorder	Hyperthymia
15	7	Male	Separation anxiety	No mental disorder
16	7	Male	No mental disorder	No mental disorder
17	6	Male	No mental disorder	No mental disorder
18	6	Male	Separation anxiety	Separation anxiety Phobia
19	17	Female	Major depression Separation anxiety Minor depression	Major depression Separation anxiety
20	17	Female	No mental disorder	Cyclothymia
22	15	Female	No mental disorder	No mental disorder
23	12	Female	No mental disorder	No mental disorder
24	10	Female	Minor depression	No mental disorder
25	9	Female	No mental disorder	No mental disorder
26	9	Female	No mental disorder	No mental disorder
27	6	Female	No mental disorder	No mental disorder
28	6	Female	No mental disorder	No mental disorder

Agreement between Mother and Child about Child's Diagnosis

As table 3 suggests, diagnostic agreement between mother and child was quite variable. Cell sizes are too small to yield discernible patterns related to diagnostic categories, age and sex of child, or to present Kappa scores. A diagnosis of conduct disorder was obtained on the basis of both mother and child interviews in the 2 cases in which it occurred. Mood swings (cyclothymia and hyperthymia), however, were only diagnosable on the basis of the children's interviews. In general, an accurate diagnostic assessment of the child could be obtained only by interviewing both mother and child and compiling this information into a final judgment of the child's psychiatric status.

Diagnostic Status of the Children Based on All Sources of Information

Each child's protocol was reevaluated so that information from the mother and/or child and any available treatment records were reviewed and a summary assessment of the child's psychiatric status was determined. When diagnostic discrepancies occurred between mother and child interviews, they were resolved by the interviewer in a best estimate judgment as to who provided the most accurate report about a particular item or set of items. Table 4 lists the diagnoses of all 28 children and represents the best estimate diagnoses based on data from all available sources. For example, the summary diagnosis for child 3 reflects the combined diagnoses of both the mother and the child, while the summary diagnosis for child 13 reflects the diagnosis based on the child's interview. For children 2, 14, and 21 the summary diagnoses reflect information derived from mothers' interviews (no children's interviews were available) and treatment records.

Of the 28 children in the sample, 12 (43%) received a psychiatric diagnosis when all sources of information were used. The remaining 16 children were evaluated as having no mental disorder on the basis of RDC or DSM-III criteria. Psychiatric disorder occurred in 3 of the 10 girls (30%) and 9 of the 18 boys (50%). The diagnoses were quite variable and ranged from fairly non-impairing mood swings to severely debilitating disorders such as autism. In general, the boys' disorders tended to be more severe and to result in greater impairment socially and academically than the girls'. Of the 12 children with psychiatric disorders, 7 (6 boys, 1 girl) had received psychiatric treatment at some time. The 5 untreated cases included the 2 children with diagnoses of mood swings (children 13 and 20), the child with a diagnosis of minor

depression (child 21), and the 2 children with diagnoses of separation anxiety only (children 15 and 18). None of the 16 children who were rated as having no mental disorder had a history of psychiatric treatment.

No systematic attempt was made to compare the children's diagnoses to the diagnoses of their proband parents because of the small cell sizes involved. We did note, however, that the girl with a diagnosis of cyclothymia (child 20) had a father with a diagnosis of intermittent hyperthymia, and the boy with a diagnosis of hyperthymia (child 13) had a mother with a diagnosis of hypomania. The information about the parents' diagnoses was, of course, unavailable to the interviewer prior to the completion of the children's assessments.

Table 4

Summary Diagnoses of Children

Case	Age of Child	Sex of Child	Diagnosis	Episode
1	16	Male	No mental disorder	—
2	16	Male	Attention deficit disorder	Past
3	14	Male	Major depression	Past
			Separation anxiety	Past
4	14	Male	Attention deficit disorder	Past
			Conduct disorder	Current
5	14	Male	Attention deficit disorder	Past
			Conduct disorder	Current
6	13	Male	No mental disorder	—
7	13	Male	No mental disorder	—
8	12	Male	No mental disorder	—
9	12	Male	Attention deficit disorder	Past
10	12	Male	No mental disorder	—
11	12	Male	No mental disorder	—
12	11	Male	No mental disorder	—
13	11	Male	Hyperthymia	—
14	9	Male	Autism	—
15	7	Male	Separation anxiety	Current
16	7	Male	No mental disorder	—
17	6	Male	No mental disorder	—
18	6	Male	Separation anxiety	Current
19	17	Female	Major depression	Past
			Separation anxiety	Past
20	17	Female	Cyclothymia	—
21	16	Female	Minor depression	Current
22	15	Female	No mental disorder	—
23	12	Female	No mental disorder	—
24	10	Female	No mental disorder	—
25	9	Female	No mental disorder	—
26	9	Female	No mental disorder	—
27	6	Female	No mental disorder	—
28	6	Female	No mental disorder	—

Discussion

This study examined the feasibility of assessing the diagnostic status of children between the ages of 6 and 17 years, using standardized diagnostic criteria, structured interviewing procedures, and survey methods. Our children were not part of a clinic population and were not seeking treatment; they were selected, instead, as a group at risk for psychiatric disorder because of the psychiatric status of their parents. This pilot study addressed two questions: (1) Can the methodology selected be applied to a non-clinic population of this type and how might it best be implemented? (2) Are the children of psychiatrically ill parents more likely to manifest emotional or behavioral problems than might be expected from the general population?

The parents and children were cooperative (refusal rates were low) and they were willing to respond to a structured and somewhat time-consuming protocol. Mothers were generally more capable than children of providing information on factual or time-related material such as treatment history and duration of episodes. Children were most essential in providing information about their own internal states such as mood swings, fears, and guilt feelings. Both parents and children were able to report on children's past psychopathology, as well as on their present status.

The ability of the investigator to assess past pathology is especially important in high-risk research. Many of the disorders of interest are episodic and may not be present at the time of the evaluation. Therefore, accurate rates of the children's disorders can be obtained only when past and current psychopathology are taken into account.

Comparisons between the mother's interview and the child's interview indicated moderate levels of diagnostic agreement. In addition, as has been stated above, the mother and child have different strengths and weaknesses in relation to the areas of information each can most reliably be expected to provide. This suggests the necessity of obtaining information from both informants and using the combined data to make a diagnosis. In subsequent studies, we would recommend modifying interview procedures to take optimal advantage of the two informants. We suggest that the mother be interviewed first, followed by the child. Discrepancies between reports could then be resolved on site and a summary rating could be obtained for each symptom as well as for the overall diagnosis. Finally, the use of standardized diagnostic criteria and structured interviews has greatly improved the reliability of diagnostic data in

adult psychiatric research (Endicott and Spitzer, 1978; Spitzer et al., 1978). It is hoped that the demonstrated feasibility of these methods for use with children will lead to their more frequent application in child psychiatric research.

With regard to the psychiatric status of the children, the prevalence of psychiatric disorders in this sample was 43%. Although no comparison data on a group of children of normal control parents were obtained, this rate is quite high, even if one counts as cases only the 25% of the sample that received treatment. No significant relationship was noted between the type of disorder in the child and the type of disorder in the proband parent. Also, there were no differences in rates of disorder in the child as a function of the sex of the proband parent.

The findings in this pilot study suggest that the children of psychiatrically ill parents do in fact evidence a high rate of psychiatric disorders, and that these disorders express themselves in a variety of diagnostic syndromes. These findings are in agreement with several other studies which found high rates of psychopathology in the children of affective disorder and other psychiatric disorder parents (Cytryn et al., 1980; El-Gaebaly et al., 1978; Gamer et al., 1977; Rolf and Garmezy, 1974; Weintraub et al., 1975).

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