

# Physicians' Recognition of Psychiatric Disorders in Children and Adolescents

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• We examined the ability of physicians to recognize psychiatric and behavioral problems in the children and adolescents under their care. The report by 35 physicians of psychopathology in their patients was compared with the reports of parents and of children which were derived from direct and independent assessments of the children and of parents about their children. Physicians' reports of psychological problems were also compared with reports by a child psychiatrist who used all available data on the children and made a best estimate diagnosis. Agreement between the physicians and any of the three other sources of information—parents, children, or child psychiatrist—was poor, with  $\kappa$  ranging from  $-.15$  to  $.11$ . Physicians tended to underreport both minor and serious psychiatric problems in children. These results are discussed in the context of the recent American Medical Association initiative to improve the health of children and adolescents. (AJDC 1988;142:736-739)

Children with psychiatric disorders are doubly disadvantaged. They suffer not only from psychic difficulties but they must also depend on others to recognize their distress and to seek appropriate treatment for them. Unfortunately, children with psychiatric illness often have parents with similar disorders<sup>1</sup> who may be less effective in their parenting roles when ill.

The prevalence of psychiatric disorders in children is not trivial. According to the Congressional Office of Technology Assessment, one of eight children in the United States suffers from a

mental health problem severe enough to require treatment. Yet of these 2.5 million children, 70% to 80% are not getting appropriate mental health services (*New York Times*, Jan 27, 1987, p C6).

Physicians can play an important role in early diagnosis of psychiatric problems. They see many children who might benefit from psychiatric services and they are one of the main conduits for child psychiatric referrals.<sup>2</sup> Recognition of psychiatric problems is the essential first step in diagnosis and treatment.

This study examined physicians' reports of psychiatric disorders in children under their care. Their detection of psychopathology in their patients is compared with reports of parents about their children and children about themselves derived from direct, structured, and independent interviews of parents and children.

## PATIENT AND METHODS

Children between the ages of 6 and 17 years ( $n=138$ ) were drawn from a family study of 220 males and females between the ages of 6 and 23 years from families with either depressed or nonpsychiatrically ill parents of comparable sociodemographic background. Details of study design are presented elsewhere.<sup>3-6</sup> Parents of 120 (87%) of the 138 children agreed to have their children's physician, usually a pediatrician, contacted for this study. The other 18 children (13%) were excluded because of parents' refusal.

Direct interviews were obtained from 93% of the eligible children and from a parent from 100% of the children ( $n=120$ ). In all but six cases the parent interviewed was the biological mother. Interviewers were MD, PhD, or masters'-level mental health professionals with a minimum of four years' experience in child assessment or treatment. The interviewer of the child and of the mother about the child was "blind" to the diagnostic status of the child's parents. Similarly, the interviewer of the parent was blind to the diagnostic status of the child and of any previous psychiatric data on the parents. The interviewers re-

ceived approximately 30 hours of training in research assessments during which the diagnostic reliability of the interviewer was achieved using videotaped practice interviews.<sup>6</sup> During the course of study, the field supervisor provided additional monitoring of the interviewers' interrater reliability by observing direct interviews.

The psychiatric diagnostic assessment of the children was made using the Schedule for Affective Disorders and Schizophrenia for School-Aged Children, Epidemiologic version,<sup>7</sup> which is a widely used research instrument for obtaining lifetime diagnoses in children<sup>8,9</sup> and which generates *Diagnostic and Statistical Manual of Mental Disorders*, ed 3 (*DSM-III*)<sup>10</sup> (the official American Psychiatric Association classification), diagnoses for most of the major Axis I disorders.

Mothers were asked to provide detailed information in a structured format about prenatal, birth, and postnatal events as well as their's and the child's medical and medication histories. Mothers were also questioned about the child's developmental history, using an interview developed and tested in several studies.<sup>11,12</sup>

A best estimate diagnosis of psychiatric and behavioral problems in the children, based on *DSM-III* criteria, was made by a child psychiatrist who was blind to the clinical status of the parent and not involved in the original data collection. Included in the diagnostic process was a review of all of the information that could be obtained about the child from the parent's and child's interview. *Physician* in this article refers to the child's physician and not the child psychiatrist who made the best estimate diagnosis.

The children's physicians were requested to complete a self-administered questionnaire about the children. The physicians received a release of information signed by the parent and were asked to complete the questionnaire as part of an intensive study "that will provide important information on factors that may place some children at risk for developing depression and other disorders." The five-page physician questionnaire consisted of the following: a systems-oriented general medical review; surgical and trauma history; history of hospitalizations; questions about physical stigmata and development; neuropsychiatric history with specific questions about

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speech development, learning disability, attention disorder, eating disorder, mood or anxiety disorder, and other neuropsychiatric disorders; history of psychotherapy and rehabilitation for physical or neuropsychological impairment; list of medications for emotional or behavioral problems; and an unstructured final page for the physician's comments or descriptions. The same questions were asked of the parents about their children.

The physicians' questionnaires were abstracted by one of us (G.C.), who was blind to the diagnosis of children and parents, for any suggestion of potential psychological problems in children. When patient charts were sent instead of the questionnaires, the charts were abstracted by one of us (G.C.) as well.

κ Statistics were calculated to measure concordance between the physicians and their patients and the pediatricians and parents on psychopathology in the children. κ Has a range of values from -1 to +1. When the observed agreement is perfect, κ will be +1. When the observed agreement equals the chance expected agreement, κ will be zero. When the agreement is less than chance expected agreement, κ will be negative.<sup>13</sup>

## RESULTS

Of the 120 children, 85 (71%) had either a completed physician questionnaire (76 cases) or chart (nine cases) returned. Thirty-five physicians responded. The 85 children ranged in age between 6 and 17 years. There were 40 males and 45 females. Thirty-nine children had depressed parents and 45 children were the offspring of normal control subjects. Direct interviews were obtained from 94% of the 85 children and from 100% of their parents. Compared with those children whose physicians did not respond, the children with physician responses did not differ on  $\chi^2$  analysis in the following variables: parents' marital status, parents' number of marriages, parents' education, parents' social class, parents' diagnostic group, or child's religion. Twenty children are from classes I and II, Hollingshead Scale; 22 are from class III; and 42 are from classes IV and V.

Thirty-one (36%) of the 85 questionnaires and charts received from the physician were positive for some evidence of potential psychological problems in children. Such problems included notations about academic or developmental difficulties, social prob-

Physician's Report of Any Psychological Problem in Child	Any DSM-III* Disorder in Child by Informant		κ	Sensitivity	Specificity
	Present	Absent			
Parent's report					
Present	16	15	.11	.43	.69
Absent	21	33	...	...	...
Child's report					
Present	14	15	-.15	.29	.55
Absent	33	18	...	...	...
Child psychiatrist's best estimate					
Present	23	8	.05	.38	.68
Absent	37	17	...	...	...

\*DSM-III indicates *Diagnostic and Statistical Manual of Mental Disorders*, ed 3.

Child Psychiatrist's Best Estimate of DSM-III* Diagnosis in Child	Physician's Observations of Any Psychological Problem in Child		κ
	Present	Absent	
Depression			
Present	7	13	.02
Absent	24	41	...
Attention deficit disorder			
Present	2	1	.06
Absent	29	53	...
Conduct disorder			
Present	7	4	.02
Absent	24	50	...
Anxiety			
Present	13	18	.09
Absent	18	36	...
Substance use			
Present	5	2	.02
Absent	26	52	...
Alcohol use			
Present	3	1	.10
Absent	28	53	...

\*DSM-III indicates *Diagnostic and Statistical Manual of Mental Disorders*, ed 3.

lems, weight disturbances, and somatic complaints with negative organic workups. None of the physicians used DSM-III diagnoses.

Compared with the 54 children without psychological problems by physician report, the 31 children with positive physicians' reports did not differ significantly on the following variables: children's age (14.09 ± 3.85 years vs 13.94 ± 4.02 years); parents' marital status and number of marriages; or parents' age, education, socioeconomic status, and diagnostic group.

Table 1 compares the physician's

report of any psychiatric or behavioral problem in the child, with any DSM-III diagnosis derived from the three other sources—the parent's interview about the child, child's interview, and the child psychiatrist's best estimate based on all available data. The κ values for Table 1 range from -.15 to .11, suggesting that the strength of agreement between physicians and any of the three other sources of information about the children was poor.

Sensitivity and specificity of the physicians' observations as compared with the DSM-III diagnoses derived from the three sources were also cal-

culated for Table 1. Sensitivity ranged from .30 (physician's vs child's report), to .43 (physician's vs mother's report). Specificity ranged from .55 (physician's vs child's report) to .68 (physician's vs mother's report). Table 1 shows that physicians' observations of psychological problems have least agreement with the child's report, somewhat more agreement with the child psychiatrist's best estimate of abnormality, and most agreement with the mother's reports.

Table 2 compares the child psychiatrist's best estimates of specific psychiatric disorders in the child with the physicians' observations of any psychological problem in the child. Using depression as an example, the child psychiatrist diagnosed 20 cases of depression. Of these 20, seven were observed to have psychological problems by the physician. Of the 20, 13 were not observed to have psychological problems by the physician. The physician observed 31 children with psychological problems. Of these 31, seven were diagnosed to have depression by the child psychiatrist. The remaining 24 children did not have a psychiatric diagnosis assigned to them by the child psychiatrist. The child psychiatrist and physician "agreed" on seven of the 20 cases of depression diagnosed by the child psychiatrist.  $\kappa$  Values were calculated for each specific psychiatric disorder in the child, except for mania since only one case was diagnosed.  $\kappa$  Values range from .02 for depression to .10 for alcohol use. The strength of agreement was slight overall. Physicians did not recognize any one psychiatric disorder significantly better than another.

In all, physicians tended to under-report psychiatric problems in the children. They did not report psychological problems in 29 children (34%) for whom at least one *DSM-III* diagnosis was derived from either the parent or child interview that identified serious and minor psychiatric disorders. In 12 cases, no *DSM-III* diagnosis was derived from the parent's interview, but the child's interview yielded at least one, and as many as five, distinct psychiatric disorders per child. In two cases, the child interview did not yield *DSM-III* diagnoses, but the parents' interviews were positive

for at least two disorders. Finally, in 15 cases, parent and child interviews resulted in *DSM-III* diagnoses for each child, but the physician did not report any psychological problem at all.

Physicians did report psychological problems in 31 children (36%). Seven children were identified by their physicians to have developmental or academic problems. Of these seven, four did not have any *DSM-III* diagnosis by either parent or child report. Physicians reported the cases of 11 children with social or psychological problems. Of these 11, four did not have any *DSM-III* diagnosis by either parent or child report. In the other seven cases, the physicians' findings were supported by child and parent interview results.

Physicians reported weight problems in seven children with no other psychological disorder. Five of seven parent interviews resulted in no psychiatric diagnosis for these children, but five of seven child interviews resulted in *DSM-III* diagnoses.

Six children were reported by physicians to have somatic complaints without organic causes. For each of these six children, either the parent or child interview resulted in at least one *DSM-III* diagnosis, and in one child both parent and child interviews yielded one diagnosis each.

## COMMENT

The major finding is the low recognition of serious and minor psychiatric disorders by pediatricians in their child and adolescent patients. These findings are surprising since the pediatricians were interested and cooperative in participating. Thirty-five (71%) of the 49 pediatricians responded to the request for information about the children under their care. These findings suggest that additional training in the detection of psychiatric problems for nonpsychiatric physicians is necessary.<sup>14</sup>

Our findings that physicians do not detect different patterns of psychopathology in children based on age or socioeconomic status contrast with other reports.<sup>15,16</sup> Goldberg et al<sup>15</sup> and Starfield et al<sup>16</sup> found that the prevalence of emotional, behavioral, or academic problems as reported by pedia-

tricians was higher in children from poorer families.

This study supports the suggestion of Costello and Edelbrock<sup>2</sup> that physicians are more sensitive to parents' reports than to those of children. The sensitivity and specificity of the physician's vs parent's report (.43 and .68) were greater than those for physician vs child (.30 and .55). Although the strength of agreement between physician and parent is not impressively greater than between physician and child, the possible tendency for physicians to rely on parent reports of the child's psychiatric problems is a cause for concern in light of numerous studies showing poor agreement between mothers and children on the degree and nature of the child's psychiatric disorder.<sup>17</sup>

A limitation of this study may be that physicians were not directly interviewed about their diagnostic impressions of the patient and the data were derived from a questionnaire they completed. However, the nine charts that were submitted by the physician did not contain information about the children that resulted in better agreement. Perhaps the physicians might hesitate to record their impressions on a chart<sup>18</sup> so as to avoid future stigmatization of the child. Also, it is not possible to assess the impact a questionnaire from psychiatric researchers might have on how physicians might complete the form. It seems unlikely, however, that physicians would purposefully withhold psychological information under such circumstances, although we cannot be certain that direct confidential interviews with the physician might not have resulted in more information.

Obstacles to physicians' awareness include the frequently cited explanation of time constraints.<sup>19</sup> The mean duration of all visits to pediatricians is 11 minutes and the mean duration of visits when "psychotherapeutic" listening is provided is 26 minutes.<sup>20</sup> An examination that includes understanding a child's emotional problems cannot be adequately performed in a limited period of 30 or even 40 minutes.<sup>14</sup>

The difficulty in making a diagnosis is further exacerbated since patients, and particularly children, do not com-

plain to their physician about psychological symptoms and seek help for a coexisting physical illness or somatic manifestation of their psychiatric disturbance.<sup>21,22</sup> For example, an 8-year-old child was brought to the physician because of obesity. She was found to have condylomata accuminata. Genital warts in children indicate the possibility of sexual abuse.<sup>23</sup> Sexual abuse was "not discussed," but the child was referred to a dermatologist. Although there is no necessary correlation between such a problem and subsequent psychopathology, this child's interview yielded five definite *DSM-III* diagnoses: separation anxiety disorder at age 4 years, minor bereavement at age 12 years, overanxious disorder and major depression at age 17 years, and obsessive-compulsive disorder at age 19 years.

While some of the diagnoses made by direct interview of the children may have only minor consequences, there is an accumulating literature that suggests that there is a tendency for the disorders of childhood to persist over time and to be accompanied by other types of difficulties, such as poor

school performance or poor peer relationships.<sup>24,25</sup> For example, antisocial behavior is one disorder that has its roots firmly set in childhood with repeated and widespread antisocial behavior in early life often leading to persisting disorders of personality.<sup>26</sup>

The barriers to making a psychiatric diagnosis in children by their primary care physicians notwithstanding, some other form of psychological assessment is needed. Although the Schedule for Affective Disorders and Schizophrenia for School-Aged Children, Epidemiologic version, has been administered by highly trained personnel, it is possible to modify certain aspects of its administration and interpretation so that subprofessionals may be able to question children and parents effectively and efficiently. Moreover, this assessment can be administered by nonmedical mental health professionals such as nurses, social workers, or psychologists. A psychological assessment of children by the pediatrician or staff should be considered as necessary and reimbursable as any other diagnostic laboratory procedure.

New technologies and diagnosis of specific psychiatric disorders will provide tools for early case finding of at-risk populations, and among youth, psychological disorders and suicide are major problems.<sup>27</sup> The body of recent epidemiologic data suggests that there has been an increase in the rates of major depression and drug abuse in children and adolescents. In addition to the coalitions between the specialists called forth recently by the American Medical Association,<sup>27</sup> improved dialogue between physician and patient will be invaluable in identifying and reducing the psychic distress of children and adolescents.

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