

# Mental Disorders and Service Utilization Among Youths From Homeless and Low-Income Housed Families

JOHN C. BUCKNER, PH.D., AND ELLEN L. BASSUK, M.D.

## ABSTRACT

**Objective:** To assess the mental health of homeless and poor housed youths, using the National Institute of Mental Health (NIMH) Diagnostic Interview Schedule for Children (DISC) Version 2.3, and to examine mental health service use.

**Method:** As part of a comprehensive study of homeless and housed families in Worcester, MA, data were collected on 41 homeless and 53 poor housed (never homeless) youths aged 9 to 17 using both the parent and youth versions of the DISC.

**Results:** On the basis of the parent version of the DISC, current (6-month) prevalence rates of *DSM-III-R* disruptive behavior, affective, and anxiety disorders were comparable in homeless and housed youths but higher than rates found among youths in the NIMH-sponsored Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study, which used the same diagnostic measure. Approximately 32% of the combined sample of homeless and housed youths had a current mental disorder accompanied by impairment in functioning. Mental health service use in the preceding 6 months among youths who had one or more current disorders and associated impairment ranged from 20% to 35%. A subgroup of youths with one or more current disorders and poor global functioning had never received treatment.

**Conclusions:** This sample of homeless and housed youths was found to have high rates of current mental disorders. Use of mental health services by children with mental health needs was low, particularly for youths with poor overall functioning. *J. Am. Acad. Child Adolesc. Psychiatry*, 1997, 36(7):890–900. **Key Words:** homelessness, poverty, Diagnostic Interview Schedule for Children, prevalence of psychiatric disorders, mental health service use.

Children and adolescents represent a sizable percentage of our nation's poor. Approximately 20% of all children in this country live below the poverty line and, among the chronically poor, 48.1% are under the age of 18 (U.S. Bureau of the Census, 1995a). Children of color are overrepresented in this group: 42% of black, 39% of Hispanic, and only 15% of white children are poor (Lewit, 1993). Risks associated with poverty among youths include factors such as school dropout, teen

pregnancy, poor health status, hunger, and delinquency (Dryfoos, 1990; Huston, 1991; Knitzer and Aber, 1995).

The U.S. Department of Education (1995) recently estimated that 744,000 school-age children and adolescents are homeless in the course of a year. The experience of homelessness and residential instability, often coupled with stigmatization, typically stresses poor children. Studies have noted elevated emotional symptoms and behavior problems among homeless youths compared to normative data (Bassuk and Rosenberg, 1990; Masten et al., 1993; Rescorla et al., 1991; Zima et al., 1994). Yet to our knowledge, no prior study has assessed the mental health of children belonging to homeless families according to established diagnostic criteria.

We report descriptive findings on the prevalence of emotional and behavioral disorders as well as mental health service utilization among a sample of 94 poor children aged 9 to 17 years; 44% were homeless at the time of assessment. Since this study is limited to a small sample of youths from one location, our findings should be viewed as preliminary. Nonetheless, they represent a

Accepted January 30, 1997.

Drs. Buckner and Bassuk are with The Better Homes Fund, Newton, MA, and the Department of Psychiatry, Harvard Medical School, Boston.

This research was supported by grants from the NIMH (R01-MH47312 and R01-MH51479) and the Maternal and Child Health Bureau (MCJ250809). The authors acknowledge the following persons in the conduct of this research: Shari Bassuk, Margaret Brooks, Linda Cohan, M.S.W., Mardia Coleman, Ann Dalianis, M.A., Veronica Guerrero-Macia, M.A., Barbara Page, M.A., Nancy Popp, Ed.D., Laurie Ross, M.A., Robin Weatherill, Linda Weinreb, M.D., Constance Wood, M.S.W., and Dorothy Young.

Reprint requests to Dr. Buckner, The Better Homes Fund, 181 Wells Avenue, Newton, MA 02159.

0890-8567/97/3607-0890/\$0.300/0 © 1997 by the American Academy of Child and Adolescent Psychiatry.

starting point for better understanding the mental health needs and use of services among homeless and other youths belonging to poor families and highlight the importance of conducting more comprehensive studies in the future.

These findings were made possible by methodological progress in the diagnostic assessment of childhood emotional and behavioral disorders. At the forefront of these efforts is the collaborative work of investigators involved with the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study sponsored by the National Institute of Mental Health (NIMH) (Dulcan, 1996). The MECA study is the best descriptive epidemiological investigation to date on the prevalence of *DSM-III-R* mental disorders among youths in the United States. Interviews were conducted with 1,285 randomly selected families in New York, Connecticut, Georgia, and Puerto Rico. The MECA study has several key aims, including (1) testing the feasibility of surveying parents and youths on mental health issues in anticipation of a much larger-scale national study of child and adolescent mental disorders and service use and (2) examining the test-retest reliability and concurrent validity of the NIMH Diagnostic Interview Schedule for Children (DISC) Version 2.3 (Lahey et al., 1996; Schwab-Stone et al., 1996; Shaffer et al., 1996).

The DISC is a highly structured interview that can be administered by trained lay persons. It provides diagnostic information on mental disorders according to *DSM-III-R* criteria as well as limited information on service utilization. The DISC has two versions: one is administered directly to the youth and the other to a parent or other knowledgeable adult. Our use of the DISC-2.3 enables direct comparison with prevalence rates reported in the MECA study.

## METHOD

This investigation was embedded within a case-control study of 220 sheltered homeless families and a comparison group of 216 low-income housed (never homeless) families and their 627 dependent children in Worcester, MA. Data were collected between 1992 and 1995. The broader aims, sampling, and data collection procedures for the overall study have been previously described (see Bassuk et al., 1996b, 1997). In sum, we recruited currently homeless single mothers and their dependent children from all nine of Worcester's emergency shelters and transitional housing facilities. Low-income housed single mothers receiving Aid to Families With Dependent Children (AFDC) and their children were enrolled from the Department of Public Welfare Office to form a comparison group of poor but never homeless families.

Mothers from both the homeless and housed groups participated in a structured interview conducted over three to four sessions covering themselves as well as each of their children. We obtained detailed information from the mother about demographic characteristics, factors in the mothers' childhood and adulthood that might influence the risk for and consequences of homelessness, and service needs. Information about children's developmental history, health, stressful life events, and service use patterns was also gathered.

## Participants

To ensure a sufficient sample of homeless school-age children, we selected up to two children aged 6 and older from both homeless and housed families. As described more extensively by Buckner et al. (unpublished), a total of 80 homeless school-age children from 57 separate families and 148 housed school-age children belonging to 98 families were assessed on a broad range of psychosocial variables. Only youths aged 9 and older were eligible for diagnostic assessment, in keeping with the age range standards for the DISC (Shaffer et al., 1996). Thus, we assessed the mental health of 94 youths (from 74 separate families) with the parent version of the DISC and also obtained the youth's self-report for 86 of these individuals (91%).

## Assessment of Diagnostic Disorders

Similar to the MECA collaborators, we used both the youth and parent forms of the DISC-2.3 to assess a range of disorders including disruptive behavior disorders (attention-deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder), affective disorders (major depressive disorder, dysthymic disorder, and mania/hypomania), anxiety disorders (simple phobia, social phobia, agoraphobia, panic disorder, separation anxiety disorder, avoidant disorder, overanxious disorder, generalized anxiety disorder, and obsessive-compulsive disorder), and alcohol and other substance use disorders. Because of time constraints and low expected prevalence rates, Module B of the DISC, which asks diagnostic questions concerning eating, elimination, and tic disorders, was not administered. Unlike the MECA collaborators, who administered the DISC with the assistance of a computer, we followed a standard "paper-and-pencil" interview format. Because of the sizable number of Hispanic families in our sample (primarily Puerto Rican), the Spanish translation of the DISC, which was specifically developed for use with Hispanics of Puerto Rican descent (Bravo et al., 1993), was used for mothers and youths who did not speak English well. Our interviewers, a team of highly educated (college and master's-level graduates) women, received specialized instruction on administering the DISC by a trainer from Columbia University (one of the four institutions involved in the MECA study) as well as one of the authors (J.C.B.).

Data from both the parent and youth versions of the DISC were scored via computer using diagnostic algorithms programmed from the Statistical Analysis for Software (SAS) language (Columbia University, 1993).

## Assessment of Associated Impairment and Level of Functioning

The DISC-2.3 includes three to four questions within each diagnostic section regarding possible impairment associated with a particular disorder. Typically, these questions ask whether the symptoms of a disorder have caused problems with family members, with friends, or at school. A youth may meet criteria for a particular dis-

order yet not have any "diagnostic-specific impairment." If a youth meets *DSM-III-R* criteria for a disorder and endorses one or more of the impairment questions, the youth has met "criteria with diagnostic-specific (i.e., associated) impairment."

Unlike the MECA investigators, we did not use the Children's Global Assessment Scale (CGAS) (Shaffer et al., 1983) to measure level of functioning. Instead, adaptive functioning was more comprehensively assessed using the Vineland Screener (Sparrow et al., 1995), a 60-item shortened version of the Vineland Survey Form (Sparrow et al., 1984). Scores on the Screener can be transformed into corresponding scores on the Survey version; normative data on a representative national sample of children and youths exist for the latter. Both versions of the Vineland are administered in a semistructured interview to a person (in our study, the youth's mother) who knows about the child's competencies and behavioral deficits. For children 6 years and older, the Vineland assesses adaptive functioning in three areas: communication, daily living skills, and socialization. An Adaptive Behavior Composite (Vineland-ABC) score is computed by summing scores across these domains and represents a global measure of adaptive functioning. In standard score format, it has a mean of 100 and a standard deviation equal to 15. For each of the three domain scores and the composite score, the Vineland Screener has very good correspondence ( $r = .90$  and higher) with the more in-depth Vineland Survey Form (Sparrow et al., 1995).

#### **Validity of the DISC and Case Definitions**

In the MECA study, the parent version of the DISC was found to have greater criterion-related validity for most disorders in comparison with the youth version (Schwab-Stone et al., 1996); a clinician's ratings of the presence or absence of a disorder served as the criterion or "gold standard." There were two exceptions to this general finding: With both major depressive and dysthymic disorders, the youth version of the DISC evidenced greater validity as determined by higher concordance with symptom ratings and diagnoses made by clinicians (Schwab-Stone et al., 1996). In light of the MECA findings, we present results based predominantly on the parent version of the DISC.

Our prevalence rates were also determined using three distinct definitions for what constitutes a "case." Using the case definition termed "criteria only," we report the percentage of youths who met *DSM-III-R* criteria for a particular disorder on the DISC. The prevalence rate for the second definition of case status ("criteria + impairment") reflects the percentage of youths who met *DSM-III-R* criteria and who were reported to have had at least one index of impairment linked to the disorder. The third prevalence rate ("criteria + impairment + Vineland <85") reports the percentage of youths who met diagnostic criteria and had at least one impairment and scored lower than one standard deviation (less than 85) on the Vineland-ABC. (A score of less than 85 on the Vineland-ABC is indicative of significant global problems in adaptive behavior and functioning, placing a youth no higher than the 16th percentile relative to other children the same age.) We refer subsequently to youths defined as cases using this third definition as "seriously emotionally disturbed." The first two case definitions are identical with those used in the MECA study (cf., Shaffer et al., 1996). The third is slightly different because of our use of the Vineland instead of the CGAS as a global measure of functioning.

#### **Assessment of Mental Health-Related Service Use**

With questions from the DISC-2.3, mothers were asked near the end of each diagnostic section whether or not their child had ever

"seen a doctor, psychiatrist, psychologist, social worker, guidance counselor or any other professional like that because of [the signs or symptoms of the disorder in question]." Those answering affirmatively were then asked whether the child had seen a professional in the preceding 6 months. For children who had not seen a professional because of the disorder, the mother was asked whether she had ever thought the child should be seen because of the signs or symptoms of the mental health problem.

## **RESULTS**

#### **Characteristics of Youths**

Boys and girls were approximately equally represented among the 41 homeless and 53 housed youths, aged 9 and older for whom a parent version of the DISC had been administered. Overall, the average age was 11.8 years (11.4 years for homeless youths and 12.2 years for housed youths). Homeless children were less likely to be white compared with their housed counterparts (26.8% versus 37.7%) and were more commonly Puerto Rican Hispanic (48.8% versus 34.0%). Black youths were about equally represented in both groups (17.1% for homeless versus 18.9% for housed) as were youths of other race/ethnic backgrounds (7.3% for homeless and 9.4% for housed children).

These youths had experienced many stressful life events in the prior year, with higher rates found among the homeless children. Mothers reported that 39% of homeless youths and 17% of housed youths had witnessed some form of violence at home or in the community in the previous year. Residential instability was pronounced, especially for homeless youths, who had moved an average of 3.7 times in the preceding 12 months compared with 0.7 times for housed youths. During the previous year, 70% of the homeless and 32% of the housed children had changed schools. Mothers of homeless youths reported that 17% had been physically abused and 22% sexually abused at some point in the past. The corresponding rates were 15% and 6% for housed children. Twenty-four percent of the homeless youths and 4% of the housed had been placed in foster care.

#### **Characteristics of Mothers**

Mothers of homeless children were 33.7 years old on average compared with 36.4 years for mothers of housed children. Reflecting their status as single parents, about one third in each group had never married and close to 60% were either separated, divorced, or

widowed. Forty percent of housed mothers and 53.9% of homeless mothers had graduated from high school, and the average annual income of families in both groups was about \$12,000. All housed and most homeless mothers (76%) were receiving AFDC.

#### Current (Six-Month) Prevalence Rates of Mental Disorders

Table 1 provides three different prevalence rates reflecting our three separate "case definitions" for each disorder. In keeping with the MECA study's findings concerning the criterion validity of the DISC-2.3 (discussed in "Method" section), all disorders diagnosed with the parent version of the DISC are shown. In addition, for major depression and dysthymia, we also report the prevalence rates generated by the youth version of the DISC.

As shown in Table 1, 31.9% of the homeless and housed children in our study had one or more (i.e., "any") DISC disorders with associated impairment. About 12% of youths appeared seriously emotionally disturbed in that they met criteria for at least one disorder, had impairment associated with that condition, and had low scores on the Vineland-ABC. Looking across diagnostic groupings, disruptive behavior disorders were the most prevalent for both homeless and housed youths; for oppositional defiant disorder, 14% of children met criteria and had associated impairment. Anxiety disorders were also prominent, as were affective disorders. When impairment was added as a qualifier, specific anxiety disorders had comparable prevalence rates in the combined sample. No youths met criteria for substance abuse or dependence (of alcohol, marijuana, or any other drug) with either version of the DISC. Also, no youths received a diagnosis of a manic or hypomanic condition.

Table 2 shows the percentage of youths in each group and overall who received diagnoses for two or more co-occurring disorders, three or more disorders, and four or more disorders according to the three separate definitions of caseness. Sixteen percent of the overall sample had two or more co-occurring disorders with associated impairment. Overall, 7.4% who met criteria for two or more disorders had impairment specific to each disorder and were globally impaired as evidenced by a score of less than 85 on the Vineland-ABC. Homeless youths had higher prevalence rates of co-occurring disorders than housed youths, although these differences are modest.

#### Gender and Race/Ethnicity Comparisons: DISC Prevalence Rates

Table 3 presents "criteria + impairment" prevalence rates for boys and girls separately. Because substantial differences were noted between the two genders according to housing status, these figures are broken down further, between homeless and housed boys and homeless and housed girls. Overall, boys and girls had equivalent rates for any DISC disorder, although boys tended to have more disruptive behavior disorders and girls more anxiety disorders. Homeless boys had about double the rate of housed boys (and homeless girls) within each diagnostic category and for any DISC disorder. The reverse was the case for girls: housed girls had approximately twice the rate of disorder within each diagnostic category compared with homeless girls (and housed boys). The small sample size makes race/ethnic comparisons difficult. In general, prevalence rates for various disorders across the four groupings (whites, blacks, Puerto Rican Hispanics, other minority) were quite similar. These rates were also comparable when broken down further by housing status.

#### Mental Health-Related Service Use

Table 4 presents the number of youths falling within a particular DISC diagnostic category and the percentage of children who had been seen by a "doctor, psychiatrist, psychologist, social worker, guidance counselor or any other professional like that because of [the signs or symptoms of a particular disorder]." For example, of the 16 children in the combined sample who met the "criteria only" case definition for at least one of the disruptive behavior disorders, 5 (31.3%) had received some form of mental health "treatment" in the preceding 6 months; service use was roughly equivalent for homeless and housed youths. Only one additional mother reported that her child had *ever* been treated (total of 37.5%). Seven children met criteria for a disruptive behavior disorder and were globally impaired as well. Just one (14.3%) of these seven seriously emotionally disturbed children had received mental health treatment in the preceding 6 months (or ever).

Looking across the disruptive behavior, anxiety, and depressive disorders for all youths who met criteria with associated impairment, the percentages of those who had seen someone in the preceding 6 months were roughly comparable, ranging from 20% to 35%.

**TABLE 1**  
Current (Six-Month) Prevalence Rates of Mental Disorders Among Homeless and Low-Income Housed Youths

Diagnosis	Homeless (%) (n = 41)	Housed (%) (n = 53)	Total (%) (n = 94)
Disruptive behavior disorders (parent report)			
Attention-deficit hyperactivity disorder			
Criteria only	7.3	3.8	5.3
Criteria + impairment	7.3	3.8	5.3
Criteria + impairment + Vineland <85	2.4	1.9	2.1
Oppositional defiant disorder			
Criteria only	10.3	17.0	14.1
Criteria + impairment	10.3	17.0	14.1
Criteria + impairment + Vineland <85	5.1	7.6	6.5
Conduct disorder			
Criteria only	7.3	1.9	4.3
Criteria + impairment	7.3	1.9	4.3
Criteria + impairment + Vineland <85	2.4	1.9	2.1
Any disruptive behavior disorder			
Criteria only	17.1	17.0	17.0
Criteria + impairment	17.1	17.0	17.0
Criteria + impairment + Vineland <85	7.3	7.6	7.5
Anxiety disorders (parent report)			
Simple phobia			
Criteria only	30.8	30.8	30.8
Criteria + impairment	10.3	5.8	7.7
Criteria + impairment + Vineland <85	5.1	3.9	4.4
Social phobia			
Criteria only	16.7	7.9	11.8
Criteria + impairment	10.0	5.3	7.4
Criteria + impairment + Vineland <85	6.7	2.6	4.4
Agoraphobia			
Criteria only	5.1	5.9	5.6
Criteria + impairment	5.1	3.9	4.4
Criteria + impairment + Vineland <85	2.6	0.0	1.1
Panic disorder			
Criteria only	2.4	0.0	1.1
Criteria + impairment	2.4	0.0	1.1
Criteria + impairment + Vineland <85	0.0	0.0	0.0
Separation anxiety disorder			
Criteria only	9.8	7.7	8.6
Criteria + impairment	7.3	5.8	6.5
Criteria + impairment + Vineland <85	2.4	1.9	2.2
Avoidant disorder			
Criteria only	5.1	7.6	6.5
Criteria + impairment	2.6	1.9	2.2
Criteria + impairment + Vineland <85	2.6	0.0	1.1
Overanxious disorder			
Criteria only	9.8	7.7	8.6
Criteria + impairment	7.3	5.8	6.5
Criteria + impairment + Vineland <85	4.9	0.0	2.2
Generalized anxiety disorder			
Criteria only	4.9	1.9	3.2
Criteria + impairment	4.9	1.9	3.2
Criteria + impairment + Vineland <85	2.4	0.0	1.1
Obsessive-compulsive disorder			
Criteria only	2.4	1.9	2.1
Criteria + impairment	2.4	1.9	2.1
Criteria + impairment + Vineland <85	2.4	1.9	2.1
Any anxiety disorder			
Criteria only	43.9	43.4	43.6

*— Continued*

**TABLE 1**  
(continued)

Diagnosis	Homeless (%) (n = 41)	Housed (%) (n = 53)	Total (%) (n = 94)
Criteria + impairment	19.5	17.0	18.1
Criteria + impairment + Vineland <85	9.8	7.6	8.5
Affective disorders (parent report)			
Major depression			
Criteria only	10.3	9.4	9.8
Criteria + impairment	10.3	9.4	9.8
Criteria + impairment + Vineland <85	7.7	0.0	3.3
Dysthymic disorder			
Criteria only	9.8	5.7	7.5
Criteria + impairment	9.8	5.7	7.5
Criteria + impairment + Vineland <85	7.3	0.0	3.2
Any depressive disorder			
Criteria only	9.8	11.3	10.6
Criteria + impairment	9.8	11.3	10.6
Criteria + impairment + Vineland <85	7.3	0.0	3.2
Manic or hypomanic disorder			
Criteria only	0.0	0.0	0.0
Summary disorders (parent report)			
Any substance abuse or dependence disorder			
Criteria only	0.0	0.0	0.0
Any (1 or more) DISC disorder			
Criteria only	48.8	52.8	51.1
Criteria + impairment	31.7	32.1	31.9
Criteria + impairment + Vineland <85	12.2	11.3	11.7
Any DISC disorder (except simple phobia)			
Criteria only	34.2	35.9	35.1
Criteria + impairment	29.3	28.3	28.7
Criteria + impairment + Vineland <85	12.2	9.4	10.6
Affective disorders (youth report <sup>a</sup> )			
Major depression: youth report			
Criteria only	8.3	4.7	6.3
Criteria + impairment	8.3	4.7	6.3
Criteria + impairment + Vineland <85	0.0	0.0	0.0
Dysthymic disorder: youth report			
Criteria only	2.6	2.1	2.4
Criteria + impairment	2.6	2.1	2.4
Criteria + impairment + Vineland <85	0.0	0.0	0.0
Any depressive disorder: youth report			
Criteria only	7.3	5.7	6.4
Criteria + impairment	7.3	5.7	6.4
Criteria + impairment + Vineland <85	0.0	0.0	0.0

Note: DISC = Diagnostic Interview Schedule for Children.

<sup>a</sup>For youth report, sample size = 38 homeless and 48 housed youth (total n = 86).

Lifetime rates were somewhat higher, ranging from 38% to 53%. There were no substantial differences in service use between homeless and housed youths for disruptive behavior and anxiety disorders and slight differences for depressive disorders.

Of the 11 youths who appeared seriously emotionally disturbed, with at least one DISC disorder, only 3

(27%) were seen in the preceding 6 months for some form of mental health-related treatment and only 4 (36%) had ever been seen. This compares with service use rates of 38% (preceding 6 months) and 68% (ever) for the 37 higher-functioning youths who had at least one disorder. Of the 11 seriously emotionally disturbed children, 7 had never been treated in any way. However,

**TABLE 2**  
Co-Occurrence of DISC (Parent Version) Diagnoses Among Homeless ( $n = 41$ ) and Low-Income Housed ( $n = 53$ ) Youths

Diagnosis	Two or More Disorders (%)			Three or More Disorders (%)			Four or More Disorders (%)		
	Homeless	Housed	Total	Homeless	Housed	Total	Homeless	Housed	Total
Criteria only	22.0	20.7	21.3	19.5	13.2	16.0	12.2	7.6	9.6
Criteria + impairment	19.5	13.2	16.0	14.6	11.3	12.8	4.9	5.7	5.3
Criteria + impairment + Vineland <85	9.8	5.6	7.4	9.8	3.8	6.4	2.4	0.0	1.1

Note: DISC = Diagnostic Interview Schedule for Children.

five (71%) of the seven mothers perceived a need for their child to receive mental health treatment.

## DISCUSSION

Past research has implicated poverty as a risk factor for mental health problems in children and adolescents (Institute of Medicine, 1994; Knitzer and Aber, 1995; McLoyd and Wilson, 1991; Tuma, 1989). Similar to extremely poor youths in other studies, the children in our study had experienced various severe life stressors, such as abuse, witness to domestic and/or community violence, and foster care placement. In addition to losing one's home, stressors such as residential instability and changing schools were the norm for homeless youths.

Shaffer et al. (1996) contend that "caseness" is best defined by the presence of signs and symptoms of a disorder as well as associated impairment rather than by meeting diagnostic criteria alone. Because this approach is a clear indicator of the need for treatment, we emphasize our second and third case definitions in reporting and discussing prevalence rates. Youths meeting our second case definition (criteria + impairment) are not necessarily impaired in their overall level of functioning,

but they may need services. Many youths meeting the third case definition (criteria + impairment + poor global functioning) are likely to be "seriously emotionally disturbed" and are in definite need of mental health treatment.

While sweeping conclusions cannot be made from this investigation given the small sample size and single locale, our findings support other studies that have documented an adverse relationship between poverty and mental health. In our sample, we found that 31.9% of youths met criteria for at least one (i.e., "any") DISC disorder with associated impairment (Table 1). This prevalence rate is 66% higher than the comparable prevalence figure of 19.2% for "any disorder (with impairment)" diagnosed by MECA study investigators in a sample of youths more representative of the general population (see Shaffer et al., 1996). For any DISC disorder with impairment (excluding simple phobia), we found a prevalence rate that is 77% higher than was diagnosed in the MECA study (28.7% versus 16.2%). This contrast highlights the added mental health burden that youths and families living in poverty may be experiencing. At the same time, it is also possible that significant mental health problems experienced by a child can exacerbate the economic condition of a single

**TABLE 3**  
Prevalence of DISC (Parent Version) Disorders by Gender and Housing Status

Diagnosis	Boys (%)			Girls (%)		
	Homeless ( $n = 20$ )	Housed ( $n = 25$ )	Total ( $n = 45$ )	Homeless ( $n = 21$ )	Housed ( $n = 28$ )	Total ( $n = 49$ )
Any disruptive behavior disorder with impairment	30.0	12.0	20.0	4.8	21.4	14.3
Any anxiety disorder with impairment	20.0	4.0	11.1	19.1	28.6	24.5
Any depressive disorder with impairment	20.0	8.0	13.3	0.0	14.3	8.2
Any DISC disorder with impairment	45.0	20.0	31.1	19.1	42.9	32.7
Any DISC disorder (except simple phobia) with impairment	40.0	20.0	28.9	19.1	35.7	28.6

Note: DISC = Diagnostic Interview Schedule for Children.

**TABLE 4**  
Mental Health Service Use in Relation to Diagnoses Among Homeless and Housed Youths

Diagnosis	Mental Health Service Use—Past 6 Months						Mental Health Service Use—Ever					
	Homeless		Housed		Total		Homeless		Housed		Total	
	%	n	%	n	%	n	%	n	%	n	%	n
Any disruptive behavior disorder												
Criteria only	28.6	7	33.3	9	31.3	16	42.9	7	33.3	9	37.5	16
Criteria + impairment	28.6	7	33.3	9	31.3	16	42.9	7	33.3	9	37.5	16
Criteria + impairment + Vineland <85	0.0	3	25.0	4	14.3	7	0.0	3	25.0	4	14.3	7
Any anxiety disorder												
Criteria only	27.8	18	26.1	23	26.8	41	50.0	18	47.8	23	48.8	41
Criteria + impairment	37.5	8	33.3	9	35.3	17	50.0	8	55.6	9	52.9	17
Criteria + impairment + Vineland <85	0.0	4	50.0	4	25.0	8	25.0	4	50.0	4	37.5	8
Any depressive disorder												
Criteria only	0.0	4	33.3	6	20.0	10	0.0	4	66.7	6	40.0	10
Criteria + impairment	0.0	4	33.3	6	20.0	10	0.0	4	66.7	6	40.0	10
Criteria + impairment + Vineland <85	0.0	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	3
Any (1 or more) DISC disorders												
Criteria only	35.0	20	35.7	28	35.4	48	60.0	20	60.7	28	60.4	48
Criteria + impairment	46.2	13	41.2	17	43.3	30	53.9	13	70.6	17	63.3	30
Criteria + impairment + Vineland <85	20.0	5	33.3	6	27.3	11	20.0	5	50.0	6	36.4	11
2 or more DISC disorders												
Criteria only	55.6	9	36.4	11	45.0	20	55.6	9	63.6	11	60.0	20
Criteria + impairment	62.5	8	42.9	7	53.3	15	62.5	8	71.4	7	66.7	15
Criteria + impairment + Vineland <85	25.0	4	33.3	3	28.6	7	25.0	4	66.7	3	42.9	7
3 or more DISC disorders												
Criteria only	62.5	8	57.1	7	60.0	15	62.5	8	71.4	7	66.7	15
Criteria + impairment	50.0	6	50.0	6	50.0	12	50.0	6	66.7	6	58.3	12
Criteria + impairment + Vineland <85	25.0	4	50.0	2	33.3	6	25.0	4	50.0	2	33.3	6

Note: n = number of youths meeting criteria within a diagnostic category; % = percentages of n who used service. DISC = Diagnostic Interview Schedule for Children.

parent and may also partially account for the high prevalence rate we found in this sample of impoverished single-parent families.

When comparing parent-generated prevalence rates using the same case definition (criteria + impairment) between our study and the MECA study (see Shaffer et al., 1996, for MECA findings), similar rates were found for attention deficit disorder and any substance abuse/dependence (we found 0%; the MECA study found less than 1%). For all other disorders, our rates were substantially higher, especially for oppositional defiant disorder (14.1% versus 4.4%), simple phobia (7.7% versus 1.3%), and major depression (9.8% versus 3.0%).

The use of different measures for level of functioning precludes a precise comparison of the number of youths who were found to have a disorder with associated impairment and poor global functioning. In our sample, 11.7% of youths ( $n = 11$ ) met this description and con-

stitute a group of seriously emotionally disturbed children. Of these, six had three or more disorders. Because findings on co-occurring conditions in the MECA study have not been published, there is no basis for comparison.

We did not find noteworthy differences in rates of mental disorders between boys and girls or among the four race/ethnic groups. However, homeless boys had double the rate of disorder compared with housed boys, while housed girls had double the rate compared with homeless girls. One possible explanation is that boys are more adversely affected than girls when living in a shelter setting. Residing in close quarters with their mother and siblings and lacking a same-sex parent, boys may have more internalizing and externalizing problems than they would experience in a housed setting. Girls, on the other hand, may be more protected from external influences in a shelter. They may be more able than boys to control their behavior and may be supportive to

their mothers during crisis compared with when they are living in permanent housing. Further research is needed to confirm and clarify the apparent interaction between gender and housing status.

Even when defining mental health treatment broadly (being seen by a professional could have involved an assessment or treatment on just one occasion), the combined sample reported only modest rates of mental health-related service use. Of special concern is that the seriously emotionally disturbed youths appeared less likely to have been seen in the preceding 6 months than were higher-functioning youths with a current disorder; yet most of the mothers of the seriously disturbed youths who had never received treatment did perceive their child's need for help. The MECA study used a 1-year time frame for reporting mental health-related service use, rendering a comparison to our data problematic.

#### **Strengths and Limitations**

As we have discussed, our findings on the prevalence of mental disorders among homeless and housed youths must be looked at as tentative estimates, given the small sample size from one location. The sample size also limits our statistical power for detecting real differences among subgroups. Thus, we have chosen not to report tests of statistical significance as these results could potentially be misleading. A strength of this investigation is the close comparability of findings with that of the MECA study. Still, there are slight discrepancies in methodology that we have noted which make various comparisons difficult. In addition, the MECA study is not entirely representative of youths in the United States since its sample was drawn from only three eastern states and Puerto Rico.

In terms of generalizing to other poor and/or homeless youths, our overall sample of 220 homeless families is comparable with sheltered homeless families in nine large American cities with respect to the mother's age and average number of children (Rog et al., 1995). However, our sample has fewer blacks and a greater percentage of Hispanics. Comparison group mothers are similar to Worcester's broader AFDC population in terms of age and race/ethnicity. Compared with women receiving AFDC nationwide, the housed mothers are more likely to be Hispanic (42% versus 18%) and less likely to be black (10% versus 45%) but are similar in mean age, education, and number of children (U.S. Bureau of the Census, 1990, 1995b).

#### **Recommendations and Conclusions**

This study is the first of its kind to document mental health problems in youths belonging to homeless and extremely poor housed families according to established diagnostic criteria. Our findings (and their limitations) highlight the need for more comprehensive investigations of the mental health needs and service use of poor youths in this country. It is important that youths who are homeless and with their families (e.g., children in this study) as well as unaccompanied adolescents (i.e., those who have left home or foster care situations and are living on the streets or in shelters for homeless and runaway teenagers) be included in future epidemiological investigations of child and adolescent mental health. Findings from surveys based solely on household-based sampling frames are not representative of *all* youths in this country because they exclude homeless children and adolescents and, therefore, likely underestimate the actual rate of mental health problems.

Historically, the mental health care system in the United States has failed to meet the needs of children and adolescents (Institute of Medicine, 1989; Knitzer, 1982; Leaf et al., 1996; National Mental Health Advisory Council, 1990; Tuma, 1989). Comprehensive, coordinated systems of mental health care are lacking in many communities because of shortages in community-based services, especially case management, and inadequate linkages among agencies (Knitzer, 1982; Tuma, 1989). When treatment is available to children with diagnosable conditions, it is usually beneficial, although research is needed to determine what types of treatment modalities (e.g., individual therapy, family therapy, pharmacological intervention) work for whom and in which settings (Tuma, 1989).

Our data suggest that the mental health needs of some children are not being attended to, either because of the lack of availability of services, barriers to treatment, or failure to recognize need. To understand better why some poor children lack critical services even when treatment is available, the realities of poor families' lives and the barriers to service use must be considered. The family composition of youths in our study (single-parent, female-headed families) is becoming the norm among poor families. Single mothers, faced with the task of supporting and raising children with few social supports and diminishing economic aid, have many pressing and competing demands. For some families, a child's

need for mental health treatment may be a low priority compared with the need for shelter, food, and clothing. When services are available and judged to be effective, lack of transportation and child care for siblings can become insurmountable barriers to care. Especially for poor youths belonging to single-parent, female-headed families, it is important that the mother's stressors, including domestic violence and her current mental health status, be considered when devising a treatment plan. Family-based interventions are likely to be more effective in helping youths with mental health problems than are treatment plans that do not consider issues pertaining to the mother, siblings, and extended family.

Our findings, as well as anecdotal reports from the interviewers, suggest that some youths living in poverty may have unrecognized but significant untreated mental health needs. For example, a mother may be experiencing her own mental health or substance abuse problems, making it more difficult for her to attend to similar problems in her children. Schools have an important role to play in identifying children with emotional and behavioral problems and ensuring that they find treatment, especially when parents are unable to help their child. Better linkages among schools, shelters, and traditional mental health workers would help to identify children's emotional needs earlier and facilitate the establishment of appropriate treatment. Primary health care physicians can also play a critical role in detecting the signs and symptoms of a mental disorder and referring the child for treatment. In concert with case managers, they can work together to develop and implement comprehensive treatment.

Community outreach to poor families that provides education about children's mental health problems and information concerning treatment efficacy is needed to promote service utilization. Providers' awareness of issues that a poor, single parent faces is vital in obtaining her involvement and cooperation in her child's treatment. Finally, mental health treatment needs to be affordable to poor families.

In conclusion, given the high levels of stress and other adverse correlates of poverty experienced by the youths in our study, it is not surprising that we found higher rates of current emotional and behavioral disorders compared with the MECA study, especially since the latter is a sample of youths more representative of the general population. Recent welfare reform raises the specter of growing hardships and increased risk for

homelessness among poor families as term limits on cash assistance and cutbacks in antipoverty programs go into effect (Bassuk et al., 1996a, 1997). Children living in poverty, many in single-parent, female-headed households, will likely experience this stress both directly and as a result of their mother's distress. As welfare and other antipoverty programs undergo change at the state level, care must be taken to not compound the difficulties faced by poor families. Youths in general, and especially those who are impoverished, should have access to mental health treatment as well as opportunities and assistance in achieving their full potential.

## REFERENCES

- Bassuk EL, Browne A, Buckner JC (1996a), Single mothers and welfare. *Sci Am* 275:60-67
- Bassuk EL, Buckner JC, Weinreb LF et al. (1997), Homelessness in female-headed families: childhood and adult risk and protective factors. *Am J Public Health* 87:241-248
- Bassuk EL, Rosenberg L (1990), Psychosocial characteristics of homeless children and children with homes. *Pediatrics* 85:257-261
- Bassuk EL, Weinreb LF, Buckner JC, Browne A, Salomon A, Bassuk SS (1996b), The characteristics and needs of sheltered homeless and low-income housed mothers. *JAMA* 276:640-646
- Bravo B, Woodbury M, Canino G, Rubio-Stipe M (1993), The Spanish translation and cultural adaptation of the Diagnostic Interview Schedule for Children (DISC) in Puerto Rico. *Cult Med Psychiatry* 17:329-344
- Columbia University (1993), *The DISC 2.3 Algorithms: General Procedures for Use*. New York: Department of Child and Adolescent Psychiatry, College of Physicians and Surgeons of Columbia University
- Dryfoos JG (1990), *Adolescents at Risk: Prevalence and Prevention*. New York: Oxford University Press
- Dulcan MK (1996), Introduction: Epidemiology of child and adolescent mental disorders. *J Am Acad Child Adolesc Psychiatry* 35:852-854
- Huston AC, ed (1991), *Children in Poverty: Child Development and Public Policy*. New York: Cambridge University Press
- Institute of Medicine (1989), *Children and Adolescents With Mental, Behavioral, and Developmental Disorders: Mobilizing a National Research Initiative*. Washington, DC: National Academy Press
- Institute of Medicine (1994), *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research*. Washington, DC: National Academy Press
- Knitzer J (1982), *Unclaimed Children: The Failure of Public Responsibility to Children and Adolescents in Need of Mental Health Services*. Washington, DC: Children's Defense Fund
- Knitzer J, Aber JL (1995), Young children in poverty: facing the facts. *Am J Orthopsychiatry* 65:174-176
- Lahey BB, Flagg EW, Bird HR et al. (1996), The NIMH Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study: background and methodology. *J Am Acad Child Adolesc Psychiatry* 35:855-864
- Leaf PJ, Alegria M, Cohen P et al. (1996), Mental health service use in the community and schools: results from the four-community MECA study. *J Am Acad Child Adolesc Psychiatry* 35:889-897
- Lewit EM (1993), Why is poverty increasing among children? *Health Care Reform* 3:198-207
- Masten AS, Miliotis D, Graham-Berman SA, Ramirez M, Neumann J (1993), Children in homeless families: risks to mental health and development. *J Consult Clin Psychol* 61:335-343
- McLoyd VC, Wilson L (1991), The strain of living poor: parenting, social support, and child mental health. In: *Children in Poverty: Child*

- Development and Public Policy*, Huston AC, ed. New York: Cambridge University Press
- National Mental Health Advisory Council (1990), *National Plan for Research on Child and Adolescent Mental Disorders*. Rockville, MD: US Department of Health and Human Services, Public Health Service, ADAMHA
- Rescorla L, Parker R, Stolley P (1991), Ability, achievement, and adjustment in homeless children. *Am J Orthopsychiatry* 61:210-220
- Rog D, McCombs-Thornton K, Gilbert-Mongelli A, Brito MC, Holupka CS (1995), Implementation of the homeless families program, 2: characteristics, strengths and needs of participating families. *Am J Orthopsychiatry* 65:514-528
- Schwab-Stone ME, Shaffer D, Dulcan MK et al. (1996), Criterion validity of the NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3). *J Am Acad Child Adolesc Psychiatry* 35:878-888
- Shaffer D, Fisher P, Dulcan MK et al. (1996), The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the MECA study. *J Am Acad Child Adolesc Psychiatry* 35:865-877
- Shaffer D, Gould MS, Brasic J et al. (1983), A children's global assessment scale (CGAS). *Arch Gen Psychiatry* 40:1228-1231
- Sparrow SS, Balla DA, Cicchetti DV (1984), *Vineland Adaptive Behavior Scales: Survey Form Manual*. Circle Pines, MN: American Guidance Services
- Sparrow SS, Carter AS, Cicchetti DV (1995), *Vineland Screener: Overview, Reliability, Validity, Administration, and Scoring*. New Haven, CT: Yale Child Study Center
- Tuma J M (1989), Mental health service for children: the state of the art. *Am Psychol* 44:188-199
- US Bureau of the Census (1990), *1990 Census of Population: Metropolitan Areas*. Washington, DC: US Government Printing Office
- US Bureau of the Census (1995a), Dynamics of economic well-being: poverty 1991 to 1993. In: *Survey of Income and Program Participation*, Series P70-45. Washington, DC: US Government Printing Office
- US Bureau of the Census (1995b), *Statistical Brief: Mothers Who Receive AFDC Payments—Fertility and Socioeconomic Characteristics*. Washington, DC: US Government Printing Office
- US Department of Education (1995), *Report to Congress: A Compilation and Analysis of Reports Submitted by States in Accordance With Section 722(d)(3) of the Education for Homeless Children and Youth Program*. Washington, DC: US Department of Education, Office of Elementary and Secondary Education
- Zima BT, Wells KB, Freeman HE (1994), Emotional and behavioral problems and severe academic delays among sheltered homeless children in Los Angeles County. *Am J Public Health* 84:260-264