Barriers to Children's Mental Health Services

PAMELA L. OWENS, Ph.D., KIMBERLY HOAGWOOD, Ph.D., SARAH M. HORWITZ, Ph.D., PHILIP J. LEAF, Ph.D., JEANNE M. PODUSKA, Sc.D., SHEPPARD G. KELLAM, M.D., AND NICHOLAS S. IALONGO, Ph.D.

ABSTRACT

Objective: To examine the characteristics associated with barriers to children's mental health services, focusing on the effect of children's psychosocial problems on parents. **Method:** Data come from a first-grade, prevention-intervention project conducted in Baltimore, Maryland. Analyses were restricted to 116 families who participated in seventh-grade interviews and indicated the index child needed services. The Services Assessment for Children and Adolescents was used to measure barriers to children's mental health services. **Results:** More than 35% of parents reported a barrier to mental health services. Types of barriers included those related to structural constraints, perceptions of mental health, and perceptions of services (20.7%, 23.3%, and 25.9%, respectively). Although parenting difficulties were associated with all barriers (structural: OR = 10.63, 95% CI: 2.37, 47.64; mental health: OR = 8.31, 95% CI: 1.99, 34.79; services: OR = 5.22, 95% CI: 1.56, 17.51), additional responsibilities related to attendance at meetings was associated only with structural barriers (OR = 5.49, 95% CI: 1.22, 24.59). **Conclusions:** Researchers and policymakers interested in increasing children's access to mental health services should consider strategies to reduce barriers related to perceptions about mental health problems and services, in addition to structural barriers. Particular attention should be given to programs that focus on the needs of families who are most affected by their child's psychosocial problems. *J. Am. Acad. Child Adolesc. Psychiatry*, 2002, 41(6):731–738. **Key Words:** barriers to care, mental health.

With the recent release of the Surgeon General's report on mental health (U.S. Department of Health and Human Services, 1999), policymakers are keenly aware of high levels of unmet mental health care needs for children (Burns et al., 1995; Costello et al., 1996; Leaf et al., 1996; Shaffer et al., 1996) and the importance of increasing children's access to mental health services. These policymakers, however, have little guidance from researchers on potential strategies that would increase children's access to mental health care.

Accepted January 8, 2002.

From the Department of Mental Hygiene, Johns Hopkins University Bloomberg School of Public Health, Baltimore (P.L.O., P.J.L., N.S.I.); National Institute of Mental Health, Rockville, MD (K.H.); Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, CT (S.M.H.); and American Institutes for Research, Washington, DC (J.M.P., S.G.K.).

This study was supported by research and training grants from the NIMH (5P0-MH38725, 2P50-MH43703, 5T32-MH19545). Although the principal author is currently employed at the Agency for Healthcare Research and Quality, this study was conceived and designed, the data were analyzed, and the manuscript was written while the principal author was a postdoctoral fellow at Johns Hopkins University Bloomberg School of Public Health.

Correspondence to Dr. Owens, Center for Organization and Delivery Studies, Agency for Healthcare Research and Quality, 2101 East Jefferson Street, Suite 605, Rockville, MD 20852.

0890-8567/02/4106-0731@2002 by the American Academy of Child and Adolescent Psychiatry.

Although a few studies have examined barriers to children's mental health care (Kazdin et al., 1997a,b; Kazdin and Wassell, 2000), children's mental health services researchers have focused on characteristics of children, parents, and families (sociodemographics, health and mental health problems, other family members' use of mental health services, perceived parental burden) associated with mental health service utilization (cf. Angold et al., 1998; Costello and Janiszewski, 1990; Cunningham and Freiman, 1996; Leaf et al., 1996; Padgett et al., 1993). While service utilization is closely related to barriers to care, there is a subtle, but important, difference between the two measures. The latter focuses on the perceptions of parents about the factors that have prevented access or created difficulties in accessing child mental health services. Service utilization, on the other hand, focuses on the actual receipt of services, regardless of whether barriers existed.

The literature on barriers to mental health services is limited; few studies explicitly examine barriers to children's mental health care (Kazdin et al., 1997a,b; Kazdin and Wassell, 2000). Among clinically referred children, for example, Kazdin and Wassell (2000) found that increased parent psychopathology and decreased quality of life predicted parental perception of barriers to treat-

ment participation in outpatient mental health therapy. This study, however, focused on barriers to treatment retention, not barriers to accessing mental health services.

In fact, obstacles to obtaining children's mental health services, beyond system-level barriers such as insurance, are poorly understood, despite the fact that conceptual frameworks in the general health services literature suggest that identifiable barriers to care exist (Andersen, 1995; Halfon et al., 1995; Rosenstock, 1966). In applying these conceptual models to children's mental health services, there are several characteristics unique to mental health and the mental health system that must be considered (Stroul, 1996; U.S. Department of Health and Human Services, 1999). First, unlike most childhood medical conditions, there is no consensus on the causes of, identification of, and long-term effectiveness of treatments for many mental health problems of children. Second, unlike children's general medical care, the mental health care system for children is complex and fragmented, with separate mental health services having different pathways of entry and funding streams. Third, unlike physical health conditions and health services, there is a stigma associated with mental health and mental health service utilization that can result in denial of mental health problems and reluctance to use services.

Thus we suggest that there are three types of barriers that hinder access to children's mental health services. These barriers include (1) structural barriers (lack of availability of providers, long waiting lists, lack of insurance or inadequate insurance coverage, inability to pay for services, transportation problems, inconvenient services), (2) barriers related to perceptions about mental health problems (parents', teachers', and medical care providers' inability to identify children's need for mental health services; denial of the severity of a mental health problem; belief that the problem can be handled without treatment), and (3) barriers related to perceptions about mental health services (lack of trust in or negative experience with mental health providers, lack of children's desire to receive help, stigma related to receiving help) (Flisher et al., 1997; Hoagwood et al., 2000b; Pavuluri et al., 1996; Stiffman et al., 2000a).

To further explore barriers to care and better understand potential intervention points in children's access to mental health care, this study aimed to (1) describe the type and frequency of parent-reported barriers to child mental health care, (2) examine the characteristics associated with the perception of barriers, (3) examine explicitly the association between the effect that children's psychosocial problems have on parents and barriers to care, and (4) examine whether the types of barriers vary by the type of care sought (entry into the system versus additional services), among Baltimore public school parents who identified that their child needed mental health services.

METHOD

STUDY POPULATION

Data for this study were obtained from a school-based prevention project designed to reduce early risk behaviors for later substance abuse and affective and conduct disorders. Described in detail elsewhere (Ialongo et al., 1999), this randomized block design intervention trial included two interventions: classroom-centered, designed to enhance first-grade teachers' management of children's behavior, and family—school partnership, designed to improve parent-teacher communication and parents' management of children's behavior. In the fall of 1993, three first-grade classrooms in nine Baltimore public elementary schools were randomly assigned to one of two intervention conditions or control condition. Interventions were provided throughout the first-grade year.

All 799 children enrolled in the 27 classrooms were recruited for participation in first grade (fall and spring), sixth grade (spring) and seventh grade (spring) interviews. Fifty-four percent of the children were male, 85.0% were African American, and 15.0% were of Euro-American heritage. Nearly two thirds (68.9%) of the children received free or reduced-price lunch. At each time point, children, parents, and teachers were interviewed about children's emotional and behavioral health. In addition, trained lay interviewers queried children for 90 minutes and parents for 50 minutes about sociodemographics, perceived stressors, parent-child relationship, and children's mental health service utilization. Although basic service utilization was assessed in first grade, a standardized assessment of barriers to care and mental health service utilization was not implemented until sixth grade. In seventh grade, the service utilization assessment was enhanced to include additional parental responsibilities related to children's psychosocial problems (attending meetings, financial impact).

Because barriers to care and parental difficulties were the primary focus, the parent study population was limited to children and families who participated in the initial randomization and in seventh-grade interviews (N = 579). There were no significant differences in sociodemographics; intervention/control group assignment; or parent, teacher, and child ratings of children's psychosocial behavior between the 579 children and families who participated in seventh-grade interviews and the 220 who did not participate.

Of the 579 children and families, 116 indicated that the index child needed mental health services in seventh grade on the Services Assessment for Children and Adolescents Parent Report (SACA) (see description below) (Horwitz et al., 2001). Need for services was defined by parents' report that their child used mental health services in the past year and/or parents' report that their child needed mental health services in the past year. There were no significant differences in sociodemographics or intervention/control group assignment between children identified as being in need of services and those who did not need services. There were statistically significant differences, however, in parent, teacher, and child ratings of psychosocial problems between the two groups; children who needed services were more likely to have psychosocial problems compared with children who did not need services.

VARIABLES

Dependent Variable

The primary outcome of interest was perceived barriers to care, which was assessed by using questions from the SACA. The SACA is a structured interview designed to assess children's mental health service utilization, including past and present use of inpatient, outpatient, and school-based mental health services; parents' perception of need for services; and barriers to receipt of services. The validity (κ = 0.76) (Hoagwood et al., 2000a) and the test-retest reliability of both lifetime (κ = 0.82–0.94) and 12-month (κ = 0.75–0.86) service use on the parent version of the SACA is strong (Horwitz et al., 2001); the interrater reliability between parent and child reports of service use (κ = 0.43–0.86) is fair to excellent (Stiffman et al., 2000b).

At the seventh-grade time point, all parents who reported that their child had mental health service needs over the past year identified, from a list of 15 barriers, all the reasons that their child had not received care. Types of barriers included structural barriers, barriers related to perceptions about mental health problems, and barriers related to perceptions about mental health services (Table 1). In addition, based on child service utilization during seventh grade, parents were classified as perceiving the barriers in relation to service entry (no services in seventh grade) or in relation to additional services (one or more services in seventh grade).

Independent Variables

The primary independent variables focused on the effect of children's psychosocial problems on parents (additional responsibilities, difficulties with parenting). In addition, other independent variables included sociodemographics; parent stressors; and children's prior men-

TABLE 1Barriers to Children's Mental Health Services (*N* = 116)

Types of Barriers to Care	n	%
Any barriers	41	35.3
Any structural barriers	24	20.7
Help too expensive	12	10.3
Services too inconvenient	9	7.8
Services too far away	8	6.9
Not know where to go	18	15.5
No way to get there	6	5.2
Long wait for appointment	7	6.0
Any barriers related to perceptions		
of mental health problems	27	23.3
Thought problems not serious	24	20.7
Decided to handle problems on own	20	17.2
Any barriers related to perceptions of		
mental health services	30	25.9
Lacked confidence in who		
recommended help	12	10.3
Had negative experience with		
professionals	10	8.6
Afraid of what family/friends would		
say (stigma)	3	2.6
Thought treatment would not help	6	5.2
People trusted most did not		
recommend help	12	10.3
Did not know whom to trust	10	8.6
Child did not want to go	12	10.3

tal health service utilization, mental health, stressors, and intervention group. With the exception of prior service utilization (sixth grade) and intervention (first grade), all information was obtained in seventh grade.

Effect of Children's Psychosocial Problems on Parents. Indicators of the effect of children's psychosocial problems on parents included additional responsibilities (objective measure) and difficulties with parenting (subjective measure). In the SACA, parents were asked about additional responsibilities as a result of their child's psychosocial problems, including whether they or their partner had attended a school or treatment meeting (time) and whether they or their partner had their family finances affected (financial).

In addition, perceived difficulties with parenting were assessed with three subscales from the Structured Interview of Management Skills and Practices-Parent Version (Monitoring, Discipline, and Involvement), which has adequate internal consistency and test-retest reliability (Capaldi and Patterson, 1989). An overall mean score was derived from subscale scores, which ranged from 1 to 5. A higher mean score indicated that parents had more difficulties with parenting.

Sociodemographics. Parents answered questions about their age and education, child's gender and ethnicity, number of adults and children living in the household, and income. A poverty variable, based on household size and family income, was derived from the poverty index used by the federal government ($\leq 200\%$ of the poverty line versus > 200%).

Parent Stressors. The presence of parent stressors was based on their child's response to the Life Events Questionnaire-Adolescent Version (adapted from Coddington, 1972). Children indicated whether their parent had ever experienced severe illness, accidents, death of a loved one, loss due to fire, or had ever been a victim or witness to a crime. On the basis of the frequency distribution of the sum of stressors in the sample population, parents were considered under stress if they had experienced three or more stressful events. In addition, dichotomous variables were created for parent-reported stressful experiences in the past year, including schedule constraints due to work or school, managing a single-parent household, being unemployed/disabled, and being divorced.

Child Mental Health Service Use. Questions from the SACA given in sixth grade were used to ask parents about children's use of mental health services during sixth grade, the year prior to the year covered by the seventh-grade barriers interview. Mental health services included inpatient services (psychiatric hospital, psychiatric unit, substance abuse unit, residential treatment center, group home, foster home, detention center, emergency shelter), outpatient services (community mental health center, private professional, partial hospitalization, in-home therapist, emergency room, pediatrician, court counselor, clergy member), and school-based services (special school, special classroom, special help, counseling).

Child Mental Health. Children's mental health was assessed by the Diagnostic Interview Schedule for Children Version 4 (C-DISC-IV) (Shaffer et al., 2000), a structured interview to assess the presence and duration of psychiatric symptoms. Children were classified as having a conduct disorder diagnosis or other mental health diagnosis (including general anxiety disorder, dysthymia, or major depression) versus no mental health diagnoses. Although the psychometric properties of this version of the DISC have not been published, researchers have found that earlier versions of the DISC have adequate test-retest reliability (Jensen et al., 1995) and validity (Schwab-Stone et al., 1996).

Child Stressors. Similar to the parents, children were considered under stress if they indicated three or more stressful life events on the Life Events Questionnaire-Adolescent Version.

Intervention Group. In addition to the variables described above, the intervention in which the children and family participated was considered (classroom-centered, family–school partnership versus control condition).

ANALYSIS

After examining the frequency of each parent-reported barrier to care (aim 1), the association between independent variables and parental perception of barriers was assessed in bivariate (Pearson's χ^2 test and t test) and multivariate (logistic regression analyses) analyses (aims 2 and 3). To identify the correlates of parent-reported barrier, four logistic regression models were derived (any barriers [not shown], structural barriers, barriers related to perceptions of mental health problems, barriers related to perceptions of mental health services). Sociodemographics were placed in the model first, followed by parent and child psychosocial characteristics, intervention status, and effect of children's mental health on parents. Potential interactions between all independent variables were tested. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated.

Because barriers to care may not be reported uniformly throughout the help-seeking process, the association between types of barriers and type of care sought was examined in bivariate (Pearson's χ^2 test) analyses (aim 4). Although of interest, correlates of the types of barriers stratified by type of care sought was not assessed, because the sample size of parents reporting a barrier was small (N= 41). All data analyses were performed with PC-SAS version 8.0.

RESULTS

Description of Barriers

Approximately one third (35.3%) of parents reported a barrier to mental health services for their seventh-grade child with mental health needs (Table 1). Each type of barrier was represented in the analysis, with approximately one fifth to one fourth of parents indicating barriers related to structural constraints (20.7%), perceptions about mental health problems (23.3%), and perceptions about mental health services (25.9%).

Sample Description and Barriers

Table 2 displays sociodemographics, effect of children's mental health on parents, psychosocial characteristics of parents and children, and intervention status. These results were stratified by whether the parents reported any barrier to service. None of the sociodemographic characteristics varied significantly by reports of barriers, with parents in both groups indicating that they had boys (57.3% no barriers versus 63.4% barriers) who were African American (80.0% no barriers versus 85.4% barriers) and lived in poverty (62.2% no barriers versus 53.7% barriers). Parents' perception of additional responsibilities did not vary significantly by report of barriers. There was some variation in parents' perception of difficulties with parenting by parents' report of barriers. Parents who reported barriers perceived more difficulties with parenting their child compared with parents who did not report any barriers ($\mu =$ 2.14, SD = 0.46, no barriers versus μ = 2.36, SD = 0.47, barriers; p = .016).

The majority of parents' psychosocial characteristics varied by report of barriers to care. Parents who reported barriers were more likely to have three or more parent stressors, schedule constraints, and to be divorced compared with parents who did not report barriers (data shown in Table 2). The majority of children's psychosocial characteristics, however, did not vary significantly by parents' report of barriers, with one exception. Parents who reported barriers were less likely to have a child who received mental health services in sixth grade compared with parents who did not report barriers (22.0% versus 42.7%, respectively; p = .026). Intervention status was not significantly related to report of barriers.

Characteristics Associated With Types of Barriers

Strong relationships between the effect of children's psychosocial problems on parents and barriers to care were evident, although the significant characteristics varied by type of barrier (Table 3). In the model examining characteristics associated with structural barriers, additional responsibilities (time) (OR = 5.49, 95% CI: 1.22, 24.59) and difficulties with parenting (OR = 10.63, 95% CI: 2.37, 47.64) were statistically significant. In addition, parent stressors and children's mental health service utilization in sixth grade were statistically significant. In the model examining the characteristics associated with barriers related to perceptions of mental health problems, difficulties with parenting was statistically significant (OR = 8.31, 95% CI: 1.99, 34.79). Parent stressors, parent being unemployed or disabled, and children's mental health service utilization in sixth grade also were statistically significantly associated with barriers related to perceptions of mental health problems. In the model examining barriers related to perceptions of mental health services, difficulties with parenting was statistically significant (OR = 5.22, 95% CI: 1.56, 17.51). In addition, divorce was statistically significantly associated with barriers related to perceptions of mental health services. Intervention status and interaction terms were nonsignificant in all models.

Types of Barriers Associated With Entry Versus Additional Services

Of those who reported a barrier to care (N = 41), 50% reported barriers to entry into the mental health system and 50% reported barriers to additional services (Table 4). When we examined barriers to different types of care separately (either entry into the system or additional services), we found that there was some variation in the types

TABLE 2 Characteristics of Families With Children Who Have Mental Health Needs (N = 116)

Characteristics	Total (N = 116)	Did Not Report Any Barriers (N = 75)	Reported Barriers $(N = 41)$	p Value	
Characteristics	(1, 110)	(21 / 7)	(11 11)	- raide	
Sociodemographics					
Child gender: male	59.5	57.3	63.4	.524	
Child ethnicity: African American	81.9	80.0	85.4	.473	
Poverty: yes ^a	59.1	62.2	53.7	.374	
Mother's age (in years) b	40.93 (9.02)	41.25 (9.40)	40.34 (8.38)	.605	
Mother's education: ≤12 years	50.0	53.3	43.9	.331	
Effect of child mental health on parents					
Additional responsibilities (time): yes	70.7	65.3	80.5	.086	
Additional responsibilities (financial): yes	13.8	14.7	12.2	.712	
Difficulties with parenting: yes ^b	2.21 (0.47)	2.14 (0.46)	2.36 (0.47)	.016	
Parent psychosocial characteristics					
Parent stressors: 3+ ^c	73.4	67.6	84.6	.051	
Schedule constraints: yes	69.0	61.3	82.9	.016	
Single parent: yes	67.2	62.7	75.6	.156	
Unemployed/disabled: yes	21.5	26.7	12.2	.070	
Divorce: yes	25.9	20.0	36.6	.051	
Child psychosocial characteristics					
Mental health services 6th grade: yes	35.3	42.7	22.0	.026	
Mental health problems ^d		,			
Conduct disorder	16.5	17.3	15.0	.468	
Other mental health problem	12.2	14.7	7.5		
No problems	71.3	68.0	77.5		
Child stressors: 3+°	67.3	62.2	76.9	.112	
Intervention status	07.5	02.2	, 0.,	.112	
Classroom-centered	37.1	33.3	43.9	.499	
Family–school partnership	33.6	34.7	31.7	.177	
Control condition	29.3	32.0	24.4		

Note: Values are percentages except where noted.

of barriers reported between the two groups. Overall, parents who reported barriers to entry into the system were less likely to report structural barriers (42.9% versus 75.0%, p = .037) and more likely to report barriers related to perceptions of mental health problems (85.7% versus 45.0%, p = .006) compared with parents who reported barriers to additional services. Although nonsignificant, parents who reported barriers to entry into the system tended to be less likely to report barriers related to perceptions of mental health services compared with parents who reported barriers to additional services (61.9% versus 85.0%, p = .095).

DISCUSSION

This study demonstrated that parent-reported barriers to children's mental health care are common, with approx-

imately one third of parents who identified that their child had mental health needs reporting barriers to care. Further, the types of parent-reported barriers were remarkably consistent (20.7%–25.9% of parents indicated barriers related to structural constraints, perceptions of mental health problems, and perceptions of services), indicating that all three types of barriers were important.

Moreover, our results indicated that the effect of children's mental health on parents was related to barriers to care. Specifically, report of additional responsibilities related to attendance at meetings was associated with structural barriers, and difficulties with parenting was related to all types of barriers. Parents may be too overwhelmed by their child's psychosocial problems and lack resources and knowledge about mental health and health services to be able to care for their child and overcome barriers to mental health care. Conversely, parents over-

^a Missing information for one respondent who reported no barriers.

^b Mean (SD).

^c Missing information for one respondent who reported no barriers and two respondents who reported barriers.

^d Missing information for one respondent who reported barriers.

TABLE 3 Characteristics Associated With Each Type of Barrier (N = 116)

	Structural Barriers	Barriers Related to Perceptions of Mental Health Problems	Barriers Related to Perceptions of Mental Health Services	
Characteristic	Adjusted OR (95% CI)	Adjusted OR (95% CI)	Adjusted OR (95% CI)	
Child gender: male			2.01 (0.72, 5.62)	
Child ethnicity: African American		6.73 (0.76, 59.68)		
Poverty: yes	0.68 (0.20, 2.27)		0.44 (0.16, 1.20)	
Mother's education: ≤12 years	0.52 (0.16, 1.69)	0.86 (0.29, 2.56)	0.61 (0.22, 1.70)	
Parent stressors: 3+	15.69 (1.49, 164.82)	5.30 (1.19, 23.54)		
Unemployed/disabled: yes		0.12 (0.02, 0.76)		
Divorce: yes			4.61 (1.65, 12.92)	
Child mental health service				
6th grade: yes	0.15 (0.03, 0.71)	0.17 (0.05, 0.63)		
Child mental health problems:				
conduct disorder	1.13 (0.21, 6.15)			
Child mental health problems:				
other problems	0.16 (0.01, 1.95)			
Child stressors: 3+			2.22 (0.75, 6.58)	
Additional responsibilities (time): yes	5.49 (1.22, 24.59)			
Difficulties with parenting: yes	10.63 (2.37, 47.64)	8.31 (1.99, 34.79)	5.22 (1.56, 17.51)	

Note: Each model included only those characteristics for which an odds ratio is shown. OR = odds ratio; CI = confidence interval.

whelmed by the responsibilities of caring for their child may simply perceive additional barriers, whether or not they actually exist.

Parent and child psychosocial characteristics also were associated with barriers to children's mental health care, although sociodemographics was not related to any barriers to care. Parents who reported structural barriers and barriers related to perceptions of mental health problems were more likely to report parental stressors but less likely to report that their child had received mental health services in sixth grade. In addition, unemployment was associated with barriers related to mental health problems, and divorce was associated with barriers related to mental health services. Parents may be too overwhelmed by their own problems to access services, new to the mental health system and have trouble accessing services, or have a long history of barriers to care and not yet be able to negotiate the system. These findings imply that barriers, whether externally driven (structural) or internally driven (perceptions), need to be understood in the context of the social and health environment. Although we expected to find relationships between sociodemographics and barriers to care, such relationships were not present. It is possible that the homogeneity of this sample (students enrolled in Baltimore public schools) did not allow for adequate examination of these associations.

Further, of those who reported barriers to care, 50% reported barriers to entry into the mental health system and 50% reported barriers to additional care, suggesting that barriers can occur at different points in the health service continuum. The types of barriers reported varied between parents who indicated barriers to entry and those who indicated barriers to additional services. Parents who indicated barriers to entry into the system were more likely to report barriers related to mental health problems, whereas parents who indicated barriers to additional services were more likely to report structural barriers.

Limitations

The interpretation of these results, however, must take into consideration three limitations. First, this study was based on perceptions that may change over time. We measured perceived barriers to care and the perceived effect of children's psychosocial problems on parents at only one point in time. Therefore, the causal direction of the association between the effect of children's psychosocial problems on parents and barriers to care is difficult to discern.

Second, limitations in the data hindered our ability to control for important potential confounders, including parent psychopathology and mental health service utilization. Parent psychopathology, for example, may positively or negatively influence identification of children's

TABLE 4Barriers to Children's Mental Health Services by Type of Care Sought (N = 41)

Types of Barriers to Care	Barriers to Entry $(N = 21)$ $n (\%)$		Barriers to Additional Services $(N = 20)$ $n (\%)$		p Value
Help too expensive	4	(19.0)	8	(40.0)	.140
Services too inconvenient	3	(14.3)	6	(30.0)	.224
Services too far away	1	(4.8)	7	(35.0)	.015
Not know where to go	6	(28.6)	12	(60.0)	.043
No way to get there	2	(9.5)	4	(20.0)	.343
Long wait for appointment	2	(9.5)	5	(25.0)	.188
Any barriers related to perceptions of mental health problems	18	(85.7)	9	(45.0)	.006
Thought problems not serious	16	(76.2)	8	(40.0)	.019
Decided to handle problems on own	16	(76.2)	4	(20.0)	<.001
Any barriers related to perceptions of mental health services	13	(61.9)	17	(85.0)	.095
Lacked confidence in who recommended help	5	(23.8)	7	(35.0)	.431
Had negative experience with professionals	2	(9.5)	8	(40.0)	.023
Afraid what family/friends would say (stigma)	3	(14.3)	0	(0.0)	.079
Thought treatment would not help	2	(9.5)	4	(20.0)	.343
People trusted most did not recommend help	5	(23.8)	7	(35.0)	.431
Did not know whom to trust	4	(19.0)	6	(30.0)	.414
Child did not want to go	5	(23.8)	7	(35.0)	.431

mental health problems. Parents with mental health problems may be more aware of psychosocial symptoms, or they may be less capable of recognizing their child's needs. Further, compared with parents who have not used mental health services, parents who have used services may have fewer negative perceptions about mental health problems and services and may be able to negotiate the service system, which, in turn, increases their child's access to mental health care.

Third, due to the nature of the interview instrument, we were limited in our measurement of barriers to care. Only parents who identified a need for mental health services were questioned about barriers to mental health care for their child. Thus we were unable to explore parents' inability to identify a mental health need as a barrier to service. Further analyses examining the correlation between parent and teacher report of behavior problems (r = 0.02– 0.26), however, suggest the possibility that parent's identification of mental health problems is a potential barrier. In addition, barriers related to perceptions of mental health services did not incorporate parent's perception of the school's accommodations for and/or interventions with their child's mental health problems. Further, the instrument did not ask about barriers for parents who reported that their child used services but did not need additional services. Therefore, we were unable to investigate "soft" barriers to care, such as barriers experienced

by parents who obtained services and thus may have underestimated the overall prevalence of barriers to care.

Policy Implications

Notwithstanding these limitations, the findings from this study have several policy implications. First, intervention strategies should be targeted not only at the more traditional structural barriers to care, but also at barriers related to perceptions about mental health problems and services. For example, consideration should be given to public education campaigns that increase awareness and knowledge of mental health problems and services. Second, although federal and state policies have attempted to eliminate some structural barriers to children's mental health services, these policies may not have funded services as generously as children's mental health needs demand. Third, to be most effective in reducing barriers to mental health care, programs should focus on the needs of families who are most affected by their child's psychosocial problems.

Directions for Future Research

The results of this study suggest potential strategies to increase children's access to mental health care, but additional research on barriers to children's mental health care is needed. Although barriers to mental health care was a relatively common phenomenon among poor, urban, African-American families, it is important to determine

the extent to which these results generalize to families of different incomes, geographic locations, and ethnicities.

In addition, this study focused on access to services but did not focus on the quality of services being obtained. Access and consistent participation in mental health services are important for the families of children with psychosocial problems; however, participating in any mental health service alone does not necessarily produce positive outcomes. Research suggests that the key to positive service outcomes may be access to and engagement in quality mental health services (Weisz et al., 1995). To ultimately improve child mental health outcomes, emphasis should be placed on removing those barriers that prevent families from receiving quality care.

REFERENCES

- Andersen RM (1995), Revisiting the behavioral model and access to medical care: does it matter? *J Health Soc Behav* 36:1–10
- Angold A, Messer SC, Stangl D, Farmer EMZ, Costello EJ, Burns BJ (1998), Perceived parental burden and service use for child and adolescent psychiatric disorders. Am J Public Health 88:75–80
- Burns BJ, Costello EJ, Angold A et al. (1995), Children's mental health service use across service sectors. *Health Aff* 14:147–159
- Capaldi DM, Patterson GR (1989), Psychometric Properties of Fourteen Latent Constructs From the Oregon Youth Study. New York: Springer-Verlag
- Coddington RD (1972), The significance of life events as etiological factors in the diseases of children, II: a study of a normal population. J Psychosom Res 16:205–213
- Costello EJ, Angold A, Burns BJ et al. (1996), The Great Smoky Mountains Study of Youth: goals, design, methods and the prevalence of *DSM-III-R* disorders. *Arch Gen Psychiatry* 53:1129–1136
- Costello EJ, Janiszewski S (1990), Who gets treated? Factors associated with referral in children with psychiatric disorders. *Acta Psychiatr Scand* 81:523–529
- Cunningham PJ, Freiman MP (1996), Determinants of ambulatory mental health services use for school-age children and adolescents. *Health Serv Res* 31:409–427
- Flisher AJ, Kramer RA, Grosser RC et al. (1997), Correlates of unmet need for mental health services by children and adolescents. Psychol Med 27:1145–1154
- Halfon N, Inkelas M, Wood D (1995), Nonfinancial barriers to care for children and youth. Annu Rev Public Health 16:447–472
- Hoagwood K, Horwitz S, Stiffman A et al. (2000a), Concordance between parent reports of children's mental health services and service records: the Services Assessment for Children and Adolescents (SACA). J Child Fam Stud 9:315–331
- Hoagwood K, Kelleher KJ, Feil M, Comer DM (2000b), Treatment services for children with ADHD: a national perspective. J Am Acad Child Adolesc Psychiatry 39:198–206

- Horwitz SM, Hoagwood K, Stiffman AR et al. (2001), Reliability of the Services Assessment for Children and Adolescents. *Psychiatr Serv* 52:1088–1094
- Ialongo NS, Werthamer L, Kellam SG, Brown CH, Wang S, Lin Y (1999), Proximal impact of two first-grade preventive interventions on early risk behaviors for later substance abuse, depression, and antisocial behavior. Am J Community Psychol 27:599–641
- Jensen P, Roper M, Fisher P et al. (1995), Test-retest reliability of the Diagnostic Interview Schedule for Children (DISC 2.1): parent, child, and combined algorithms. *Arch Gen Psychiatry* 52:61–71
- Kazdin AE, Holland L, Crowley M (1997a), Family experience of barriers to treatment and premature termination from child therapy. J Consult Clin Psychol 65:453–463
- Kazdin AE, Holland L, Crowley M, Breton S (1997b), Barriers to treatment participation scale: evaluation and validation in the context of child outpatient treatment. *J Child Psychol Psychiatry* 38:1051–1062
- Kazdin AE, Wassell G (2000), Predictors of barriers to treatment and therapeutic change in outpatient therapy for antisocial children and their families. Ment Health Serv Res 2:27–40
- 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
- Padgett DK, Patrick C, Burns BJ, Schlesinger HJ, Cohen J (1993), The effect of insurance benefit changes on use of child and adolescent outpatient mental health services. *Med Care* 31:96–110
- Pavuluri MN, Luk SL, McGee R (1996), Help-seeking for behavior problems by parents of preschool children: a community study. *J Am Acad Child Adolesc Psychiatry* 35:215–222
- Rosenstock IM (1966), Why people use health services. Milbank Mem Fund Q 44(suppl):94–127
- 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, Fisher P, Lucas CP, Dulcan MK, Schwab-Stone ME (2000), NIMH Diagnostic Interview Schedule for Children, Version IV (NIMH DISC-IV): description, differences from previous versions, and reliability of some common diagnoses. J Am Acad Child Adolesc Psychiatry 39:28–38
- Stiffman AR, Hadley-Ives E, Dore P et al. (2000a), Youths' access to mental health services: the role of providers' training, resource connectivity and assessment of need. *Ment Health Serv Res* 2:141–154
- Stiffman AR, Horwitz SM, Hoagwood K et al. (2000b), The Service Assessment for Children and Adolescents (SACA): adult and child reports. *J Am Acad Child Adolesc Psychiatry* 39:1032–1039
- Stroul BA (1996), Children's Mental Health: Creating Systems of Care in a Changing Society. Baltimore: Paul H Brookes
- US Department of Health and Human Services (1999), Mental Health: A Report of the Surgeon General. Washington, DC: US Government Printing
- Weisz JR, Donenberg GR, Han SS, Weiss B (1995), Bridging the gap between laboratory and clinic in child and adolescent psychotherapy. J Consult Clin Psychol 63:688–701