

Correlates of unmet need for mental health services by children and adolescents

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ABSTRACT

Background. Little is known about the extent and correlates of unmet need for mental health services in community samples of children and adolescents.

Methods. Data were obtained from the 1285 parent/youth pairs interviewed at four sites in the USA and Puerto Rico in the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study. Unmet need was defined to exist if psychopathology and associated functional impairment were present but no mental health services had been received in the previous 6 months.

Results. Of the total sample, 17.1% had unmet need. Adjusting for demographic variables, logistic regression analyses revealed that unmet need was significantly associated with: indicators of economic disadvantage, such as being on public assistance and not being covered by health insurance; opinions of the parents and children or adolescents that the latter had poor mental health; parental psychopathology; poor school grades; and parent-reported access barriers such as concern that the child would want to solve the problem unassisted, would refuse to attend mental health services, or would be hospitalized or taken away against the parent's will. No youth-reported access barriers were significantly associated with unmet need.

Conclusions. The economic correlates of unmet need may attain increased importance in the light of current reform in health care financing in the USA. Access may be facilitated by increasing parental knowledge of mental health services and enabling children and adolescents to initiate contact with services independently of their families.

INTRODUCTION

According to the Needs for Care Assessment Methodology of the Medical Research Council (MRC), need for mental health services is defined to exist when: (a) there is functional impairment, that is the level of functioning falls below, or threatens to fall below, some minimum specified

level; and (b) this is due to some potentially remediable or preventable cause, for example psychopathology for which there is effective and acceptable treatment (Brewin *et al.* 1987; Bebbington, 1992; Bebbington *et al.* 1996). If need is present, it can be characterized as 'met need' or 'unmet need', depending on whether the necessary services are being provided. 'Overprovision' refers to the provision of services in the absence of need (Brewin & Wing, 1993). Given that the prevalence of psychopathology in children and adolescents in the

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USA is approximately 20% (Canino *et al.* 1995; Cohen *et al.* 1996; Bird, 1996) and that only a small proportion of these receive mental health services (Friedman, 1996), it is reasonable to suppose that there is a considerable amount of unmet need for mental health services among children and adolescents.

The identification of factors that distinguish those with unmet need for mental health services from the rest of the population may suggest how the extent of unmet need can be reduced. In the first study that systematically addressed this question, Shepherd *et al.* (1966, 1971) compared a group of 50 children attending child guidance clinics in Buckinghamshire with a group of matched children who had never attended such a clinic. They concluded that the severity of behavioural disturbance was not significantly associated with referral. However, parental reactions to their children's behaviour and the occupational class of the father were significantly associated with referral (Shepherd *et al.* 1966, 1971). There is support from more recent studies that potential correlates of unmet need may include: (a) demographic features – gender, age, race/ethnicity, place of residence (Hoberman, 1992); (b) economic factors – family income, access to health insurance (Pavuluri *et al.* 1996); (c) family factors – parental psychopathology, maternal educational level, family structure (Jensen *et al.* 1990); (d) academic factors – school grades; (e) perceptions of mental health status and usefulness of mental health services (Hornblow *et al.* 1990); and (f) barriers to access of mental health services (Pavuluri *et al.* 1996). These variables may be associated with unmet need through their association with one or more of the components of need as defined by the Needs for Care Assessment Methodology of the MRC, viz. functional impairment, psychopathology and service use history (Brewin *et al.* 1987).

The present analysis investigates need for mental health services in four community-based samples of children and adolescents in the USA and Puerto Rico. Data were derived from the National Institute for Mental Health (NIMH) Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) study (Lahey *et al.* 1996). These data formed the basis of two previous analyses addressing aspects of service use by children and adolescents (Good-

man *et al.* 1997; Leaf *et al.* 1996). However, unlike the present study, neither Goodman *et al.* (1997) nor Leaf *et al.* (1996) employed the categories of need status as defined by the MRC's Needs for Care Assessment (no need, overprovision, met need, and unmet need) (Brewin *et al.* 1987). It should be noted that although the present study draws on the Needs for Care Assessment as regards these categories of need status, there are many other aspects of the Needs for Care Assessment that are not included in the present study (for example, instrumentation that operationalizes and measures need in diverse functional domains) (Brewin *et al.* 1987).

Leaf *et al.* (1996) described service use by the children and adolescents comprising the MECA sample. Among his findings were that 25.3% of those with a diagnosis and who were rated as functionally impaired had received mental health services from a speciality mental health provider (psychiatrist, psychologist, social worker, or counsellor) in the previous year. They did not attempt to identify factors distinguishing those who had received mental health services from the rest of the sample. Goodman *et al.* (1997) compared youth who met criteria for a mental disorder who had received out-patient mental health services with those who had not received these services. Even after controlling for global functional impairment, they found that those receiving services were not representative of all youth with mental disorders in that they were more likely to have had a police contact, to have been suspended or expelled from school, to have engaged in suicidal behaviour, and to be rated as low in social competence. However, they confined their attention to those with mental disorder, and they did not compare those with unmet need with the remainder of the sample. From the perspective of population-based public mental health strategies, this latter comparison is integral in distinguishing those with unmet need from the rest of the population. It is necessary to distinguish this group from the general population of children and adolescents so that services can be provided, thus reducing the extent of unmet need. For this purpose, it is of secondary importance whether the absence of unmet need is due, for example, to an absence of psychopathology or the utilization of the appropriate services.

The present study aimed to extend previous findings by: (a) describing the sample of the MECA study in terms of the categories of need status as defined by the MRC Needs for Care Assessment; and (b) documenting the correlates of unmet need for mental health services.

METHOD

Sample and procedures

The sample consisted of 1285 children and adolescents (604 boys and 681 girls) in the age range of 9 to 17 years (mean = 12.9 years; s.d. = 2.6 years). Probability samples were obtained at four sites: New Haven, Connecticut ($N = 314$); Atlanta, Georgia ($N = 299$); Westchester County, New York ($N = 360$); and Metropolitan San Juan, Puerto Rico ($N = 312$).

All children and adolescents in the age range who had lived in the household at least half the time during the previous 6 months were eligible for participation in the study. Where there was more than one eligible youth residing in the household, the subject for the study was randomly selected from those eligible. Both the selected youth and an adult caretaker were simultaneously interviewed by trained lay interviewers. The caretaker was selected from a hierarchy of possible respondents including the young person's biological mother, adoptive mother or stepmother and is referred to hereafter as the 'parent'. Further details about the methodology of the MECA Study are provided by Lahey *et al.* (1996).

Measures

Psychiatric disorder

The computerized version of the NIMH Diagnostic Interview for Children Version 2.3 (DISC-2.3) was administered by the lay interviewers and yielded diagnoses according to the *Diagnostic and Statistical Manual for Mental Disorders, 3rd edn, Revised* (DSM-III-R) (American Psychiatric Association, 1987; Shaffer *et al.* 1996). All diagnoses are 'current' in that symptoms must have occurred in the 6 months prior to the interview. A criterion was considered met if reported present by either the parent or the child (Shaffer *et al.* 1996). A DISC diagnosis was considered to be present if DSM-III-R symptom, onset, and duration criteria were met. The DISC-2.3 is organized into 19

diagnostic schedules, grouped into six diagnostic modules. The diagnostic modules are as follows: anxiety disorders (for example, simple phobia, separation anxiety disorder, obsessive compulsive disorder), mood disorders (major depressive episode, dysthymia, mania, hypomania), disruptive behaviour disorders (attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder), substance abuse disorders (for example, alcohol and marijuana abuse), psychotic disorders (consisting of a screen only) and miscellaneous disorders (for example, anorexia nervosa, nocturnal enuresis, Tourette's syndrome) (Shaffer *et al.* 1996).

The criterion validity of the DISC-2.3 was examined for 247 of the parent-youth pairs participating in the MECA Study (Schwab-Stone *et al.* 1996). Subjects who had a positive DISC diagnosis using a lay-administered DISC on any of the diagnostic areas under investigation and a comparable number of 'screen negatives' were included in the validation study. Clinicians re-interviewed both the youth and the parent using the DISC followed by a clinical-style interview on the basis of which they rated the presence of symptoms and impairment. In the clinical-style interview, there was enquiry about each item for which there was clinical doubt about the veracity of the response or which had been scored positively. The latter items were selected because of concerns about false positives on earlier version of the DISC. Computer algorithms combined this information into diagnoses. The results indicated that the DISC has moderate to good validity across a number of diagnoses (Schwab-Stone *et al.* 1996).

Impairment

A youth with a DISC diagnosis was defined to be impaired if the following two conditions were satisfied: (a) the presence of at least two of the three to five diagnosis-specific DISC items indicating personal distress or social or academic difficulties related to the symptoms of each diagnosis; and (b) the youth had a score of ≤ 70 on the Child Global Assessment Scale (CGAS) (Shaffer *et al.* 1983, 1996; Bird *et al.* 1987), as assessed by the interviewer of the parent (Bird *et al.* 1997). The CGAS is an adaptation of the Global Assessment Scale for Adults (Endicott *et al.* 1976) and reflects the lowest level of

functioning during the previous 6 months. The range of scores is 1 (most impaired) to 100 (least impaired).

Mental health services use

Participants were defined as having received mental health services if their parents reported that they had seen a psychiatrist, psychologist, social worker, or counsellor in the previous 6 months for emotional or behaviour problems, or for the use of alcohol or drugs. There was no independent verification of this report of service use. Mental health services provided by other professionals such as paediatricians and primary health care providers were not included. No data were available regarding referrals to mental health providers that were not followed up by the youth and/or parent.

Need categories

Four categories of need were created: (a) no need – no DISC diagnosis or any DISC diagnosis without impairment and no mental health service use in the previous 6 months; (b) overprovision – no DISC diagnosis or any DISC diagnosis without impairment and mental health service use in the previous 6 months; (c) met need – and DISC diagnosis with impairment and mental health service use in the previous six months; and (d) unmet need – any DISC diagnosis with impairment and no mental health service use in the previous 6 months.

Economic factors

Family income was assessed according to whether the family was receiving public assistance or not. Access to health insurance was obtained from the parent's answer to a question about whether the youth was currently covered by any type of health insurance, including Blue Cross, Medicaid, Medicare, or any other type of insurance.

Family characteristics

Family History Epidemiologic (FHE) (Lish *et al.* 1995) was used to assess family psychiatric history. The parent's report of specific psychiatric symptoms in either biological parent indicated a positive history of psychopathology. Maternal educational level was assessed by whether the mother had received a high-school diploma (obtained after 12 years of schooling). Family structure referred to whether or not the

parent currently had a spouse. However, this information is lacking for the 42 (18.0%) parents who were not the youth's primary caretaker.

Academic factors

School grades were estimated from the youth's report of a summary of their grades on their last report card on a scale ranging from 1 (mostly A's) to 7 (mostly D's or below). There was no independent verification of the youths' summary of their grades.

Perceptions of mental health status and usefulness of mental health services

The parent and the youth were asked to assess the latter's current mental health on a scale ranging from 1 (excellent) to 5 (very poor). They were also asked about their perception of the usefulness of professional help for emotional or behavioural problems. For the parents, the following question was asked:

People differ a lot in their feelings about professional help for emotional or behavioral problems. If a friend of yours had a child ***'s age who had an emotional or behavioral problem, would you **definitely** recommend that she/he go for professional help, **probably** recommend that she/he go for professional help, or **definitely not** recommend that she/he go for professional help?

For the youth, the question was phrased in the same manner, except that the second sentence read as follows: 'If a friend of your age had a problem like this, would you...'

Access barriers to mental health services

Both the parent informant and the youth were asked to indicate which factors might serve as barriers to receiving professional help for the youth. If the youth had received professional help for emotional or behaviour problems or for the use of alcohol or drugs in the previous year, they were asked which factors might stop them from receiving such help. If they had seen a professional for the above reasons in the previous year and had attended fewer times than recommended, they were asked to indicate which factors were part of the reason they stopped treatment or attended on fewer occasions than recommended. If they had been referred for professional help outside of school for emotional or behaviour problems, or for the use of alcohol or drugs, or had been advised to receive such

help, but did not go, they were asked to endorse the reasons for this. Finally, if the youth had not been referred for help or had not received any such help, they were asked which factors might cause them to refrain from going for professional help if mental health services were indeed needed.

Analysis

Analysis was conducted on the combined data from all the sites. The number of youth in each need category, and the number of youth with each diagnosis who had unmet need, were calculated. The percentages of each of the potential correlates were also calculated, stratifying by whether there was unmet need or not.

To investigate further the association between unmet need and its hypothesized correlates, a series of logistic regression models was constructed. The dependent variable for each model was the dichotomous variable of unmet need compared to the remaining need categories combined. The independent variable for each model was each hypothesized correlate. Unadjusted odds ratios are provided for each independent variable. In addition, adjusted odds ratios were calculated, in which age, sex, race/ethnicity and site were entered as covariates. An odds ratio is significant at the 5% level of significance if the 95% confidence interval does not include 1.

RESULTS

Of the total sample, the proportion with unmet need (any DISC diagnosis with impairment and no mental health service use in the previous 6 months) was 17.1%, compared with the 3.8% who had met need (any DISC diagnosis with impairment but with mental health service) (Table 1). The group with met need represents

Table 2. Demographic factors: descriptive data and results of logistic regression analyses (N = 1285)

	Unmet need (N = 220)		No unmet need (N = 1065)		Unadjusted OR for unmet need (95% confidence interval)
	N	%	N	%	
Gender					
Male	116	52.7	565	53.1	
Female	104	47.3	500	47.0	1.0 (0.8–1.4)
Age					
Oldest tertile	76	34.5	368	34.6	
Middle tertile	58	26.4	371	34.8	0.8 (0.5–1.1)
Lowest tertile	86	39.1	326	30.6	1.3 (0.9–1.8)
Race/ethnicity					
White	108	49.1	555	52.1	
African American	49	22.3	141	13.2	1.8 (1.2–2.6)
Hispanic	47	21.4	314	29.5	0.8 (0.5–1.1)
Other	16	7.3	55	5.2	1.5 (0.8–2.7)
Site					
San Juan, PR	62	28.2	237	22.3	
Atlanta, GA	77	35.0	237	22.3	2.5 (1.5–3.9)
New Haven, CT	51	23.2	309	29.0	3.1 (1.9–4.8)
Westchester, NY	30	13.6	282	26.5	1.6 (0.9–2.5)

18.2% of the 269 children and adolescents who had a DISC diagnosis with impairment. Of the total sample, 76.5% had no need while 2.7% had overprovision.

Neither gender, age, nor being Hispanic (compared with White) was significantly associated with unmet need (Table 2). However, being African American (compared with White) was significantly associated with unmet need. Also, those living in Atlanta and New Haven were significantly more likely to have unmet need than those living in San Juan. However, there was no significant difference in the proportion with unmet need between the Westchester County and San Juan sites.

Table 1. Need categories (N = 1285)

DISC diagnosis	Impairment	Mental health service use in the previous 6 months	Need category	N	%
No	Not applicable	No	No need	615	47.9
Yes	No	No	No need	367	28.6
No	Not applicable	Yes	Overprovision	19	1.5
Yes	No	Yes	Overprovision	15	1.2
Yes	Yes	Yes	Met need	49	3.8
Yes	Yes	No	Unmet need	220	17.1

Table 3. *Economic, family, and academic factors: descriptive data and results of logistic regression analyses (N = 1285)*

	Unmet need (N = 220)		No unmet need (N = 1065)		Unadjusted OR (95% confidence interval)	Adjusted OR* (95% confidence interval)
	N	%	N	%		
Family on public assistance	36	16.4	92	8.6	2.1 (1.4-3.1)	2.3 (1.5-3.7)
Youth not covered by health insurance	35	15.9	92	8.6	2.0 (1.3-3.0)	2.1 (1.4-3.4)
Parental psychopathology	161	75.2	573	56.6	2.3 (1.7-3.3)	2.2 (1.5-3.1)
Mother has high-school diploma	186	84.6	922	86.6	0.8 (0.6-1.3)	1.0 (0.6-1.5)
Family structure						
Primary caretaker has a spouse	41	18.6	111	10.4		
Primary caretaker does not have a spouse	152	69.1	844	79.3	1.4 (0.9-2.1)	1.4 (0.9-2.2)
Informant not primary caretaker	27	12.3	110	10.3	2.1 (1.4-3.1)	2.1 (1.3-3.1)
School grades						
As	20	9.7	241	23.4		
As-Bs	124	59.9	621	60.4	2.4 (1.5-3.9)	2.6 (1.6-4.3)
Cs-Ds	63	30.4	167	16.2	4.5 (2.6-7.8)	5.2 (2.9-9.3)

* Adjusted for sex, age, race/ethnicity and site.

Table 4. *Perceptions of mental health status and usefulness of mental health services: descriptive data and results of logistic regression analyses (N = 1285)*

	Unmet need (N = 220)		No unmet need (N = 1065)		Unadjusted OR (95% confidence interval)	Adjusted OR* (95% confidence interval)
	N	%	N	%		
Parent report						
Opinion of youth's current mental health						
Excellent	77	35.2	612	57.5		
Good	100	45.7	358	33.6	2.2 (1.6-3.0)	2.1 (1.5-3.0)
Fair	37	16.9	84	7.9	3.5 (2.2-5.4)	3.4 (2.1-5.5)
Poor/very poor	5	2.3	11	1.0	3.6 (1.2-10.5)	3.3 (1.1-10.0)
Opinion of usefulness of professional help for emotional or behavioural problems						
Definitely recommend	155	70.8	765	72.3		
Probably recommend	52	23.7	269	25.4	1.0 (0.7-1.3)	0.8 (0.6-1.2)
Definitely not recommend	12	5.5	24	2.3	2.5 (1.2-5.0)	1.8 (0.9-3.9)
Youth report						
Opinion of own current mental health						
Excellent	45	20.6	430	40.8		
Good	108	49.3	519	49.2	2.0 (1.4-2.9)	1.7 (1.2-2.5)
Fair	59	26.9	99	9.4	5.7 (3.7-8.9)	5.1 (3.2-8.0)
Poor/very poor	7	3.3	7	0.7	9.6 (3.2-28.5)	6.8 (2.2-21.0)
Opinion of usefulness of professional help for emotional or behavioural problems						
Definitely recommend	122	56.0	665	63.2		
Probably recommend	87	39.9	359	34.1	1.3 (1.0-1.8)	1.2 (0.8-1.6)
Definitely not recommend	9	4.1	29	2.8	1.7 (0.8-3.7)	1.2 (0.5-2.7)

* Adjusted for sex, age, race/ethnicity and site.

After adjusting for selected demographic variables, unmet need was significantly associated with the family being on public assistance, the youth not being covered by health insurance, the presence of parental psychopathology and poor school grades, but not with whether the parent had a spouse (Table 3). In addition, unmet need was significantly

associated with the reports of both the parent and youth that the latter had poor mental health. However, beliefs of either informant about the effectiveness of professional mental health services were not significantly associated with unmet need (Table 4).

In contrast to their parents, young people with unmet need for mental health services were

Table 5. Access barriers to mental health services: descriptive data and results of logistic regression analyses (N = 1285)

	Unmet need (N = 220)		No unmet need (N = 1065)		Unadjusted OR (95% confidence interval)	Adjusted OR* (95% confidence interval)
	N	%	N	%		
Parent report						
Health insurance not covering this type of treatment	46	20.9	136	12.8	1.8 (1.2–2.6)	1.5 (1.0–2.2)
Treatment not helping	28	12.7	114	10.7	1.2 (0.8–1.9)	1.2 (0.8–1.9)
Problem getting better by itself	40	18.2	136	12.8	1.5 (1.0–2.2)	1.5 (1.0–2.2)
Help being too expensive	53	24.1	201	18.9	1.4 (1.0–1.9)	1.3 (0.9–1.9)
Concern about what others think	8	3.6	44	4.1	0.9 (0.4–1.9)	1.0 (0.4–2.3)
Taking too much time/inconvenience	11	5.0	17	1.6	3.2 (1.5–7.0)	3.7 (1.6–8.3)
Youth wanting to solve the problem on his/her own	60	27.3	179	16.8	1.9 (1.3–2.6)	1.8 (1.3–2.6)
Language problem	7	3.2	38	3.6	0.8 (0.4–2.0)	0.9 (0.4–2.0)
Concern about being hospitalized or taken away against parents' will	52	23.6	196	18.4	1.4 (1.0–1.9)	1.5 (1.1–2.2)
Youth refusing to go	67	30.5	205	19.3	1.8 (1.3–2.5)	1.9 (1.3–2.6)
Not trusting mental health professionals	18	8.2	63	5.9	1.4 (0.8–2.4)	1.4 (0.8–2.4)
Family members objecting	16	7.3	75	7.0	1.0 (0.6–1.8)	1.1 (0.6–1.9)
Staff being unfriendly or disrespectful	14	6.4	58	5.5	1.2 (0.6–2.2)	1.1 (0.6–1.9)
Transportation problems	18	8.2	50	4.7	1.8 (1.0–3.2)	1.7 (1.0–3.1)
Child previously not being helped	21	9.6	61	5.7	1.7 (1.0–2.9)	1.6 (0.9–2.7)
Being unsure about where to go for help	56	25.5	154	14.5	2.0 (1.4–2.9)	2.0 (1.4–2.9)
Being unable to get an appointment	11	5.0	53	5.0	1.0 (0.5–2.0)	1.1 (0.5–2.2)
Youth report						
Concern about what others (including family and friends) would think	83	37.7	371	34.8	1.1 (0.8–1.5)	1.0 (0.7–1.4)
Being unsure about where to go or who to ask for help/treatment	56	25.5	220	20.7	1.3 (0.9–1.8)	1.2 (0.8–1.7)
Worry about paying for the help/treatment	43	19.6	166	15.6	1.3 (0.9–1.9)	1.1 (0.8–1.7)
Thinking the problem would go away or be solved unassisted	73	33.2	289	27.1	1.3 (1.0–1.8)	1.3 (0.9–1.8)
Too difficult to get help (for example, being on a waiting list, not being seen without parents' consent, transportation problems)	44	20.0	177	16.6	1.3 (0.9–1.8)	1.1 (0.7–1.6)

* Adjusted for sex, age, race/ethnicity and site.

not relatively more likely to worry about payment for services, or to think that it would be too difficult to get help (Table 5). Also, the parents of young people with unmet need were relatively more likely to think that their children would refuse to go for help for emotional or behavioural problems or for the use of alcohol or drugs; although this item was not asked of the young people themselves, they gave no indication that they harboured a negative attitude to mental health services either in terms of barriers to access or when asked explicitly about their opinion about the usefulness of professional mental health services. Other barriers identified relatively more frequently by parents of young people with unmet need but not by the young people themselves referred to the problem being solved unassisted and being unsure where to go for help.

DISCUSSION

A relatively inclusive definition of mental health service use was employed, namely, any contact with a psychiatrist, psychologist, social worker or counsellor in the previous 6 months for emotional or behaviour problems or the use of drugs. It is probable that a substantial proportion of the sample defined as having used mental health services had not received the appropriate type, duration, or intensity of services that are necessary for a child or adolescent with need as defined above. It is thus probable that the proportion with unmet need is even higher than the 17.1% of the total sample calculated using the present definitions (Brewin *et al.* 1987).

Compared with the other sites, those living in San Juan received relatively low scores on the

C-GAS (Bird *et al.* 1997). This decreases the proportion with unmet need since the C-GAS score is a component of the definition of need (Bird *et al.* 1997). In Westchester county, this may be counteracted by mental health services being relatively more accessible than at the other sites (Bird *et al.* 1997).

Data from previous community-based studies have expressed service utilization in terms of the proportion of children with a diagnosis who received services. The majority of previous studies involving children or adolescents referred to lifetime or annual prevalence of service use (Whitaker *et al.* 1990; Cohen *et al.* 1991; Offer *et al.* 1991; Leaf *et al.* 1996). However, the present finding of 18.2% of those with a DISC diagnosis and impairment receiving services in the previous 6 months is comparable with the 16.1% of children aged 4 to 16 years with a psychiatric disorder who had received mental health or social services in this time period in Ontario, Canada (Offord *et al.* 1987).

Of the total sample, 6.5% had received mental health services in the previous 6 months, which comprised those with met need (3.8% of the total sample) and with overprovision (2.7%). Those with overprovision comprised those receiving mental health services either in the absence of a DISC diagnosis or, if a DISC diagnosis was present, in the absence of functional impairment. The proportion with overprovision is considerably less than the 17.1% with unmet need. It is thus obvious that the extent of unmet need would not be substantially reduced by reallocating services from those with overprovision to those with unmet need.

Hoberman (1992) has attributed the high proportion of unmet need for services among children and adolescents to parents' having difficulty in assessing the presence of a psychiatric disorder. However, in the present study unmet need was significantly associated with opinions of both the parents and the youth that the latter had relatively poor mental health, which is not consistent with a lack of insight accounting for the high proportion with unmet need. Furthermore, after controlling for demographic variables, unmet need was not associated with a pessimistic perception of the usefulness of professional help for emotional or behavioural problems. However, it is possible that this absence of a significant association can be

attributed to difficulties in understanding the question (especially by the younger children).

In contrast to these attitudinal factors, unmet need was associated with several variables that may be correlated with economic disadvantage, namely: (a) being African American; (b) being on public assistance; (c) not being covered by health insurance; (d) perceptions by the parent that services would take too much time or be inconvenient; and (e) transportation problems. The salience of economic factors for access to mental health services has been documented in previous clinic- and community-based studies of children and adolescents (Costello & Janiszewski, 1990; Hoberman, 1992; Cohen & Hesselbart, 1993). Inclusion of additional indicators of economic circumstances such as disposable income may elucidate the mechanisms whereby economic adversity contributes to the existence of unmet need for mental health services. Investigations in other countries are necessary to document the extent to which the present findings are specific to the American scenario.

It is possible that the impact of economic factors will increase in the face of the far-reaching reform in health care financing being implemented in the USA (Inglehart, 1996). There is a thrust to reduce government health care expenditure, which would disproportionately affect mental health care (Inglehart, 1996). In addition, an increasing proportion of mental health services in both the public and private sectors are provided under managed care plans, whose profits are correlated with their success in reducing expenditure on services (Inglehart, 1996).

There were several barriers to receiving mental health services that were reported more frequently by the parents of those with unmet need compared with those in other need categories. However, for barriers as perceived by the children or adolescents themselves, there were no differences between those with unmet need and the rest of the sample. It is probable that there is more than one explanation for these differences between informants. For developmental reasons, the children or adolescents may not be sufficiently knowledgeable or mature to appreciate some of the practical aspects identified by their parents, such as health insurance not covering the treatment, treatment

taking too much time or being inconvenient and transportation problems. The parents of those with unmet need were more likely to think that the youth would want to solve the problem on their own or would refuse to go, which indicates that they may have underestimated the acceptability of mental health services to their children. Whatever the reason for these differences, they suggest that access might be facilitated by: (a) increasing parental knowledge regarding mental health services; and (b) enabling the children and adolescents to make contact with services independently of their families. Of course, in almost all cases it would be desirable to involve the families in the assessment and intervention processes immediately after the initial contact with mental health services. An accessible venue that enables children or adolescents to initiate contact independently is the school (Dryfoos, 1994 *a, b*).

The relationship between scholastic progress and mental health is reflected in the associations of unmet need with low school grades. Not only could this association be ascribed to any of the components contributing to an attribution of unmet need, viz. psychopathology, impairment, and service utilization (Bebbington, 1992; Bebbington *et al.* 1996), but the causal directionality of the association is impossible to establish with the present data set. However, efforts to address either unmet psychiatric need or unsatisfactory scholastic progress that ignore the other are ill-conceived and likely to be of compromised efficacy (National Commission on the Role of the School and Community in Improving Adolescent Health, 1990).

There are also implications for intervention from the finding that unmet need is associated with parental psychopathology. As for school-related factors, these implications are valid regardless of the mechanism for the relationship. Specifically, clinicians treating adults should be aware of the possibility of unmet need in their children. This would improve the well-being of the adult (through reducing the impact of stressors) and the children.

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