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CHILD ANXIETY DISORDERS AND SERVICE UTILIZATION IN PUBLIC SYSTEMS OF CARE

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Abstract

Little is known about mental health service use among children with anxiety disorders and even less is known about these children in public sectors of care. In this study, 1715 children were randomly sampled from one of five public service systems. Psychiatric diagnoses were assessed with a structured interview and standardized measures were used to assess mental health service utilization. Data from a subsample (n = 779) of youth with psychiatric disorders were analyzed. Analyses revealed that children with anxiety disorders received more inpatient services than children with other psychiatric disorders however rates of comorbid diagnoses were substantial. Approximately 26% of children with anxiety had a comorbid depressive disorder and 62% had a disruptive behavior disorder. Comorbidity, caregiver strain, and service sector were associated with inpatient and nonspecialty service use. Findings underscore the need for evidence based interventions to be adapted to meet the complex needs of children in public sectors of care who often have multiple disorders.

Keywords

children; anxiety; mental health services; comorbidity; public sector

Anxiety disorders are among the most common diagnoses of childhood and adolescence with lifetime prevalence rates ranging between 10–20% [1–3]. Children with anxiety disorder experience considerable impairment including educational underachievement, low-self esteem, loneliness, and physical health problems[4–8]. Furthermore, anxiety is associated with risk for later disorders and comorbidity is common particularly with other anxiety disorders, major depression and substance use [9–11].

Little is known about patterns of mental health service utilization among children with anxiety disorders. In general, rates of service utilization in community samples typically range from 15–30% [12–14]. and these studies have usually classified services broadly as “counseling” or “medication.” In a study conducted in pediatric primary care, anxiety

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disorders were the most prevalent, yet least often treated psychiatric condition [12]. Overall, 31% of children with an impairing anxiety disorder had received either counseling or medication, while 40% and 75% of children with depression and externalizing disorders respectively, had received counseling or medication. Although data regarding specific types of service use are limited, in general, findings suggest that children with anxiety disorders are most often treated in outpatient or school settings, and rarely treated in inpatient settings [13].

At present, most of the data about childhood anxiety disorders comes from general epidemiological studies, specialty service settings, and privately insured samples. However children with anxiety disorders are also found in public sectors of care including child welfare, juvenile justice, mental health, alcohol and drug abuse and special education services [15]. These sectors of care represent a unique context for childhood anxiety disorders given the increased risk for mental health problems as a consequence of caregiver mental health problems, unstable income, large family size, single parent household, domestic community violence and/or other risk factors [16–17]. Furthermore, publicly funded sectors of care are also a common pathway to care for racial and ethnic minority children [18–19]. Understanding the characteristics of child anxiety in these sectors and accompanying patterns of utilization is critical to providing effective services for a broad range of children with anxiety disorders.

Additionally, understanding variables that are related to mental health service use can be useful in identifying underserved groups and those factors that facilitate or inhibit appropriate service use. Among children, various sociodemographic and clinical characteristics have been found to be important predictors of any mental health service use. In some studies, male children have higher rates of utilization than females, a difference that tends to disappear during adolescence [20]. Strong race/ethnicity disparities exist with regard to overall mental health service use [18,21–23], access to mental health outpatient visits [19], and the use of psychotropic medications [24] with Caucasians more likely to utilize services in the majority of studies; disparities which persist even when confounds such as income, insurance and clinical severity are controlled. Other studies have found that clinical variables such as level of impairment, type of impairment and comorbidity [13,20,25] as well as perceptions of need [26] (e.g., how much a problem impacts a caregiver) are particularly important when explaining patterns of utilization.

The current study will address these issues by examining mental health service utilization among children with anxiety disorders identified in public sectors of care. Unlike previous studies of children with anxiety disorders, where utilization has typically been defined as medication use or counseling, utilization of four types of mental health services (outpatient, inpatient, school, and nonspecialty services) as well as factors that inhibit or facilitate service use will be examined. The Behavioral Model of Health Service Use [27] will provide a conceptual framework for the analyses in this study identifying predisposing, enabling, and need determinants of service utilization.

METHOD

Participants

Participants in this study were a subsample (N=779) of the 1715 youths (ages 6–18) in the "Patterns of Care" (POC) study sample [15] who had one or more psychiatric disorder and for whom complete diagnostic and services use data from both the child and an adult caregiver were available. The original sample of 1715 youth were randomly selected from a list of all youths who were "active" in one or more of five San Diego County public sectors of care (alcohol and drug (AD), child welfare (CW), juvenile justice (JJ), mental health (MH), and

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public school services for youths with serious emotional disturbance (SED) during the first half of 1997 (total population = 12,662). Simple random sampling techniques with stratification by race/ethnicity and restrictiveness of care (aggregate versus home residence) were used. Data were obtained for 67% of the eligible sample in interviews completed between late 1997 and early 1999. Participants did not differ significantly from non-participants on age, gender, sector affiliation, or racial/ethnic distribution except that slightly fewer Asian-Americans participated compared to the eligible sample 15.

The 779 participants included in the analyses for this study had at least one psychiatric disorder and complete diagnostic and mental health service utilization data from both adult and child interviews. Two thirds of the sample was male. The mean age was 13.9 years (SE= .13). The ethnic distribution was as follows: 44.0% were non-Hispanic White, 22.9% were Latino American, 18.7% were African American, 5.9% were Asian American/Pacific Islander, 5.0% were biracial, and 3.4% were other. Most of the parent/caregiver informants were biological parents (68%) while others included foster, adoptive, step-parents, and professional caregivers.

Procedure and Measures

Written informed consent was obtained from the parent and assent from the youths. Parents and youths were interviewed individually regarding the youth's mental health use, needs, and a variety of factors associated with mental health service use (e.g., caregiver strain, family income). Interviews were conducted in English or Spanish, depending on the participant's preference. The interview procedures averaged three hours and parents and youth were compensated (up to $40) for their time. Interviewer training and reliability checks have been described previously and reliability estimates were good [15,28].

Various diagnostic and service utilization measures were used in this study and are described below. Measures are categorized according to Andersen's conceptual model of service [27] which includes predisposing, enabling, and need factors as determinants of service use. More specifically, predisposing factors include demographic (e.g., age and gender) and social structure (e.g., education, ethnicity, marital status, occupation) characteristics of individuals. Enabling factors are those variables which facilitate or inhibit access to service use (e.g., insurance, transportation, childcare, language, time). Organizational factors (e.g., type of provider and health services organizations) and social support systems can also be included here. The need domain consists of both perceived need (the way people view their own health in terms of severity, impairment, level of burden and impact on life functioning), and evaluated need (the severity of an illness as assessed by a professional).

Predisposing Characteristics—Demographic information was obtained through a series of standardized questions for parent and child age, child gender, parent marital status (married/not married), race/ethnicity and parent highest level of education. Race/ethnicity was coded as non-Hispanic white or Other; the Other category included Latino Americans, Asian American/Pacific Islanders, and African Americans. Parents' highest level of education was coded as no high school, high school diploma, community college, or college degree.

Enabling Characteristics

Insurance: Information was also obtained regarding insurance coverage for mental health care and coded as no insurance, private insurance or government program funding.

Sector: Children were identified from one of five public sectors of care. Mental health affiliated sectors included county mental health, alcohol and drug services, and school

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special education programs. Non-mental health sectors included juvenile justice and child welfare services.

Need Characteristics

Diagnostic Interview Schedule for Children - IV (DISC-IV) [29]: The computer assisted parent and youth versions of the DISC-IV assessed DSM-IV psychiatric diagnoses during the past year. The reliability and validity of the DISC is well supported 29. To reduce interview duration, the mood and anxiety modules were administered to youths older than age 8, given some findings which suggest that adolescents are the best informants for internalizing disorders [30]. This section included major depressive disorder, dysthymia, manic episode, generalized anxiety disorder, separation anxiety disorder, social phobia, post traumatic stress disorder, panic disorder, and obsessive compulsive disorder. The disruptive behavior disorder module was administered to both informants and diagnoses were considered present if either respondent's report met diagnostic criteria using the DISC-IV scoring algorithms (including diagnostic specific functional impairment). These modules included: attention deficit hyperactivity disorder, conduct disorder, and oppositional defiant disorder.

Children's Global Assessment Scale (C-GAS) [31]: The C-GAS was used as a measure of global functional impairment; interviewers assigned ratings on the C-GAS following the completion of the youth and parent interviews. The standard cut-off of 60 was used to designate clinically significant functional impairment [32].

Caregiver Strain Questionnaire (CGSQ) [33]: The CGSQ assessed the parents' perceptions of the burden or impact of caring for a child with behavioral problems. The reliability and validity of this 21 item self-report measure are well supported [33].

Comorbidity: The number of DISC-IV psychiatric disorders was summed. Comorbid diagnoses were categorized using a scale of 0–4 where "0" represented the absence of comorbidity, 1= one additional disorder (including comorbid anxiety disorders), 2= two additional disorders, 3 = 3 additional disorders, and 4 = four additional disorders.

Outcomes

Services Assessment for Children and Adolescents (SACA) [34]: Parent and youth versions of the SACA assessed use of different types of mental health and substance abuse services. Only past year service use is examined in this study and SACA test-retest reliability for past year service use is excellent for parent informants and is good for youth informants over age 10 [34]. Service use was considered positive if endorsed by either the parent or the youth. The following types of services were assessed [18,35]:

1. Inpatient services including in-patient psychiatric hospital or psychiatric unit within a hospital, residential treatment center/group home, and/or in-patient alcohol-drug treatment.
2. Out-patient services including visits to a psychologist, counselor, community mental health clinical and/or partial hospitalization or day treatment program.
3. School services including any school counseling, special help in regular classroom, placement in a special classroom, or placement in special school.
4. Non-specialty out-patient services including visits to a family doctor, pediatrician, or emergency room for emotional/behavioral issues, or the use of an in-home counselor.

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Statistical analyses—All analyses were conducted with SPSS 14.0 Complex Samples Module [36] which allows for sample design specifications and weighting to be incorporated into the analyses. Chi square analyses were conducted to examine service utilization among children with anxiety disorders, when compared to children with other psychiatric disorders (i.e., disruptive and depressive disorders). Thereafter, chi-square analyses were conducted comparing each specific DSM child anxiety disorder (e.g., PTSD, GAD, Social Phobia, Separation Anxiety Disorder, OCD) to the non-anxiety psychiatric group; four types of services were examined. Based on Andersen's Behavioral Model of Health Service Use, the relationships between predisposing, enabling, and perceived need characteristics and specific types of mental health service use were examined for children with anxiety disorders. Pre-screening of bivariate relationships using logistic regression analyses allowed for models that were appropriate for smaller sample sizes. All variables that were significant at $p < .15$ were retained for the multivariate logistic regression models predicting service use. Separate analyses were conducted for each of the four service types.

RESULTS

Sociodemographic and clinical characteristics

The sociodemographic and clinical characteristics of children with anxiety disorders and those in the non-anxiety psychiatric comparison group are presented in Table 1. Overall, children with an anxiety disorder diagnosis were equally represented across all service sectors. The only demographic difference between groups was the presence of fewer boys in the anxiety disorder group. Clinically, ratings of caregiver strain and global functioning (as determined by either youth or parent report) were similar across the anxiety disorder group and non-anxiety psychiatric comparison group.

Anxiety prevalence and comorbidity

All DSM-IV anxiety disorders were present in this public service sector sample, except for specific phobias and anxiety not otherwise specified, which were not assessed as part of the diagnostic interview. Among the 779 children with psychiatric disorders, the rate of any anxiety disorder was 21% (n = 162) with highest rates found for separation anxiety disorder (SAD) (10%, n = 76) and lowest for panic disorder (PD) (.4%, n =3). Rates were 2% (n = 19) for generalized anxiety disorder (GAD), 5% (n = 36) for post-traumatic stress disorder (PTSD), 4% (n = 35) for obsessive compulsive disorder (OCD), and 6% (n =49) for social phobia (SOC). Among children with anxiety disorders, the comorbidity rate with another anxiety disorder was 23.2%. The comorbidity rate was 26.1% with any depressive disorder and 62% with any disruptive behavior disorder (including ADHD).

Patterns of service utilization for children with anxiety disorders

As shown in Table 2, children with any anxiety disorder diagnosis were more likely to receive inpatient services compared to children in the non-anxiety psychiatric comparison group. Similarly, children who had a generalized anxiety disorder (GAD), separation anxiety disorder (SAD), obsessive compulsive (OCD) disorder, or post-traumatic stress disorder (PTSD) diagnosis were more likely to use inpatient services compared to those in the non-anxiety psychiatric comparison group. No differences were found for outpatient, school, or nonspecialty services when compared to the non-anxiety psychiatric comparison group.

Factors influencing Service Utilization

The next step was to assess those factors that were inhibiting or facilitating various types of service use among children with anxiety disorders (n =162). As derived from Andersen's Behavioral Model of Health Service Use, predisposing, enabling, and need characteristics

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were prescreened to identify those variables that shared a bivariate relationship with various types of service use. Potential predisposing characteristics included child gender, child age, child ethnicity, parent marital status and education level. Enabling factors included insurance type and service sector. Need characteristics included type of anxiety disorder, number of comorbid disorders, type of comorbidity (e.g., comorbid with a depressive disorder or comorbid with a disruptive behavior disorder), caregiver strain, and global functioning (based on CGAS cutoffs). Logistic regression analyses were conducted and those variables with a significance level of $p < .15$ were retained for the final multivariate models (shown in Table 3).

As shown in Table 3, among children with anxiety disorders, both comorbidity and service sector shared a statistically significant relationship with inpatient use. Children with anxiety who had comorbid conditions were more likely to receive inpatient services than those without comorbidity and children who were identified from “mental health affiliated sectors” (i.e., alcohol and drug (AD), mental health (MH), and public school services for youths with serious emotional disturbance (SED)) were also more likely to have received inpatient services than those from non-mental health affiliated sectors (child welfare and juvenile justice). Insurance type was also significant (particularly private insurance vs. no insurance) however this finding should be interpreted with caution given a confidence interval which includes 1. Lastly, caregiver strain was associated with use of non-specialty services including physician and emergency room visits. There were no significant relationships between outpatient and school services with any of the included variables.

DISCUSSION

The findings from this paper are some of the first to characterize children with anxiety disorders in public sector service systems. Descriptive findings suggest that child anxiety disorders are common in these sectors, accounting for 21% of the total sample of children with psychiatric disorders. Findings suggest that children with anxiety disorder are most commonly served by school and outpatient services and less often by nonspecialty and inpatient services. Similar patterns are found in community samples however given the high-risk characteristics of this group, utilization rates are much higher. Important to note, children with anxiety disorders had impairment and caregiver strain ratings that were similar to children with other psychiatric disorders including disruptive behavior and depressive disorders.

Comparisons of service use among children with anxiety disorders compared to other psychiatric disorders were significant for inpatient services only; that is, children with an anxiety disorder diagnosis were more likely to use these services than children with non-anxiety psychiatric disorders. A similar pattern was also present for specific anxiety disorders: Children with GAD, SEP, OCD, and/or PTSD had higher rates of inpatient use than the non-anxiety psychiatric comparison group. In general, OCD and PTSD are frequently perceived as being more debilitating than other anxiety disorders and in their most severe form requiring intensive services. In addition, anxiety disorders, particularly during adolescence and young adulthood, are often associated with increased rates of suicidal ideation and suicide attempts [11,37], potentially increasing rates of inpatient service use. The overall high-risk nature of this sample as well as the presence of comorbidity may moderate this relationship, however some studies have found that the association between suicidality and anxiety persists even when such confounds are controlled [37–38].

In order to better understand those factors that might be contributing to service utilization among children with anxiety disorders, variables that could be important facilitators and inhibitors of four types of service use were examined. The findings which emerged from

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these analyses revealed that few variables were significant predictors of service use among children with anxiety disorders. Demographic factors such as child age, child gender, parent marital status, and ethnicity (Non Hispanic White/Other) were not related to service use in this sample. Of the enabling characteristics, only sector emerged as statistically significant; that is, service use was related to the sector from which the child was recruited. Children identified in mental health affiliated sectors (which included county mental health, alcohol and drug abuse services, and special education) were more likely to use outpatient and school services than children recruited from child welfare and juvenile justice. Need characteristics (both perceived and evaluated) emerged as being most important for children with anxiety disorders. For example, caregiver strain was related to non-specialty care. Non-specialty care includes visits to a child's pediatrician or other medical providers, as well as in-home services. For many parents, a subjective sense of how much a problem is interfering and what type of interference it is causing affects their decision to request a referral or seek treatment [39–41]. Furthermore previous studies suggest that caregiver strain is a rather robust predictor of service use and often more important than impairment or type of diagnosis 26. Given the extensive comorbidity in this sample, it is likely that both internalizing and externalizing symptoms contributed to caregiver strain.

While no specific anxiety disorder was significantly associated with any of the four utilization types, there was a relationship between comorbidity and greater inpatient service use. Interestingly, findings revealed that this relationship was not accounted for by specific type of comorbidity (i.e., comobidity with either a depressive or disruptive disorder) but more likely by the additive effect of having multiple comorbidities. Generally, rates of comorbidity between anxiety disorders and disruptive behavior disorders range from 20–40% [42–44] however in the current group the comorbidity rate was 62%. Rates of comorbid depression usually range from 11–69% 42; in this sample, the rate of a comorbid depressive disorder was 26%.

The extensive comorbidity in this sample is understandable given increased vulnerability and exposure to multiple risk factors among the participants. However such findings are particularly important when considering service delivery and treatment planning. The presence of comorbid anxiety and depression is associated with more severe depressive symptoms and suicidality over time when compared to children with depression only [11]. Comorbid anxiety with disruptive behavior disorders may affect both functioning and treatment outcome 45–49. Some data suggest that children with comorbid ADHD and anxiety respond less well to stimulant medication and get more unpleasant arousal side-effects 50–[53]. The Multimodal Treatment Study of Children with ADHD did not find that children with comorbid anxiety (32% of the sample) did worse with stimulant medication, but did find that the presence of anxiety disorders was associated with a preferential response to behavioral treatment [54].

Limitations

This study is limited by the smaller sample size of the anxiety disorder group. The smaller sample sizes are most noteworthy when specific anxiety diagnoses are considered. In addition, the extensive comorbidity in this sample makes it difficult to isolate the effects of having an anxiety disorder diagnosis. A "pure" anxiety diagnostic group would have included a total of 32 subjects with any anxiety disorder and would likely have obscured the clinical complexity of children with anxiety disorders in this high-risk sample.

The participants in this study are from San Diego County and therefore findings may not be generalizable to other regions. Also, the rate of participation was 67%, which may mean that youth who were most difficult to locate or least willing to participate are not represented. However, the sociodemographic characteristics of participants and non-participants were

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comparable except for a slightly lower participation rate by Asian Americans [15]. Furthermore, this is a high-risk sample of youth who have had some contact with public service systems of care and therefore more likely to receive any type of service use. Consequently, study findings are likely to be inconsistent with those from general community and clinic samples of children with anxiety disorders; at the same time, a greater understanding of the unique characteristics of children who come from high-risk samples is a strength of this study.

Lastly, it is important to recognize that there are limitations to using traditional models of service utilization developed for adults to explain mental health service utilization for children in public service systems of care. These models do not account for the multiple pathways to care nor do they consider the multiple influences of parents, judges, caseworkers, caregivers, and other adults when decided whether a child receives care or has access to a given service.

Implications for Behavioral Health

Most of the knowledge about children with anxiety disorders comes from community samples or clinical research samples, however, children in the public sector are a group of high-risk youth with unique needs. In this study, child anxiety disorders were common and found across all five public sectors of care. In general outpatient and school services were most frequently received by children with anxiety disorders. Relative to other psychiatric disorders, children with anxiety disorders received more inpatient care however this is likely explained by the substantial comorbidity and caregiver strain associated with having multiple disorders. From a clinical standpoint, providers need to be aware of the complex needs of children identified in public sectors of care. Children with anxiety disorders in this setting are likely to present with significant levels of both internalizing and externalizing symptoms complicated by traditional problems associated with socioeconomic disadvantage. Evidence based interventions which typically focus on one disorder at a time, will likely be suboptimal for these families, and additional interventions directed at disruptive behaviors will likely be necessary in these samples of high risk youth. Already interventions are being developed to treat concurrent internalizing and externalizing problems in school settings [55] but more research is necessary particularly in high risk public service settings where such comorbidity will be most common.

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Table 1

Characteristics of Youths age 6–18 from a publicly funded system of care by anxiety disorder status (N = 779).

	Children with anxiety disorders N = 162	Non-anxiety psychiatric comparison group[a] (N = 617)	Analysis
Child Gender (male)	56.1%	69.4%	**OR=.56 (.37–.87)***
Non Hispanic White	45.5%	43.6%	OR=1.1 (.70–1.7)
Latino American	24.2%	22.6%	OR=1.1 (.64–1.9)
African American	19.5%	15.5%	OR=.76 (.41–1.4)
Asian American	7.1%	5.6%	OR=1.3 (.60–2.7)
Child Age (years old)	M = 13.64 (SE = .37)	M = 13.99 (SE= .14)	p = .39
Insurance			p = .77
No insurance	8.1%	10.3%	
Private Insurance	33.2%	34.6%	
Government program	58.7%	55.2%	
Level of education			p= .48
No degree	26.3%	19.3%	
High school	44.1%	45.6%	
Community College	19.6%	23.4%	
University	9.9%	11.7%	
Sector			
Alcohol	5.4%	3.5%	OR= 1.6 (87.-2.8)
Mental Health	65.2%	60.0%	OR= 1.3 (.80–2.0)
School Special Education	22.7%	19.6%	OR = 1.2 (.81–1.8)
Juvenile Justice	24.3%	29.5%	OR = .95 (.86–1.1)
Child Welfare	29.6%	24.5%	OR = 1.3 (.78–2.2)
Marital status (married)	38.2%	43.2%	OR=.81 (.52–1.3)
Caregiver burden	M = 2.53 (SE =.08)	M = 2.46(SE = .04)	p = .47
Functioning (CGAS <=60)	66.4%	56.9%	OR=1.5 (.94–2.4)

[a]Includes children with any non-anxiety psychiatric disorder.

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Table 2

Services used by children with anxiety disorders relative to the non-anxiety psychiatric comparison group (N = 779).

	Any Anxiety Disorder n = 162 **%** **OR** **95% CI**	**GAD n = 19** **%** **OR** **95% CI**	**SEP n = 76** **%** **OR** **95% CI**	**SOC n = 49** **%** **OR** **95% CI**	**OCD n = 35** **%** **OR** **95% CI**	**PTSD n = 36** **%** **OR** **95% CI**
Outpatient	72.2	54.2	66.1	81.3	72.5	68.7
	OR=1.13	OR .49	.81	1.9	1.1	.93
	.68–1.7	.17–1.5	.41–1.6	.84–4.3	.46–2.8	.32–2.8
Inpatient	**27.6**	**41.8**	**29.9**	22.2	**33.8**	**37.4**
	2.2	**3.5**	**2.2**	1.4	**2.6**	**3.0**
	1.3–3.6**	**1.2–10.4***	**1.2–4.3***	.64–3.0	**.95–6.8***	**1.2–7.4***
School	63.5	68.3	67.2	53.1	80.3	56.0
	.88	1.1	1.1	.57	2.2	.65
	.55–1.4	.33–3.7	.55–2.1	.28–1.2	.77–6.2	.27–1.6
Nonspecialty	24.8	34.1	24.7	21.2	32.8	32.6
	1.1	1.7	1.1	.90	1.7	1.7
	.73–1.8	.58–5.4	.61–2.0	.43–1.9	.72–4.0	.73–3.8

Note: GAD = generalized anxiety disorder; SEP = separation anxiety disorder; SOC= social phobia; OCD = obsessive compulsive disorder; PTSD = post-traumatic stress disorder.

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Table 3

Logistic regression analyses assessing inhibitors and facilitators of four types of service use among children with anxiety disorders (n = 162)

	Inpatient		Outpatient		School		Nonspecialty	
	OR	CI	OR	CI	OR	CI	OR	CI
Child Gender	--	--	--	--	--	--	--	--
Child Age (6–18)	--	--	--	--	--	--	--	--
NonHispanic White	--	--	--	--	--	--	--	--
Married	--	--	--	--	--	--	--	--
Education (1–4)	--	--	1.6	.93–2.8	--	--	--	--
Insurance[a]			--	--	--	--	--	--
Private	4.5	.78–26.0						
Government	1.5	.24–8.8						
Mental health sector	**7.0****	**1.8–26.5**	--	--	**5.4***	2.0–14.5	--	--
Caregiver strain	.93	.50–1.7	1.5	.82–2.7	--	--	**1.9***	**1.04–3.7**
CGAS (<=60)	3.1	.80–12.0	--	--	--	--	3.4	.97–12.2
Sum of comorbid disorders (0–4)	**1.7***	**1.1–2.6**	--	--	--	--	.85	.53–1.4
Comorbid DD	--	--	--	--	--	--	--	--
Comorbid DBB	--	--	--	--	--	--	1.9	.50–7.5
GAD	--	--	.36	.12–1.1	--	--	--	--
OCD	--	--	--	--	3.4	.88–13.0	--	--
SOC	--	--	--	--	--	--	--	--
PTSD	--	--	--	--	--	--	--	--
SEP	--	--	--	--	--	--	--	--
	F	P	F	P	F	p	F	P
	4.1	**.001**	2.20	.09	**6.6**	**.002**	**4.34**	**.002**

Note. “--“ Bivariate relationship not significant therefore not included in final multivariate model.

[a]Reference group is no insurance. All other categorical variables are dichotomous.

GAD = generalized anxiety disorder; SEP = separation anxiety disorder; SOC = social phobia; OCD = obsessive compulsive disorder; PTSD = post-traumatic stress disorder; DD = Depressive Disorder; DBB = Disruptive Behavior Disorder.