

# Diagnostic Profiles Associated With Use of Mental Health and Substance Abuse Services Among High-Risk Youths

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**This study examined use of mental health services by 947 high-risk youths in a publicly funded system of care to determine how single and comorbid diagnostic profiles (psychiatric and substance use disorders) were associated with use of a variety of types of formal and informal services. Use of professional services was most likely for youths with non-substance use psychiatric disorders, those with comorbid disorders, and those for whom high caregiver strain was reported. Use of informal services, such as peer support groups, was most likely for youths with substance use disorders, those with comorbid disorders, and those who had had police contact. Unmet need for mental health services was greatest among youth with substance use disorders only. (*Psychiatric Services* 54:562–564, 2003)**

Underuse of mental health services by adolescents with psychiatric disorders is a significant public health problem (1). Youths who have had contact with public service sectors

such as child welfare, juvenile justice, and mental health services are a particularly high-risk group with elevated rates of psychiatric disorders (2,3). These youths have relatively high rates of mental health service use, but little is known about what types of services are used by youths with different diagnostic profiles.

Adults with psychiatric comorbidity—the co-occurrence of a substance use disorder with another psychiatric disorder—are more likely to use mental health services than those with a single diagnosis (4), but this relationship has not been demonstrated among youths. The purpose of this study was to examine how single and comorbid diagnostic profiles are associated with the use of a variety of mental health services among youths in public service sectors; the study controlled for the effects of other sociodemographic and family variables known to predict service use, including age, gender, race, caregiver strain, and police contact.

## Methods

### Participants

Participants were a subgroup of all youths whose cases were active in one or more of five San Diego County public sectors of care—child welfare, juvenile justice, special education, alcohol and drug, and mental health—from January through June 1997. Interviews were completed between October 1997 and February 1999, and complete data were obtained for 1,715 (66 percent) of the eligible

sample (3). The 947 participants were aged 13 to 18 years.

Sample weights were assigned to represent the original sample of all youths in the system of care. All numbers reported reflect actual numbers available for analysis; percentages reflect sample weighting procedures.

Of the study subsample of 947, a total of 628 youths (66 percent) were male. The mean±SD age was 15.9±1.6 years. The racial and ethnic distribution was 341 (33 percent) Caucasian, 272 (32 percent) Latino, 194 (21 percent) African American, 75 (8 percent) Asian American or Pacific Islander, and 65 (7 percent) multiracial or other.

### Procedure and measures

To assess past-year psychiatric disorders, youths and their parents were interviewed individually with the youth and parent reports of the Diagnostic Interview Schedule for Children (DISC-IV) (5). The youths were assessed for substance use disorders with the youth report of the Composite International Diagnostic Interview—Substance Abuse Module (CIDI-SAM). Youths were assessed for functional impairment with the Children's Global Assessment Scale and the Columbia Impairment Scale. Youths and their parents were interviewed about service use with the parent and youth reports of the Services Assessment for Children and Adolescents (SACA) (6). Parents were administered the Caregiver Strain Questionnaire (7).

Youths were classified into five diag-

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**Table 1**

Associations between model variables and the use of public mental health services by 947 youths

Variable <sup>a</sup>	Professional service						Any informal service <sup>e</sup>		Any professional or informal service <sup>f</sup>	
	Any outpatient <sup>b</sup>		Any 24-hour care <sup>c</sup>		Any professional <sup>d</sup>		OR	95% CI	OR	95% CI
	OR	95% CI	OR	95% CI	OR	95% CI				
<b>Demographic characteristic</b>										
Age	.88*	.78–.99	1.06	.91–1.23	.91	.81–1.03	1.24**	1.05–1.45	.95	.84–1.08
Sex, female	2.13***	1.45–3.12	1.63*	1.02–2.62	2.17***	1.46–3.24	.84	.53–1.32	1.81**	1.19–2.77
Race, white	2.05***	1.38–3.05	1.27	.79–2.04	2.15***	1.42–3.28	1.24	.78–1.96	1.93**	1.23–3.01
Model F (df=3, 936)	8.79***		1.90		7.92***		2.66*		4.46**	
<b>Family social factor</b>										
Reported caregiver strain	1.56*	1.03–2.38	2.70**	1.51–4.82	1.82**	1.17–2.82	1.58	.89–2.82	2.15**	1.34–3.46
Reported police contact	.47***	.32–.70	.85	.53–1.37	.52**	.35–.78	3.85***	2.19–6.74	.59*	.39–.90
Contact with alcohol and drug treatment services sectors	1.02	.70–1.49	5.32***	2.34–12.1	1.23	.84–1.81	1.31	.79–2.18	1.27	.84–1.91
Model F (df=6, 933)	5.61**		12.31***		6.20***		10.49***		5.98***	
<b>Diagnostic group</b>										
Comorbid diagnoses	2.56**	1.40–4.69	2.25	.70–7.19	2.07*	1.11–3.86	2.95**	1.36–6.40	2.88**	1.45–5.71
Psychiatric disorders only	2.29**	1.39–3.78	1.26	.47–3.38	1.85*	1.11–3.08	1.08	.48–2.46	1.94*	1.17–3.21
Substance use disorders only	1.46	.57–3.73	1.73	.34–8.86	.97	.38–2.44	3.14*	1.23–8.57	1.51	.62–3.68
No diagnosis, with impairment	1.45	.82–2.55	1.29	.43–3.84	1.19	.66–2.13	1.43	.60–3.44	1.36	.76–2.46
Model F (df=10, 929)	3.31*		.89		2.12		4.22**		2.84*	

<sup>a</sup> Age was entered as a continuous variable; reference groups for other variables were as follows: male sex, nonwhite race, low caregiver strain, no police contact, and no contact with alcohol, drug, or mental health service sectors. Diagnostic groups were entered with dichotomous “dummy variable” coding.

<sup>b</sup> Includes visits to a professional psychologist, counselor, mental health clinic, day treatment program, and outpatient alcohol-drug treatment facility and visits to a pediatrician, another M.D., emergency room, and use of in-home therapy for emotional or behavioral reasons

<sup>c</sup> Includes psychiatric hospitalization or use of residential treatment center or group home

<sup>d</sup> Includes all service types listed above except informal services

<sup>e</sup> Includes self-help groups and peer counseling

<sup>f</sup> Includes all outpatient, 24-hour care, and informal service types listed above

\* $p < .05$

\*\* $p < .01$

\*\*\* $p < .001$

nostic groups: comorbid psychiatric and substance use disorders (N=174), psychiatric disorder only (N=385), substance use disorder only (N=58), no diagnosis with functional impairment (N=143), and no diagnosis and no functional impairment (N=187). Within each group that had a diagnosis, youths could have multiple diagnoses; for example, youths in the group with psychiatric disorders only could have multiple non-substance use diagnoses.

Mental health services were classified into three groups: professional outpatient, 24-hour care, and informal. Professional outpatient included visits to a professional psychologist, counselor, mental health clinic, day treatment program, and alcohol-drug treatment facility; visits to a pediatrician, another type of M.D., and the

emergency department; and in-home therapy for emotional or behavioral reasons. Included in 24-hour care were psychiatric hospitalization and a residential treatment center or group home. Informal services included peer counseling, support groups, and alternative healers. Two summary categories were created: any professional care, which included professional outpatient and 24-hour care; and any service, which included all professional and informal services.

Chi square analyses tested for significant differences in service use rates across diagnostic groups. Multiple logistic regression analyses tested whether these differences remained when the analysis controlled for the effects of potential confounders such as sociodemographic characteristics and

caregiver strain. All analyses were conducted with STATA, version 7.0, with data weighted to represent the system-of-care population.

## Results

Rates of service use were high: 693 youths (70 percent) received some kind of service, including informal services such as peer support. Significant differences were found across diagnostic groups in rates of use of any service and in use of each category of service except 24-hour care. Youths with psychiatric disorders, with or without comorbid substance use disorders, were most likely to receive any service and to receive professional outpatient services. For example, of the 385 youths with only psychiatric disorders, 273 (70 percent) received outpa-

tient services, whereas, of the 58 youths with only substance use disorders, 29 (46 percent) received outpatient services, including substance abuse treatment.

Youths with substance use disorders, with and without comorbid psychiatric disorders (N=232), were most likely to receive informal services: 106 (46 percent) of these youths received such services. In comparison, of the 385 youths with only psychiatric disorders, 72 (17 percent) received informal services. Unmet need was greatest for youths with substance use disorders only: 22 (37 percent) of that group did not receive any type of mental health service, compared with 26 (19 percent) of those with comorbidity and 79 (23 percent) of those with psychiatric disorders only.

Table 1 shows that diagnostic group had a significant association with the likelihood of use of professional outpatient, informal, and any mental health service after the effects of other potential confounders were controlled for. For example, youths with comorbid psychiatric and substance use disorders were significantly more likely to receive outpatient services than were those with no diagnosis and no impairment. Other significant predictors of outpatient service use included younger age, female sex, white race, high caregiver strain, and no police contact. Diagnoses were not significantly associated with 24-hour care, but female sex, high caregiver strain, and contact with the alcohol, drug, or mental health service sectors did predict such use. Significant predictors of the use of informal services were older age, police contact, comorbid diagnoses, and diagnosis of substance use disorder only. Predictors of any service use included female gender, white race, no police contact, high caregiver strain, comorbid diagnoses, and psychiatric diagnoses only. Youths with substance use disorders only were no more likely to use a mental health service than those with no diagnosis and no impairment.

## Discussion

Service use rates in this high-risk sample are much higher than for community samples of youths (1), but significant discrepancies by diagnostic pro-

file were found. Youths with non-substance use psychiatric disorders were likely to receive professional mental health services, whether or not they also had a substance use disorder. Use of professional services by youths with psychiatric disorders only and youths with comorbid disorders were equivalent; thus having a comorbid substance use disorder did not significantly elevate the likelihood of receiving mental health services. It is a matter for concern that 46 (30 percent) of those with comorbid disorders did not receive any professional services, given that these youths are at high risk for maladaptive outcomes (8).

Unmet need for services was greatest for the 58 youths with a substance use disorder only. They were most likely to receive informal services, but 29 (55 percent) received no formal services and 22 (37 percent) received no services at all. Given that these youths had substance abuse problems serious enough to meet *DSM-IV* criteria, it is a matter for concern that so many were receiving no treatment. In addition, the effectiveness of informal services, such as 12-step programs, for youths is debatable (9).

One finding, consistent with much of the literature, was that one of the strongest predictors of use of professional services was parents' reported objective and subjective burden in caring for their child (7). However, caregiver strain did not predict the use of informal services; the strongest predictor was police contact, which was significantly associated with a lower likelihood of professional outpatient service use. Apparently the juvenile justice system prefers to refer youths to peer support services.

## Conclusions

Equitable and efficient delivery of effective mental health services to youths with psychiatric disorders is essential for reducing individual and societal costs as these youths age into adulthood. Discrepancies in service use such as those identified here should be addressed by more aggressive outreach and training for "gateway providers" in multiple service sectors to improve identification and referral (10). Of particular concern is the apparent lack of attention to youths with

substance use disorders. More research on the complex processes of problem identification, help seeking, and referral is needed to identify the greatest barriers to service use. ♦

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