Criminal Behavior and Emotional Disorder: Comparing Youth Served by the Mental Health and Juvenile Justice Systems

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Abstract

This study explored whether youth involved in joint service systems differed from single-agency users in terms of types of crimes committed and clinical functioning. Data from 4,924 youth involved in one county's public mental health and juvenile justice service systems were examined. Twenty percent of those youth receiving mental health services had recent arrest records, and 30% of youth arrested received mental health services. Of all youth arrested in the county, mental health service users had more arrests than non–mental health service users. A subsample of 94 mental health service users with arrests was matched on demographics with 94 mental health service users without arrests. Youth with arrests had a higher frequency of conduct disorder, higher Child Behavior Checklist Externalizing and Total Problem Scale scores, and more functional impairment on the Child and Adolescent Functional Assessment Scale as compared to youth without arrests. Implications for behavioral health service delivery were discussed.

Public fear of an increase in juvenile crime is fueling debates about how, and even whether, youth with criminal offenses should be rehabilitated. Often ignored in such debates is that a proportion of those youth who are involved with the juvenile justice system have mental health (MH) disorders that may be treatable.[1,2] Although some juvenile delinquents with MH needs receive MH services, the degree of overlap between youth with mental disorders and youth who commit crimes has been sparsely documented or explored. Few robust epidemiological studies exist that can provide accurate national prevalence rates of mental disorders in the youth served by the juvenile justice system.[3] Information regarding the number and type of crimes committed by youth in the MH system is similarly lacking.[4]

Interest in the relationship between psychopathology and criminology dates back to the nineteenth century.[5,6] An abundance of research establishes the complex nature of the relationships between mental illness and criminal activity in adults.[7,8] Similar research examining the relationship between delinquency and psychopathology in children and adolescents[6,9] is plagued by a nosological dilemma: the individual and situational variables that are often associated with antisocial behavior and delinquency[10-12] are also commonly related to specific mental disorders.[13] These common underlying variables lead to a large overlap between the population of youth involved in juvenile crime and those with a diagnosable mental disorder.

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Although estimates differ considerably, there is ample evidence that juvenile offenders are beset with emotional difficulties. Prevalence rates for conduct disorder (CD) are high, ranging from 10% to 91%, with a majority of studies reporting rates between 50% and 90%.[3, 14] This is not surprising considering that the *Diagnostic and Statistical Manual 4th Edition* (*DSM-IV*) criteria for a CD diagnosis include several types of delinquent behavior (e.g., physical assault, vandalism, and theft).[15] Nonetheless, substantial evidence for the presence of other categories of mental disorders has been documented among delinquent populations. Results from a review of four studies of juvenile delinquents found the rate of attention deficit disorder to range from 19% to 46%.[14] Prevalence rates of major affective disorders in a sample of incarcerated juvenile delinquents ranged from 38% to 50%.[3] Furthermore, study results indicated higher rates of internalizing (e.g., symptoms of depression and anxiety) as well as externalizing problems (e.g., aggression, defiance, hyperactivity) among a sample of incarcerated juvenile offenders than among a matched control group of nonoffenders.[16] Cohen et al.[17] found that youth incarcerated in a detention center and youth residing in psychiatric hospitals had similar behavioral and emotional profiles. Consequently, considerable evidence exists to support the supposition that youth with delinquent behaviors frequently have comorbid MH disorders.[18]

Likewise, youth with emotional and behavioral disorders served in community MH settings commit crimes. Vander Stoep, Evens, and Taub[4] found that children served by community-based public MH systems were approximately three times as likely to be referred to the juvenile justice system than youth in the general population. Findings from Fort Bragg, North Carolina, indicated that 38% of youth referred for MH services had prior contact with the juvenile justice system.[19] Finally, a study examining youth with severe emotional disturbance served by a continuum of MH care found that 44% of participants were involved with the juvenile justice system.[20]

Youth with concomitant delinquent behavior and emotional and behavioral disorders have multifaceted problems presenting in multiple contexts including home, school, and community. Individual agencies in isolation may not be equipped to deal with the complexity of these youths' impairment. Current interventions acknowledge the multisystemic needs of delinquents with mental disorders at both the level of the clinical interventions[1] and at the level of system structure and organization.[2] At the level of system structure and organization, the integrated systems of care approach underlies many new efforts at serving youth with multisystemic needs. The data for this study derive from a California county that is implementing this approach as part of the Center for Mental Health Services' (CMHS's) Child Mental Health Initiative. The aim of this study is to better understand characteristics of youth served jointly by MH and juvenile justice agencies within a system of care. Similar to Vander Stoep, Evens, and Taub,[4] the present study seeks to explore youths' involvement in public MH services and the juvenile justice system. Whereas Vander Stoep, Evens, and Taub examined the relative risk of criminal referrals and crime typology for youth receiving MH services, the current study explored whether youth involved in joint service systems differed from single-agency users in terms of types of crimes committed and clinical functioning.

Specifically, this study poses two key questions: (1) For youth who have been arrested in one county, do the types and frequency of crimes committed differ for public MH service users and non–mental health (non-MH) service users? (2) For MH service users, does functional status differ for youth with and without recent arrest records?

Method

Design

Participants consisted of all youth served by a public MH agency or arrested between April 1995 and June 1998 in Sonoma County, CA. Youth were identified as MH service users or non-MH service users.

MH Service Users. These youth included all children and adolescents who received MH services from public agencies. County MH data were accessed to obtain demographic information for these participants. Information from juvenile justice records was gathered for those MH service users who had been arrested during the study period.

Non-MH Service Users. These youth were involved in the juvenile justice system as a result of one or more arrests during the study period, but they were not receiving any MH services. Age at time of arrest, gender, and arrest data were gathered from juvenile justice records. Unfortunately, ethnicity information was unavailable for these youth.

Instrumentation

Clinical data were collected only for those children who continued to receive MH services beyond a 60-day initial assessment period. Youth were administered a set of instruments assessing clinical status on entry into the county system of care. These data were not available for youth served only by the juvenile justice system. The clinical status of the sample was assessed with widely used instruments administered by an MH clinician.

Assessment of Clinical and Functional Status for MH Service Users

There were three sources of information regarding the clinical and functional status of the study participants: the Child Behavior Checklist (CBCL),[21] the Child and Adolescent Functional Assessment Scale (CAFAS),[22] and a *DSM-IV*[15] diagnosis.

CBCL.[21] The CBCL is composed of 118 behavioral/emotional problem items that are rated by the parent on a three-point scale (*not true* to *very true*). Factor analysis of the CBCL has yielded nine syndrome scales and two broadband scales. For purposes of this study, the Internalizing, Externalizing, and Total Problem scales were used to assess functioning.

CAFAS.[22] The CAFAS was designed to assess impairment of functioning in children and adolescents (ages 6 to 19). The clinician rates the most severe level of impairment in the youths' current functioning in each of five psychosocial domains: Role Performance, Behavior Toward Others/Self, Moods/Emotions, Substance Use, and Thinking. The following rating scores are used: 30 for "severe" (disruption or incapacitation), 20 for "moderate" (persistent disruption), 10 for "mild" (significant problems or distress), or 0 for "average" (no disruption of functioning). A total score is generated from the sum of these five scales and can range from 0 to 150. The total scale was used to represent functional impairment in this study.

DSM-IV.[15] At intake, clinicians assigned each youth a primary *DSM-IV* diagnosis and recorded demographic data, including age, gender, and ethnicity. Each youth involved in MH was given a *DSM-IV* diagnosis at intake into the program by an MH clinician or caseworker. These diagnoses were made "in the field" by the clinician without utilization of standardized diagnostic instruments. For the purposes of this study, conduct disorder (CD) and oppositional defiant disorder (ODD) were grouped together. Although ODD may indicate less severe impairment than CD, ODD also can be an early manifestation of CD.[23, 24] Because most youth received primary diagnoses before the time of their arrests, a strong possibility exists that the arrest may signal the progression of diagnosis from ODD to CD. Therefore, ODD and CD diagnoses were combined.

Results

Demographics and Arrest Data for MH and Non-MH Service Users

During the 38 months of the study, 3,367 youth received public MH services. Of these children and adolescents, 684 (20%) were arrested during the study period. Of all the youth arrested in the county, 31% had some history with the public MH system. The mean age of those youth receiving MH services (at first entry into MH) was 14.8 (SD = 2.0), whereas the mean age at intake for the youth without arrests was 13.9 (SD = 3.7). The average age at arrest was similar for MH service users and non-MH service users (15.5 and 15.8, respectively). A majority of youth receiving MH services with and without recent arrest records were Euro-American (69% and 73%, respectively); ethnicity data for non-MH service users were unavailable. Gender also was comparable for the three groups of youth (i.e., MH service users with and without arrests, and non-MH service users); approximately 60% were males. The demographic characteristics of the MH service users by arrest status are presented in Table 1.

Neither average age at arrest nor gender were used as covariates in further analyses because these variables were comparable in both groups of offenders. The 684 MH service users were arrested 1,924 times. The 1,557 youth who did not receive MH services were arrested 2,557 times. An analysis of variance (ANOVA) revealed a significant difference between the MH service users and non-MH service users on number of arrests, $F(12,239) = 256.1$, $p < .001$. MH service users had more arrests. The average number of arrests per MH service user was 2.81 (SD = 2.2), with a range from 1 to 12, compared to non-MH service users who averaged 1.6 (SD = 1.2) arrests, with a range from 1 to 10.

A majority of arrests for both groups of youth were misdemeanors (MH service users, 65%; non-MH service users, 59%). The MH service users committed more "other misdemeanors" than the non-MH service users (44.3 and 37.4, respectively). These other misdemeanors (e.g., flight/escape, petty theft, traffic violations, trespassing, disturbance of the peace) are the least severe type of crime examined. Table 2 depicts the breakdown of type of crime for MH and non-MH service users.

Functional Status of MH Service Users with and without Recent Arrest Records

Those MH service users with recent arrest records who received functional assessments were matched with MH service users without recent arrest records. We wanted to compare functional status controlling for all available demographic variables; thus, participants were matched on age, gender, and ethnicity, with random assignment of duplicated matches.

CBCL and CAFAS scores were analyzed for 94 MH service users with recent arrest records and 94 MH service users without recent arrest records. The demographics of both groups were identical due to the matching process. The mean age of the youth was 14.5 (SD = 1.8), and 57% were males. A majority of children and adolescents were Euro-American (87%), with 8% Latino American, 4% African American, and 1% Native American.

DSM-IV *Diagnostic Categories*. Chi-square tests of associations were conducted to detect group differences in *DSM-IV* diagnoses of ODD/CD, mood disorders, and anxiety disorders. Significant differences were found for ODD/CD, $\chi^2(1) = 3.92$, $p = .04$, and anxiety disorders $\chi^2(1) = 6.14$, $p = .01$. MH service users with arrest records received more primary diagnoses of ODD and CD and less diagnoses of anxiety disorders than MH service users without recent arrest records. No significant associations were detected for mood disorders ($p > .50$); thus, the frequency of the mood disorders diagnoses was similar for both groups of youth. Table 3 depicts frequency and percentages of *DSM-IV* diagnoses for youth with and without recent arrest records.

Table 1
Demographics of Mental Health Service Users by Arrest Status

	Recent Arrest Record (n = 684)		No Recent Arrest Record (n = 2,683)	
	N	Percentage	*N*	Percentage
Age (years)				
0 to 10	28	0.4	660	24.6
11 to 15	387	56.6	1,193	44.5
16 to 20	269	39.3	830	30.9
Gender				
Male	417	61.0	1,659	61.8
Female	267	39.0	1,024	38.2
Ethnicity				
Euro-American	470	68.7	1,943	72.8
Latino American	133	19.4	463	17.4
African American	38	5.6	123	4.6
Native American	41	6.0	122	4.6
Other	2	0.3	17	0.6

Table 2
Types of Crime Committed by Mental Health Service Users and Non–Mental Health Service Users

	Mental Health Service Users		Non–Mental Health Service Users	
Type of Crime	*N*	Percentage	*N*	Percentage
Felony against person	215	11.2	281	11.0
Other felony	412	21.4	657	25.7
Misdemeanor against person	315	16.4	362	14.2
Other misdemeanor	853	44.3	958	37.4
Felony drugs/alcohol	44	2.3	111	4.3
Misdemeanor drugs/alcohol	85	4.4	188	7.4
Total felonies	671	34.9	1,049	41.0
Total misdemeanors	1,253	65.1	1,508	59.0
Total	1,924	100.0	2,557	100.0

CBCL and CAFAS Scales. A Multivariate Analysis of Variance (MANOVA) was conducted to determine if differences existed between the youth with and without recent arrest records on the CBCL Internalizing, Externalizing, and Total Problem Scales and the CAFAS Total Scale. Results of the MANOVA indicated a significant main effect for group, $F(4, 183) = 12.74, p < .001$. Examining the univariate analyses, youth with recent arrest records scored significantly higher on the CBCL

Table 3
Diagnoses of Mental Health Service Users with Recent Arrests Compared to a Matched Group of Youth without Recent Arrests

DSM Diagnostic Category	Recent Arrest Record ($n = 94$)		No Recent Arrest Record ($n = 94$)	
	N	Percentage	*N*	Percentage
Oppositional defiant/conduct disorder	31	33.0	19	20.2
Mood and affective disorders	35	37.2	39	41.5
Anxiety disorders	4	4.3	14	14.9
ADHD	6	6.4	7	7.4
Adjustment disorders	4	4.3	7	7.4
Developmental disorders	2	2.1	3	3.2
Psychotic disorders	1	1.1	2	2.1
Substance abuse disorders	3	3.2	1	1.1
Other disorders	7	7.4	1	1.1
No specific diagnosis	1	1.1	1	1.1

NOTE: ADHD = Attention Deficit Hyperactivity Disorder.

Externalizing and Total Problem Scales and the CAFAS Total Scale than youth without recent arrest records. Thus, youth with recent arrest records were reported as having more externalizing and overall problems by their parents and more functional impairment by clinicians than their peers without arrests. Table 4 displays group means, standard deviations, and *F* values for the CBCL and CAFAS Scales.

A majority of youth in both groups were within the borderline or clinical range of the CBCL (Internalizing—recent arrest records 66%, no recent arrest records 68%; Externalizing—recent arrest records 86%, no recent arrest records 71%; and Total Problem—recent arrest record 85%, no recent arrest record 78%). The group differences on the CAFAS were more salient: 61% of youth with recent arrest records received ratings of greater than 70 as opposed to 31% of the group without recent arrest records.

To determine which subscales of the CAFAS were differentiating between the two groups, a MANOVA was conducted. A significant main effect for group was detected, $F(8, 179) = 9.97$, $p < .001$. Univariate analyses indicated that youth with recent arrest records scored significantly higher than youth without recent arrest records on the School/Work Role, Home Role, Community Role, Behavior Toward Others/Self, and Substance Use subscales ($p < .05$). Refer to Table 5 for means, standard deviations, and *t*-values for the CAFAS subscales.

Discussion

One-fifth of all youth receiving public MH services were arrested during a three-year period. Vander Stoep, Evens, and Taub[4] found a similar result, with a 22/100 annual rate of juvenile justice referrals for youth receiving public MH services. These youth were approximately one year older than the average youth served by MH. Youth receiving MH services were predominantly male and Euro-American regardless of their arrest histories. A substantial proportion of the youth in the county with recent arrest records also received MH services. Results indicated that 31% of all children and adolescents in the county who committed crimes had received public MH services. Other

Table 4
Functional Status of Mental Health Service Users with and without Recent Arrest Records

Mental Health Service User	CBCL Internalizing			CBCL Externalizing			CBCL Total Problem			CAFAS Total Scale		
	M	*SD*	*F*	*M*	*SD*	*F*	*M*	*SD*	*F*	*M*	*SD*	*F*
Recent arrest record ($n = 94$)	65.4	11.7	0.1	72.5	10.7	19.6*	71.1	10.9	6.5*	84.4	24.8	28.4*
No recent arrest record ($n = 94$)	65.8	12.0		65.8	10.2		67.3	10.0		64.2	26.9	

NOTE: CBCL = Child Behavior Checklist; CAFAS = Child and Adolescent Functional Assessment Scale.
*$p < .05$.

Table 5
Child and Adolescent Functional Assessment Scale (CAFAS) Subscales for Mental Health Service Users with and without Recent Arrest Records

CAFAS Subscale	Recent Arrest Record $n = 94$		No Recent Arrest Record $n = 94$		
	M	*SD*	*M*	*SD*	*F*
School/Work Role	25.6	7.0	18.8	10.1	28.8*
Home Role	22.1	9.0	14.9	10.2	26.4*
Community Role	17.3	10.7	6.4	10.1	51.9*
Behavior Toward Others/Self	19.2	7.0	13.5	8.4	25.1*
Emotions	18.0	8.4	18.1	8.6	0.1
Self-Harm	7.2	9.8	8.5	10.8	0.7
Substance Use	14.6	12.2	6.2	9.8	27.4*
Thinking	5.0	7.9	4.6	7.7	0.1

*$p < .05$.

researchers found MH disorders in delinquents to range from 38% to 78%.[3] The current study examined rates of identified MH disorders by the public MH system, whereas other researchers were identifying MH disorder in all youth. Because traditional services in the juvenile justice system have tended to either ignore MH needs or inappropriately treat youth with multifaceted problems,[25] 31% is probably a low estimate of the MH needs of youth arrested for crimes in the current study. Dissimilar

to these prior studies, however, the current study used one or more arrests as the inclusionary criterion where other studies used incarceration.[8, 16, 26] Consequently, the MH utilization rates for this study should be higher due to a lower threshold of criminal involvement.

Overall, MH service users were arrested for less severe crimes than youth in juvenile probation with no evidence of MH involvement; MH youth committed approximately 5% fewer felonies and 6% more misdemeanors. This finding was similar to other research that found that children in the MH system were more likely to be referred for minor charges and infractions than youth in the general population.[4] Although, as might be expected, youth receiving MH services did commit somewhat less severe crimes, a significant proportion of these youth (35%) were arrested for felony-level offenses. These findings indicate that the criminal offenses committed by MH youth still reflect a serious level of involvement in the criminal justice system.

One limitation of these findings is that arrest record data were only examined during a 38-month cross section of time; thus, it was not possible to ascertain whether MH service users without recent arrest records had been arrested prior to April 1995. Only a modest number of arrests were probably made before this time period due to the average age of 13.9 years of the MH service users. Prior to 1995, the youth would be 11.9 years of age, and fewer than 9% of juvenile arrests in 1995 involved youth 12 and younger.[27] Similarly, this study reported arrests and not crimes committed. Thus, it is unknown how many crimes were committed by any of the youth when an arrest was not involved or whether the charges ultimately were sustained.

Research indicates that a disproportionate number of youth from ethnic minorities are arrested and also that these youth are less likely than Caucasian youth to receive MH services within the juvenile justice system.[28] It has been suggested that Caucasian youth who commit delinquent acts tend to be served by MH agencies, whereas minority youth are relegated to the juvenile justice system for the same acts. Unfortunately, lack of complete ethnicity data made ethnic comparisons between MH service users and non-MH service users with recent arrest records unattainable in the current study. Only slight differences were found for ethnicity between MH service users with and without arrests. Of youth served by public MH agencies, 4% more minority youth had recently been arrested (69% Caucasian with arrest records, 73% Caucasian without arrest records).

Functional Status

The functional status of MH service users with recent arrest records differed from a matched comparison of youth without recent arrest records. Overall, the youth in MH with arrest histories were diagnosed with ODD and CD at a higher frequency than the comparison group of MH service users without recent arrests (33% and 20%, respectively). In contrast, the MH service users with recent arrest records received fewer internalizing diagnoses (mood disorders and anxiety disorders) than the group without arrests (42% and 56%, respectively). These findings are consistent with previous research citing the association of CDs and ODDs and juvenile delinquency.[5, 14]

The prevalence of mood disorders in the arrest group was concordant with findings from other studies of delinquent populations.[3] Prevalence rates for Attention Deficit Hyperactivity Disorder (ADHD) as a primary diagnosis were consistently low for MH service users with and without recent arrest records (6.4% and 7.4%, respectively). Relatively low rates of ADHD among youth involved in the juvenile justice system were also reported by Cairns, Peterson, and Neckerman.[29] These low rates may be due to youth in these studies only receiving one *DSM* diagnosis. In studies in which youth were given more than one diagnosis, rates of ADHD were much higher (38% to 46%).[30, 31] Diagnostic results may have differed in the results if multiple diagnoses were given since comorbidity of mental disorders in youth has been reported to be high.[32, 14]

Similar patterns of externalizing problems for those youth served by MH with arrest histories emerged on the CBCL and CAFAS. Youth with arrests were rated on the CBCL as having more externalizing and overall problems than their peers without arrests. Youth with arrests also received

higher CAFAS ratings, indicating more functional impairment, than the group without arrests. Specifically, the arrest group was rated as having more functional impairment in externalizing domains consistent with the CBCL, including Role Functioning, Behavior Toward Others, and Substance Abuse.

Implications for Behavioral Health Services

The results of this study have implications for service delivery at the clinical and policy levels. Findings indicate that youth with MH problems who are arrested are more likely to have externalizing problems than youth without recent arrest records. In addition, a significant proportion (more than 20% in the current study) of youth in the public MH system had a history of arrest. Combined, these two findings illustrate the need for MH delivery systems to implement clinical strategies that are effective with externalizing problems. Unfortunately, most interventions with adolescent offenders have not proven successful,[25] raising the question of whether MH agencies can provide useful services to this population of youth. Certainly, youth with externalizing problems may not respond to the same types of treatments, such as cognitive behavior therapy, that are used with internalizing types of problems. The MH service systems may be ill equipped in their current form to serve youth with antisocial and/or violent behavior.[33] Failure to separately examine outcomes of the significant proportion of youth with arrest histories (20% in the current study) whose MH problems include aggression, defiance of authority, and substance abuse for whom services often fail may diminish the capacity to detect positive overall effectiveness of MH services.

Treatment for these youth needs to be understood within a socioecological perspective, examining a youth in terms of his or her family, peer, school, and neighborhood relationships.[16] A community-based component is essential for altering the environment to fit the needs of the particular child.[34,35] Multisystemic therapy is one of the few treatment models that focuses on juvenile delinquents and attempts to broaden the approach to intervention with empirical support for its efficacy.[1,36,37] Yet, to date, relatively few service delivery systems have implemented such treatment models. Although preliminary clinical outcomes from an MH system of care involving a majority of juvenile-justice-referred youth also were encouraging,[38] little data are available regarding the outcomes of such youth in systems of care.[39]

Finding that close to a third of the youth with arrest histories also received some type of MH services also serves to underline the importance to the juvenile justice system of collaborative service strategies with MH systems. Results indicating that MH youth were arrested for less severe crimes may be indicative of a need to expand identification and treatment of mental disorders in restrictive juvenile justice settings. Youth who commit serious crimes may be relegated to the juvenile justice system—specifically, incarceration or the California Youth Authority—without receiving an MH evaluation. Once involved in restricted settings within the juvenile justice system, youth may not be identified as having MH disorders or receive treatment for emotional problems. These youth may have the same need for MH services as youth committing less severe crimes, yet due to the nature of their arrests, they may be viewed as in need of punishment rather than rehabilitation.

The results presented in this article provide evidence of a high degree of interrelationship between the juvenile justice and public MH systems in a county in which MH services are delivered as part of an overall strategy for developing a system of care for youth with severe emotional disturbance. Because one of the goals of a system of care is the identification and treatment of youth with multiagency needs, the degree of overlap between systems in other locales may not appear to be as great. However, evidence from this and other studies still points to the reality that many youth who commit criminal offenses also have MH needs and that many youth who receive MH services commit criminal offenses. Consequently, a better understanding of how to coordinate services between MH and juvenile probation is as much an essential component of addressing the problem of juvenile delinquency as it is of treating the needs of youth with severe emotional disturbance.

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