

Mental Health Service Needs of Juvenile Offenders: A Comparison of Detention, Incarceration, and Treatment Settings

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Juvenile arrests have increased dramatically in recent years and emerging evidence suggests that youth involved in juvenile justice have significant mental health needs. In this study, we examined 473 youth in multiple counties from 3 settings: community settings (detention–petition), correctional settings, and residential treatment settings. Using the Childhood Severity of Psychiatric Illness Scale (Lyons, 1998), the mental health needs of youth in each of these settings was ascertained and compared. Results suggest an overall high rate of mental health needs, including serious emotional disorders. Youth in institutional settings had higher levels of need than those in the community. Youth with behavioral problems were more likely to be incarcerated, whereas youth with emotional problems were more likely sent to residential treatment facilities. Prior treatment experiences, both in mental health and substance abuse treatment, were strongly related to incarceration. Other clinical and demographic variables also distinguished youth in these three settings. Implications for service planning and integration are discussed.

In 1997, there were approximately 2.8 million juvenile arrests. From 1988 to 1997, the overall juvenile arrest rate increased by 22% (Snyder, 1998). Indeed, in 1997, the juvenile violent crime rate was approximately 30% greater than the average rate of the years between 1981 and 1988, and juveniles represented 17% of all violent crime arrests and 35% of all property crime arrests (Snyder, 1998). As the adoles-

cent population increases, there is a risk of an expansion of juvenile crime (Fox, 1996).

A large percentage of the adolescents in the juvenile justice system have mental health needs (Steiner & Cauffman, 1998). Providers in the juvenile justice system describe their clients as having significant need for mental health services (Stiffman, Chen, Elze, Dore, & Cheng, 1997). Limited epidemiological data suggest that the majority of detained youth suffer from diagnosable psychiatric disorders (Timmons-Mitchell et al., 1997), with more than one third consistently exhibiting symptoms of major affective disorders (Alessi, McManus, Grapentine, & Brickman, 1984; Davis, Bean, Schumacher, & Stringer, 1991; Wierson, Forehand, & Frame, 1992). In a series of studies of detained juveniles, Richard Dembo and his colleagues have demonstrated that the majority of adolescents involved with the criminal justice system have suffered or continue to suffer physical abuse (Dembo, Dertke, Borders, Washburn, & Schmeidler, 1988), sexual victimization (Dembo et al., 1989), disrupted emotional functioning (Dembo et al., 1990), and alcohol and substance abuse problems (Dembo, Williams, & Schmeidler, 1993).

Juvenile delinquency has been linked to a variety of detrimental environmental contexts, and rehabilitative efforts have been primarily focused on changing anti-social youths' social, environmental, or familial circumstances. However, many researchers now agree that delinquency may be better understood according to a developmental psychopathology paradigm, wherein a paucity of protective factors and an accumulation of risk factors during adolescence result in psychological and behavioral disruption (Steiner, Williams, Benton-Hardy, Kohler, & Duxbury, 1997). These risks include socioeconomic factors (e.g., poverty, neighborhood crime), ecologic factors (e.g., an absence of community and school support structures), parenting and family factors (e.g., parental abuse, affectional bonds, parental supervision), individual factors (e.g., social skills, impulse control, academic performance, temperament; Jessor, 1993; Loeber, Wung, Keenan, & Giroux, 1993), and cultural factors (Cohen et al., 1990).

Studies (Wierson, Forehand, & Frame, 1992) have suggested similarities between children involved with the juvenile justice system and those who are served within the public mental health system. This overlap is particularly evident when emotionally disturbed youths are detained simply because they are in need of care (Feld, 1995). The relation between the juvenile justice and mental health systems is reciprocal, with children in the public mental health system involved with juvenile justice at a rate three times that of the general population (Vander Stoep, Evens, & Taub, 1997). Adolescents suffering from emotional and psychological disorders are likely to be found in any number of service settings, including psychiatric hospitals, juvenile corrections, residential facilities, and foster care (Cohen et al., 1990).

Despite the empirical evidence of a relation between delinquent behavior and psychological disorders, stable prevalence estimates remain scarce. In a meta-

analysis (Otto, Greenstein, Johnson, & Friedman, 1992), the authors reported that prevalence rates for conduct disorder ranged between 50% and 90%, rates for substance abuse disorders ranged between 25% and 50%, rates for personality disorders ranged between 2% and 46%, and rates for psychotic disorders ranged between 1% and 6%. In studies that employed clinical interviews, prevalence rates for affective disorders ranged between 32% and 78%, and rates for anxiety disorders ranged between 6% and 41%. The authors (Otto et al., 1992) noted that although these estimates exceed the prevalence rates for mental disorders in the general adolescent population, they may be conservative, as most extant studies report only a single disorder for each youth, neglecting any comorbidity.

Elsewhere, we (Lyons, 1998; Lyons, Libman-Mintzer, Kisiel, & Shallcross, 1998) have developed a needs-based planning process that builds on the use of existing record information to provide an initial estimate of the types and levels of mental health needs among youth. This process involves using a reliable and valid measure that can be applied to extant records to describe the needs of a population. These data can then be used to assess the match between identified needs and existing services, and can establish a framework for decision support strategies to improve identification and service linkage. By capitalizing on existing information, this needs-based planning process can be rapid and local, thereby reducing problems with expensive and slow research projects that may have questionable generalizability across settings.

Our project was prompted by a recognition of the need for an accurate and reliable method of operationalizing the mental health needs of behavior-disordered juveniles, such that rational criteria could be identified and utilized to guide future level-of-care decisions. We compared the three groups of juveniles within this sample according to a measure of mental health service need: a probation-referred ("community sample") group, a group incarcerated in the Department of Corrections ("DOC sample"), and a group referred to residential treatment centers ("RTC sample"). The primary aim of the study was to discern whether these three settings could be distinguished on the basis of mental health symptomatology and need for treatment.

METHOD

A stratified random sample of petitioned, adjudicated, and incarcerated cases received from 1995 to 1996 in three counties—one urban, one suburban, and one rural—was drawn for this study. The RTC sample was drawn solely from the urban county. Researchers collected general needs assessment data from juvenile court records, and mental health needs data from case folders.

The data utilized in this study were contained in the youths' case folders. The assessment instrument used to evaluate the youths' mental health needs was the

Children's Severity of Psychiatric Illness (CSPI) Scale (Lyons, 1998), a measure structured around five clinically relevant areas: symptoms, risk factors, functioning, comorbidity, and caregiver characteristics. In general, the assessment areas of the measure are organized according to anchored dimensions wherein 0 = *no evidence of that dimension*, 1 = *a mild degree of that dimension*, 2 = *a moderate degree*, and 3 = *an acute or severe degree*. The CSPI consistently has been shown to be an accurate and informative measure of mental health service need and clinical symptomatology (Lyons et al., 1998).

The principal analyses in this study utilized analysis of variance (ANOVA), with the post hoc Bonferroni test (Dunn, 1961) used to discriminate among the three samples. Chi-squares were used with dichotomous variables. Logistic regression was used to determine what factors were predictive of youths' relative level of care or confinement.

RESULTS

Demographic Comparisons

Demographic comparisons among the three groups can be found in Table 1. The community sample contained 473 youth, the DOC sample contained 120 youth, and the RTC sample contained 50 youth. When county of residence was controlled for (as the RTC sample was drawn solely from the urban county), results indicated that the DOC sample contained significantly fewer Hispanic youth than the other two groups, although there were no other differences in race among the three groups.

Significantly fewer of the DOC and RTC youth were in the custody of at least one of their parents at the time of their judicial petition when compared with the community sample. Although biological mothers were present in the household in the majority of cases, biological fathers were absent in more than three fourths of all cases.

The RTC sample contained the greatest number of juveniles with prior physical or sexual abuse histories, a number significantly greater than the DOC sample, which was in turn significantly greater than the community sample. Significantly fewer youth in the community sample evidenced moderate to severe alcohol abuse problems when compared to the one half or more of the RTC and DOC samples. Similarly, significantly fewer juveniles in the community sample evidenced moderate to severe drug abuse problems when compared to the RTC sample, which in turn evidenced significantly fewer problems than did the juveniles in the DOC sample. In the community sample, few youth had ever received outpatient substance abuse treatment, compared to about one fourth of the DOC sample and 16% of the RTC sample. Fewer still of the community sample had received inpatient

TABLE 1
Comparison of Community, DOC, and RTC Sample Means on
Demographic Characteristics

<i>Characteristics</i>	<i>Community %</i>	<i>DOC %</i>	<i>RTC %</i>	<i>n</i>	χ^2
Gender: % male	83	100	78		<i>ns</i>
Race					
African American	42	57	52	554	14.43**
White	37	38	28		
Hispanic	17	6	20		
Custody				623	8.75*
Parents/relatives	95	88	54		
DCFS	5	12	46		
Biological mother in home	78	70	70		<i>ns</i>
Biological father in home	28	20	24		<i>ns</i>
Prior abuse	18	43	64	619	65.40**
Alcohol abuse	22	60	50	631	58.56**
Drug abuse	34	83	66	631	78.18**
Prior outpatient substance abuse treatment	5	26	16	625	45.92**
Prior inpatient substance abuse treatment	2	18	6	625	51.90**
Prior outpatient mental health treatment	10	54	54	625	128.11**
Prior inpatient mental health treatment	7	28	38	625	59.71**
Prior RTC	0.7	17	8	625	57.47**

Note. DOC = Department of Corrections; RTC = residential treatment centers; DCFS = Department of Children and Family Services.

* $p < .01$. ** $p < .001$.

substance abuse treatment, as opposed to the DOC sample and the RTC sample. Prior mental health treatment was uncommon in the community sample, whereas a slight majority of both the DOC and RTC samples had prior outpatient services. A similar pattern was observed for prior psychiatric hospitalization. DOC youth were the most likely to have had prior residential treatment experiences.

Mental Health Needs

The community sample evidenced significantly less impairment, as well as significantly less mental health service need, than did the DOC and RTC samples on nearly all indexes of the CSPI. In contrast, the DOC and RTC samples were not significantly different from one another on many of the CSPI indexes. Results of the ANOVA and post hoc analyses can be seen in Table 2.

TABLE 2
Comparison of Community, DOC, and RTC Sample Means on CSPI Indexes

<i>CSPI Index</i>	<i>Community</i>	<i>DOC Sample</i>	<i>RTC Sample</i>	<i>F</i>
Neuropsychiatric	0.0014 ^a	0.0058 ^a	0.18 ^b	15.53**
Emotional	0.51 ^a	1.08 ^b	1.47 ^c	61.84**
Conduct disorder	1.63 ^a	2.07 ^b	2.10 ^b	26.30**
Oppositional behavior	1.28 ^a	1.52 ^b	1.69 ^b	11.01**
Impulsivity	1.11 ^a	1.58 ^b	2.31 ^c	65.36**
Contextual consistency	1.47 ^a	2.08 ^b	2.18 ^b	19.23**
Total symptoms	4.51 ^a	6.33 ^b	7.76 ^c	79.95**
Suicide risk	0.0084 ^a	0.40 ^b	0.48 ^b	43.11**
Danger to others	1.35 ^{a,c}	1.69 ^{b,c}	1.56 ^c	8.54**
Elopement risk	0.27 ^a	1.60 ^b	1.12 ^c	149.55**
Crime–delinquency	2.12 ^a	2.78 ^b	2.52 ^c	45.41**
Sexual aggression	0.13 ^a	0.36 ^b	0.44 ^b	8.85**
Total risk behaviors	3.80 ^a	6.85 ^b	6.12 ^c	151.04**
School impairment	1.92 ^a	2.37 ^b	2.50 ^b	15.48**
Family impairment	1.15 ^a	1.77 ^b	2.20 ^c	40.42**
Peer impairment	1.78 ^a	2.84 ^b	2.70	74.14**
Total functioning	4.85 ^a	6.97 ^b	7.39 ^b	63.63**
Adjustment to trauma	0.28 ^a	1.09 ^b	1.58 ^c	125.30**
Medical status	0.14 ^a	0.38 ^b	0.42 ^b	15.48**
Substance problems	0.88 ^a	1.77 ^b	1.38 ^c	53.19**
Severity of abuse	0.27 ^a	0.79 ^b	1.26 ^c	62.46**
Sexual development	0.27 ^a	0.63 ^b	0.94 ^b	15.93**
LD/MR	0.45 ^a	0.87 ^b	1.33 ^c	29.54**
Total comorbidities	2.09 ^a	5.54 ^b	6.99 ^c	156.01**
Caregiver supervision	1.14 ^a	1.70 ^b	1.74 ^b	21.53**
Caregiver motivation	0.53 ^{a,b}	0.71 ^{b,c}	0.91 ^c	5.95**
Caregiver knowledge	0.65 ^a	1.51 ^b	1.83 ^b	70.99**
Placement safety	0.39 ^a	1.23 ^b	1.09 ^b	63.04**
Total caregiver	2.69 ^a	5.16 ^b	5.53	42.66**
Multisystem needs	0.80 ^a	1.47 ^b	1.76 ^c	116.31**
Total CSPI	17.39 ^a	31.51 ^b	33.68 ^b	156.48**

Note. DOC = Department of Corrections; RTC = residential treatment centers; CSPI = Childhood Severity of Psychiatric Illness Scale (Lyons, 1998); LD/MR = learning disability/mental retardation.

The superscripts (a, b, c) indicate groups that are significantly different on post hoc comparison. Any two groups that do not share a common letter are significantly different.

* $p < .01$. ** $p < .001$.

Symptoms. The RTC sample displayed significantly more neuropsychiatric disorder than did either the community or the DOC samples. Similarly, the RTC sample displayed significantly more emotional disturbance than the other two samples, and the DOC sample in turn displayed significantly more emotional disturbance than did the community sample. The community sample was significantly lower than both the RTC and DOC on conduct disorder and oppositional behavior,

although these latter two groups had equivalent levels of need on these indexes. Finally, the RTC sample demonstrated significantly more impulsivity than did the DOC and community samples, with the DOC sample in turn demonstrating significantly more impulsivity than the community sample.

Risk factors. There were no significant differences in the level of suicide risk between the DOC and RTC samples, although the community sample presented significantly less risk than the other two groups. The DOC sample presented a significantly greater danger to others than did the community sample, although the DOC and RTC samples were similar on this index, and the DOC sample presented the greatest elopement risk, with the RTC sample presenting a significantly greater risk than the community sample. Surprisingly, on both the crime–delinquency and the sexual aggression indexes, the DOC and RTC samples were not significantly different from one another, although both were significantly greater than the community sample.

Functioning. The DOC and RTC samples were not significantly different from one another on indexes of school and peer dysfunction, although the community sample was significantly less dysfunctional on both these indexes. However, the RTC sample evidenced the greatest family dysfunction, with the DOC sample scoring significantly less than the RTC sample and significantly greater than the community sample.

Comorbidity. The RTC sample demonstrated the poorest adjustment to prior trauma, with the community sample demonstrating significantly better adjustment than the DOC sample. The DOC and RTC samples were not significantly different on indexes of medical status and sexual development, and both groups evidenced significantly more impairment than the community sample on these indexes. On the substance abuse index, the DOC sample displayed the greatest impairment, followed by the RTC and then the community samples, although on the learning disability index, it was the RTC sample that displayed the greatest impairment, followed by the DOC and then the community samples. Finally, the RTC sample had experienced a significantly greater amount of past abuse than the other groups, and the DOC sample had experienced significantly more childhood abuse than did the community sample.

Caregiver characteristics. The caregivers of the RTC sample demonstrated significantly less motivation to care for their charges than did the caregivers

of the community sample. The caregivers of the RTC and DOC samples were not significantly different on indexes of supervision, knowledge of their child, or placement safety, and the caregivers of the community sample demonstrated significantly more strengths on these indexes. Finally, the RTC sample evidenced more multisystem needs than did the DOC sample, which in turn demonstrated significantly more needs than did the community sample.

Because gender differences have been observed in mental health service need in both the general adolescent and delinquent populations and because the proportion of male and female youth in the current samples varied by setting, all of the prior analyses were redone using gender as a covariate. All significant findings noted above remained, even after controlling for gender.

Serious emotional disorders (SED). The CSPI can be used to classify youth as having SED. For our study, this classification was defined as ratings of 2 or 3 on any of the following dimensions: neuropsychiatric, emotional disturbance, oppositional behavior (i.e., oppositional defiant disorder), and impulsivity. Table 3 provides the percentage of each of these disorders and the overall SED rate for each of the three settings. In addition, the rate of any substance use problems also is provided.

Multivariate Prediction

Logistic regression with demographic and environmental variables. Because the DOC and RTC samples were not significantly different from one another in terms of total mental health service need, as well as in terms of individual indexes on which one might expect them to diverge (e.g., crime–delinquency, suicide risk),

TABLE 3
Percentage of Youth Meeting Criteria for Serious Emotional Disorder (SED) or Substance-Related Problems in Community, DOC, and RTC Settings

<i>Disorder</i>	<i>Community %</i>	<i>DOC %</i>	<i>RTC %</i>
Neuropsychiatric	0.2	0.8	2.0
Emotional	13.7	25.2	44.9
Oppositional	36.9	46.7	61.2
ADHD/impulse	32.0	46.7	85.7
Any SED	45.9	67.5	88.0
Any substance use	55.3	94.2	76.0

Note. DOC = Department of Corrections; RTC = residential treatment centers; ADHD = attention deficit hyperactivity disorder.

logistic regression analysis was performed to determine which factors were associated with placement. Placement was treated as a dichotomous variable (e.g., correctional center vs. residential treatment center), and all demographic and environmental variables were entered into the regression equation. As the RTC sample was drawn solely from the urban county, only participants from that county were included in the analysis. Race was split into two variables, one representing Hispanic and non-Hispanic youth and the other representing African American and non-African American youth. Regression analyses were repeated by dropping any variable that was not significantly associated with the level of care in the first logistic equation.

The final model, which is shown in Table 4 and that was statistically significant, $\chi^2(4, N = 169) = 64.45, p < .0001$, indicated that three environmental variables were predictive of delinquents' placement in a correctional versus a residential treatment facility: the youth's custodial situation at the time of arrest, the youth's school status immediately prior to arrest, and whether or not the youth had a prior residential placement. Thus, youths who were no longer in the custody of their natural parents or relatives, and who had been placed in the care of the Department of Children and Family Services at the time of their arrest, were more likely to be placed in a residential treatment center. In contrast, youths who were not attending school regularly at the time of their arrest due to suspension, expulsion, or chronic truancy, or who had at least one prior placement in a residential treatment center, were more likely to be placed in a correctional facility. This model accurately predicted 86.36% of placements, with a sensitivity of 90% and a specificity of 76.3%.

The logistic regression analyses was repeated, comparing a higher level of confinement (the DOC and RTC samples) with a lower level (the community sample) to distinguish the demographic factors that influence a youth's commitment to an institution as opposed to their probationary release back into the community. Once again, race was split into two variables, one representing Hispanic and non-Hispanic youth and the other representing African American and non-African American youth. The results are shown in Table 5. The logistic regression model, which was significant, $\chi^2(12, N = 169) = 213.28, p < .0001$, had an accuracy of 87%, a sensitivity of 88.8% and a specificity of 85.4%. The model revealed that school

TABLE 4
Logistic Regression Comparing Placement of Delinquent Youth in a Correctional
Versus a Residential Treatment Center (RTC)

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>df</i>	<i>Significance</i>	<i>R</i>
Custodial status	-3.39	0.60	31.98	1	.0001	-0.41
School status	1.28	0.48	6.90	1	.0086	0.17
Past RTC placement	2.81	0.91	9.45	1	.0021	0.20

TABLE 5
 Logistic Regression Comparing Placement of Delinquent Youth in a Community
 Versus an Institutional Setting

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>df</i>	<i>Significance</i>	<i>R</i>
African American	1.27	0.44	8.11	1	.0044	0.12
Custodial status	-3.29	0.98	11.16	1	.0008	-0.16
School status	2.15	0.56	14.61	1	.0001	0.18
LD/MR	-1.45	0.45	10.04	1	.0015	-0.15
Cocaine abuse	-2.28	0.72	10.03	1	.0015	-0.15
Cannabis abuse	-3.71	0.90	16.88	1	.0001	-0.20
Outpatient substance	2.60	0.59	18.94	1	.0001	0.21
Inpatient substance	3.34	1.01	10.85	1	.0001	0.15
Outpatient psychiatric	3.36	0.56	35.43	1	.0001	0.30
Inpatient psychiatric	1.17	0.60	3.71	1	.0542	0.07
Firearm	2.50	0.51	23.24	1	.0001	0.24
Family dysfunction	1.60	0.44	13.05	1	.0003	0.17

Note. LD/MR = learning disabilities/mental retardation.

truancy, prior outpatient and inpatient substance abuse treatment, prior outpatient and inpatient mental health treatment, prior use or possession of a firearm, consistent family chaos or dysfunction, and being African American were all predictive of placement in an institutional setting. In contrast, previously diagnosed learning disabilities, cocaine or cannabis abuse problems, and custodial arrangements that included natural parents or relatives were all predictive of probationary placement back in the community.

Logistic regression with clinical variables. A second set of logistic regressions was performed, predicting the level and type of care with all dimensions of the CSPI measure. As with the first set of regressions, these analyses were repeated by dropping any variable that was not significantly associated with the level of care in the first logistic equation. Results can be seen in Tables 6 and 7.

The first regression analysis examined the decision to incarcerate a youth versus the decision to refer him or her to residential treatment. The final model was statistically significant, $\chi^2(11, N = 168) = 77.21, p < .0001$, and had an accuracy of 88.5%, a sensitivity of 91.3%, and a specificity of 82% (Table 6). The model indicated that the incarcerated juveniles had higher suicide risk, presented a greater danger to others, presented a greater elopement risk, were more sexually aggressive, were in more need of medical attention, had greater substance abuse problems, and were more poorly supervised by their caregivers. In contrast, the RTC juveniles evidenced greater emotional disturbance, more impulsivity, more severe past abuse, and poorer caregiver knowledge.

TABLE 6
 Logistic Regression Comparing Youth Placement in a Correctional Versus a Residential Treatment Setting According to CSPI Dimensions

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>df</i>	<i>Significance</i>	<i>R</i>
Emotional	-1.70	0.59	8.21	1	.0042	-0.20
ADHD/impulse	-1.90	0.46	16.97	1	.0001	-0.30
Suicide risk	1.60	0.70	5.14	1	.0234	0.14
Danger to others	1.76	0.64	7.48	1	.0062	0.18
Elopement risk	0.91	0.34	6.48	1	.0092	0.17
Sexual aggression	0.70	0.32	4.63	1	.0314	0.13
Medical status	1.11	0.48	5.23	1	.0221	0.14
Substance problems	1.42	0.40	12.53	1	.0004	0.26
Severity of abuse	-1.12	0.41	7.26	1	.0070	-0.18
Caregiver supervision	1.01	0.49	4.19	1	.0406	0.12
Caregiver knowledge	-1.45	0.54	7.12	1	.0076	-0.18

Note. CSPI = Childhood Severity of Psychiatric Illness Scale (Lyons, 1998); ADHD = attention deficit hyperactivity disorder.

TABLE 7
 Logistic Regression Comparing Youth Placement in an Institutional Versus a Community Setting According to CSPI Dimensions

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>df</i>	<i>Significance</i>	<i>R</i>
Elopement risk	0.84	0.17	22.11	1	.0001	0.19
Peer dysfunction	1.40	0.28	23.93	1	.0001	0.20
Adjustment to trauma	0.90	0.22	17.09	1	.0001	0.17
Caregiver motivation	-1.45	0.31	21.01	1	.0001	-0.19
Caregiver knowledge	1.36	0.29	21.12	1	.0001	0.19
Multisystem needs	1.67	0.38	18.50	1	.0001	0.17

Note. CSPI = Childhood Severity of Psychiatric Illness Scale (Lyons, 1998).

The second regression model, which was also statistically significant, $\chi^2(6, N = 534) = 325.88, p < .0001$, compared the community probation referred youth with youth who had been placed in a more confined setting, either correctional or residential. The final model had an accuracy rate of 89.78%, a sensitivity of 82.9%, and a specificity of 92.3% (Table 7). Results indicated that juveniles placed in institutional settings presented a greater elopement risk, demonstrated more peer dysfunction, had poorer adjustment to past trauma or abuse, had poorer caregiver knowledge, and evidenced more multisystem needs.

Logistic regression with demographic and environmental and clinical variables. A final logistic regression analysis was performed to discern whether the demographic and environmental variables that were predictive of community

versus institutional placement would remain so even when the predictive clinical variables were entered into the equation. All significant demographic and environmental variables were entered into the equation first, with significant clinical variables following. The final model, which is shown in Table 8, was statistically significant, $\chi^2(11, N = 531) = 262.40, p < .0001$. It accurately predicted placement decisions 91.2% of the time, and evidenced a sensitivity of 89.4% and a specificity of 92.8%. When the clinical variables were entered into the equation, one half of the demographic and environmental variables lost their significance. Specifically, custodial arrangement, cocaine abuse, chronic family dysfunction, being African American, and both types of prior inpatient treatment (substance abuse and mental health) ceased to be significant. The combined final model indicated that previously diagnosed learning disabilities, untreated cannabis abuse problems, and more motivated caregivers all remained predictive of placement back in the community. Similarly, chronic school truancy, use or possession of a firearm, peer dysfunction, poorer adjustment to prior trauma, less knowledgeable caregivers, prior outpatient treatment (either substance abuse or mental health), and more multisystem needs remained predictive of institutional placement.

DISCUSSION

The delinquent youth in each of the three samples exhibited a significant level of mental health need. On the majority of CSPI indexes, a significant proportion of the youth in this study exhibited needs. Nearly one half of youth in the community, two thirds of youth in corrections, and almost all of youth in residential treatment had a level of need consistent with a SED. Problems with substance use were common

TABLE 8
Logistic Regression Comparing Youth Placement in an Institutional
Versus a Community Setting

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>df</i>	<i>Significance</i>	<i>R</i>
School status	1.39	0.66	4.33	1	.0375	0.08
LD/MR	-2.69	0.77	12.18	1	.0005	-0.17
Cannabis abuse	-2.73	0.95	8.15	1	.0043	-0.13
Outpatient substance	1.99	0.75	6.97	1	.0083	0.12
Outpatient psychiatric	3.37	0.74	20.50	1	.0001	0.23
Firearm	1.81	0.60	9.05	1	.0026	0.14
Peer dysfunction	1.33	0.45	8.44	1	.0037	0.13
Adjustment to trauma	0.90	0.34	6.97	1	.0083	0.12
Caregiver motivation	-2.06	0.54	14.52	1	.0001	-0.19
Caregiver knowledge	2.65	0.55	22.73	1	.0001	0.24
Multisystem needs	3.22	0.81	15.48	1	.0001	0.19

Note. LD/MR = learning disabilities/mental retardation.

and pandemic in corrections and residential treatment. Consistent with prior research, this sample manifested emotional difficulties, aggressivity and behavior disorders, substance abuse problems, and high levels of interpersonal and academic impairment.

Among the three samples, significant differences in the patterns of needs are observed. The community youth demonstrated less psychiatric pathology and aggressive behavior overall. Analogously, the clinical variables that were predictive of an increased likelihood of institutional placement were greater elopement risk, greater peer dysfunction, poorer adjustment to trauma or abuse, poorer caregiver knowledge, and more multisystem needs. It appears that courts consider youth with multiple and complex problems to be poor candidates for community placement, particularly when their caregivers do not seem to accept the gravity of their adolescents' needs. Also, individuals with these needs may be more likely to commit the types of offenses that lead to these more intensive placements.

In contrast to the lower needs displayed by the community sample, the DOC and RTC youth were quite similar in their overall high level of need. These two groups were also similar on a number of indexes that should conceivably be predictive of placement in a correctional facility as opposed to deflection to a mental health treatment setting (e.g., conduct disorder, oppositional behavior, and crime–delinquency). The clinical variables that were predictive of correctional as opposed to residential treatment placement were increased suicide risk, increased danger to others, increased elopement risk, greater sexual aggression, poorer medical status, greater substance abuse problems, and poorer caregiver supervision. The clinical variables predictive of residential treatment placement were greater emotional distress, increased impulsivity, more severe past abuse, and poorer caregiver knowledge. Youth who engaged in riskier, more aggressive, and more anti-social behaviors, and whose caregivers seemed unable or unwilling to monitor and control their activities, had a much greater likelihood of correctional placement. Youth who demonstrated greater emotional disruption, who evidenced more severe abuse histories, and whose caregivers displayed notable deficits in understanding their condition, had a greater likelihood of residential placement. In other words, although these clinical characteristics may not form the explicit basis on which level of care decisions are made, it appears that children who are at increased risk for an institutional placement will be placed roughly according to the type of primary dysfunction they evidence, with behaviorally disordered children becoming incarcerated and emotionally disordered children being placed into the state mental health system.

Variables other than mental health needs also had an appreciable effect on placement decisions. Previously diagnosed learning disabilities were predictive of probationary community placement. In contrast, chronic school truancy, prior outpatient substance abuse or mental health treatment, and prior use or possession of a firearm were predictive of institutional placement. Once a youth has a history of

mental health or substance abuse treatment, juvenile courts appear less likely to subsequently rely on the mental health system as an alternative to incarceration, perhaps due to the notion that the prior treatment had not proved successful. Courts may evaluate certain youths' constellation of problems, including school truancy and gun possession, as being indicative of more severely antisocial traits that are not likely to respond to mental health intervention. In contrast, courts may view learning disabled or substance-abusing youth without a prior treatment history more sympathetically, particularly if their caregivers appear to be motivated.

The involvement with child welfare predicting out of community placement is somewhat worrisome. It appears that these children, who already have been failed by their parents may be subjected to different standards of decision making within the juvenile justice system.

Ideally, the threshold decision of whether to institutionalize a youth in a correctional facility or whether to deflect him or her to the mental health system should be made solely on the basis of rational criteria such as risk factors, aggressivity, and psychiatric distress. However, three environmental variables proved to be salient to this analysis. Youths who were no longer in the custody of their natural parents were more likely to be placed in a RTC. Those not attending school at the time of their arrest or who had at least one prior residential treatment placement were more likely to be incarcerated. These results suggest that placement decisions for more severely disordered offenders are not being made solely on the basis of individual need but also based on considering familial disruption and academic failure—two variables that are already characteristic of the most severe juvenile offenders (Dembo et al., 1988). In this sense, the same factors that cause a given adolescent to become vulnerable to serious and protracted delinquency prior to his or her entrance into the juvenile justice system may also subsequently serve as an impediment to mental health treatment.

Clinical criteria can be used to reliably predict placement decisions for adolescents involved in the juvenile justice system, with less disordered offenders being more likely to receive probation and more disordered offenders being more likely to receive an institutional placement. Furthermore, clinical criteria is predictive of the type of institutional placement a disordered youth will receive, with primarily behavior-disordered juveniles being sent to DOC and primarily emotion-disordered juveniles being deflected to the state mental health system. It may seem appropriate that aggressive adolescents are more likely to be incarcerated, and that adolescents who evidence depressive or anxious symptoms are more likely to be treated. However, it is striking that judicial level of care decisions can be modeled by the type of psychiatric problem. It seems appropriate to question whether the juvenile justice system is not in fact serving as a *de facto* mental health intervention for adolescents in certain communities (Duclos et al., 1998). If committing a crime is equally likely to result in placement in a correctional or a treatment facility, regardless of the type of emotional or behavioral disorder evidenced by the youth in

question, one would expect to find equivalent levels of overall mental health service need among youth in both settings. The results of our study are consistent with this hypothesis. The question is the degree to which judges and others use explicit clinical variables to guide level-of-care or level-of-confinement decisions. In the absence of best practices in this regard, the result is likely to be a juvenile justice system that is ill-equipped to address the mental health and substance abuse treatment needs presented by the population it serves.

There are several limitations in this study that can help clarify directions for future research. First, because this study was based on retrospective file reviews, there was a limitation to the amount and type of information gathered. Future studies investigating diagnostic and clinical status could be enhanced by including clinical interviews with participants. Similarly, including self-report and corroborative measures of psychiatric pathology in future studies could offer increased validity to descriptive information about the delinquent population. However, reliance solely on adolescent self-report to identify pathways to juvenile justice is likely to result in other validity concerns. Finally, the generalizability of our study is limited by the fact that only adolescents referred to residential treatment, and not to other types of mental health interventions, were included.

It is important to note that given the limitations inherent in a retrospective analysis, the level of mental health service need found in the current sample serves as compelling evidence for the high prevalence of psychiatric disorders among the delinquent population. Even when examining records not specifically prepared or maintained for clinical or diagnostic purposes, it was possible to reliably discern a high level of psychiatric disruption among adjudicated or petitioned adolescents.

Despite the common assertion that treatment with juvenile delinquents was uniformly unsuccessful, recent research indicates that this is far from true (Bartol & Bartol, 1989; Borduin, 1994; Lipsey, 1992). To the extent that the juvenile justice system serves as a *de facto* mental health intervention, the detention center may be critical to accurate and timely evaluation, diagnosis, and treatment planning. Comprehensive intake assessments, substance abuse screenings, and more intensive case management can serve to identify youth in need of treatment. Moreover, integrated services models can conceivably have a mitigating effect on subsequent recidivism. Of course, screening alone is insufficient. It must be linked to effective services for these hard-to-treat youth. The use of well-validated treatment techniques with serious incarcerated offenders (e.g., multisystemic therapy) can serve to decrease the incidence of persistent antisocial behavior in these youth, and assist in preparing them for release and reintegration into the community (Henggeler, 1997).

Conceptualizing the juvenile justice system as a focal point for mental health assessment and intervention may necessitate a paradigm shift. Despite the fact that the justice and mental health systems have traditionally had divergent and at times conflicting goals, increased service coordination seems critical to both prevention and rehabilitation for juvenile offenders. Because the juvenile court system is

likely to continue to function both as gatekeeper and repository for youths with mental health and substance abuse treatment needs, comprehensive and integrated services are needed to identify, evaluate, and intervene with youth with multiple and complex needs.

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