

A Comparison of Youth Referred to Psychiatric Emergency Services: Police Versus Other Sources

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Although the presentation of children and adolescents to psychiatric emergency services has been increasing, little is known about the characteristics of these persons, the circumstances surrounding their referral for treatment, or their disposition. This study compares patients referred by police with those referred by others, based on data from a study of 1,779 patients in the Bronx, New York. Logistic regression was used to develop propensity scores for selection of a matched sample of non-police referrals ($n = 159$) to compare with police referrals ($n = 53$). Caregivers in police-referred cases were rated as less capable of active treatment involvement, and domestic violence was more likely to occur in their homes. Police referrals had higher substance use in the past month than referrals from other sources, were rated as more symptomatic and dangerous to self and others, had exhibited more assaultive and destructive behavior, and were less likely to be referred to outpatient services.

J Am Acad Psychiatry Law 30:74–80, 2002

There is considerable interest worldwide in examining the characteristics and circumstances surrounding the presentation of persons referred to psychiatric emergency services (PESs). Recent articles on this topic include reports from the United Kingdom,^{1,2} Israel,³ Australia,⁴ and Switzerland.⁵ Representative articles that have focused on persons referred in the United States include Briere,⁶ Watson *et al.*,⁷ Halamandaris and Anderson,⁸ Simon and Goetz,⁹ Binder and Mc-Niel,¹⁰ Segal *et al.*,¹¹ Dhossche and Ghani,¹² Klinkenberg and Calsyn,¹³ Way *et al.*,¹⁴ Henggeler *et al.*,^{15,16} Schoenwald *et al.*,¹⁷ and Finn and Stalans.¹⁸ Few of these researchers and clinicians, however, have focused on the presentation of children and youths to the PES, and none has compared the characteristics and dispositions of youths referred by police to those referred by other agents. By “police referrals,” we mean youths who are identified by police as in need of services and who are then transported by them to PESs. This definition excludes those cases in which another referral source, such

as the school administration, identifies a youth as in need of services and calls the police to transport the youth to the PES.

It is commonly acknowledged that youths are appearing at the PES and that their numbers are increasing,^{19,20} but little is known about them. Halamandaris and Anderson,⁸ for example, note that emergencies in child and adolescent psychiatry are not uncommon and recommend that future research include gathering more extensive epidemiologic data and data on practice patterns nationwide. Recently, Breslow *et al.*²¹ compared children and adolescents with disruptive behavior disorders (DBDs) and those with other diagnoses who were referred to a PES. They found that more visits from patients with DBDs were prompted by the intervention of police and/or a mobile crisis team. Little else is known about youths referred to PESs.

The purpose of this study was to compare the characteristics and living environments of 53 youths referred to two urban PESs by police with a matched group of 159 youths referred through other sources, and to examine their dispositions.

Context

The data were gathered from two child and adolescent PESs in the Bronx, New York, between No-

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vember 1993 and December 1995. A federally funded study was being conducted there to examine the outcomes in a select group of youths and families who had experienced a psychiatric crisis.²⁰ These families were randomly assigned to one of three intensive, in-home interventions and were observed for six months. To provide a context for the study and to better understand clinicians' judgments about referrals, however, the investigators obtained epidemiologic information on all persons who presented to the participating PES during this 26-month period.

The two PESs that were the intake sites in this study used existing Child and Adolescent Crisis teams to evaluate referred youths. These teams comprised child psychiatrists, psychologists, social workers, and nurses. The PESs served children in the poorest sections of this intensely urban, primarily minority-populated borough of New York City. The Bronx is home to more than 1.2 million people and contains the economically poorest congressional district in the United States.²² It has been ranked first in New York State counties in violent crime and is the site of 20 percent of all the murders in New York State, although it accounts for less than 7 percent of the state's population.²² Relevant poverty indicators obtained for the study period showed that 49 percent of the youths lived below 100 percent of the poverty line.²³

Given that police play a major role in the initiation and decision-making regarding mental health services for adults,²⁴ we were interested in exploring police involvement with youths referred to the PES. In addition, the PES is a critical node in the children's service system, because it is where mental health, social services, and law enforcement services interact. Finally, in studies involving adults,^{2,12,14,25,26} differences have been shown in the characteristics, waiting time in the PES, and disposition or referral between those referred by police and those referred by others. It was unclear whether such findings would be similar in children and adolescents, particularly given that their primary contact with the mental health system is generally through family or through the schools, which have been called a *de facto* mental health system.²⁷

Methods

Human Subjects

The study protocol was reviewed by six institutional review boards at the state, city, and hospital

levels, each of which approved all data collection and consent procedures.

Risk Assessment Data

During the 26-month study period, risk assessment data were collected on 1,779 youths who were referred to the two PESs. An examination of the emergency service logs indicated that assessments were completed on nearly 80 percent of the youths who were referred during this period. This examination failed to identify any systematic differences in the rate of completion across the two data-collection sites (77% and 82%). In addition, no significant differences were found between the two intake sites in the characteristics of the youths and/or families on whom assessments were completed. Members of the Child and Adolescent Crisis Teams located in the PESs collected the data reported in the study. Assessments from one emergency service, which was publicly funded, accounted for 64 percent of the data collected; assessments from the second site, a voluntary, nonprofit hospital, accounted for 36 percent of the data. These percentages reflect the relative number of children and adolescents appearing at each site, because the publicly funded site typically evaluated nearly twice as many youths as the other site.

Measure

Clinical staff on both crisis teams completed the Screening Crisis among Children and Adolescents with Reported Emergencies (SCCARE) assessment developed by Gutterman and Levine²⁸ on each child who appeared at the two PESs, regardless of whether the child was referred to the study for intensive in-home services. The SCCARE assesses imminent danger in the child and was used in this study to increase understanding of clinical decision-making by examining the role of perceived dangerousness in decisions to hospitalize a child.

The SCCARE has three sections. The first section contains 27 items related to child and family demographics, school, utilization of services, source of referral to emergency services, and disposition. The second section contains 23 Likert-type items focused on clinical indicators related to the child's symptoms (e.g., assaultive behavior, suicidal behavior; 13 items), coping strengths (e.g., ability to follow a coping plan; 4 items), and parental behavior (e.g., provision of age-appropriate supervision; 6 items). The third section contains six items related to historical

factors such as prior substance abuse and domestic violence (5 items) and the child's vulnerabilities (e.g., prior suicide attempt; 1 item). Clinicians complete their assessments using a five-point behaviorally anchored response scale ranging from 0 (none) to 4 (severe) for dangerousness, coping strengths, and parental competency.

Gutterman *et al.*²⁹ and Gutterman^{30,31} have informally reported on the psychometric properties of the SCCARE, the results of which are available from the authors. The subscale Cronbach α reliabilities based on the administration of the SCCARE to the first 419 children who presented to the emergency rooms during this study were .71 for dangerousness, .89 for parent competence, and .92 for coping ability.³⁰ In addition, interrater reliability of the dangerousness scale computed among 64 clinician pairs was .65 (Pearson correlation).³¹ The predictive validity of the SCCARE was also established, because the SCCARE scores have been found to discriminate among youths referred for different levels of psychiatric care.^{30,31} The discriminant validity of the SCCARE was assessed by comparing the mean scores on these three scales of children referred for three levels of psychiatric care: hospitalization, intensive in-home care, and outpatient care. As hypothesized, Gutterman³⁰ found that children who were hospitalized were assessed on all three scales as having significantly greater impairment than those referred for outpatient care. In addition, the dangerousness scale of the SCCARE also has been found to be predictive of hospitalization of youths.³¹ These results suggest that SCCARE scales reflect dimensions relevant to the process of clinical decision-making and determinations of the perceived need for emergency care.

Analysis

Logistic regression was used to develop propensity scores for the identification and selection of a matched sample of non-police referrals to which youths referred to the emergency room by the police ($n = 53$) would be compared. The procedures used followed those recommended by Rubin³² and Rosenbaum and Rubin.^{33,34} The variables used in this analysis were designed to control for differences among referral sources in the youths' gender, age, race, previous receipt of mental health services, prior psychiatric hospitalizations, involvement in special education, number of biological parents at home, and enrollment in managed care. To develop homo-

geneous groups for matching, youths were divided into five strata based on the similarity of their propensity scores. A threefold "matched" sample of youths was randomly selected within each stratum from among the 1,726 youths referred to the PESs by sources other than the police. This resulted in a comparison sample of 159 youths. A threefold sample was used to increase statistical power by reducing the variability within the non-police-referred group.

The findings summarized in this article are based on 212 youths (all 53 referred to PES by police and a sample of 159 referred by other sources). Finally, after controlling for the demographic and mental health history differences, other contributing factors related to police involvement were explored in three areas: family factors, clinical status, and PES disposition. Chi-square analyses were used to test for differences between referral groups involving categorical variables, and a t test was used when comparisons involved continuous variables. The degrees of freedom involving several of the t tests are substantially smaller than the number of children included in the analyses. These reduced degrees of freedom reflect recommended computational adjustments caused by unequal sample sizes and variances between the two groups.³⁵

Results

Referral Sources

Of the clinical assessments completed on 1,779 youths, police were the primary referral source for 53 (3%) of the children, although they transported many other children to the emergency room. Other referral sources were self or family (31%), schools (33%), mental health programs (11%), hospitals (9%), and other or unknown (12%).

Characteristics of Youths in the Analysis

The characteristics of the police- and other-referred youths were compared, to determine the success of the logistic regression in controlling for demographic and mental health history differences. These comparisons, as well as the overall characteristics of the youths, are presented in Table 1. No statistically significant differences were found between the police- and other-referred youths on any of the control variables, indicating the success of the matching process.

Table 1 Comparison of Police-Referred and Non-Police-Referred Youths on Control Variables

Characteristics	Police Referred (n = 53)	Non-Police Referred (n = 159)	Total (n = 212)	p
Age (mean ± SD)	14.1 ± 2.7	14.0 ± 3.0	14.0 ± 2.9	.89
Boys (%)	60	62	62	.81
Race/ethnicity (%)				
Hispanic	53	52	52	.96
Black/African American	37	36	36	
White	4	6	5	
Prior mental health treatment (%)	43	45	45	.81
Prior psychiatric hospitalization (%)	21	17	17	.40
Special education student (%)	15	19	18	.54
Living with both biological parents (%)	4	5	5	.71
Enrolled in managed care (%)	4	8	7	.34
Likelihood of a police referral (average propensity score)	.05	.04	.04	.40

Home and Family Factors

The caregivers of youths referred by police were rated by clinicians at the PESs on the parental competence subscale as having significantly less capacity to be actively involved in the youths’ treatment compared with caregivers of youths referred by other sources. The data on home and family factors, as well as those on other comparisons between police- and non-police-referred youths are provided in Table 2.

Youths referred by police did not come from homes in which there were a greater number of other problems (e.g., alcoholism or serious physical disability), compared with youths referred by other sources. However, domestic violence was reported more frequently in the homes of youths referred by the police. No significant differences were found between police-referred youths and those referred by other sources in the presence of other youths with emo-

Table 2 Comparison of Youths Referred to PES by Police and by Others

Characteristics	Police Referred (n = 53)	Non-Police Referred (n = 159)	p
Parental competence (mean ± SD)*	2.75 ± 0.61	3.05 ± 0.82	.02
Number of other family problems (mean ± SD)*	0.77 ± 1.05	0.53 ± 0.94	.11
Domestic violence (%)	29	6	.001
Children with SED in home (%)	23	22	.48
Disabled family member (%)	16	10	.31
Alcohol or substance abuse (%)	8	9	.09
Previous suicide attempt in family (%)	20	13	.48
Severity of youth’s symptoms (mean ± SD)†	0.85 ± 0.60	0.61 ± 0.38	.008
Dangerousness to self and others (mean ± SD)*	2.00 ± 1.12	1.61 ± 1.04	.02
Assaultive behavior (mean ± SD)*	1.81 ± 1.35	1.01 ± 1.07	.001
Destructive behavior (mean ± SD)*	1.62 ± 1.26	0.85 ± 0.99	.001
Drug use in past month (mean ± SD)*	1.00 ± 1.66	0.46 ± 1.08	.03
Alcohol use in past month (mean ± SD)*	0.81 ± 1.47	0.37 ± 1.08	.13
Common diagnoses (%)			
Adjustment disorders	21	23	.78
Disruptive behavior	28	24	.52
Mood disorders	13	20	.30
Psychotic disorder	9	16	.26
Anxiety disorders	6	3	.27
Court or DFY involvement (%)	9	11	.80
Disposition (%)			
Outpatient	42	66	.003
Intensive in-home	17	9	.13
Hospital	24	20	.43
Non-mental health	11	4	.58

SED, serious emotional disturbance; DFY, Division For Youth.

* Propensity scores.

† Mean score on a five-point scale: 0, none; 4, severe.

tional problems in the home, a family member with a serious physical disability, the presence of alcohol or substance abuse problems in the home, and/or someone who had previously attempted suicide.

Current Clinical Status

Clinicians at the PESs assessed youths referred by police as having significantly more severe symptoms on the child symptoms subscale than youths referred by other sources. Police referrals were also assessed as more dangerous to self and others than those referred by others. Clinicians rated youths referred to the PES by the police as exhibiting significantly more assaultive and destructive behavior than youths referred by other sources.

Significant differences were found between youths referred by police and those referred by other sources regarding the frequency of drug use during the previous month. Although the difference found between the two groups regarding the frequency of alcohol use did not reach a conventional level of significance, youths referred by police were somewhat more likely to have used alcohol than were youths referred by other sources.

There were no significant differences in presenting diagnoses between children referred to the PES by police and those referred by other sources. The most common diagnoses in both groups were adjustment disorders, DBDs (e.g., conduct disorder), mood disorders, psychotic disorders, and anxiety disorders. Although youths in one group were identified by the police as in need of services, no differences were found between the two groups in current court or Division for Youth (i.e., the juvenile justice agency in New York City) involvement at the time of intake.

Disposition from the Emergency Service

There was a significant difference in the most frequent disposition from the PES between police-referred youths and those referred by other sources. Police referrals were significantly less likely to be referred for outpatient mental health services than were youths referred by other sources. No significant differences were found between police-referred youths and those referred by other sources in referrals to intensive in-home services, being admitted to the hospital, or referral to non-mental-health settings, although in each case, police-referred youths were more likely to be referred to these settings, all of which are considered to be more restrictive than out-

patient services. (The non-mental-health referrals tended to be either to social-services-related agencies or to the Division for Youth.)

In addition to the comparisons between police-referred and non-police-referred youths that are presented in Table 2, 10 factors that might influence the clinician's decision regarding a youth's disposition, such as access to hospital alternatives, supportive community services, family finances, and transportation, were examined. No significant differences in these potential influences were found between youths referred to the PES by police and those referred by other sources.

Summary, Conclusions, and Recommendations

The analyses conducted in this study indicate that police-referred youths differed from those who appeared at the PES after referral by another source. Police referrals had caregivers who were rated as having less capacity to be actively involved in their treatment, and there was more likelihood of domestic violence in their homes. Police-referred youths were also assessed as significantly more symptomatic and more dangerous to self and others. Specifically, they were assessed by clinicians as exhibiting more assaultive and destructive behavior. Finally, police referrals were reported to have been more likely to use substances in the month before referral. Based on this clinical and social picture, police-referred youths were less likely to be referred by the PES to outpatient programs, which tend to provide less intensive services than other types of interventions available in the study setting.

In some ways these police-referred youths resemble adults referred to PESs by police. In a study by Way *et al.*¹⁴ of adults appearing at 10 psychiatric emergency rooms, those referred by police were more likely to be judged by clinicians as exhibiting behavior assessed as dangerous to others. This is reasonable, in that families and other community members might tend to see youths, especially adolescents who exhibit destructive behavior, as beyond their ability to control and therefore regard the intervention of a more authoritative agent, such as the police, as appropriate. An interesting finding about the youths referred by police, however, is that their living environments were assessed as more disrupted by domestic violence and their caregivers were identified as being less able to participate in a treatment plan to

support the child than other children referred to the PES. As a result of evaluation in the PES, for example, several of the police-referred youths were referred to social services for investigation of possible child abuse.

Jenkins and Bell³⁶ and Perry,³⁷ among others, have indicated that children growing up in environments where domestic and community violence are common are more likely to resort to violence themselves and that violent behavior by the child may have prompted police intervention. Of course, clinicians in the PES confronted by a police referral, especially a youth in handcuffs, and upset family members, may be more likely to identify the youth as dangerous to others than a youth who is brought by school officials or a family member.

That there was no statistically significant difference between police- and other-referred youths in their involvement with the courts or New York's primary juvenile justice agency, the Division for Youth, is particularly surprising. Nor were DBDs such as conduct disorder more likely to be diagnosed in police-referred youths. We had surmised that law enforcement's familiarity with these disruptive youths might have led to a higher rate of police referral. Currently, we lack understanding of the decision-making process that leads police to refer children and adolescents to PESs rather than to other human service agencies. Additional study is needed to understand how police balance their public safety and social services missions when dealing with youths and families in crisis. This information could provide the foundation for the development of training programs for police and public safety officers in schools.

From a clinical perspective, special attention may be needed by police-referred youths in PESs to provide for their safety. These youths may be acutely upset, not only because of the precipitating circumstances for their referral to the PES, but also because of their police escort. Particularly in poor and minority-dominant communities, police may be viewed more as control agents than as assistive or *de facto* social service agents. Special attention to the child's sense of self-esteem or mastery may be indicated, particularly when police have used handcuffs. The youngest police-referred child in this study was five years old, and several preadolescents were handcuffed. Additional study is necessary to assess the need for protocols that balance public safety and protection of youths with interventions that do not fur-

ther upset them. For example, Briere⁶ suggests that being restrained in emergency settings may retraumatize victims of recent interpersonal violence, including children and adolescents exposed to chronic abuse.

Mobile crisis teams may be more effective in conducting on-site assessments and arranging less traumatic referrals for services than the police. Blansjaar and Bruna³⁸ suggest that direct responses to a patient in familiar environments can often allow for a more accurate assessment of the person's level of functioning and support system compared with data available in the emergency service setting. Alexander and Zealberg³⁹ suggest that community-based responses may prevent inpatient hospitalization or repeated emergency service visits. These issues should be studied in children and adolescents.

Finally, we know very little about the outcomes in children referred to the PES, whether by police or other agents. From our data, we know that several of the children were referred to the PESs more than once, perhaps indicating unresolved emotional and/or environmental problems as well as a paucity of community-based services. At least four intensive in-home intervention programs—Multisystemic Therapy, Crisis Case Management, Home-Based Crisis Intervention, and Enhanced Home-Based Crisis Intervention—have been shown to decrease inpatient hospitalization and placement in restrictive service settings.^{16,17,20,40} These effective community-based programs could be linked directly with mobile crisis services to reduce the number of PES referrals and restrictive placements. Additional research is needed to examine the post-PES referral patterns and outcomes experienced by youths and their families to better inform clinical decision-making in crises involving children.

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