DSM-III Diagnoses and Offenses in Committed Female Juvenile Delinquents

Wade C. Myers, MD; Roger C. Burket, MD; W. Bradford Lyles, MD; Lauren Stone, BS; and John P. Kemph, MD

The relationship between juvenile delinquency and psychiatric disorders remains poorly understood. However, it is becoming more apparent that the spectrum of psychiatric illness present in juvenile delinquents is broader than once believed. Fifteen female juvenile delinquents committed to a residential treatment program were assessed for DSM-III diagnoses, using a structured diagnostic interview, the Diagnostic Interview for Children and Adolescents (DICA). A search of the literature revealed no other reports using the DICA in female juvenile delinquents. A broad spectrum of current and past diagnoses was discovered, including conduct disorder (100%), substance abuse/dependence (87%), major depression (67%), and anxiety disorders (47%). The average number of lifetime diagnoses per subject was 4.7; current diagnoses averaged 3.4 per subject. Additionally, criminal and status offense records were obtained for each subject. No significant relationship was noted between diagnoses and categories of offense. These results add further evidence for the presence of frequent and severe psychiatric disturbances in this population, and the need for increased clinical and research efforts by the psychiatric community.

The boundaries between psychiatric illness and the terms conduct disorder and delinquency remain poorly understood. Lewis *et al.*[1] noted that the diagnosis of conduct disorder encompasses a multiplicity of signs and symptoms characteristic of other psychiatric disorders, and that often the difference between psychiatrically hospitalized adolescents and conduct disordered adolescents is not clear. Shanok *et al.*[2] found that the psychopathology in a sample of delinquent and nondelinquent psychiatrically hospitalized adolescent boys was similarly severe, and that at one time the majority of the delinquents had been regarded as severely psychiatrically disturbed. These two reports point out the presence of multiple and serious psychiatric symptoms in youth with antisocial behavior, yet the investigators' reliance on past records to generate their data bases and the lack of a standard diagnostic classification system precluded the identification of valid and reliable psychiatric

Drs. Meyers and Burket are assistant professors in psychiatry, Division of Child and Adolescent Psychiatry and Dr. Lyles is fellow in child psychiatry, Division of Child and Adolescent Psychiatry, University of Florida, College of Medicine. Lauren Stone is research assistant, University of Florida. Dr. Kemph is professor and dean emeritus, Medical College of Ohio and professor and chief, Division of Child and Adolescent Psychiatry.

diagnoses. McManus *et al.*[3] used a semistructured interview (Schedule for Affective Disorders and Schizophrenia—SADS) and depression rating scales to investigate for the presence of DSM-III diagnosable psychopathology in incarcerated seriously delinquent adolescents, and all subjects received multiple psychiatric diagnoses. A drawback to this study was the use of diagnostic instruments not designed for use in children and adolescents, again raising the issue of diagnostic validity.

Overall, the vast majority of studies on delinquent youth have neglected the female offender. In this pilot study, we hypothesized that a great diversity and number of psychiatric disorders as defined by the DSM-III classification system would be present in a population of committed female juvenile delinquents. Although it is believed that anxiety, depression, and substance abuse are commonly associated features of conduct disorder (as stated in DSM-III-R), studies are lacking which provide a clear delineation of the type, frequency, and severity of these associated symptoms and/or disorders.

The categorization of youths with antisocial behavior disturbances has deep and varied roots. Lombroso and Ferrero[4] saw the female offender as less likely to be a born criminal type and more likely to be an "occasional offender," and he implicated parental neglect and desertion as highly causative factors. Hewett and Jenkins[5] classified delinquents into three groups: (1) unsocialized aggressive, (2) socialized, and (3) overinhibited. Redl[6] defined four types of delinquency: (1) as a defense in essentially healthy individuals, (2) in adolescent acute growth confusional states, (3) having a neurotic basis, and (4) due to deformities of the psychical system. Using the Jessness Psychological Inventory, Butler's[7] analysis of female delinquents yielded three types: Type I—disturbed neurotic, Type II—immature-impulsive, and Type III—covert manipulators. Vedder and Sommerville[8] divided female delinquents into five groups: (1) the runaway girl, (2) the incorrigible girl, (3) the sex-delinquent girl, (4) the probation-violater girl, and (5) the truant girl. Shamsie,[9] in a review of the literature on antisocial adolescents, made the distinction between those with a milder form of antisocial behavior and accompanying "neurotic" disorders such as anxiety and depression, and those with conduct disorders who are persistent, repetitive offenders and seldom demonstrate marked anxiety or depression (in other words, two groups consisting of those who are more disturbed than disturbing, and those who are more disturbing than disturbed). Most recently, DSM-III-R has introduced the categories of group type, solitary aggressive type, and undifferentiated type conduct disorders.

In this study a structured diagnostic interview designed specifically for children and adolescents was given to a population of committed delinquent adolescent females to explore for the presence of DSM-III mental disorders. This approach was selected so that diagnoses could be made in a more standardized manner, thus helping to minimize the impact of such factors as theoretical orientation, varying interview techniques,

clinical judgment in diagnosis, and countertransference. To the best of the authors' knowledge, this is the first use of a fully structured diagnostic interview for children and adolescents in a population of female juvenile delinquents.

Methods

Subjects The sample consisted of 15 consecutive adolescent females who were placed in a nonsecure commitment facility (half-way house for delinquent girls). The use of the term "juvenile delinquent" in this article refers to its legal definition according to Florida Statutes: a child under the age of 18 who has been found guilty of an offense which if committed by an adult would be a crime, and who subsequently has been adjudicated delinquent in a court of law for that offense. Placement in this institution required an adjudication of delinquency. The census at this facility varied between 15–20, and the average length of stay was four to six months. The subjects' ages ranged from 13–18 with a mean of 15.3 years (*SD* 1.34). Sixty percent (9) of the girls were white, 33.3% (5) black, and 6.7% (1) hispanic. Clinical experience with these girls revealed that the majority was financially underprivileged and were from broken homes. Six subjects lived with a mother and stepfather, three with a mother and father, two with a single mother, two with a foster mother, one with a grandfather/grandmother, and one with a boyfriend. Overall, 80% (12/15) were from broken homes. Four subjects reported current parental alcohol abuse in the home. Six subjects had withdrawn from school, most commonly during the ninth grade (median), (this does not include the one subject who obtained a GED). Ten subjects had failed one or more grades.

Overall, the subjects were in a good state of health, except for one with mild neurofibromatosis and seizures (Subject 1, see Table 1), another girl with a history of idiopathic epilepsy (no. 11), and a third girl with anemia and renal insufficiency (no. 14). Four subjects (nos. 1, 4, 9, and 14) gave a history of previous head injury with loss of consciousness.

Description of the Instrument The Diagnostic Interview for Children and Adolescents (DICA) is a fully structured interview for use in children ages 6 to 17, and it allows determination of both current and past DSM-III diagnoses. This instrument was developed by Herjanic and colleagues in 1969 at Washington University in St. Louis.[10] A revised version based on DSM-III criteria was developed in 1981 when the instrument was restructured after the NIMH Diagnostic Interview Schedule for Adults (DIS).[11] Twenty diagnostic categories from DSM-III are covered by the DICA.

There are two versions of the DICA: a child interview and a parent interview. In this study only the child interview was used, as access to the parents was not routinely available. A recent study found the DICA child interview to be a reliable and valid instrument for both research and clinical purposes when used alone.[12] The administration of this instrument required an average of 90 to 120 minutes. The diagnoses were derived in strict accordance with DSM-III criteria.

Child Evaluation Procedure All sub-

jects were given the DICA by the investigators. Author W.C.M., who was previously trained in the use of the DICA on a similar population, supervised the training and subsequent administration of the DICA by the remaining investigators. Interrater agreement was assured by having at least two of the investigators independently and simultaneously score the DICA. Diagnoses were then reviewed for accuracy.

The investigators assisted the subjects when necessary to narrow their response down to the closest possible fit to the DICA answers. At times explanations were given to clarify the questions for the participants, yet this was rarely necessary. None of the subjects in this study found the interview to be unpleasant or difficult, and in general they appeared to enjoy the process. This observation is supported by the findings of Lewis *et al.*,[13] who reported that the overwhelming majority of their subjects given diagnostic interviews reported no ill effects, and many said they liked participating in the interview. It is believed that responses generated from a structured interview tend to be more accurate and reliable provided that the subjects are cooperative and free of distress.

Other information obtained about the girls included their legal history and intelligence test scores. The legal record of each girl was examined for both criminal and status offenses to compile an offense pattern. IQ test results were available for only 10 of the 15 subjects, primarily due to subject noncompliance. These tests demonstrated a mean full scale IQ of 91.3, mean verbal score of 90.2, and mean performance score of 93.8.

Results

Diagnoses The DICA interview generated a mean of 3.4 current and 4.7 lifetime diagnoses per subject, following exclusion of questionable or marginal diagnoses. Table 1 depicts the distribution of diagnoses. The range of current diagnoses was from 1 to 6 per subject, and the range of lifetime prevalence diagnoses was 3 to 7. Thirteen of 15 (87%) had a current diagnosis other than conduct disorder, and 9 of 15 (60%) had current diagnoses excluding conduct disorder and substance use disorder.

One hundred percent of the 15 subjects fulfilled DSM-III criteria for conduct disorder. Separated into conduct disorder subtypes, nine (60%) were socialized non-aggressive, four (27%) were socialized aggressive, and two (13%) were undersocialized aggressive. The diagnosis of conduct disorder, undersocialized nonaggressive type was not present in any of the subjects.

Thirteen (87%) of the 15 subjects had current or past substance abuse diagnoses. This included eight (53%) with current ethanol (ETOH) abuse, six (40%) with current cocaine dependence, and one (7%) with current cocaine abuse, five (33%) with current marijuana abuse, three (20%) with past ETOH abuse, and three (20%) with previous abuse of other substances (amphetamines, barbiturates, and/or inhalants).

Along the affective disorders spectrum, 10 subjects obtained a diagnosis of major depressive episode (66.7%), with five of these subjects (33.3%) suffering from a current major depression

Table 1
DSM-III Diagnoses

Subject	Conduct Disorder			Substance Use Disorders		Affective Disorders		Anxiety Disorders				Attention Deficit Disorder	Enuresis
	SA	SN	UA	Abuse	Depend	MDD	ADDM	SAD	OCD	PH	OA		
1	–	+	–	MJ	–	p	–	–	–	–	–	–	–
2	–	+	–	p-ETOH/ OTHER	–	+	–	p	–	–	–	–	–
3	–	+	–	–	–	–	–	–	–	–	–	–	p
4	–	+	–	p-MJ	–	–	–	p	–	–	–	–	–
5	–	–	+	ETOH	COC	p	–	–	–	–	–	–	–
6	+	–	–	ETOH/MJ	COC	–	–	–	–	–	–	–	–
7	–	+	–	p-ETOH	COC	p	–	p	–	–	–	–	p
8	+	–	–	ETOH	COC	+	–	–	–	+	–	–	–
9	–	+	–	ETOH/MJ/ COC/ OTHER	–	+	–	–	–	–	–	–	–
10	+	–	–	ETOH/MJ/ OTHER	COC	+	–	–	–	–	–	p	–
11	–	+	–	–	–	+	–	–	–	–	–	+	–
12	+	–	–	ETOH	–	–	–	–	–	+	–	–	p
13	–	+	–	ETOH	–	–	+	–	–	–	–	–	–
14	–	–	+	p-ETOH/MJ	–	p	+	p	+	–	+	–	–
15	–	+	–	ETOH	COC	p	–	+	–	+	–	+	–

ADDM = adjustment disorder w/depressed mood; COC = cocaine; ETOH = ethanol; MJ = marijuana; MDD = major depressive disorder; OTHER = amphetamines, barbiturates, inhalants; OA = overanxious disorder; OCD = obsessive compulsive disorder; PH = phobia; SA = socialized aggressive; SAD = separation anxiety disorder; SN = socialized nonaggressive, UA = undersocialized aggressive; + = current history, p = past history, – = None.

and five (33.3%) with a history of past major depression. Two (13%) other subjects had current diagnoses of adjustment disorder with depressed mood. None of the sample fulfilled criteria for bipolar disorder.

Seven of the 15 subjects (47%) met criteria for anxiety disorder diagnoses. Specifically, one subject (7%) had a current separation anxiety disorder, and four (27%) had a past history of separation anxiety disorder, one (7%) presented with overanxious disorder, one (7%) with obsessive-compulsive disorder, and three (20%) had simple phobias.

Other diagnoses made were attention-deficit disorder and enuresis. One (7%) subject presented with current attention deficit disorder, and two (13.3%) gave a history of past attention deficit disorder. Three (20%) subjects gave a history of functional childhood enuresis. Although the DICA probes for psychotic disorders, none could be made, and there was no evidence in any of the girls' histories or through reports by staff members of behaviors or symptoms to suggest otherwise.

Criminal and Status Offenses Each subjects' records were reviewed for the type and number of current and past criminal and status offenses. The mean number of overall offenses per girl was 7.5, with the mean number of criminal and status offenses per girl at 5.9 and 1.6, respectively. The range of all offenses was 2 to 15 (SD = 3.9, Table 2) lists

Table 2
Summary of Offenses

Criminal Offenses	No. of Subjects	% (N = 15)
Violent		
Assault and battery	5	33
Resisting arrest	5	33
Robbery	2	13
Nonviolent		
Thefts		
Grand theft (including auto)	8	53
Burglary	7	47
Petty theft	7	47
Forged check	1	7
Nonthefts		
Violation of court sanctions	9	60
Drug related	2	13
Trespassing	2	13
Escape detention center	2	13
Carrying concealed weapon	2	13
Prostitution	1	7
Hitchhiking	1	7
Bomb threat	1	7
Receiving stolen property	1	7
Status offenses		
Run away	4	27
Beyond control	4	27
Truancy	4	27

the distribution and percentages of the various categories of offenses. Eight (53%) of the 15 subjects had a history of committing at least one violent crime, 13 (87%) of the 15 had committed some type of theft, 10 (67%) had committed nonviolent nontheft offenses, and seven (47%) had committed status offenses. Statistical analyses were applied to the data, but no significant associations were found between DSM-III diagnoses and logical groupings of offense categories.

Additional Findings The DICA interview generated histories of sexual experience and sexual and physical abuse. The mean age of initiation of sexual intercourse was 13.6 years, excluding one subject who denied a history of sexual activity. Six subjects had experienced pregnancy, with two of these having been pregnant twice. The girls had a mean of 4.1 past sexual partners, excluding Subject 1 who had a history of sexual activity and Subject 6 who had been a prostitute with more than 50 past sexual partners. Three subjects reported a history of extrafamilial rape, and three other subjects reported a history of intrafamilial sexual abuse by a father, uncle, and cousin. Seven girls reported having suffered repeated parental physical abuse.

Discussion

As in several previous studies of juvenile delinquents,[1,2,9] a high rate of psychiatric disorders were found in this study, including a diagnostic rate of 100% for conduct disorder. Unfortunately, the nature of the relationship between conduct disorder, other types of psychopathology, and delinquency remains unclear. In our study no relationship could be established between DSM-III diagnoses and types of offenses, but due to the small sample size the authors do not mean to imply that such a finding is conclusive.

What is increasingly evident is the need to aggressively treat psychiatric disorders that are found in the juvenile delinquent. There are several reasons for this. First, mental disorders found in a delinquent youth may be etiologically related to the antisocial or acting out behavior. For instance, Puig-Antich[14] reported on a group of children with diagnoses of both major depression and conduct disorder; 11 of these 13 children

had a remission of conduct disorder symptoms following antidepressant response to a tricyclic. Second, the accompanying psychiatric disorders may not be etiologic but instead contributory to the exacerbation of preexisting antisocial behavior. Third, even if there is no etiologic relationship between the psychiatric disorders and the delinquent behavior, this population nevertheless has the right to a comprehensive diagnostic evaluation and appropriate treatment of underlying psychiatric conditions.

Not unexpectedly, high rates of substance abuse were found in this delinquent population. Although not specifically a part of DSM-III diagnostic criteria for conduct disorder, substance abuse is a frequent associated finding. Of particular interest in our study is the alarming frequency of subjects who met criteria for cocaine dependence (40%). This is likely reflective of the current popularity, availability, and inexpensiveness of free base cocaine, otherwise known as "crack." Although there is no known causal relationship between drug use and delinquency, some authors have said that both may be a manifestation of similar underlying psychopathologies or social environmental factors.[15] In a position statement on psychoactive substance abuse, it was noted that heavy drug abusers may become involved in criminal behaviors, including thefts, robbery, and prostitution, to support their drug habits.[16] Others have postulated that drug taking behavior represents an individual's attempt to self-medicate dysphoric affects or hyperactivity.[17,18] The finding in our study of many affective disorders and also attention deficit disorders could thus possibly have contributed to their substance abuse.

There has been a startling increase in juvenile crime, including violent offenses, over the last three decades.[9] The male:female ratio for violent offenses by juveniles ranges from 5:1 to 14:1, and it appears that the gender ratio for serious offenses has been decreasing over the last half-century.[19] Unfortunately, most of the studies of violent behavior in delinquents have reported only on male subjects. In our study, over one-half (53%) of the girls had committed at least one violent offense. Similarly, the population of serious delinquents studied by McManus *et al.*[3] (1984) revealed that 42% of the females had committed at least one violent offense. Yet Vedder and Sommerville,[8] in their 1970 examination of committed female delinquents, did not find violent crimes to be among the five most common offenses; they reported a predominance of status offenses. In our study group, violent crimes ranked third in frequency behind substance abuse and theft, reflecting a relative shift from status offenses to criminal and violent offenses.

In conclusion, multiple DSM-III diagnoses and legal offenses were present in this population of committed female juvenile delinquents. The Diagnostic Interview for Children and Adolescents turned out to be an instrument that was quite adaptable to this population, and future reports conducted with larger samples may offer further evidence of its usefulness as an adjunct in the evalua-

tion of youthful offenders. The classification, psychiatric diagnosis, and epidemiological understanding of juvenile delinquents continue to be areas in need of intensive research efforts. This seems even more evident in the female delinquent because of the paucity of studies available in comparison to those on the male delinquent.

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