

Original Research Article

A cross sectional study of psychiatric morbidity in juvenile boys admitted in an observation home

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ABSTRACT

Background: It is estimated that 10-20% of children and adolescents are affected annually by psychiatric problems. Studies in several countries across three continents have repeatedly shown that young offenders have higher rates of psychiatric morbidity than youths in the community. Given the growth of juvenile delinquent population, epidemiologic data on their psychiatric evaluation is becoming increasingly important. Thus, to study the psychiatric morbidity in juvenile delinquent boys in an observation home was undertaken.

Methods: This cross sectional study was conducted in an observation home for boys. Study was approved by the institutional ethics committee. Prior to conducting the study, informed written consent was sought from the superintendent of observation home for boys. The study sample consists of 50 boys from the observation home aged between 6-16 years. Boys from observation home for whom responsible legal authority gave permission were included in the study.

Results: Prevalence of individual psychiatric disorders was as follows: conduct disorder 23 (46%), anxiety disorder 05(10%), oppositional defiance disorder 04 (08%), mild mental retardation 03 (06%), depression 02 (04%), psychosis 01(02%), adjustment disorder 01(02%), disorders of emotions and conduct 01 (02%). In our study prevalence of psychiatric disorder was more common in juveniles under conflict of law (19 out of 20) than juveniles under care and protection (25 out of 30).

Conclusions: Initial screening of juveniles in observation home by expert mental health care professionals is needed for the rational management of psychiatric morbidity and enhancement of their development towards productive adulthood and productive integration into the general society.

Keywords: Conduct disorder, Delinquency, Mental health, Observation home, Juvenile

INTRODUCTION

The term child delinquency refers to the commission of criminal offences by minors. In criminology and sociology, offences against criminal norms are considered to be a part of socially deviant behavior. Antisocial or dissocial behavior is said to be present only when it is against societal norms and the rights of other

persons.¹ This deviation cannot be equated with mental disturbance.²

The Juvenile Justice (Care and Protection of Children) Act, 2000 defines juvenile or child as a person who has not completed eighteen years of age. 'Delinquency' is a legal term referring to juveniles committing offenses against the law. They are kept usually in an 'Observation

Home' which means a home established by a state government or by a voluntary organization and certified by that state government under section 8 as an observation home for the juvenile in conflict with law. A juvenile alleged to have committed an offence is called juvenile in conflict with law.³

It is estimated that 10-20% of children and adolescents are affected annually by psychiatric problems.⁴ Though an essential component of overall health of children, importance of mental health is being recognized only in the past few years. A few surveys conducted in India have revealed that 7- 30% children under the age of 12 years need either evaluation or continuing psychiatric care.^{5,6} It is not surprising that very little work has been done in the area of mental health of children in the world and more so in India.⁷ Most of the epidemiological surveys have not mentioned about childhood psychiatric disorders. Whereas, the surveys that have mentioned about child psychiatric disorders have reported a wide variation in the prevalence rates in both rural and urban setting and also in school children.⁸⁻¹²

Studies in several countries across three continents have repeatedly shown that young offenders have higher rates of psychiatric morbidity than youths in the community. Although findings of these studies vary, most recent studies have found that 65%-85% of youths in correctional facilities have a major psychiatric diagnosis, with 31%-45% having a substance use disorder.^{13,14} These numbers are significantly higher than those found for age-matched youths in the community. A systematic review and metaregression analysis by Fazel et al of 25 surveys on adolescents in juvenile detention and correctional facilities showed that among boys 3.3% were diagnosed with psychotic illness; 10.6% with major depressive disorder, 11.7 % with ADHD and 52.8 % with conduct disorder. Among girls 2.7 % were diagnosed with psychotic illness, 29.2% with major depressive disorder, and 18.5 % with ADHD 52.8% with conduct disorder.¹⁵ Adolescents in detention and correctional facilities were 10 times more likely to suffer from psychosis than general population.

A recent study conducted by Malhotra S et al, in school going children in Chandigarh, for estimating the incidence of psychiatric disorders in childhood, also reported similar findings with annual incidence rate of 18-37 per 1000 per year. She concluded that there is need for further research to understand the rates and pattern of causation in childhood psychiatric disorders. Hence, focused studies in high risk group like juvenile delinquents will help to assess psychiatric illness in children.¹⁶ In the present study, we have done a cross sectional psychiatric evaluation of juvenile delinquents in an observation home to study the prevalence and pattern of psychiatric morbidity. Given the growth of juvenile delinquent population, epidemiologic data on their psychiatric evaluation is becoming increasingly important.

METHODS

This cross sectional study was conducted in an observation home for boys. The study sample consists of 50 boys from the observation home aged between 6-16 years. Out of 50 juvenile boys admitted in observation home, 20 juveniles under conflict of law and 30 under care and protection were included in the study.

Study was approved by the institutional ethics committee. Prior to conducting the study, informed written consent was sought from the superintendent of observation home for boys. Informed written assent was also taken from boys above 12 years of age.

Prevalence and pattern of psychiatric disorder was studied in the juvenile boys enrolled in the study. The tools used in the study are as follows:

Mini-international neuropsychiatric interview (MINI)-Kid version

This is a short structured diagnostic interview, developed jointly by psychiatrists and clinicians in the United States and Europe, for DSM-IV and ICD-10 psychiatric disorders. With an administration time of approximately 15 minutes, it was designed to meet the need for a short but accurate structured psychiatric interview for multicenter clinical trials and epidemiology studies and to be used as a first step in outcome tracking in non-research clinical settings. The MINI Kid was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10 in children and adolescents.¹⁷

ICD-10 diagnostic criteria for research

International classification of diseases 10th revision diagnostic criteria for research is devised by WHO with an aim to standardize the diagnosis and classification of mental disorders. Diagnosis is based on clinical interview and other available information. These criteria are more operational than ICD-10 (Clinical description and diagnostic guidelines) and are used for research work.

Statistical analysis

The findings were tabulated and statistical analysis was done by using Graph pad prism version 6 software. We applied Fischer's Exact Test to test the significant differences in qualitative data between Juveniles under conflict of law and juveniles under care and protection. All hypothesis tests were two-sided and p-value less than 0.05 were considered as significant.

RESULTS

The study includes 50 juvenile boys between 6-16 years age group from an observation home for boys. Out of 50 juveniles 44 (88%) had psychiatric diagnosis as per ICD-

10 DCR guidelines. Prevalence of individual psychiatric disorders was as follows: conduct disorder 23(46%), anxiety disorder 05(10%), oppositional defiance disorder

04(08%), mild mental retardation 03(06%), depression 02(04%), psychosis 01(02%), adjustment disorder 01(02%), disorders of emotions and conduct 01 (02%)..

Table 1: Diagnostic categories of psychological morbidity in juvenile boys.

ICD 10 diagnosis	Juvenile under conflict of law (20)	Juvenile under care and protection (30)	P-value
Conduct disorder	14 (70%)	09 (30%)	0.008*
Oppositional defiance disorder	00	04 (13.3%)	0.14
Anxiety disorder	00	05 (16.7%)	0.07
Depression	02 (10%)	00	0.15
Mild mental retardation	00	03 (10%)	0.26
Psychosis	00	01 (3.3%)	1
Adjustment disorder	01 (05%)	00	0.40
Attention deficit hyperactivity disorder	00	01 (3.3%)	1
Disorders of emotions and conduct	01 (05%)	00	0.40
Total number of juveniles diagnosed with psychopathology	19 (95%)	25 (83.33%)	0.38

*significant at, p value <0.05

Table 2: Pattern of substance abuse in juvenile boys.

Substance of abuse	Juveniles under conflict of law (20)	Juveniles under care and protection (30)	Total juveniles (50)
Only tobacco	09 (18%)	03 (06%)	12 (24%)
Tobacco and alcohol	05 (10%)	02 (04%)	07 (14%)
Tobacco and whitener (inhalant)	00	02 (04%)	02 (04%)
Tobacco alcohol and cannabis	01(02%)	00	01 (02%)
Tobacco alcohol and whitener (inhalant)	02 (04%)	04 (08%)	06 (12%)
Total number of juveniles with substance use disorder	17 (85%)	11 (36.7%)	28 (56%) P = 0.001*

*significant at, p value <0.05

In our study prevalence of psychiatric disorder was more common in juveniles under conflict of law (19 out of 20) than juveniles under care and protection (25 out of 30), though this difference is statistically non-significant, as shown in Table 1. 70% of juveniles under conflict of law and 30% of juveniles under care and protection had conduct disorder and this difference was statistically significant (p = 0.0089).

Data regarding prevalence of substance abuse among juvenile delinquent is shown in Table 2. Only single time substance use was not taken into consideration. The pattern of use meeting criteria for the abuse pattern was considered. Most commonly used substance was tobacco (52%) followed by alcohol (28%) and inhalants like whitener (12%). Half (14 out of 28 juveniles) of those using substance, were using more than one substance. None of them was using the substance in dependence pattern. The substance use was more common in juveniles under conflict of law (85%) than juveniles under care and protection (36.7%) and this difference was statistically significant (p = 0.0012).

DISCUSSION

As per the definitions given in Juvenile Justice (Care and Protection) Act 2000, the sample of boys was divided into two groups, as those under conflict of law numbering 20 (40%) and those under care and protection numbering 30 (60%). Information regarding the type of admission was obtained from the records.

Psychopathology

Of 50 juveniles 44 (88%) had psychiatric diagnosis as per ICD-10 DCR guidelines. This is similar to Cook County study 2006, where nearly two-thirds of males and three-quarters of females met diagnostic criteria for one or more psychiatric disorders. Many of these youth had two or more disorders.¹³ The findings in various studies show wide variation in the prevalence rates. The prevalence of major affective disorder in the studies varies from 5 percent to 88 percent; substance use disorders from 20 percent to 88 percent; and psychosis from 12 percent to 45 percent.¹⁸⁻²⁰ Such inconsistencies may arise from

discrepancies in methodology like use of different diagnostic and interviewing methods, which have different thresholds for detecting psychiatric morbidity.¹³ This also may be due to the differences in the infrastructure, culture and the perception of population.

Conduct disorder (CD) and oppositional defiance disorder (ODD)

This was the most common diagnosis in both groups. The prevalence of conduct disorder in previous studies on juvenile delinquent boys varied between 40-100%.²¹⁻²⁴ Our finding is similar to the study by Rhode et al, who reported prevalence of 73% in both boys and girls in secure detention facility.²⁵ In our study, significant correlation was found between conduct disorder and delinquency ($p = 0.0054$). This finding was obvious as conduct disorder is considered to be precursor of delinquent behaviour and antisocial personality. Delinquency is defined according to acts prohibited by the criminal law, such as theft, burglary, robbery, violence, vandalism, and drug use. Thus many delinquent acts are also symptoms of conduct disorder.²⁶ In our study 8% of juveniles had oppositional defiance disorder. It is known to be a precursor of the conduct disorder. All these children were admitted under care and protection, for the reason of being unmanageable at home.

Anxiety disorders

10% of the juvenile inmates had anxiety disorders, which included generalized anxiety disorder, separation anxiety disorder and anxiety disorder NOS. All of them had lost one or both the parents, and were admitted under care and protection. This finding is similar to the studies by McCabe et al and Garland et al who reported prevalence of anxiety disorders in adjudicated boys to be 8-9%.^{27,28} Now such children have different needs and requirements of their care. This has an implication of need for segregation of the juveniles after initial screening by the professional psychiatrists. This will help in their management and proper care and prevention of complications like criminal activities in future.

Depression and suicidal behavior

4% of delinquent boys were diagnosed as depression. Another two juveniles had history of self-harm attempts one in the form of consumption of poisonous compound and other with cuts on the forearm. The one with cuts on forearm also had substance abuse disorder, and he was admitted for homicidal crime. The prevalence of affective disorders in the previous studies varies from 5% to 88%. Affective disorders are more common in female juvenile delinquents than males.¹³ This may be due to underreporting by the boys than girls. The incidence of suicidal behaviour is five times more common in delinquent boys than girls.²⁹ In our study the juveniles with self-harm attempt were suffering from conduct disorder and childhood disorder of emotions and conduct.

This is of particular concern because of suicidal risk among boys with comorbid conduct disorder and depression.³⁰ Irritability and anger outbursts are common in childhood depression, so it should be considered as differential in evaluation of delinquent acts.

Substance abuse in juveniles

The findings were similar to the findings of the study by Clelland et al.¹⁴ He found that nearly half of detainees had one or more substance use disorder; over 21% had two or more substance use disorder. The most prevalent combination of substance use disorder was alcohol and marijuana use disorders (17.25% females, 19.42% males).

Mental retardation

3 (6%) of the juveniles were having mild mental retardation. All of whom were admitted under care and protection. One was orphan and two others were found unattended on the streets while begging. Due to mental retardation they were not able to travel back to their homes and were unable to tell the address. They were doing some labor works like in hotel or railway station. Low IQ is related to delinquency but in our study all mentally retarded children were not delinquent (Juveniles under care and protection). These children need special interventions compared to the children with normal intelligence. Usually they are kept in facilities for mentally retarded children, so the need for evaluation by the experts and segregation according to the needs is to be stressed for better child mental health care.

Attention deficit hyperactivity disorder (ADHD)

Several studies demonstrated that ADHD is precursor to conduct disturbances, and that ADHD is a risk factor for early onset of conduct disorder in boys.³¹ Children with ADHD often demonstrate learning difficulties.³² In our study an 8 year boy admitted for care and protection with reason of unmanageable at home, had ADHD with enuresis. In their study of school children, Farnone et al concluded that psychosocial adversity in general and low social class, maternal psychopathology, and family conflict in particular increased the risk for ADHD and associated morbidity; boys were more vulnerable to the disorder than girls.³³

There is some limitation in the study. In view of the fact that under reporting by the juveniles is endemic especially for the disruptive behavior, our data are subject to the validity and reliability of the juveniles self-report.³⁴ It was not feasible to interview the parents or caretakers at home, and only few would have been available at the observation home. We have tried to overcome this by checking the records and collateral information from the caretakers at the observation home. Despite these limitations our findings have implications for mental

health research and rehabilitation of such high risk group of juvenile delinquents.

CONCLUSION

There is an urgent need to improve screening in observation homes, as many detention centers do not screen juveniles for the psychiatric problems. Thus the need for expert mental health professional from the initial assessment of these juveniles is highlighted. Further studies are needed in psychiatric co morbidities of the juvenile delinquents, pathways to the co morbid illness and their relationship with the delinquency. Only a sustained partnership between mental health professionals and juvenile justice system offers the hope for rational management of not only psychiatric morbidity of the juveniles in Observation Homes but also the enhancement of their development towards productive adulthood and productive integration into the general society.

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