

Current and Lifetime Prevalence of Mental Disorders in a Juvenile Borstal Institution in Nigeria

¹Peter O. Ajiboye, ¹Abdullah D. Yussuf, ¹Baba A. Issa,

¹Olusola A. Adegunloye and ¹Olubunmi N. Buhari

¹Department of Behavioural Sciences, College of Health Sciences,
University of Ilorin, P.M.B. 1515, Ilorin, Nigeria

²Department of Behavioural Sciences, University of Ilorin Teaching Hospital,
Ilorin, P.M.B. 1459, Ilorin, Nigeria

Abstract: Chronic and violent juvenile offending has been associated with adverse health, educational, vocational and interpersonal consequences with repercussion seen into adulthood. Youths with mental disorders pose a challenge for the juvenile system and after their release for the larger mental health system. This study investigated current and lifetime prevalence of mental disorders in a Borstal home in Nigeria. The study is a cross-sectional, descriptive one and reports exclusively on the 53 youths, aged 14-21 years, remanded at the Juvenile Borstal Institution in Ilorin, the Kwara state Capital. The inmates were interviewed using MINI-KID. The mean age±SD of the inmates was 17.3±2.1 years. Majority of them (52.8%) were between 18-21 years of age. Current psychiatric diagnoses were made in 67.6% of them and lifetime diagnoses made in 64.2% of the inmates. Recommendation is made for early detection and treatment of these psychiatric disorders.

Key words: Current, lifetime, mental health, juvenile offenders, inmates, borstal institution

INTRODUCTION

Juvenile delinquency is one of our most pressing social problems with detrimental emotional, physical and economic effects felt through the communities in which it occurs (Tarolla *et al.*, 2002). Juvenile offenders consume a large proportion of child welfare, juvenile justice, special education and mental health resources.

Moreover, chronic and violent juvenile offending has been associated with adverse health, educational, vocational and interpersonal consequences with repercussion seen into adulthood (Borduin and Schaeffer, 1998). The number of youths in the juvenile justice system with psychiatric disorders is a major public health problem (Abram *et al.*, 2004).

Youths with mental disorders pose a challenge for the juvenile system and after their release for the larger mental health system. Even after excluding conduct disorders, nearly 60% of male juvenile detainees and >2 female met diagnostic criteria and had diagnosis-specific impairment for one or more psychiatric disorders (Teplin *et al.*, 2002).

In Nigeria, psychiatric disorders have been investigated among young offenders in adult prisons and

among adult offenders (Otakpo and Asikhia, 2002; Admson and Malomo, 1991; Fatoye *et al.*, 2006). There was also a study on youths in a remand home which focused on correlates of delinquency (Ogunlesi, 1990). It can be said that for now, that studies on young offenders in Nigeria are very few and many aspects still need to be researched.

Prevalence of mental disorders would vary considerably depending on the type of sample, the measure used and the time frame (within the past year, within the past month or at the time of interview). Therefore, in this study, the authors investigated current and lifetime prevalence of mental disorders in a Borstal home in Nigeria.

MATERIALS AND METHODS

The present study is a cross-sectional, descriptive one and reports exclusively on the 53 youths, aged 14-21 years, remanded at the Juvenile Borstal Institution in Ilorin, the Kwara state Capital. The Institution was the second of such in Nigeria, the other being in Kaduna, North-Western zone; both has been for only male juvenile offenders and none yet for female offenders. It is a

purposely-built institution equipped with crafts, sporting and academic materials for the training of youth offenders.

The sample was stratified by ethnicity (Ibo, Yoruba, Hausa; the major ethnic groups in Nigeria and others), age and religion, source of referral to the Borstal Institution, duration of stay at the Borstal, parents marital status and the inmates position in the family. The inmates were eligible to be sampled regardless of their psychiatric morbidity (by GHQ-12 scores), except those who could not read or write and could not follow simple instructions. Inclusion criteria for the study were ability to read and write and understand simple instructions. Cognitive impairment was an exclusion criterion. Because studying detained youths requires special procedures being minors, detained and may not have a parent or guardian who can provide appropriate consent. The authors approached potential participants at the Institution, explained the project and assured them that their responses would be kept confidential, except where necessary immediate intervention is required (e.g., acute severe mental disorder). Participants signed an assent form (if they were younger than 18 years) or consent form (if they were aged 18 years and above). We nevertheless attempted to contact parents to provide them with information and an opportunity to decline participation of their wards. Where parents were not available, senior officials of the Institution (Principal, Vice-Principal, or senior teachers; they were all Prisons staff) were requested to give consents on their behalf.

The study involved a 2-staged procedure. In the 1st stage, every inmate was given a questionnaire booklet consisting of socio-demographic questionnaire and the General Health Questionnaire-12 (GHQ-12) (Goldberg, 1972), an instrument that has been validated among prison populations (Black *et al.*, 2004) and in this environment (Gureje and Obikoya, 1990; Amoran *et al.*, 2007). The participants had no problems responding to these questionnaires because the institutions officials and researchers were on hand to give necessary explanations where expedient. The institution's officials were given the responsibility for collection and custody of the completed questionnaires until after the MINI interview to ensure that researchers were blind to the inmates scores on GHQ-12. The 2nd stage involved interviewing with MINI-KID (Sheehan *et al.*, 1998). MINI was designed as a brief structured interview for the major axis I psychiatric disorders in DSM-IV and ICD-10. It has acceptable, validity and reliability and clinicians require relatively brief training session, while lay interviewers require more extensive training. The inmates of the Borstal were 70, all males, 53 of them were eligible for the study; 17 (24.3%) were ineligible because they were too cognitively impaired

to be interviewed (they were only brought into Borstal for vocational training). All the eligible 53 inmates (total sampling) were made to go through MINI-KID interview (regardless of their GHQ-12 scores) and on the average span through 50 min/inmate. The interview was conducted by YAD, APO, IBA and BOIN after an initial interview with randomly selected group during which inter-rater reliability (Kappa) of 0.86 was recorded. This study reports only the MINI-KID interview findings and the GHQ-12 findings are reserved for another report.

Statistical analysis: Because the inmates were stratified by age, ethnicity, religion and MINI diagnoses, the frequency distributions of these variables, mean and standard deviations were calculated and the analysis was done using SPSS for Window, version 11.0.

RESULTS

Sample characteristic: Table 1 presents the sociodemographic characteristics of the sample. It was composed of 53 male inmates and there was a predominance of people aged 18-21 years (about 52.8%). Majority (62.3%), were Christian, more of the inmates occupied the middle position in their family and majority

Table 1: Sociodemographic variables of borstal inmates (n = 53)

Variables	n (%)
Age group (year):	
<11	5 (9.4)
11-14	4 (7.5)
15-18	16 (30.2)
18-21	28 (52.8)
Mean age (years)	17.312.1
Religion:	
Christianity	33 (62.3)
Islam	20 (37.7)
Ethnicity:	
Hausa	17 (32.1)
Ibo	15 (28.3)
Yoruba	13 (24.5)
Others	8 (15.1)
Position in family:	
Firstborn	14 (26.4)
Middle position	19 (35.8)
Lastborn	12 (22.6)
Only child	8 (15.1)
Parents marital status:	
Living together	34 (64.2)
Not living together	19 (35.8)
Source of referral:	
Parents	43 (81.1)
School authority	1 (1.9)
Government agencies	3 (5.7)
NGOs/Concerned citizens	6 (11.3)
Mean duration of stay (weeks)	64.9/41.6
Duration of stay (weeks):	
<8	8 (15.1)
8-24	14 (26.4)
>24	31 (58.5)

Table 2: Prevalence of current psychiatric diagnoses among borstal inmates (n = 53)

Psychiatric disorders	n (%)
Panic disorder (current)	3 (5.7)
Separation anxiety disorder (current)	1 (1.9)
Obsessive-compulsive disorder (current)	1 (1.9)
Post traumatic stress disorder (current)	4 (7.5)
Depression (current)	9 (17.0)
Dysthymia (current)	4 (7.5)
Hypomania (current)	6 (11.3)
Attention deficit/hyperactivity disorder	8 (15.1)

Table 3: Prevalence of lifetime psychiatric diagnoses among borstal inmates (n = 53)

Disorders	n (%)
Panic disorder	2 (3.8)
Depression	19 (35.8)
Suicidality	11 (20.8)
Alcohol dependence/abuse	14 (26.4)
Marijuana dependence/abuse	21 (39.6)
Cocaine dependence/abuse	5 (9.4)
Conduct disorder	34 (64.2)
Oppositional defiant behaviour	32 (60.4)
Psychotic disorders	2 (3.8)

(81.1%) of them were brought to the borstal institution by their parents. The major ethnic groups Nigeria were represented (Hausa (32.1%), Ibo (28.3%) and Yoruba (24.5%)).

Current psychiatric diagnoses: Table 2 shows that 67.9% of the sample had one current psychiatric disorder or another. Depression was the most common current psychiatric diagnosis occurring in 17% of the subjects and was closely followed by hypomania which occurred in 11.3% of the subjects.

Lifetime psychiatric diagnosis: Table 3 shows that 64.2%, had lifetime psychiatric diagnoses excluding conduct disorders and Substance Use Disorders (SUD). Depression was also the most common (35.8%) and suicidality which occurred in 20.8% of the subjects was next to depression.

DISCUSSION

In considering the findings reported here, it is important to note that the findings have to be interpreted with caution because of the small sample size and it is also a predominantly male population. This implies that the results cannot be generalized to other juvenile offenders populations. It was not possible, to interview caretakers; therefore, our data are subject to limitation of self-report.

Also, since the inmates had emotional/behavioral problems severe enough to be admitted at the Borstal institution, it will appear the study was biased from onset to include individuals with a high degree of axis I diagnoses.

Having considered some general limitations, it is our believe that our findings would lay a good foundation for further research among juvenile offenders and could help redirect mental health policy especially as it affects the juvenile offenders.

Our study shows that current psychiatric disorders were recorded in 67.9% and affective disorders accounted for 35.8% (Depression 17%, Hypomania 11.3% and dysthymia 7.5%). Different types of anxiety disorders accounted for 17 and psychosis 3.8%.

On the other hand about 64.2% had lifetime psychiatric disorders and depression accounted for 35.8%, suicidality 20.8%, panic disorder 3.8% and psychotic disorder 3.8%.

It has been previously reported that it may be easy to recognize individuals with severe distressed or psychotic symptoms but individuals with current or past psychiatric illnesses who do not have dramatically apparent symptoms may not be recognized easily (James and Glaze, 2006). Nevertheless, such psychiatric illnesses may place the inmates at increase risk of clinical deterioration, disciplinary concern or suicide attempts and such inmates are known to have lowest functional status (Black *et al.*, 2004). Also Teplin *et al.* (2002), reported that depressive disorders are difficult to detect (and treat) in chaos of the corrections milieu. All the aforementioned studies make our findings of 35.8% having one form of current affective disorder or another and 17% with anxiety disorders relevant. These are disorders that are disabling or incapacitating but the inmates with these disorders may not show any outward manifestation of distress that a layman may be able to detect. This further corroborates the report of Stiffman *et al.* (1997) that health service providers in juvenile justice system complaints that they lacked knowledge concerning mental health assessment.

It will be interesting to note that before we embarked on carrying out the study only 7 (25.9%) of the inmates of the Borstal institution were referred to our hospital for treatment and it was because they had florid psychotic symptoms. However, during the period of carrying out the study we further detected that additional 20 more inmates of the Borstal institution needed urgent mental health attention and they were therefore, referred to our hospital for treatment. This is why, the need to screen and treat juvenile offenders cannot be over emphasized and it should be part of the regular services that is rendered to the inmates so as to bridge the gap between need and service.

The reported 17% current depressive disorder is similar to that of Teplin *et al.* (2002). Similarly, we can also say that our finding of 17% current depressive disorder and 35.8% mood disorders is similar to previously

reported findings of depression and mood disorders prevalence ranging from 18-48% among juvenile offenders (Milin *et al.*, 1991; Neighbors *et al.*, 1992; Riggs *et al.*, 1995; Trestman *et al.*, 2007).

Our findings also show that 26.4% had lifetime alcohol abuse/dependence disorder, 39.6% had lifetime cannabis abuse/dependence and 9.4% had lifetime cocaine abuse/dependence. Studies (Neighbors *et al.*, 1992; Stiffman *et al.*, 1997; McClelland *et al.*, 2004), reported that SUDs are common among juvenile offenders with estimates ranging from 27-63%.

Cannabis abuse/dependence accounted for 39.6% in our study and had the highest prevalence rate and was closely followed by alcohol abuse/dependence with lifetime prevalence of 26.4%. Cocaine on the other hand had a lifetime prevalence of 9.4%. Studies have reported that adolescents who have tried cocaine would have first used alcohol, tobacco and cannabis in that order (Kandel, 1975, 2002).

Hall (2006) reported that cannabis is a gateway drug and that users of cannabis are more likely to use other illicit drugs, those who use cannabis at an early age are more likely for other reasons to use other illicit drugs and that the pharmacological effects of cannabis increases an adolescent propensity to use other illicit drugs. Also, McClelland *et al.* (2004) were of the opinion that among detained youths with any SUD, multiple SUDs are the rule and not the exception. There is therefore, the need to put in place substance abuse treatment program in institutions where juvenile offenders are detained. It is also, important to ensure continuity of care upon their release into the community.

A greater percentage of the inmates of the juvenile borstal home (64.2%) had lifetime diagnosis of conduct disorder and 15.1% had current diagnosis of Attention Deficit/Hyperactivity Disorder (ADHD). Conduct disorder and ADHD have been reported to have a close association with SUD. It has also been observed that male juvenile delinquents with greater ADHD symptomatology show more severe and earlier onset of conduct disorder, SUDs diagnoses (Thompson *et al.*, 1996).

Our study also recorded 7.5% had current diagnosis of Post Traumatic Stress Disorder (PTSD). This finding is lower than that of (Abram *et al.*, 2004; Burton *et al.*, 1994; Steiner *et al.*, 1997). Abram *et al.* (2004) reported a prevalence of 11.2% among juvenile detained during the year prior to intervention, while Burton *et al.* (1994) reported 24% current disorder and Steiner *et al.* (1997) reported 31.7% current disorder.

Also, Fondacaro *et al.* (1999) and Gibson *et al.* (1999) reported that lifetime and current rate of anxiety disorders were found to be higher in prison inmates with than

without PTSD. There is therefore, the need to improve the detection of PTSD because it can easily be overlooked and difficult to detect without systematic screening (Abram *et al.*, 2004).

The findings of this study, buttress the report that accurate diagnosis and treatment of psychiatric symptomatology and co-occurring condition would greatly enhance the effectiveness of juvenile offender intervention (Tarolla *et al.*, 2002).

CONCLUSION

This study has looked at, different aspects of mental health problems as it relates to inmates of a Borstal institution in Nigeria; albeit within the limitations of small sample size; a sample drawn from a predominantly male population and data that was subject to limitation of self-report, since it was not possible, to interview the caretakers of the inmates. The study brought to the fore the need for improved detection of psychiatric disorders and putting in place appropriate intervention measures. Screening and treating juvenile offenders should be part of the regular services that is rendered so as to bridge the gap between need and service. There is also, the need to introduce substance use disorders treatment programs in institutions where juvenile offenders are kept and also ensure continuity of care upon their release into the community.

ACKNOWLEDGEMENT

The authors thank the Principal, the Vice-principal, all the staff and inmates of the Borstal Institution, Ilorin for their patience, assistance and cooperation before, during and after the course of the study.

REFERENCES

- Abram, K.M., L.A. Teplin, D.R. Charles, S.L. Longworth, G.M. McClelland and M.K. Dulcan, 2004. Posttraumatic Stress Disorder and trauma in youth in juvenile detention. Arch. Gen. Psychiatr., 61: 403-410. PMID: 15066899.
- Admson, T.O. and I.O. Malomo, 1991. Psychological profiles of some armed Robbers in Bendel state of Nigeria. Nig. Med. J., 21: 41-44.
- Amoran, O., T. Lawoyin and V. Lasebikan, 2007. Prevalence of depression among Adults in Oyo state, Nigeria: A comparative study of rural and urban communities. Aust. J. Rural. Health, 15 (3): 211-215. PMID: 17542795.

- Black, D.W., S. Arndt, N. Hale and R. Rogerson, 2004. Use of the Mini International Neuropsychiatry Interview (MINI) as a screening tool in prisons: Results of a Preliminary study. *J. Am. Acad. Psychiatr. Law*, 32: 158-162. PMID: 15281417.
- Borduin, C.M. and C.M. Schaeffer, 1998. Violent Offending in Adolescence: Epidemiology, Correlates, Outcomes and Treatment. In: Gullot, T.P., G.R. Adams and R. Montemayor (Eds.). *Delinquent and Youth Theory and Interventions: Advances in Adolescent Development: An Annual Book Series*, 9: 144-174. Thousand Oaks, CA: Sage.
- Burton, D., D. Foy, C. Bwanausi, J. Johnson and L. Moore, 1994. The relationship between traumatic exposure, family dysfunction and Posttraumatic Stress Symptoms in male juvenile offenders. *J. Trauma. Stress*, 7: 83-93. DOI: 10.1111/j.1469-7610.2007.01817.X. PMID: 8044445.
- Fatoye, F.O., A.O. Fatoye and A.S. Ogunro, 2006. Psychological characteristic as correlates of emotional burden in incarcerated offenders in Nigeria. *East Afr. Med. J.*, 83 (10): 545-552. PMID: 17310680.
- Fondacaro, K.M., J.C. Holt and T.A. Powell, 1999. Psychological impact of childhood sexual abuse on male inmates: The importance of perception. *Child Abuse. Negl.*, 3 (4): 371-382. PMID: 10321773.
- Gibson, L.E., J.C. Holt, K.M. Fondacaro, T.S. Tang, T.A. Powell and T.E. Turbitt, 1999. An examination of antecedent trauma and psychiatric co morbidity Among male inmates with PTSD. *J. Trauma Stress*, 12: 473-484. PMID: 10467556.
- Goldberg, G., 1972. *The detection of psychiatric illness by questionnaire*. Oxford University Press, London.
- Gureje, O. and B. Obikoya, 1990. The GHQ-12 as a screening tool in a primary care setting. *Soc. Psychiatry Psychiatr. Epidemiol.*, 25: 276-280. PMID: 2237610.
- Hall, W.D., 2006. Cannabis use and the mental health of young people. *Aust. New Zealand J. Psychiatr.*, 40: 105-113. PMID: 16476127.
- James, D.J. and L.E. Glaze, 2006. *Mental health problems of prison and jail inmate*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, DOJ Publication NCJ 213000.
- Kandel, D.B., 2002. *Stages and pathway of drug involvement: Examining the gateway hypothesis*. New York Cambridge University Press.
- Kandel, D.B., 1975. Stages in adolescent involvement in drug use. *Sci.*, 190: 912-914.
- McClelland, G.M., K.S. Elkington, L.A. Teplin and K.M. Abram, 2004. Multiple substance use disorders in juvenile detainees. *J. Am. Acad. Child. Adolesc. Psychiatr.*, 43 (10): 1215-1224. PMID: 15381888.
- Milin, R., J.A. Halikas, J.E. Meller and C. Morse, 1991. Psychopathology among substance abusing juvenile offenders. *J. Am. Acad. Child Adolesc. Psychiatr.*, 30: 566-574. PMID: 1890090.
- Neighbors, B., T.J. Kempton and R. Forehand, 1992. Co-occurrence of substance use with conduct, anxiety and depression disorders in juvenile delinquents. *Addictive Behaviours*, 17: 379-386. PMID: 1502971.
- Ogunlesi, A.O., 1990. Nigeria juvenile offenders: A case-controlled study. *Forensic. Sci. Int.*, 44 (2-3): 187-192. <http://www.sciencedirect.com/science/journal/03790738>.
- Otakpo, A.N. and U.E. Askhia, 2002. Psychiatric disorders among young offenders in a Nigerian Prison Community. *Nig. Postgrad. Med. J.*, 21: 41-44.
- Riggs, P.D., S. Baker, S.K. Mikulich, S.E. Young and T.J. Crowley, 1995. Depression in Substance dependent delinquents. *J. Am. Acad. Child Adolesc. Psychiatr.*, 34: 764-771. PMID: 7608050.
- Sheehan, D., D. Shytle, K. Milo, Y. Lecrubier and T. Herguete, 1998. Mini International Neuropsychiatry Interview for Children and Adolescents-MINI (5.0). The development and validation of structured diagnostic psychiatric Interview for DSM-IV and ICD-10. *J. Clin. Psychiatr.*, 59 (20): 22-23. PMID: 9881538.
- Steiner, H., I.G. Garcia and Z. Mathews, 1997. Post traumatic stress disorder in incarcerated juvenile delinquents. *J. Am. Acad. Child Adolesc. Psychiatr.*, 36: 357-365. PMID: 9055516.
- Stiffman, A.R., Y.W. Chen, D. Elze, P. Dore and L.C. Cheng, 1997. Adolescents perspectives on the need for and use of mental health services. *J. Adolesc. Health*, 21: 335-342. DOI: 10.1016/S1054-139X(97)00046-3. PMID: 9358297.
- Tarolla, S.M., E.F. Wagner, J. Rabinowitz and J.G. Tubman, 2002. Understanding and treating juvenile offenders: A review of current knowledge and future directions. *Aggression Violent Behavior*, 7: 125-143. PII: S1359-1789(00)000410.
- Teplin, L.A., K.M. Abram, G.M. McClelland, M.K. Dulcan and A.A. Mericle, 2002. Psychiatric disorders in youth in juvenile detention. *Arch. Gen. Psychiatr.*, 59: 1133-1143. PMID: 12470130.
- Thompson, L.L., P.D. Riggs, S.K. Mikulich and T.J. Crowley, 1996. Contribution of ADHD symptoms to substance problems and delinquency in conduct Disordered adolescents. *J. Abnormal Child Psychol.*, 24: 325-347. PMID: 8836804.
- Trestman, R.L., J. Ford, W. Zhang and V. Wiesbrock, 2007. Current and lifetime psychiatric illness among inmates not identified as acutely mentally ill at intake in Connecticut's jails. *J. Am. Acad. Psychiatr. Law*, 35: 490-500. PMID: 18086741.