

Psychiatric morbidity among prisoners

A S M Kowser, Munira Parveen, Md Azizul Islam, Md Shamim Reza

Background: Prisoners have high levels of mental illness and drug or alcohol dependence. Prison environment is highly stressful and often predisposes the prisoners to develop mental disorders which go undetected and untreated.

Objectives: To find out the prevalence of psychiatric morbidity among prisoners as well as to bring out some socioeconomic and demographic parameters in relation to psychiatric morbidity.

Methods: It was a cross-sectional study conducted in Dhaka central jail, Keraniganj. The duration of the study was six months starting from 01 May 2018 to 31 October 2018. All Bangladeshi male prisoners who were 18 years above and willing to participate were included in the study. Informed written consents from the respondents were taken. Those who refused to give consent and had severe cognitive impairment were excluded. Ethical issues were maintained all throughout the study. 438 prisoners were randomly selected out of which 276 cases were identified as having psychiatric morbidity by screening of common psychiatric disorders using General Health Questionnaire-12 item (GHQ-12). Socio-demographic data were collected by face-to-face interview using semi structured questionnaire. Psychiatric diagnoses were assigned by Consultant Psychiatrist according to Diagnostic and Statistical manual of Mental Disorders version 5 (DSM-5). Statistical analyses were carried out by using the Statistical Package for Social Sciences version 23.0 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated for continuous variables. The quantitative observations were indicated by frequencies and percentages.

Results: The age range of the prisoners were 19-65 years having a mean age of 32.5 ± 9.3 . Two third (63.0%) prisoners had psychiatric disorders, came from rural background (60.5%). Most of the prisoners were from low economic group (50.4%) and were charged with drug related offences (60.14%).

Conclusions: Psychiatric morbidity among prisoners is very common. It is evident that high rate of mental health problems exists in prisons like substance related disorder, anxiety disorder, adjustment disorder, antisocial personality disorder, depressive disorder and schizophrenia. To improve the overall health care service for the prisoners, psychiatric evaluation and treatment remain a fundamental element. Proper diagnosis and timely intervention of the mental health problems including substance related disorders may help in the reduction of occurrence or repetition of some offences.

Declaration of interest: None

Copyright and usage: ©Archives of NIMH 2022

Keywords: Prisoners; morbidity; General Health Questionnaire-12 item (GHQ-12); Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5).

Introduction

In general, persons who are suspected to have committed an offence are arrested and brought to jail regardless of their mental condition. It has been recognized that the inmates in prisons have exceptional mental health needs. Studies show that the prisoners have high levels of mental illness and drug or alcohol dependence.^{1,2,3} It is well established that people with psychiatric problems are over-represented in prison populations. The prevalence of psychiatric disorder in prison population ranged from 37-70% found in empirical studies.⁴ It is a fact that the prison environment is highly stressful and often predisposes the prisoners to develop mental disorders. Many a time, the psychiatric problems of prisoners go undetected and untreated. The studies reported a high prevalence of psychiatric illnesses among men and women prisoners.^{2,5}

Conditions in jails often test or demand effective coping skills and this may lead to adjustment disorders. High rates of suicide was also reported among the prisoners.^{6,7,8} Individuals with antisocial personality problems have an increased chance of conflict with the criminal justice system. Substance abuse, on several occasions lead to increased risk of violent behavior. Considerable evidences indicate a high rate of substance related disorders among the prisoners.^{3,5,9} Men account for majority among prison population. Women prisoners, though small in number, also have an increased rate of psychiatric illness.^{3,8} Most of the jails show a high occupancy rate and 0.9% of the total inmates were reported to be mentally ill.¹⁰ A study observed 28.8% psychiatric morbidity among convict prisoners. There is a need for further exploration of the mental health problems in prisoners.¹¹

This study tried to ascertain the prevalence of psychiatric morbidity among prisoners in Bangladesh and to bring out some socioeconomic and demographic parameters in relation to psychiatric morbidity. The relationship between psychiatric morbidity among prisoners brought some awareness of need of treatment that definitely helped the patient in early social recovery and adjustment ad to find out an actual situation of psychiatric morbidity among prisoners in our country. It also encouraged further research in this aspect in Bangladesh.

Methods

It was a cross-sectional study conducted in Dhaka central jail, Keraniganj. The duration of study was six months starting from 01 May 2018 to 31 October 2018. All Bangladeshi male prisoners who were 18 years and above and were willing to participate were included in the study.

Those who refused to give consent and had severe cognitive impairment were excluded. Informed written consents from the respondents were taken. Ethical issues were maintained all throughout the study. 438 prisoners were randomly selected out of which 276 cases were identified as having psychiatric morbidity as well as screening of common psychiatric disorders by using General Health Questionnaire-12 item (GHQ-12). Socio-demographic data were collected by face-to-face interview using semi structured questionnaire. Psychiatric diagnoses were assigned by Consultant Psychiatrist according to Diagnostic and Statistical manual of Mental Disorders version 5 (DSM-5). Statistical analyses were carried out by using the Statistical Package for Social Sciences version 23.0 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated for continuous variables. The quantitative observations were indicated by frequencies and percentages.

Results

438 prisoners were randomly selected for the study. Among them, almost two third, i.e., 276 (63.0%) cases were identified as having psychiatric morbidity. (Table 1)

Table 1: Prevalence of psychiatric morbidity among prisoners (N=438)

Psychiatric morbidity	Number of patients	Percentage
Total screening prisoners	438	100.0
Psychiatric morbidity	276	63.0

The age range of the prisoners was from 19-65 years having a mean age of 32.5±9.3.

Table 2 shows the sociodemographic status of the normal and diseased individuals.

Table 2: Socio demographic distribution of the prisoners with psychiatric morbidity (n=276)

Socio-demographic factors	Number (n)	Percentage (%)
Age group in years		
≤30	113	40.9
31-40	109	39.5
41-50	38	13.8
51-60	10	3.6
>60	06	2.2
Religion		
Islam	243	88.0
Hinduism	29	10.5
Christianity	03	1.1
Buddhism	01	0.4
Education level		
Illiterate	75	27.17
Primary	131	47.46
SSC	41	14.85
HSC	19	6.88
Graduate	7	2.54
Post-graduate	3	1.09
Occupation		
Unemployed	34	12.3
Service	109	39.5
Business	39	14.1
Day labourer	43	15.6
Student	25	9.1
Marital status		
Married	187	67.8
Unmarried	83	30.1
Divorced	6	1.1
Social background		
Urban	109	39.5
Rural	167	60.5
Economic background (BDT/month)		
Lower class (<10,000)	139	50.4
Middle class (10,000-30,001)	96	34.8
Higher class (>30,001)	41	14.8

Data was collected and analyzed to see psychiatric morbidity among the prisoners. (Table 3)

Table 3: Relevant psychiatric history of the prisoners with psychiatric morbidity (n=276)

Psychiatric history	Number (n)	Percentage (%)
Psychiatric morbidity		
Substance related disorder	166	60.1
Anxiety disorder	29	10.5
Adjustment disorder	20	7.3
Antisocial personality disorder	21	7.6
Depressive disorder	30	10.9
Schizophrenia	7	2.5
Others	3	1.1
Family history of psychiatric illness		
Yes	56	20.3
No	192	69.6
Not known	28	10.1
Past history of psychiatric illness		
Yes	60	21.7
No	216	78.3
Past history of psychiatric treatment		
Yes	22	8.0
No	254	92.0
Multiple marriage in parents		
Yes	82	29.7
No	194	70.3

The forensic history of the prisoners who had psychiatric morbidity are given in Table 4.

Table 4: Forensic history of the prisoners with psychiatric morbidity (n=276)

Forensic history	Number (n)	Percentage (%)
Type of charge		
Drug related offences	166	60.1
Violence	35	12.7
Fraud	18	6.5
Eve teasing	16	5.8
Robbery	11	4.0
Murder	7	2.5
Arms & bombs	6	2.2
Snatching	5	1.8
Kidnap	5	1.8
Theft	4	1.5
Suspicious movement	3	1.1
Type of prisoner		
Under trial	149	54
Convicted	127	46
Duration of stay in prison (months)		
<1	184	66.7
1-6	69	25.0
7-24	13	4.7
25-60	07	2.5
61-120	03	1.1
Past history of imprisonment		
Yes	20	7.2
No	256	92.8
Past history of imprisonment in family members		
Yes	20	7.2
No	256	92.8
History of substance abuse		
Yes	166	60.1
No	110	39.9

Discussion

In this study the total sample size was 438. Among them 276 individuals were identified as cases having psychiatric morbidity using the General Health Questionnaire-12 (GHQ-12). Further diagnosis of the cases was done by consultant psychiatrist using DSM-5. The prevalence rate of psychiatric morbidity was found 63%. It was also observed that majority (40.9%) of the patients belonged to age around 30 years. Mean age was found 32.5 ± 9.3 years with range from 19 to 65 years. All (100%) prisoners were male, 243 (88%) were Muslim, 131 (47.5%) completed primary education, 109 (39.5%) were service holders, 187 (67.8%) were married, 167 (60.5%) come from rural area and 139 (50.4%) come from lower income family. Similar observation was reported that the mean age was 34.49 ± 11.38 years with range from 18 to 78 years. Majority were males (87.0%), married (58.4%), belonged to a nuclear family (64.3%) and came from a rural background (68.2%). A significant majority (63.9%) reported an income of more than Rs. 5000/month prior to incarceration.¹² The rate of illiteracy and unemployment was less compared to the study probably due to the high literacy rate in the state and other social reasons. Another study¹³ also supported our observation with the prisoner's age ranging from 19-66 years with mean age 33.7 years while at the time of crime it was 30.4 years. Majority of the prisoners were males (97.5%), more than half of the prisoners (57.6%) were from rural areas. Average education in studied years was found 6.6 years with 20 (6.9%) illiterate and only 4 (3.4%) prisoners having master's degree. Half of the prisoners (50.8%) were unskilled workers and 16.9% were either in service or had their own business. Nearly two-third (65.3%) of the prisoners were married while 5.1% were widowed or divorced. Another study found that participants were aged from 17-76 years, with a mean age of 32.7 years.¹⁴ About half (49.0%) of the subjects were within the age group 25 - 34 years.¹⁵ More than half of the subjects were single (53%), with 392 (64.5%) practicing Christianity, 277 (45.5%) were unemployed.¹⁶ The studied sample consisted of 80 adult prisoners aged from 20 to 45 years with a mean of 34.82 ± 6.18 .¹⁷

In this series it was observed that almost two-third (63.0%) prisoners were suffering from psychiatric morbidity. Another study¹³ made a psychiatric diagnosis in 68.6% of the total population, where more than half of the subjects (57%) had a psychiatric morbidity. Studies from Australia, Iran and other parts of the world also found psychiatric morbidity in 80%, 57%, 55.4%, 51.4% and 43% of the studied subjects respectively using standardized

instruments.¹⁸⁻²³ Approximately similar findings were reported by many other studies.^{14,24} A study in India observed 28.8% prevalence of psychiatric morbidity which was lower than what was seen in this study.^{25,26} A study which showed an increased suicide risk in prisoners with mood disorders (32%) and psychosis (45%) remains in agreement with this study.²⁷ Another study found prevalence of psychiatric disorders in 33% of the population.¹³ Current mental disorders were diagnosed in 57.2% of participants with mood disorders having the highest prevalence.¹⁴ A systematic literature review showed that the prevalence of mental disorders among prisoners varies from 55-80% and rate of psychiatric morbidity was around three times higher in prisoners than normal individuals.²⁸

In this study, majority were diagnosed with substance related disorder 166 (60.14%) followed by 29 (10.51%) anxiety disorder, 20 (7.25%) adjustment disorder, 21 (7.61%) antisocial personality disorder, 30 (10.87%) depressive disorder, 7 (2.54%) schizophrenia and 3 (1.09%) with other morbidities. In comparison, a study¹² showed substance use disorder as the most common diagnosis (47.1%). Antisocial personality disorder was diagnosed in 19.2%, adjustment disorder in 13.7%, mood disorder in 4.3% and psychosis in another 6.3% of prisoners. It was also observed that psychotic disorders in prisoners were 6.7% individuals including 3.4% schizophrenia and 2.5% bipolar affective disorders. Neurotic disorders were seen in 26.3% prisoners. Depressive disorder was seen in 16.1% prisoners. Anxiety disorders were seen in 8.5% including generalized anxiety disorder and obsessive-compulsive disorder as 6% and 2.5% respectively. Somatoform disorder was seen in 1.7% prisoners.

In this study it was observed that 56 (20.3%) prisoners had family history of psychiatric illness and 23 (8.3%) has history of imprisonment in family. A study observed that total of 107 (42.0%) subjects had a previous history of imprisonment.¹² Another study reported that 47.5% were convicted and history of criminal behavior in family was found in 32.2% prisoners.¹⁵ In this current study it was observed that 60 (21.7%) prisoners had past history of psychiatric illness, 22 (8.0%) had past history of psychiatric treatment and 20 (7.2%) had past history of imprisonment. Similar observation was found in Kumar and Daria¹³ study where they showed one in 10 prisoners (9.3%) had previous history of imprisonment and history of criminal behavior in family was found in 32.2% prisoners.

In this series it was observed that 149 (54.0%) prisoners

were under trial and 127 (46%) were convicted. In another study it was observed nearly half of the prisoners (47.5%) were convicted while 52.5% were under trial.¹³ In this study it was observed that 184 (66.7%) prisoners were found to be staying in prison for less than 1 month followed by 69 (25.0%) for 1-6 months, 13 (4.7%) for 7-24 months, 7 (2.5%) for 25-60 months and 3 (1.1%) for 61-120 months. A majority (67.9%) of the subjects were found to be staying in prison for less than 1 month and this observation was support to our study.¹² Another study also found similar observation where they showed average stay of prisoners was 30 months.¹³ Duration of stay in prison before conviction in months was between 0-305 months with mean of 42.9 ± 65.6 months. However, a study conducted in United States found that 60.1% of the subjects had spent less than 24 months in prison detention.¹⁶ In the present study it was observed that 166 (60.14%) prisoners were charged with drug related offences followed by 35 (12.68%) for violence, 18 (6.52%) with cheating, 16 (5.80%) for eve teasing and 11 (3.99%) for robbery. Offences against property were the major types of crimes (34.5%) in another study.¹² A study reported a higher rate of affective disorders than this study (21% and 30%, respectively).^{14,25} In another study maximum numbers of prisoners were murderers (47.5%) while 20.3% of prisoners carried out drugs related crimes like drug trafficking.¹³ The commonest crimes in another study were armed robbery (37.7%), murder (16.4%), theft (21.1%), assault (7.1%) and manslaughter (2.3%).¹⁶ The main causes of admission as expressed by them were killing (75%) and attempted murder (25%).¹⁷

In this current study it was observed that 82 (29.7%) prisoners were found having multiple marriages in parents. It was also observed that 166 (60.14%) prisoners had history of substance abuse. A study showed history of drug abuse or dependence prior to imprisonment in 58.8% prisoners.²⁵

Conclusions

It is evident that high rate of mental health problems exists in prisons. A proper identification and diagnosis of the cases is required for treatment and rehabilitation of the patients. Psychiatric evaluation and treatment remain a fundamental element to improve overall health care service for prisoners. Almost two third prisoners had psychiatric morbidity and commonest psychiatric illnesses were substance related disorder, anxiety disorder, adjustment disorder, antisocial personality disorder, depressive disorder and schizophrenia. Many factors including the prison settings, socio-cultural differences and

methodological issues must be considered while dealing with the psychiatric problems of prisoners. So proper diagnosis and timely intervention of the mental health problems including substance related disorders may help in the reduction of occurrence or repetition of some offences. It is a primary need for Bangladesh in the field of epidemiological survey to find out the prevalence of psychiatric disorder among prison population and the relationship with psychiatric disorders, crime and prison, and thereby it will help to develop need-based prison psychiatry in Bangladesh.

A S M Kowser, Lt Col of Bangladesh Armed Forces, Classified Specialist in Psychiatry, Combined Military Hospital (CMH) Chattogram, Chattogram Cantonment cum Associate Professor and Head of the Department of Psychiatry, Army Medical College, Chattogram, Bangladesh; **Munira Parveen**, Lt Col of Bangladesh Armed Forces, Medical Officer, CMH Chattogram, Chattogram Cantonment, Bangladesh; **Md Azizul Islam**, Professor and Retired Adviser of Psychiatry, Bangladesh Armed Forces cum Consultant Psychiatrist, Square Hospital, Dhaka, Bangladesh; **Md Shamim Reza**, Major of Bangladesh Armed Forces, Graded Specialist in Psychiatry, Combined Military Hospital (CMH) Ramu, Ramu Cantonment, Bangladesh.

Correspondence: A S M Kowser, Lt Col of Bangladesh Armed Forces, Classified Specialist in Psychiatry, Combined Military Hospital (CMH) Chattogram, Chattogram Cantonment cum Associate Professor and Head of the Department of Psychiatry, Army Medical College, Chattogram, Bangladesh.
Email: kowser1973@gmail.com

How to cite this article: Kowser ASM, Parveen M, Islam MA, Reza MS. Psychiatric morbidity among prisoners. Arch NIMH. 2022; 5(1): 31-37.

Received 7 March 2022, revised 5 May 2022, accepted 27 May 2022.

References

- Gunn J, Maden A, Swinton M. Treatment needs of prisoners with psychiatric disorders. *BMJ* 1991; 303: 338-41.
- Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: A systematic review. *Addiction* 2006; 101: 181-91.
- Maden T, Swinton M, Gunn J. Psychiatric disorder in women serving a prison sentence. *Br J Psychiatry* 1994; 164: 44-54.
- Mullick MSI, Khanam M, Nahar JS, Psychiatric profile of the prisoners referred for psychiatric assessment. *Bang J Psychiatry* 1998; 12(2): 69-75.
- Jordan BK, Schlenger WE, Fairbank JA, Caddell JM. Prevalence of psychiatric disorders among incarcerated women. II. Convicted felons entering prison. *Arch Gen Psychiatry* 1996; 53: 513-9.
- Bird SM. Changes in male suicides in Scottish prisons: 10-year study. *Br J Psychiatry* 2008; 192: 446-9.
- Fazel S, Benning R. Suicides in female prisoners in England and Wales, 1978-2004. *Br J Psychiatry* 2009; 194:183-4.
- Shaw J, Baker D, Hunt IM, Moloney A, Appleby L. Suicide by prisoners. National clinical survey. *Br J Psychiatry* 2004; 184: 263-7.
- Farrell M, Boys A, Bebbington P, Brugha T, Coid J, Jenkins R, et al. Psychosis and drug dependence: Results from a national survey of prisoners. *Br J Psychiatry* 2002; 181:393-8.
- New Delhi, India: National Crime Records Bureau, Ministry of Home Affairs; 2009. [Accessed on 21/10/2011]. Available from: Prison Statistics.
- Goyal SK, Singh P, Gargi PD, Goyal S, Garg A. Psychiatric morbidity in prisoners. *Indian J Psychiatry* 2011; 53: 253-7.
- Fazel S, Danesh J. Serious mental disorder in 23,000 prisoners: a systematic review of 62 surveys. *Lancet* 2002; 359: 545-50.
- Ayrolimeethal A, Rajesh G, Ramanujam JM, George. Psychiatric morbidity among prisoners. *Indian J Psychiatry* 2014; 56(2): 150-3.
- Kumar V, Daria U. Psychiatric morbidity in prisoners. *Indian J Psychiatry* 2013; 55(4): 366-70.
- Assadi SM, Noroozian M, Pakravannejad M, Yahyazadeh O, Aghayan S, Shariat SV, et al. Psychiatric morbidity among sentenced prisoners: prevalence study in Iran. *Br J Psychiatry* 2006; 188: 159-64.

- 16 Andreoli SB, dos Santos MM, Quintana MI, Ribeiro WS, Blay SL, Taborda JGV, et al. Prevalence of Mental Disorders among Prisoners in the State of Sao Paulo, Brazil. *PLoS ONE* 2014; 9(2): e88836.
- 17 Armiya'u AY, Obembe A, Audu MD, Afolaranmi TO. Prevalence of psychiatric morbidity among inmates in Jos maximum security prison. *Open J Psychiatry* 2013; 3: 12-7.
- 18 Ibrahim EM, Halim ZA, Wahab EA, Sabry NA. Psychiatric morbidity among Prisoners in Egypt. *World J Medical Sci* 2014; 11(2): 228-32.
- 19 Baillargeon J. Psychiatric disorder and repeated incarceration: The revolving prison door. *Am J Psychiatry* 2009; 166: 103-9.
- 20 Butler T, Gavin A, Stephen A, Chika S, Nadine ES, John B. Mental disorder in Australian prison. A comparison with a community sample. *ANZJP* 2006; 40: 272-6.
- 21 Naidoo S, Mkize DL. Prevalence of mental disorders in a prison population in Durban, South Africa. *Afr J Psych* 2012; 15: 30-5.
- 22 Kugu N, Akyuz G, Dogan O. Psychiatric morbidity in murder and attempted murder crime convicts: A Turkey study. *Forensic Sci Int* 2007; 175: 107-12.
- 23 Gunter TD, Arndt S, Wenman G, Allen J, Loveless P, Sieleni B, et al. Frequency of mental and addictive disorders among 320 men and women entering the Iowa prison system: Use of the MINI-Plus. *J Am Acad Psychiatry Law* 2008; 36: 27-34.
- 24 Ibrahim EM, Halim ZA, Wahab EA, Sabry NA. Psychiatric morbidity among Prisoners in Egypt. *World J Medical Sci* 2014; 11(2): 228-32.
- 25 Guy E, Platt JJ, Zwerling I, Bullock S. Mental health status of prisoners in an urban jail. *Crim Justice Behav* 1985; 12: 29-53.
- 26 Hassan I, Birmingham L, Harty MA, Jarrett M, Jones P, King C, et al. Prospective cohort study of mental health during imprisonment. *Br J Psychiatry* 2011; 198: 37-42.
- 27 Brink J. Epidemiology of mental illness in a correctional system. *Curr Opin Psychiatry* 2005; 18: 536-41.
- 28 https://en.m.wikipedia.org/wiki/dhaka_central_jail_keraniganj [Accessed on 21/10/2018].