

A study of criminality and psychiatric morbidity among prison inmates

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ABSTRACT

Introduction: Prisons hold many people that society does not want to have around and it would be wise to keep them there. In India, we do not have a clear understanding of the extent and patterns of mental health problems in prisons. **Materials and methods:** The study was carried out in the Chanchalguda Central Prison. Study sample of 100 prisoners was selected by random sampling technique ensuring proportionate representation to violent as well as the non-violent groups. Mini Plus 5.00 administered for psychiatric disorders. **Results:** 86% of prisoners are diagnosed as having a diagnosis of either mental illness or substance use according to mini-plus. 53% of prisoner reported substance use prior to imprisonment. **Conclusion:** A high prevalence of psychiatric morbidity (86%) was found in the prison pointing to the fact that urgent attention is required with the aim of reducing the burden of psychiatric disorders.

Keywords: *Psychiatric Disorders, Violent And Non-Violent Prisoners, Psychopathology*

Prisoners, live away from family and their loved ones, jobs, community, friends behind bars, where the atmosphere may be deleterious with bad moral surroundings. Prisons many times include gangs and bad role morals, place where they may come in contact with homosexual contacts, maybe raped, brutalized and fearful, with overcrowding, making the environment even worse¹. This may lead to prolonged adjustments and adaptations. Loss of self-confidence and self-deprivation is common resulting in many psychological changes and mental illness. Many times, the individuals take to alcoholism and substance use to “forget” their sorrow²⁻⁴.

Estimates from different countries suggest that the prevalence of mental health problems in prisons is three to five times higher than in the general population⁵. In India, there has been little systematic assessment of the prevalence and patterns of mental morbidity among prisoners, their mental health needs and system responses or the lack of it⁶. Mental disorders are caused by a complex interaction between genetic factors, early development,

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Received: September 18, 2020; Revision Received: November 04, 2020; Accepted: November 08, 2020

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personality, current environment, physical health, life events, coping skills and social support^{7,8}.

Psychotic disorders are mental illnesses that cause impairments in a person's judgement and ability to carry on with the tasks of day to day life. Schizophrenia generally affects the individual's thought processes, perceptions, emotions and behaviors. Bipolar disorders (or affective psychoses) are characterized by periods of, elated mood, expansive ideation and over activity (mania), alternating with sadness and being withdrawn (depression). It is not uncommon to find prisoners with these disorders, which may develop before entry into prison or during imprisonment^{9,10}.

The psychopathology of criminal behaviour has long been a subject of interest for the scientists and has been explained in terms of social disorganization, cultural conflicts and psychological determinants¹¹. Systematic information on the prevalence and types of mental disorders in prisoners is scarce although available data suggest that psychiatric disorders are fairly common in this population¹².

The study of substance use and morbidity among the prisoners in India is very limited. Thus, to bridge this gap, this study was done to collect baseline data on the mental health of male and female prisoners and to estimate the prevalence of psychiatric morbidity according to diagnostic category among the prison population of Chanchalguda Central Prison and also to study and compare Psychiatric morbidity of violent and non-violent prisoners using mini plus.

MATERIALS AND METHODS

This study was done by the Department of Psychiatry at chanchalguda jail during the period 2015. 75 male prisoners 25 female prisoners above eighteen was selected by random sampling technique ensuring proportionate representation to violent as well as the non-violent groups from Chanchalguda Central Prison. This study was cleared by the Institutional Ethical Committee. The nature of study was explained to the prisoners and only those who gave written informed consent were included into the study. Those who refused to give the consent, persons with mental retardation and those with acute medical illness were excluded from the study.

MINI PLUS 5.00 administered for DSM-IV and ICD-10 psychiatric disorders to all the prisoners in the study. This Mini –International Neuropsychiatric Interview which is a short and structured interview was done in the chambers which was provided by the prison administration. The administration time of MINI plus was 15 minutes and was structures for a short but accurate psychiatric interview.

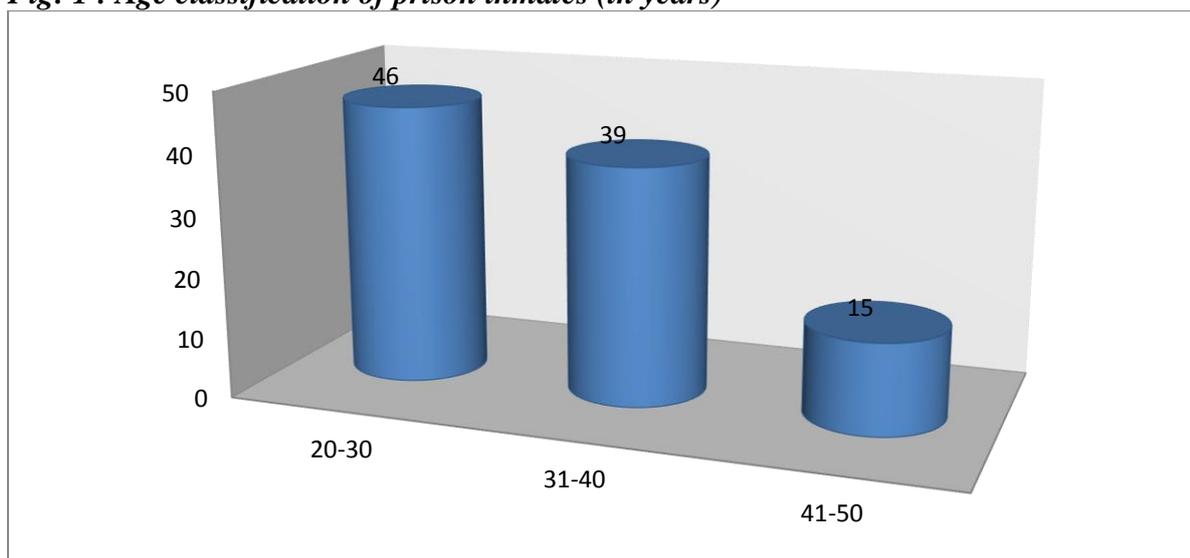
The results of the interview were statistically analyzed using SPSS software and were represented by graphs and tables where necessary.

RESULTS

Out of 100 prisoners included in the study, 75 were males and 25 were females. Most of the prison inmates were between the ages 20 to 30 years, consisting of 46% of the total patients under study. 39 (39%) of them were between 31-40 years of age and 15% of them were above the age of 41 years.

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Fig: 1 : Age classification of prison inmates (in years)



The predominant religion of the prisoners were hindus, comprising of 60%, followed by Muslims, who constituted 26%. Christians were 12% while 2 of the patients were Sikh and Parsi, one each. 43% of them were uneducated, while 15% of them had completed their Intermediate education. 21% of them had completed high school and 12% had primary school education. Most of the prisoners were unskilled workers (56%), followed by semiskilled (23%). 5% were unemployed. 70% of them came from the urban areas, while 30% of them were from rural background. Most of them (64%) were married while 32% of them were single. 57% of them were from nuclear families and 41% were from joint families (table: 1).

Table: 1: Socio-economic details of the prisoners

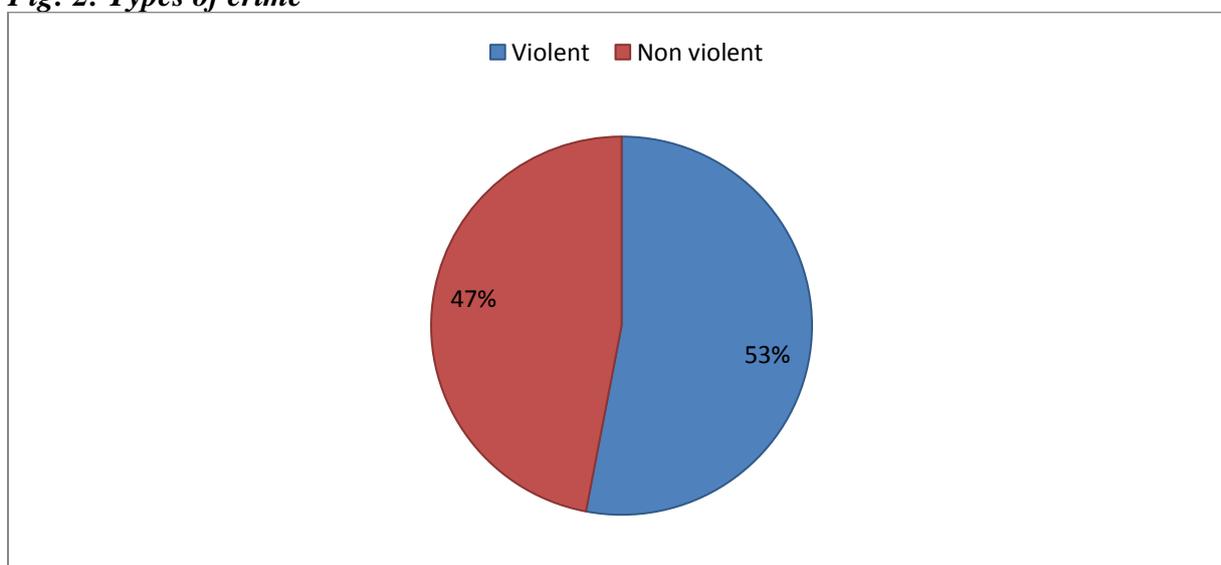
Details	Number	Percentage
Sex		
Males	75	75
Females	25	25
Religion		
Hindu	60	60
Muslim	26	26
Christian	12	12
Others	2	2
Education		
Primary	12	12
High School	21	21
Intermediate	15	15
Graduate	9	9
Illiterate	43	43
Socio-economic status		
Class I	1	1
Class II	3	3
Class III	8	8
Class IV	30	30
Class V	58	58
Occupation		
Unemployed	5	5

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Details	Number	Percentage
Unskilled	56	56
Semiskilled	23	23
Skilled	3	3
Shop owners, clerks, farm owners	5	5
Semi Professional	5	5
Professional	3	3
Locality		
Rural	30	30
Urban	70	70
Marital status		
Married	64	64
Single	32	32
Divorced	3	3
Separated	1	1
Type of Family		
Joint	41	41
Nuclear	57	57
Unimember	2	2

53% of the crimes committed by the prisoners were violent crimes while 47% of them committed non-violent crimes (Fig:2).

Fig: 2: Types of crime



Of the 25 women in the study, 5 of them had major current depressive disorder and 4 of them used cannabis. 3 of them were schizophrenic and 3 had alcohol dependence in the past 12 months. 1 each had OCD and alcohol dependence for lifetime, generalized anxiety disorder, antisocial personality disorder and adjustment disorder. 1 woman had major current depressive disorder with alcohol dependence in the past 12 months and another had BPAD-I and lifetime alcohol dependence. 3 of them had no psychiatric disorder.

Out of the 75 men, 11 of them had no disorder whatsoever, while 14% of them were dependent on alcohol for the past 12 months. 9 of them were dependent on alcohol for life time and 8 of them were schizophrenic. 5 of them had major current depressive disorder and

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alcohol dependence and 4 had antisocial personality disorder as well as alcohol dependence (Table: 2).

Table: 2 : Mini Plus diagnosis of the prisoners

MINI PLUS DIAGNOSIS OF PRISONERS	SEX	
	MALE	FEMALE
No	11	3
Major Depressive Disorder-Current	4	5
Social Phobia	1	0
Ocd	1	1
Alcohol Dependence-Past 12 Month	14	3
Alcohol Dependence-Life Time	9	1
Cannabis-Use	1	4
Schizophrenia	8	3
Substance Induced Psychotic Disorder	1	0
Generalized Anxiety Disorder	2	1
Antisocial Personality Disorder	2	1
Major Depressive Disorder-Current +Alcoholdependence	5	1
Bpad-I +Alcohol Dependence-Life Time	1	1
Major Depressive Disorder-Current +Alcohol Dependence-Lifetime+Antisocial Personality Disorder	2	0
Alcohol Dependence Lifetime +Antisocial Personality Disorder	4	0
Alcohol Dependence-Lifetime + Cannabis Use + Anti-Social Personalitydisorder	1	0
Social Phobia+ Alcohol Dependence-Lifetime	1	0
Cannabis Use +Anti Social Personality Disorder	1	0
Generalised Anxiety Disorder+Alcoholdependence-Lifetime	1	0
Alcohol Dependence-Lifetime+Cannabis Use	2	0
Adjustment Disorder	1	1
Major Depressive Disorder+Petrol Sniffing	1	0
Schizoaffective Disorder+Alcohol Dependence-Current	1	0

Amongst the prisoners with violent crimes, most of them (10 (18.9%)) were Schizophrenic and 6 were alcohol dependent life time. 5 (9.4%) of them had major current depressive disorder and 5 (9.4%) had major current depressive disorder with alcohol dependency. 4 (7.5%) were alcohol dependent for the past 12 months. Among the non violent prisoners, 13 (27.7%) were alcohol dependent for the past 12 months, and 5 (10.6%) were on cannabis use. 11(23.4%) had no psychiatric morbidity.

Table: 3: Comparison of Mini-Plus Diagnosis in Violent and Nonviolent Groups

Mini Plus Diagnosis	Type of crime	
	Violent	Non-Violent
None	3 (5.7%)	11 (23.4%)
Major Depressive Disorder – Current	5 (9.4%)	4 (8.5%)
Social Phobia	1 (1.9%)	0 (0%)
OCD	1 (1.9%)	1 (2.1%)
Alcohol Dependence – since 12 months	4 (7.5%)	13 (27.7%)
Alcohol Dependence – Life time	6 (11.3%)	4 (8.5%)
Cannabis-Use	0 (0%)	5 (10.6%)
Schizophrenia	10 (18.9%)	1 (2.1%)
Substance Induced Psychotic Disorder	1 (1.9%)	0 (0%)

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Mini Plus Diagnosis	Type of crime	
	Violent	Non-Violent
Generalized Anxiety Disorder	2 (3.8%)	1 (2.1%)
Antisocial Personality Disorder	3 (5.7%)	0 (0%)
Major Depressive Disorder-Current +Alcoholdependence	5 (9.4%)	1 (2.1%)
Bpad-I +Alcohol Dependence-Life Time	1 (1.9%)	1 (2.1%)
Major Depressive Disorder-Current +Alcohol Dependence-Lifetime+Antisocial Personality Disorder	2 (3.8%)	0 (0%)
Alcohol Dependence Lifetime +Antisocial Personality Disorder	2 (3.8%)	2
Alcohol Dependence-Lifetime + Cannabis Use + Anti Social Personalitydisorder	1 (1.9%)	0 (0%)
Social Phobia+ Alcohol Dependence-Lifetime	1 (1.9%)	0 (0%)
Cannabis Use +Anti Social Personality Disorder	1 (1.9%)	0 (0%)
Generalised Anxiety Disorder+Alcoholdependence-Lifetime	1 (1.9%)	0 (0%)
Alcohol Dependence-Lifetime+Cannabis Use	2 (3.8%)	0 (0%)
Adjustment Disorder	1 (1.9%)	1 (2.1%)
Major Depressive Disorder+Petrol Sniffing	0 (0%)	1 (2.1%)
Schizoaffective Disorder+Alcohol Dependence-Current	0 (0%)	1 (2.1%)
Total	53	47

DISCUSSION

Prison populations have a disproportionately high prevalence of mental illnesses. In the present study, most of the prisoners belong to the age group of 21 to 30 years. Overall distribution of age in the study group also suggests that prisoners (mean age 32.1 ± 9.2 years) belonged to relatively younger age group. In many similar studies, this range was seen to be quite predominant. In a study at NIMHANS, the mean age was 30.68, with most of the prisoners being in their late 20s¹³. A study by Goel et al reported 56% belonging to the age group between 21-40 years¹⁴ and Goyal et al reported a mean age of 36.68¹⁰. In studies outside India also, similar results were observed¹⁵⁻¹⁷.

Nearly half of (43%) the prisoners are illiterates. Nearly 1 in 2 prisoners are illiterates. 12% are studied up to primary education. Approximately 9% of prisoners were educated up to graduation. In violent and non-violent groups most of the prisoners are illiterates with no significant differences found between two groups. A study by Goyal et al reported illiterates to be 51.4% and Sethi et al reported 71%^{10,18}. 88% of prisoners in present study belongs to low socio-economic status (class-iv and class v). Similar results were observed by Goyal et al and Singh and Verma et al¹⁹. Most of the persons in our study were married as was the case in the studies by Goyal et al and Singh and Verma^{10,19}. However, a study at NIMHANS and a study by Simpson et al reported the predominant prisoners to be single^{13,20}.

In present study violent prisoners around 53% and non-violent prisoners around 47%. In present study depicts attempt to murder(13%), kidnapping(10%), murder(12%) are more common violent crimes done by prisoners, and theft(18%), quarrel(6%) are common types nonviolent crimes done by prisoners. A study by Jha reported 69% to be aggressive offences, with 1% to be sexual offence and 24% acquisitive offences²¹.

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In present study 86% of prisoners are diagnosed as having a diagnosis of either mental illness or substance use according to mini-plus. 11 (78.6%), male prisoners 2 female prisoners(21.4%) are without any diagnosis. Depression was most common psychiatric diagnosis (18%), 2% of prisoners are suffering from bipolar affective disorder, 46% prisoners reported alcohol use in life time. which is more than double the rates of alcohol use in India out of which 25% of violent prisoners are using alcohol in past 12 months or life time which is nearly similar to the prevalence of substance use in non-violent group (22%). A study at NIMHANS reported 79.6% to have mental illness while Goel et al reported prevalence of mental morbidity to be 70% among convicts and 93% among non-convicts. 20% of convicts and 80% of non-convicts had AXIS-1 disorders while 24.6% of convicts and 75.4% of non-convicts had AXIS-11 disorders^{13,14}. Others authors also reported similar results^{12,20,22,23}. Depression was the most common illness in studies by Goyal et al¹⁰, Math et al¹³, Chadda et al¹¹, Naidoo et al²⁴, Way et al²⁵. Assadi et al reported 29% of the prisoners to be depressed²³. Bipolar affective disorder was observed in 1.2% of the women, 2.3% male remands and 2.2% sentenced males in a study by Simpson et al²⁰.

In present study 53% of prisoner reported substance use prior to imprisonment. This was in accordance to a study by Narkauskaitė et al who observed 48.7% of the prisoners using drugs²⁶. 9% of the prisoners used cannabis in our study, while 8% was seen in a study by Assadi et al²³.

Around 46% prisoners reported alcohol use in life time in our study, which is more than double the rates of alcohol use in India. The rates of alcohol use reported among males (21.4%) in the National Household Survey of Drug Use by Tiwari et al.²⁸ clearly shows prisoners having doubled the prevalence. Same was observed in the other studies in India and around the world^{10,13,20,27}. A study by Simpson et al revealed an cannabis use in 43.3% in females 53.7 percent in male remands and 55.7% in sentenced men, which was very high compared to our study²⁰.

ASPD diagnosis varies anywhere between 25-75 % depending on the nature of the prison population and also based on the assessment instrument used. In present study 11% prisoners are diagnosed as having anti-social personality. Math et al reported a prevalence of 13% which was in concurrence to our study. However a higher rate of 47% in males was observed in a study by Fazel and Danesh²⁹.

CONCLUSION

A high prevalence of psychiatric morbidity (86%) was found in the prison, with the most common being depression and alcohol consumption. Proper counseling and monitoring is essential to counter this conditions among the prisoners and reducing the burden of psychiatric disorders.

REFERENCES

1. Kumar V, Daria U. Psychiatric morbidity in prisoners. *Indian J Psychiatry*. 2013;55(4):366–370.
2. Gunn J, Maden A, Swinton M. Treatment needs of prisoners with psychiatric disorders. *BMJ* 1991; 303:338-41
3. Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: A systematic review. *Addiction* 2006; 101:181-91
4. Maden T, Swinton M, Gunn J. Psychiatric disorder in women serving a prison sentence. *Br J Psychiatry* 1994; 164:44-54.

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5. Ronald C. Kessler, Sergio Aguilar-Gaxiola, Jordi Alonso, Somnath Chatterji, Sing Lee, Johan Ormel, T. Bedirhan Üstün, and Philip S. Wang The global burden of mental disorders: An update from the WHO World Mental Health (WMH) Surveys *Epidemiol Psichiatr Soc.* 2009 Jan–Mar; 18(1): 23–33.
6. Suresh Bada Math and Ravindra Srinivasaraju Indian Psychiatric epidemiological studies: Learning from the past *Indian J Psychiatry.* 2010 January; 52(Suppl1): S95–S103.
7. H.C.Ganguli epidemiological findings on prevalence of mental disorders in India *Indian Journal of Psychiatry,* 2000, 42(1), 14-20.
8. Hirschi, Travis and Gottfredson, Michael (1983) Age and the Explanation of Crime. *American Journal of Sociology* 89:552-584.
9. Lamb, H. R., & Weinberger, L. E. (2005). The shift of psychiatric inpatient care from hospitals to jails and prisons. *The Journal of the American Academy of Psychiatry and the Law,* 33(4), 529–534
10. Goyal SK, Singh P, Gargi PD, Goyal S, Garg A. Psychiatric morbidity in prisoners. *Indian j psychiatry* 2011; 53:253-7
11. R.K.Chadda, Amarjeet, clinical profile of patients attending a prison psychiatric clinic, *Indianj.psychiat,*1998,40(3),260-265.
12. Herrman H, McGorry P, Mills J, Singh B. Hidden severe psychiatric morbidity in sentenced prisoners: an Australian study. *Am J Psychiatry* 1991; 148: 236-9
13. Math SB, Murthy P, Parthasarathy R, Naveen Kumar C, Madhusudhan S 2011. Mental health and substance use problems in prisons: Local lessons for national action. Publication, National Institute of Mental Health Neuro Sciences, Bangalore.
14. Nidhi Goel, Pardeep Khanna, Meena, A. K. Vohra and Ramesh Verma, Prevalence of mental morbidity amongst prisoners, *Journal of Medical Genetics and Genomics* December 2010.Vol. 2(5), pp. 63 - 66,
15. Birmingham L, Mason D, and Grubin D. Prevalence of Mental Disorder in Remand Prisoners: Consecutive Case Study. *BMJ* 1996; 313:1521-1524
16. Brooke D, Taylor C, Gunn J, Maden A. Point prevalence of mental disorder in unconvicted male prisoners in England and Wales. *BMJ* 1996; 313:1524–27.
17. Fazel S, Grann M. Psychiatric morbidity among homicide offenders: a Swedish population study. *Am J Psychiatry.*2004; 161: 2129-2131.
18. Sethi BB, Guptha H C, Sinha P K, pattern of crime and alcoholism, parental deprivation. *Indian j psychiatry* 1971; 13:275-81
19. Singh G and Verma H C a murder in Punjab: A psychosocial study. *Indian j psychiatry* 1976; 18:243-51.
20. Simpson, A. I., Brinded, P. M., Fairley, N., Laidlaw, T. M., & Malcolm, F. (2003). Does ethnicity affect need for mental health service among New Zealand prisoners? *The Australian and New Zealand Journal of Psychiatry,* 37(6), 728–734.
21. Jha B K a study of nature of criminal offences of mentally ill prisoners. *Indian j psychiatry* 1968;10: 168.
22. Butler, T., Andrews, G., Allnutt, S., Sakashita, C., Smith, N. E., & Basson, J. (2006). Mental disorders in Australian prisoners: A comparison with a community sample. *The Australian and New Zealand journal of psychiatry,* 40(3), 272–276
23. Assadi, S. M., Noroozian, M., Pakravannejad, M., Yahyazadeh, O., Aghayan, S, Shariat, S. V., et al. (2006). Psychiatric morbidity among sentenced prisoners: Prevalence study in Iran. *The British Journal of Psychiatry,* 188, 159–164.
24. S Naidoo, DL Mkize South Africa Prevalence of mental disorders in a prison population in Durban, *Afr J Psychiatry* 2012;15:30-35

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25. Way BB, Sawyer DA, Lilly SN, Moffitt C, Stapholz BJ. Characteristics of inmates who received a diagnosis of serious mental illness upon entry to New York State Prison. *Psychiatr Serv* 2008; 59:1335–1337
26. Narkauskaitė, L., Juozulynas, A., Mackiewicz, Z., Surkiene, G., & Prapiestis, J. (2007). *The prevalence of psychotropic substance use and its influencing factors in Lithuanian penitentiaries. Med Sci Monit, 13(3), CR131-135.*
27. Ebiti NW, Ike JO, Sheikh TL, Lasisi DM, Babalola OJ, Agunbiade S. Determinants of psychoactive substance use among incarcerated delinquents in Nigeria. *Afr J Drug and Alcohol Studies*. 2012;11(2):117-127.
28. S.C. Tiwari, Garima Srivastava,1, Rakesh Kumar Tripathi, N.M. Pandey, G.G. Agarwal, Smita Pandey, & Samyak Tiwari Prevalence of psychiatric morbidity amongst the community dwelling rural older adults in northern India *Indian J Med Res* 138, October 2013, pp 504-514
29. Fazel S, Danesh J. Serious mental disorder among 23 000 prisoners: a systematic review of 62 surveys. *Lancet*2002; 359: 545–50.

Acknowledgement

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interest.

How to cite this article: Reddy Kancharla S., Karthikeyan S.K & Pramod Kumar V (2020). A study of criminality and psychiatric morbidity among prison inmates. *International Journal of Indian Psychology*, 8(4), 224-232. DIP:18.01.029/20200804, DOI:10.25215/0804.029