



Original Research Article

## Psychiatric Morbidity in Under Trial Prisoners

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### ABSTRACT

**Context:** Imprisoned people are very much vulnerable to develop mental health problems. Some prisoners develop mental health problem before detainment and some develops after detainment. **Aim:** Present study assessed psychiatric morbidity in under trial prisoners. **Materials and Methods:** Based on purposive sampling technique, thirty three under trail inmates were selected from psychiatric inmate ward of RINPAS, Ranchi, India. Thirty three normal participants were selected from the general population. Both the groups were matched on age, gender, education, occupation, marital status and residence. All participants were assessed on MCMI-III. **Results and Conclusions:** Obtained responses were scored by using standard scoring procedure and subsequently statistically analyzed by using  $\chi^2$  test. Result discovered that under trial inmates group had more psychiatric morbidity, pathological personality traits and disorders in comparison to their normal counterparts. The most widespread psychiatric disorder among under trial inmates group was anxiety disorder, followed by alcohol dependence, drug dependence, major depression, delusional disorder, dysthymic disorder, post-traumatic stress disorder, thought disorder and bipolar manic disorder. Antisocial, depressive and schizoid personality disorders were prominent in under trial inmates group followed by negativistic, schizotypal, avoidant, sadistic, and borderline personality disorder.

**Key Words:** Psychiatric Morbidity, Under Trial, Crime.

### INTRODUCTION

The psychiatric morbidity among prison inmates is significantly higher than the general population and prisoners have number of defined problem areas most commonly substance use, depression and anxiety disorders. <sup>[1]</sup> High prevalence of psychiatric morbidity among inmates can be secondary to stress they experience during their incarceration which may possibly intensify certain underlying psychiatric

conditions and precipitate mental abnormality in vulnerable individuals. <sup>[1, 2, 3]</sup> Environmental factors in prison give rise to feelings of anger, frustration, and anxiety which consequently results in the incidence of psychiatric morbidity among remand prisoners. <sup>[3, 4]</sup>

In an Indian study 120 under trial prisoners were assessed as per ICD-10 criteria in which 9% were diagnosed having different psychiatric disorder. Twenty eight

percent suffered from schizophrenia, 13% from manic depressive psychosis, and 14% from anxiety and depression, 9% from malingering and 7% from seizure disorder in the assessed number of under trial prisoners. Pre-existing psychiatric illness before committing major crime was detected in 35% of referred under trial prisoners. [1,5]

A review of severe mental disorder among prisoners indicate that psychiatric morbidity including, schizophrenia is higher and perhaps increasing in prison populations compared with general populations. It is also found that early phase of imprisonment is a vulnerable period with a moderately high incidence of adjustment disorders and twice the incidence in solitary confinement compared with non-solitary confinement and there is a growing population of mentally ill prisoners being insufficiently detected and treated. [3,6]

Another systematic review of 62 surveys from 12 countries included 22790 prisoners by Fazel and Danesh suggests that prisoners were several times more likely to have psychosis and major depression, and about ten times more likely to have antisocial personality disorder, than the general population. [7] A study conducted in 202 inmate samples reported 3.5% were suffering with schizophrenia, 4.5% with depression, and 3.5 % with alcohol dependence. [8] A consecutive case study by Birmingham, et al. (1996) [9] on 669 under trial prisoners reveals 26% of assessed under trial prisoners were having mental disorder (the proportion raises to 62% if substance misuse diagnoses are included), with one in 20 were fulfilling a diagnostic criteria of acute psychosis. Prisoners have a higher incidence of mental health problems, in particular, neurotic disorders, compared to the general population. [10] With this background, the present study was designed to know the presence of psychiatric

morbidity in under trial inmate group with comparison to normal control group.

## **MATERIALS AND METHODS**

This study was conducted at Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS), Ranchi. Sample for this study consisted of 33 under trial prisoners who were seeking psychiatric service, recruited from psychiatric prisoner ward of Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS). The Inclusion and Exclusion criteria for the participants were age group between twenty to fifty years, educated at least up to eighth standard. The normal control groups was also consisted of thirty three subjects aged twenty to fifty years and had to be able to give informed consent, was drawn from Ranchi and nearby places. Purposive sampling technique was used to choose the sample. In both the groups' majority of participants were educated up to intermediate, married, residing in urban areas and belonging to Hindu community.

Socio-demographic information was collected using Socio Demographic and Clinical Data Sheet. MCMI-III (Millon Clinical Multiaxial Inventory-III) was administered to assess the psychiatric morbidity in all the participants.

### **Tools used:**

#### **Socio-Demographic and Clinical Data Sheet:**

This is a semi structured Performa. It contains information about socio demographic variables such as age, sex, religion, education, marital status, occupation and domicile of the subjects and also clinical details like age and onset of illness.

#### **Millon Clinical Multiaxial Inventory- III (MCMI- III)**

The MCMI-III consists of 175 items scored true or false by the respondent and it is especially designed to measure personality

traits and disorder. The scales are clustered into two groups: 14 PD scales and 10 clinical syndrome scales. It has also Social Desirability scale (Scale Y), a Debasement scale (Scale Z), and a validity scale (Scale V) which include 3 bizarre or highly improbable items to see if responses are consistent throughout. The MCMI-III uses base rate (BR) scores to provide diagnostic clinical cut offs to indicate presence (BR) and prominence (BR) of the various personality traits and clinical syndromes. Traditionally, Base Rate scores of 75 to 84 indicate the presence of clinically significant traits. Base Rate scores of 85 or above indicates the high probability of that clinical diagnosis. For clinical significance it would then be more appropriate to regard a BR score around 70 as significant in group comparisons. Reliability and validity of the MCMI-III has consistently been demonstrated. [11, 12]

#### **Statistical analysis:**

The results were analyzed using statistical package SPSS-version 20. Sociodemographic variable as well as performance of the both groups on study variables were compared using  $\chi^2$  test.

## **RESULT**

Present study assessed the psychiatric morbidity in the group of under trial inmates and normal control group. The demographic data for the sample are given in Table 1. It reveals no significant difference found between the groups on Sociodemographic characteristics i.e., age, education, marital status, residence, and religion except employment status. Significant statistical difference was found only on employment status ( $\chi^2=19.80$ ,  $p<.00$ ). Most of the participants in under trail inmates group were unemployed during their detention.

Table 2 showing results of presence and prominence of clinical syndromes in

under trial inmate and normal control group. Under trial prisoners group scored high in presence and prominence of different clinical syndromes. The most widespread psychiatric disorder among under trial group was anxiety disorder (30.3%), followed by alcohol dependence (27.3%), drug dependence (18.2%), major depression (12.1%), delusional disorder, dysthymic disorder (6.1% each), post traumatic stress disorder, thought disorder and bipolar manic disorder (3.0% each). Where as in normal control group most widespread disorder was anxiety disorder (6.1%) followed by dysthymic disorder, alcohol dependence, and major depression (3.0% each).

With deference to comparison of clinical syndromes between under trial inmates group and normal control group, there was statistically significant differences were found in presence and prominence of different clinical syndromes. Anxiety disorder ( $\chi^2=22.23$ ,  $p<.00$ ), dysthymic disorder ( $\chi^2=17.99$ ,  $p<.00$ ), alcohol dependence ( $\chi^2= 24.10$ ,  $p<.00$ ), drug dependence ( $\chi^2= 11.78$ ,  $p<.003$ ), and delusional disorder ( $\chi^2= 13.20$ ,  $p<.001$ ).

Results in Table 3 revealed that the most prevalent personality traits and disorders in under trial prisoners group was antisocial, schizoid and negativistic (15.2% each) followed by paranoid and depressive (9.1% each), schizotypal, sadistic and narcissistic (6.1% each), borderline and avoidant (3.0% each). In the normal control group most common personality disorders were narcissistic personality disorder (18.2) followed by schizoid (9.1%), depressive, dependent, negativistic and compulsive (3.0% each).

Statistically significant differences were found on different personality traits and disorders. Antisocial ( $\chi^2= 8.63$ ,  $p<.00$ ), depressive ( $\chi^2=5.83$ ,  $p<.05$ ), negativistic ( $\chi^2=12.88$ ,  $p<.00$ ), borderline ( $\chi^2=8.87$ ,

p<.01) and paranoid personality disorder ( $\chi^2=11.78, p<.003$ ).

Table 1: Showing Socio-Demographic Characteristic of the Sample

Variables		Inmate Group	Control Group	$\chi^2$	(df)
Age	20-30	11	19	3.914 (2)	(NS)
	31-40	19	12		
	41 & above	3	2		
Education	8th-10th	14	9	2.013 (2)	(NS)
	Intermediate	11	16		
	Graduation & Above	8	8		
Marital Status	Married	19	20	0.63 (1)	(NS)
	Unmarried	14	13		
Occupation	Employed	6	24	19.80 (1)	(.00)
	Unemployed	27	9		
Residence	Urban	19	22	820 (2)	(NS)
	Rural	9	6		
	Semi urban	5	5		
Religion	Hindu	19	17	2.311 (4)	(NS)
	Muslim	2	4		
	Christian	9	11		
	Others	2	1		

P<.05\*, P<.01\*\*, NS: not significant

Table 2: Showing results of Presence & Prominence of Clinical Syndromes in under trail Inmate and Normal Control Group

Types and severity level of clinical syndromes		Group		(df)	$\chi^2$ (p-value)
		Under Trail Inmate (%)	Normal Control (%)		
Anxiety Disorder	NS	6 (18.2)	25 (75.8)	2	22.23 (.00)
	presence	17 (51.5)	6 (18.2)		
	prominence	10 (30.3)	2 (6.1)		
Somatoform Disorder	NS	32 (97.0)	33 (100)	1	1.01 (NS)
	presence	1 (3.0)	0		
	prominence	0	0		
Bipolar Disorder	NS	30 (90.0)	33 (100)	2	3.14 (NS)
	presence	2 (6.1)	0		
	prominence	1 (3.0)	0		
Dysthymic Disorder	NS	14 (42.4)	30 (90.9)	2	17.99 (.00)
	presence	17 (51.5)	2 (6.1)		
	prominence	2 (6.1)	1 (3.0)		
Alcohol Dependence	NS	12 (36.4)	31 (93.9)	2	24.10 (.00)
	presence	12 (36.4)	1 (3.0)		
	prominence	9 (27.3)	1 (3.0)		
Drug Dependence	NS	23 (69.7)	33 (100)	2	11.78 (.003)
	presence	4 (12.1)	0		
	prominence	6 (18.2)	0		
PTSD	NS	30 (90.9)	33 (100)	2	3.14 (NS)
	presence	2 (6.1)	0		
	prominence	1 (3.0)	0		
Thought Disorder	NS	28 (84.4)	33 (100)	2	5.41 (NS)
	presence	4 (12.1)	0		
	prominence	1 (3.0)	0		
Major Depression	NS	23 (69.7)	30 (90.9)	2	4.72 (NS)
	presence	6 (18.2)	2 (6.1)		
	prominence	4 (12.1)	1 (3.0)		
Delusional Disorder	NS	22 (66.7)	33 (100)	2	13.20 (.001)
	presence	9 (27.3)	0		
	prominence	2 (6.1)	0		

P<.05\*, P<.01\*\*, NS: not significant

## DISCUSSION

Findings of the present study indicates that in under trial prisoners group

most common psychiatric disorder was anxiety disorder, followed by alcohol dependence, drug dependence, major

depression, delusional disorder, dysthymic disorder, post-traumatic stress disorder, thought disorder and bipolar manic disorder. While in normal control group anxiety disorder was notably found. Dysthymic disorder, alcohol dependence and major depression were second most prevalent disorders in control group. In under trial inmate group dysthymic disorder was found, which matches the past literature in which 2% prisoners had dysthymia. [13] Similar

finding was found in an Indian study in which depressive reaction was found in 16% offenders. [14] Findings of present study confirm that prisoners are specifically sensitive to develop mental health problems. This may be because of stress they experience after their incarceration which intensify certain underlying psychiatric conditions and precipitate mental abnormality in vulnerable individuals. [2,3]

Table 3: Showing results of pathological personality traits and disorders among under trail inmate and normal control group.

Type of personality and clinical severity level		Group		(df)	$\chi^2$ (p-value)
		Under trail inmate %	Normal Control %		
Schizoid	NS	24 (72.7)	26 (78.8)	2	.580 (NS)
	Trait	4 (12.1)	4 (12.1)		
	Disorder	5 (15.2)	3 (9.1)		
Avoidant	NS	26 (78.8)	30 (90.9)	2	2.28 (NS)
	Trait	6 (18.2)	3 (9.1)		
	Disorder	1 (3.0)	0		
Depressive	NS	22 (66.7)	30 (90.9)	2	5.83 (.05)
	Trait	8 (24.2)	2 (6.1)		
	Disorder	3 (9.1)	1 (3.0)		
Dependent	NS	28 (84.8)	29 (87.9)	2	1.51 (NS)
	Trait	5 (15.2)	3 (9.1)		
	Disorder	0	1 (3.0)		
Histrionic	NS	33 (100)	33 (100)	-	-
	Trait	0	0		
	Disorder	0	0		
Narcissistic	NS	29 (87.9)	22 (66.7)	2	4.24 (NS)
	Trait	2 (6.1)	5 (15.2)		
	Disorder	2 (6.1)	6 (18.2)		
Antisocial	NS	15 (45.5)	31 (93.9)	2	8.63 (.00)
	Trait	13 (39.4)	2 (6.1)		
	Disorder	5 (15.2)	0		
Sadistic	NS	29 (87.9)	33 (100)	2	4.25 (NS)
	Trait	2 (6.1)	0		
	Disorder	2 (6.1)	0		
Compulsive	NS	32 (97.0)	30 (90.9)	2	1.39 (NS)
	Trait	1 (3.0)	2 (6.1)		
	Disorder	0	1 (3.0)		
Negativistic	NS	14 (42.4)	28 (84.4)	2	12.88 (.00)
	Trait	14 (42.4)	4 (12.1)		
	Disorder	5 (15.2)	1 (3.0)		
Masochistic	NS	26 (78.8)	31 (93.9)	1	3.21 (NS)
	Trait	7 (21.2)	2 (6.1)		
	Disorder	0	0		
Schizotypal	NS	29 (87.9)	32 (97.0)	2	2.48 (NS)
	Trait	2 (6.1)	1 (3.0)		
	Disorder	2 (6.1)	0		
Borderline	NS	23 (69.7)	32 (97.0)	2	8.87 (.01)
	Trait	9 (27.3)	1 (3.0)		
	Disorder	1 (3.0)	0		
Paranoid	NS	23 (69.7)	33 (100)	2	11.78(.003)
	Trait	7 (21.2)	0		
	Disorder	3 (9.1)	0		

P<.05\*, P<.01\*\*, NS: not significant

The relationship between alcohol/drug abuse and crime has been significantly found in different studies at different times, and present study also confirms the gravity of this relationship, as the rate of alcohol and drug dependence were 27.3% to 18.2% respectively found in under trial inmate group which is nearly the same as findings of one of the previous study. [15] The rate of substance abuse was much higher in an Iranian study [16] found 73% of offenders in the prison have a lifetime history of opiate abuse; however, there are clear methodological differences between the current study and the Iranian study. In contrast, other studies [17, 18] have found lower rates of substance abuse and dependence in inmates than the current study.

However, our findings are contradictory to some aspects of previous research findings in which delusional disorder was the common diagnosis followed by schizophrenia in offenders. [23] In our study most common diagnosis in under trial inmates group was anxiety disorder followed by alcohol dependence, drug dependence, and major depression. This discrepancy with previous researches may be due to small sample size of the present study.

In admiration of personality traits and disorders in our study 60.6% cases in under trial inmate group were diagnosed with personality disorder while in normal control group 36.3% participants were having personality disorder. A series of studies are able to replicate similar findings of our study. In a recent study, personality disorder was observed in 30% of the prison inmates. [19] Similarly some researchers have found 80% personality disorder and 60% antisocial personality disorder in inmates. [20]

With respect to the types of PDs, in present study the most widespread PD in

both groups is Schizoid Personality Disorder. Antisocial personality disorder is specifically widespread in under trial inmate group. Avoidant, Sadistic, Negativistic, Schizotypal, Borderline and Paranoid PDs were more associated to under trial inmate group than to normal controls which conforms the findings of the previous studies suggesting prevalence of personality disorder is high in prison population when compared to the general population. [6, 8, 21] Approximately fifteen for every 100 under trial prisoners were diagnosed antisocial personality disorder which is seven to eight times more than the general population. [22, 23] This fact was also confirmed by the present study.

## CONCLUSION

In present study under trial inmate group was diagnosed having higher number of psychiatric morbidity. Is personality trait contributes to an individual to commit any offence and make them vulnerable to be mentally ill? The answer is rather positive because in present study a large number of under trial prisoners were assessed having personality disorder and psychiatric illness in comparison to the normal group.

Small size of sample is a drawback of the present study. In future similar study can be replicated with a large sample size. Female inmates can also be a part in future research.

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