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Original Research Article

Assessment of levels of depression, anxiety, stress and coping strategies among inmates in a selected prison/ correctional home of West Bengal

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ABSTRACT

Background: Stress, anxiety and depression are common among inmates. They carry a much greater burden of illness than other members of the society. Therefore, present study was conducted with the aim of studying the level of depression, anxiety, stress and coping strategies among inmates in a selected prison.
Methods: A cross-sectional study was carried out on 200 inmates from district jail, Hooghly in West Bengal, India over the period of 7 months. Data was collected by interview method using DASS-21 scale and coping strategies scale by A. K. Srivastava. Administrative permission, ethics committee clearance and informed consent was taken before data collection. Data were analyzed by SPSS 20 version, descriptive and inferential statistics was used for analysis.
Results: The study results revealed that 87.5% had mild to moderate levels of depression, 100% inmates had moderate to extremely severe levels of anxiety and 39% had moderate to extremely severe levels of stress. No one used high approach coping 76% inmates used low approach coping and 62% used moderate avoidance coping.
Conclusions: Hence the study outcome provided essential information to those who help the inmates, especially the counselors in formulating and planning intervention programs to resolve the issues of underserved population.

Keywords: Anxiety, Depression, Stress, Coping, Inmates, Prison

INTRODUCTION

Incarceration is a means used by modern societies in controlling crime. Incarceration is the detention of a person in prison typically as punishment for a crime. It is often used interchangeably with imprisonment. Prison population is an underserved section of the society. Prisons over the globe including Indian prisons are overcrowded and overburdened, 1387 prisons in India house 418,536 inmates indicating severe overcrowding in prisons.[1,2]

There are numerous procedural and basic inadequacies in the Indian prison system that directly influences the psychological wellness of the inmates. Factors such as loneliness, lack of basic amenities, lack of privacy in the prison, violence between prisoners and social cut off, prison environment are likely to be responsible towards mental disorders. Prison health cannot be addressed in isolation from the health of the general population. Prison health must be seen as a part of public health. Recent statistics collated by the national crime research bureau, India in prison statistics of India, 2018 shows that between 2016 and 2018, with the number of prisons decreasing from 1412 to 1339, occupancy and consequently overcrowding in prisons has marginally increased from 113.7% to 117.6%, which continues to remain a major concern.[3] Undertrials constitute 67.4% of the prison population, and as many as 5104 undertrials

had spent more than 5 years in prisons pending completion of their trial.[4]

Similar is the situation in West Bengal. At the beginning of January 2018, West Bengal correctional homes confined 23092 inmates with undertrials constituting 69.08% of the total prison population.[5] The problems of inmates and their survival under these conditions greatly depend on their abilities to cope with the challenges of life in incarceration. Adopting effective coping strategy by incarcerated inmates of prison is the key to survival. Effective coping strategy helps to moderate the stress which the individual experiences and thus, enhance the chances of one's survival from the challenges of incarceration. It is therefore hoped that the results of this study will greatly contribute to knowledge by uncovering strategies for coping with the stress of incarceration among prison inmates. This will help counselling psychologists in general and prison counsellors in particular, the entire prison staff as well as other psychological care givers to devise appropriate means of helping incarcerated inmates of prison to learn effective ways of coping with their situation. From Indian sociocultural context, data from prison survey are less but before doing any intervention related to mental health of inmates' background informational is essential so this study is chosen. This study was conducted to assess the level of depression, anxiety, stress among inmates and to find out coping strategies adopted by them.

METHODS

A descriptive survey research design was adopted with inmates in a selected correctional home of West Bengal, following institutional ethics committee approval. A total of 200 inmates were interviewed between April 2022 to October 2022. Written informed consent was obtained from the subjects who were in the correctional home for more than 6 months. Purposive sampling technique was used to select the subject for the study. However, only those who voluntarily take part in the study were included in the sample.

In this study the inmates are under trial prisoners. It denotes an un-convicted person who has been detained in prison during the period of investigation, inquiry or trial for the offence he/she is accused to have committed, under any law.

To screen the depression, anxiety and stress status, The DASS-21 scale was adapted as it is a public domain instrument, making it cost effective.[6] This tool was designed to measure emotional distress in three sub categories of depression (e.g., loss of self-esteem/ incentives and depressed mood), anxiety (e.g., fear and anticipation of negative events) and stress (e.g., persistent state of overarousal and low frustration tolerance). It is a self-reporting questionnaire with 21 items (seven items for each category) based on a four-point rating scale. To calculate comparable scores with full DASS, each 7-items scale was multiplied by two. Participants are asked to rate how many of each of the items (in the form of statements) applied to them over the past week, with "0=did not apply to me at all" to "3=applied to me very much, or most of the time". The higher the score the more severe the emotional distress. Among Asian population the tool exhibits a reliability measure of internal consistency of α=0.86 for depression; α=0.81 for anxiety; α=0.70 in the stress scale; and overall DASS-21 with α=0.91. This scale recommended cut-off scores for conventional severity labels are-normal, mild, moderate, severe and extremely severe are adopted for this study.

The coping strategies scale by A. K. Srivastava was used after taking permission to assess the coping strategies of the subjects. It is a measure of coping strategies and comprises of 50 items. The scale describes a variety of coping strategies that fall under five major categories namely behavioural-approach, cognitive-approach, cognitive-behavioural-approach, behavioural-avoidance, and cognitive-avoidance. The items are rated on a five-point scale and each item carries five response categories-never, rarely, sometimes, most of the times, and almost always. It is a standardized test with a test-retest reliability of 0.92. The split-half reliability for the approach coping strategies is 0.78 and for avoidance coping strategies is 0.69. Content validity of the tool was ascertained by examining the extent of homogeneity among the items constituting "approach" and "avoidance" coping strategies sub-scales. Concurrent validity of the scale was ascertained by examining the correlation of the scores obtained on the coping strategies scale with the scores on mental health inventory 24 and P.G.I. health questionnaire. As per these coping scale scores on the items in three categories of approach coping strategies that is high approach coping, moderate approach coping and low approach coping and three categories of avoidance coping i.e., high avoidance coping, moderate avoidance coping and low avoidance coping. The original English version of interview schedule was translated into Bengali and back translated to English by two independent language experts and there were no significant differences found.

Analysis was done by using descriptive statistics that is frequency and percentage. Chi-square is computed to find out the association and co-relation co-efficient calculated for relationship between stress, anxiety and depression with socio-demographic characteristics. SPSS version 20 (SPSS IBM Corp, AV monk, New York, USA) software was used for statistical analysis.

RESULTS

Majority (40.5%) of the subjects belonged to the age group of 18-≤30 years., maximum (75.5%) of the subjects were of Hindu religious faith, maximum of the subjects (46%) had education up to secondary level, 55% were married, majority (59%) of the participants belonged to nuclear type of family, majority of study participants

(64%) were doing business or were self-employed, most of the study samples (42.5%) were living in semi urban areas, 39% had monthly family income of Rs.<10000/month and 46% had previous history of imprisonment. Majority (55.5%) of participants in correctional home due to NDPS 55.5%, murder 27%, civil 10%, POCSO 3%, half murder 1.5%, kidnapping 1.5%, 110 dhara and 420 dhara and family problem 5%. Almost 1/3 (29.5%) of inmates were staying in correctional home >4 year, 25.5% >1 year, 13.5% were >3 years, 11% were 1 year, 8% >2 years, 4.5% 4 years, 3.5% were in 3 years. respectively.

Only 12.5% had no depression and 48% had mild depression whereas 76% had extremely severe anxiety and 61% had extremely severe stress. No one used high approach coping, 76% inmates were using low approach coping and majority (62%) of them were using moderate avoidance coping. Approach coping was found not to be related with stress, anxiety and depression whereas avoidance coping was negatively related with stress and anxiety only. Male imprisoners were likely to have more anxiety and stress than female and anxiety level was significantly associated with period of stay in prison. Depression level was significantly associated with education levels of the inmates.

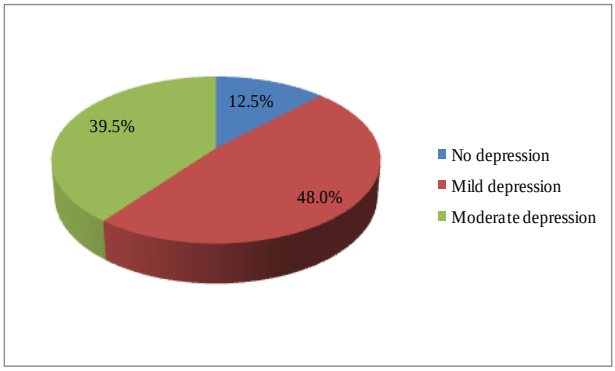

Figure 1: Percentage distribution of inmates' level of depression.

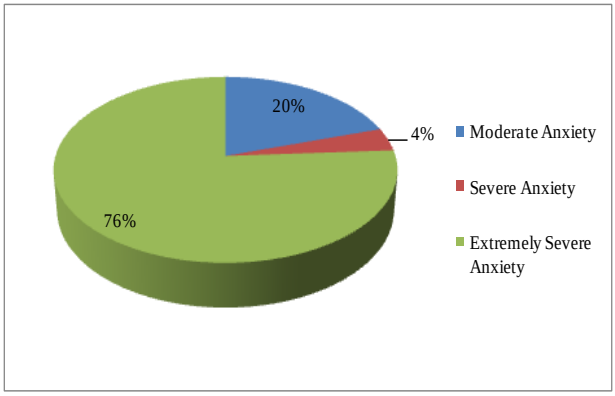

Figure 2: Percentage distribution of inmates' level of anxiety.

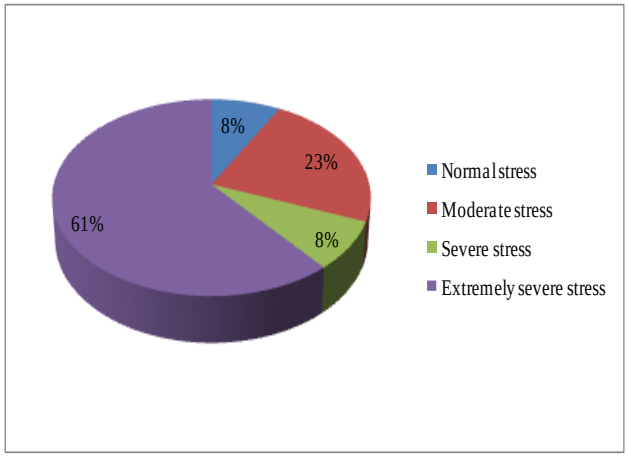

Figure 3: Percentage distribution of inmates' level of stress.

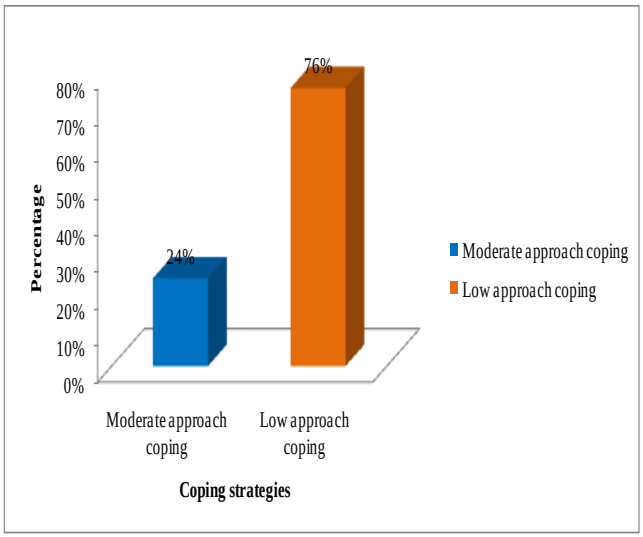

Figure 4: Percentage distribution of inmates' approach coping level.

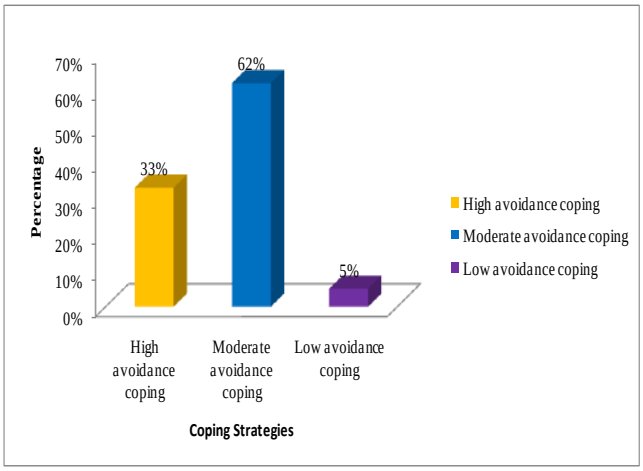

Figure 5: Percentage distribution of inmates' avoidance coping level.

Table 1: Sociodemographic characteristics of the study subjects, n=200.

Variables	N	Percentage (%)
Sex		
Male	169	84.5%
Female	31	15.5%
Age (in years)		
18-≤20	7	3.5%
>20-≤30	74	37.0%
>30-≤40	67	33.5%
>40-≤50	35	17.5%
>50	17	8.5%
Religion		
Hindu	151	75.5%
Muslim	49	28.5%
Education		
Illiterate	36	18.0%
Primary	22	11.0%
Secondary	102	46.0%
Higher secondary	17	8.5%
Graduate and above	23	11.5%
Marital status		
Married	110	55.0%
Unmarried	84	42.0%
Divorced	1	0.5%
Widow	5	2.5%
Type of family		
Nuclear	118	59.0%
Joint	70	35.0%
Extended	12	6.0%
Employment status		
Employed	37	18.5%
Business/ self employed	128	64.0%
Unemployed	35	17.5%

Table 2: Monthly family income, previous history of imprisonment, nature of criminality and period of stay inside correctional home of the study subjects, n=200.

Variables	N	Percentage (%)
Monthly family income		
≤10000	78	39.0%
>10000-≤20000	44	22.0%
>20000-≤30000	51	25.5%
>30000-≤40000	25	12.5%
Previous history of imprisonment		
Never	88	44.0%
1 time	50	25.0%
2 times	22	11.0%
>2 times	40	20.0%
Nature of criminality		
110	1	0.5%
420	1	0.5%
Family	1	0.5%
Civil	20	10.0%
Kidnapping	3	1.5%
Half murder	3	1.5%
Murder	54	27.0%
NDPS	111	55.5%
POCSO	6	3.0%

Continued.

Variables	N	Percentage (%)
Period of stay inside correctional home		
6 month-1 year	22	11.0%
2 years	9	4.5%
3 years	7	3.5%
4 years	9	4.5%
>1 year	51	25.5%
>2 years	16	8.0%
>3 years	27	13.5%
>4 years	59	29.5%

Table 3: Correlation between the approach coping with stress, anxiety and depression level of inmates, n=200.

Variables	R value	P value
Approach coping and stress	-0.280	0.690
Approach coping and anxiety	0.024	0.732
Approach coping and depression	-0.069	0.329

Table 4: Correlation between the approach coping with stress, anxiety and depression level of inmates, n=200.

Variables	R value	P value
Avoidance coping and stress	-0.219	0.002
Avoidance coping and anxiety	-0.197	0.005
Avoidance coping and depression	0.066	0.350

Table 5: Association between depression, anxiety and stress level of inmates with sociodemographic characteristics and imprisonment related history, n=200.

Variables	Moderate	Severe/ extremely severe		χ^2	Df	P value	Significance
Anxiety							
Sex							
Male	25	144		27.790	1	0.000	Significant
Female	16	15					
Period of stay in prison							
≤2 years	11	71		4.281	1	0.039	Significant
>2 years	30	88					
Stress							
Sex							
Male	45	124		9.747	1	0.002	Significant
Female	17	14					
Depression	**No depression**	**Mild**	**Moderate/ severe**				
Up to primary	8	36	14	12.196	4	0.016	Significant
Above primary to secondary	9	43	50				
Above secondary	8	17	15				

DISCUSSION

The present study found that 12.5% inmates had no depression whereas 87.5% had mild to moderate levels of depression. Regarding anxiety, 76% had extremely severe level of anxiety, 4% had severe level of anxiety and 20% had moderate level of anxiety. This study also found that 61% inmates had normal level of stress, 23% had moderate level of stress, 8% had severe level of stress and 8% had extremely severe level of stress. Our study findings were supported by the study conducted by Steyn et al which showed that majority of respondents had normal to moderate levels of depression (69.8%), anxiety (68.3%) and stress (74.2%).[7] Nearly one in three respondents showed severe to extremely severe levels of depression (30.2%) and anxiety (31.8%). On the other hand, George et al study result showed lower prevalence; which showed 8.3% (16) had extremely severe depression, 7.8% (15) had severe depression, 27.6% (53) of jail inmates had moderate depression, 18.2% (35) had mild depression.[8] The 17.7% (34) had extremely severe anxiety, 5.2% (10) had severe anxiety, 31.2% (60) of the jail inmates had moderate anxiety, 18.8% (36) had mild anxiety. 3.6% (7) had extremely severe stress, 8.9% (17)

had severe stress, 5.7 % (11) had moderate stress, 21.9% (42) of the jail inmates had mild stress. Malik et al study showed depression 18.5%, anxiety 8% and stress was found in 8% of the convicted inmates confined in jail.[9] Kumar et al study also showed lower levels of depressive disorder in 16.1% prisoners.[10] Anxiety disorders were seen in 8.5% including generalized anxiety disorder and obsessive-compulsive disorder (OCD) as 6% and 2.5% respectively. Somatoform disorder was seen in 1.7% prisoners. In Waldo study found mild depression among 67.7% samples, moderate depression 6.5% and severe depression among 4.8%.[11] Mild anxiety was found in 19.4%, moderate anxiety in 11.3%, and severe anxiety in 3.2% study samples. 56.5 study samples had normal stress, mild stress was found in 24.2% samples, moderate stress in 12.9% and severe stress in 6.5% samples. Belay in his study showed 23.2% prisoners had moderate level of depression.[12] The 22.7% of the samples were found to have severe level of depression, while 34.9% of them were having extremely severe level of depression.

The 53% of male inmates reported severe depressive symptoms in central jail in Odisha.[10] This was found to be consistent with a study conducted in the central jail of Guwahati which reported a similar 62.5 per 100 male prisoners with depressive symptoms.[13]

The variation in study findings could be due to differences in social, geographical backgrounds and jail environments. Results of the present study findings indicated much higher prevalence of depression and anxiety because of their loneliness, social cut-off, lack of freedom in jail and apprehensions about their future, family and children. As the present study included inmates under trial prisoners so it could be the reason their stress, anxiety and depression levels were higher compared to many studies.[8,13,18]

The present study findings also showed that avoidance coping is negatively related with stress and anxiety only which can be explained as inmates having high levels of stress and anxiety so they mainly used avoidance coping because persons with high levels of stress and anxiety are unable to adopt through approach coping. Study by Lesko et al showed that neuroticism was positively associated with emotion-oriented coping but negatively with task-oriented coping.[14] Conscientiousness predicts task-oriented coping strategies. George et al study supports our study which showed 76% (146) jail inmates used acceptance as their adaptive coping strategy whereas 73.44% (141) jail inmates employed self-distraction as their maladaptive coping strategy.[8] This findings were consistent with the study conducted by Reed et al they found that shorter-term prisoners adopted problem-focused strategies more than longer-term prisoners, while longer-term prisoners adopted emotion-focused strategies more than shorter-term prisoners.[15]

Male imprisoners were likely to have more anxiety and stress than female and anxiety level significantly associated with period of stay in prison. Depression level significantly associated with education level.

According to the special report of bureau of justice statistics, female inmates had higher rates of mental health problems than male inmates.[16] Kastos et al study in 2022 showed no significant association between inmates depression and education levels.[17] Kadir et al study showed those inmates whose duration of punishment was >5 years were 2.92 (95%CI, 1.59-5.35) times more likely to develop anxiety than those whose punishment duration was <1 year.[18]

The present study findings were consistent with the study conducted by George et al.[8] Which revealed that depression among jail inmates had association with age, marital status, family type, number of family members, educational qualification, previous occupation, prior income, type of crime, number of days in jail, previous substance use whereas number of times convicted and current jail inmate status had no association.

One of the main strength of this study was that the researcher used data from a large sample of prisoners and employed validated standard instruments. However, there were limitations, and caution was needed when interpreting these results. The main limitation was cross-sectional nature of the study. The present study used purposive sampling therefore was not representatives of all inmates. Prospective research and more racial diverse sample could have been included from different prisons. It would be interesting if there would be a first evaluation of depression on admission and then periodically during the prison stay.

CONCLUSION

Prevalence of depression, stress and anxiety was higher in inmates than the general population so timely screening, diagnosis and appropriate intervention is required to resolve the mental health issues of inmates.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee (MC/KOL/IEC/NON-SPON 1196/O9/21).

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