

Health Status of Incarcerated Women at Central Jail, Imphal, Manipur: A Comprehensive Survey and Analysis

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Abstract

Incarcerated women in Manipur, North East India, face a severe lack of attention regarding their health status. Field research at Manipur Central Jail, Imphal, found that under-trial inmates make up 91.67% of the incarcerated population, while 68.33% belong to the Scheduled Tribes group, and a large portion (30%) have low literacy levels, and 33.33% earn less than 5000 rupees per month. Mental health, including depression and anxiety, together with PTSD, affects 46.67% of incarcerated women, followed by gastrointestinal conditions with 25%. The research reveals that aging women show a decline in mental health ($r = -0.348$, $p < 0.01$), yet education levels ($r = 0.269$, $p < 0.05$) and income ($r = 0.269$, $p < 0.05$) have positive relationships with the health status among the incarcerated individuals.

Keywords: Incarcerated women; health status; mental health; socio-economic status; Manipur.

1. Introduction

Incarcerated women represent a special subset of the vulnerable criminal justice system population who experience numerous health struggles during their incarceration. The growing awareness regarding healthcare in incarcerated women reveals that insufficient facilities and amenities affect women in correctional centres, particularly those who reside in Manipur within Northeast India. Insurgency, together with ethnic conflicts and economic disadvantages, creates multiple socio-political complications in this region. The study from the current literature reveals the following major factors that need to be considered among incarcerated women and health issues. First, the level of substance use disorder, especially among the low-income population, seems to be very high, and the research indicates that the services reveal higher rates of drug dependence amongst women clients from this area (Khaba et al., 2021; National Crime Records Bureau, 2020). Substance use behaviour has a very high likelihood of causing these youths to get imprisoned, alongside compounding their mental health issues. However, the rate of mental health issues among women living in the correctional centre is very high. It is also found that Indian incarcerated women have more mental health issues like depression, anxiety, and PTSD (Svendsen et al., 2025; Abdu et al., 2018). Moreover, persons who have experienced trauma, violence, and abuse before and during their time in detention centres are affected by their mental health problems (Ayirolimeethal et al., 2014; Joshi, Chaudhary, & Mehta, 2018). Also, there is a lack of healthcare services within the correctional centre, and this is one of the severe challenges that seeks to limit the healthcare needs of women in custody (Rathod et al., 2023). Incarcerated women continue to be denied health care services, adequately trained health care professionals and basic health commodities, thus continuing current health status problems. In light of the above lines, this present study attempts to study the health status of the incarcerated women confined at Manipur Central Jail, Imphal, Manipur. This research implies a highly extensive evaluation of some health criteria, preferentially in the physical, psychological, cardiovascular and other types of illnesses of the women in the correctional centre. Hence, the study is an attempt to bridge the gap by conducting an extensive study on the health status and cross-sectional analysis of women under correctional supervision with their mental health status in Manipur Central Jail Imphal, Manipur.

2. Study Area

The state of Manipur lies in the easternmost portion of India's northeastern hilly region, extending in between longitudes 93°03'E and 94°78'E and latitudes 23°68'N and 25°85'N (Horam and Rizvi, 1998, p.1). This landlocked and remote hilly state holds an unparalleled geographical uniqueness. Geographically, it can be described as almost rectangular, with a valley surrounded by the Manipur Hills. It occupies an area of about 2,007 km² and covers nine percent of the state's total area of 22,327 km², making it one of India's smallest states, occupying only 0.68 percent of the Indian Union's total area. According to the 2011 census, the population of Manipur was 2,721,756 people. This accounted for a small portion of about 0.22 percent of the country's population. The valley's average elevation is situated at 790 meters above sea level. The hill area consists of five districts, namely, Senapati, Tamenglong, Churachandpur, Chandel, and Ukhrul. On the other

hand, the valley comprises the districts of Bishnupur, Thoubal, Imphal West, and Imphal East. In total, the nine districts together comprise 38 sub-divisions, 34 development blocks—9 community development blocks located in the valley and 25 tribal development blocks located in the hills—33 towns, and a total of 2,391 villages.

In 2016, the government of Manipur reorganized the administrative setup for better governance and administration. Govt. Gazette No. 408, dated 9 December 2016, bifurcated existing districts into seven new ones. It consisted of the entire Jiribam district along with its administrative sub-divisions. Kangpokpi district was carved out from Senapati district, Kakching from Thoubal district, and Tengnoupal from Chandel district. Kamjong district was created from the Ukhrul district, the Pherzawl district from the Churachandpur district, and the Noney district from the Tamenglong district. The reorganization of administrative boundaries among districts has increased the number of districts to 16.

3. Objectives of the study

To analyze the demographic factors such as age group, education level, and income level and their relationship with the reported health conditions of incarcerated women in Manipur.

4. Data Sources and Methodology

The study is based on primary data collected through a set of questionnaires administered during field surveys conducted in July and August 2022. The survey was conducted at Manipur Central Jail, Imphal in Manipur, India, which is exclusively established for women's detention. The questions include the demographic characteristics, types of crime committed, and their health-related issues. Since the number of incarcerated women was relatively small, that is, 60 persons, a non-probability sampling technique called a census was used. Census involves counting all members or subjects in a particular category or group without sampling. In this particular case, all the individuals in correctional centres were administered the interview regardless of sample selection. During the survey, pre-structured questionnaires were used to interview the incarcerated women. The collected data is analyzed using statistical procedures to determine how the crime rate was distributed among the districts, and the subjects' self-reported health status and associations between variables. Descriptive statistics analysis is employed to identify the type, frequency of crimes committed and self-reported health conditions. Pearson correlation analysis is applied to analyze the relationships between age group, education level, income level, and mental health condition among incarcerated individuals.

5. Results and Discussion

4.1 Profile of the Incarcerated Individuals

Table 1 presents a comprehensive, detailed profile of individuals in the correction centre and an analysis of selected demographic characteristics. The table shows the distribution of imprisonment status, marital status, age, religion, social class, education, and income level among incarcerated persons. An investigation of the imprisonment status reveals that most of the persons in correctional centres are under trial (91.67%) as compared to those sentenced to imprisonment (8.33%). As for marital status, 46 individuals were married, 22 were widows, 25 were divorced, and 4 incarcerated women were unmarried.

Table 1. Profile of the incarcerated individuals

<i>Variables</i>	<i>Population</i>	<i>%</i>	<i>Variables</i>	<i>Population</i>	<i>%</i>
<i>Imprisonment Status</i>			<i>Social Status</i>		
Convicted	5	8.33	General	3	5
Under-Trial	55	91.67	OBC	16	26.67
Total	60	100	ST	41	68.33
<i>Marital Status</i>			SC	0	0
Married	30	50	Total	60	100
Unmarried	2	3.33	<i>Education levels</i>		
Widow	13	21.67	Illiterate	18	30
Divorce	15	25	Primary	13	21.67
Total	60	100	Upper Primary	10	16.67
<i>Age group distribution</i>			Matriculate	13	21.67
18-21	2	3.33	Higher Secondary	4	6.67
22-30	14	23.33	Graduate	2	3.33
31-45	31	51.67	Total	60	100
46-60	11	18.33	<i>Income*</i>		
60 Above	2	3.33	No income	6	10
Total	60	100	Below 5000	20	33.33
<i>Religion</i>			5000 to 9999	20	33.33

Hinduism	7	11.67		10000 to 14999	11	18.33
Christian	41	68.33		15000 to 20000	2	3.33
Muslim	9	15		Above 20000	1	1.67
Sanamahism	3	5		Total	60	100
Total	60	100				

Source: Field Survey, July-August 2022,

* Income per month

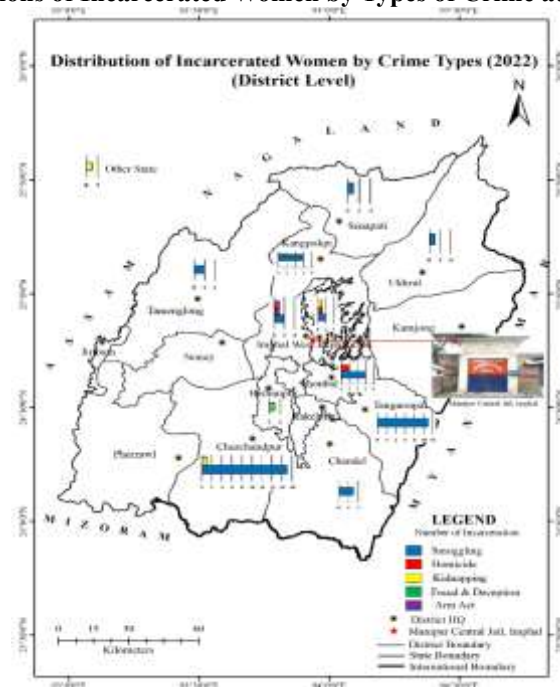
In the case of age group, the persons in correctional institutes aged between 31-45 years were recorded highest with 51.67%, followed by the age group between 22-30 years with 23.33%. According to their religious affiliations, out of the total incarcerated women, the Christian population was 68.33%, Muslim population was 15%. In the case of the social groups, the result shows that the majority of the incarcerated women belong to Scheduled Tribes communities (68.33%), followed by OBC at 26.67%, and then General at 5%. It also revealed that the maximum percentage of the incarcerated women were illiterate, amounting to 30%, followed by primary education level as 21.67%, and upper primary education as 16.67%. The most common income earned by incarcerated individuals before sentence to jail was below 5000 (33.33%), the second largest was within 5000 to 9999 (33.33%) and 6 incarcerated females, representing 10 % of the total females in correctional centres have claimed that they were unemployed and do not participate in any economically productive activity.

4.2 Offenses Committed by Incarcerated Women:

Fig. 1 shows the district-wise distribution and the type of crime incurred by incarcerated women at Central Jail, Manipur. The nature of crimes is classified into five categories: smuggling, homicide and suicide, kidnappings, fraud and deception, and violation under the Arms Acts, accompanied by their frequency table in each district.

The information is presented in graphical form in Fig.1, where the districts are given and the corresponding tally of incidents under each category of crime. Also, there appears to be a summary count of each crime type and the percentage of each category in the total crime list. Out of all the recorded crime cases, 51 women were sentenced to jail for smuggling activities. In this case, among the districts, Churachandpur recorded the highest number of cases at 17 persons (Fig. 1), followed by the Tengnoupal district with 11 cases. This indicates that these districts certainly play a significant role in the state's crime rate. Both districts share a long, porous border with Myanmar and India, and these border areas are known as hotspots for smuggling activities in the region. The present study also supports the previously reported research where open and porous borders in border districts are seen to affect smuggling in border districts, contribute to the factors influencing illicit activities and stress the role of socio-economic factors in understanding smuggling as suggested in Subair, Armstrong, & Popoola (2023), Mahadevan(2020), and Adenyi (2024).

Fig 1. Distributions of Incarcerated Women by Types of Crime at the District Level



Source: Field Survey Report from July – August, 2022.

On the other hand, a total of four individuals were sentenced to jail for homicide and suicide-related crimes during the survey. In addition, three kidnapping cases were recorded, one each from Imphal East, Imphal West, and other states. In the Bishnupur district, one case of fraud and deception was reported, while Imphal West district recorded a single case under the Arms Act. During the survey conducted at Manipur Central Jail, Imphal, no women individuals were found incarcerated from the districts of Kakching, Noney, Kamjong, Jiribam, or Pherzawl (Fig. 1).

4.3 Self-reported Health Conditions

The health conditions report can be used for comparison among various demographic variables, and the percentage can be used to visualize the relatively higher or lower prevalence of different health problems (Jones & Brown, 2018).

Table 2. Self-reported health conditions

<i>Health Status*</i>	<i>Number of Cases</i>	<i>Percentage</i>
Cardiovascular Diseases	12	20
Dermatological Diseases	4	6.67
Respiratory Diseases	2	3.33
Endocrine Disorder	4	6.67
Gastrointestinal Diseases	15	25
Gynaecological Disorder	2	3.33
Mental Disorder	28	46.67
Musculoskeletal Disorder	6	10
Renal Stone & Urolithiasis	6	10
No Health Issues	8	13.33

Source: Field Survey, July-August 2022

Table 2 reports the types of complaints about the health status of incarcerated individuals. The table gives a breakdown of various illnesses affecting the surveyed population, based on age group, educational levels and income levels. Women in correctional centres in Manipur Central Jail face numerous health challenges, including cardiovascular diseases (12 persons, 20%); gastrointestinal diseases (15 persons, 25%); mental health issues (28 persons, 46.67%); and musculoskeletal disorders (6 persons, 10%). The findings from the study coincide with existing literature, where women in detention centres frequently suffer from mental health problems (46.67%), addressing the high prevalence of that issue in health (Young, 2020). The lower prevalence of dermatological diseases (6.67% and 3.33%), endocrine disorders (6.67%), and gynaecological disorders (3.33%) can also be inferred from the similar values. There are also instances where 8 respondents, representing 13.33 %, did not encounter any health problems. The result facilitates understanding the prevalence and estimation of the proportion of self-reported health conditions in the study population.

The percentage of every individual having a health concern allows the comparison of the scale of the expression of various health issues (Kirkbride et al., 2024)). With the help of the provided respondent data, it can be seen that mental health issues can be considered a frequently encountered problem. The research underlines the need to look at healthcare management and prison administration to address the health needs identified for the targeted prison population. This will enhance the well-being of the incarcerated individuals and help towards a more efficient correctional healthcare policy.

4.4 Health Issues Among Age Groups, Education Levels and Income Levels:

Table 3 shows the types of health issues that appeared in the different demographic classifications by age, educational attainment, and income level. The most common health concerns vary in each classification.

Table 3. Health Problems among the age group, education and income level

	<i>No Health Issues</i>	<i>Cardiovascular Diseases</i>	<i>Mental Disorder</i>	<i>Gastrointestinal Diseases</i>	<i>Gynaecological Disorder</i>	<i>Dermatological Diseases</i>	<i>Musculoskeletal Disorder</i>	<i>Respiratory Diseases</i>	<i>Renal Stone &</i>	<i>Endocrine Disorder</i>	<i>Total</i>
<i>Age Group</i>											
18 to 21	0	0	2	0	0	0	0	0	0	0	2
22 to 30	2	2	9	3	0	1	0	1	1	1	20
31 to 45	5	6	14	7	2	2	1	1	4	2	44
46 to 60	1	3	3	3	0	1	5	0	1	1	18
60 Above	0	1	0	2	0	0	0	0	0	0	3
Total	8	12	28	15	2	4	6	2	6	4	87
<i>Education Level</i>											

Illiterate	3	3	9	6	0	1	2	1	1	1	27
Primary	1	3	3	4	2	1	1	0	3	1	19
Upper Primary	1	2	3	3	0	1	2	0	1	1	14
(Matric) Class 10	3	2	8	1	0	1	0	1	0	0	16
Higher Secondary	0	1	3	1	0	0	1	0	1	0	7
Graduate	0	1	2	0	0	0	0	0	0	1	4
Total	8	12	28	15	2	4	6	2	6	4	87
<i>Income Level**</i>											
No Income	3	0	2	0		0	1		0		6
Below 5000	0	4	10	10		0	4	1	2	2	33
5000 to 9999	3	4	10	3	1	3	0		2		26
10000 to 14999	2	3	4	1		1	1	1	2	1	16
15000 to 19999	0	0	1	1	1	0	0		0		3
20000 and above	0	1	1	0		0	0		0	1	3
Total	8	12	28	15	2	4	6	2	6	4	87

Source: Field Survey, July-August 2022,

*Responses are not mutually exclusive, ** Income per month of the individuals before incarceration.

Among the persons in correctional centres, the 31 to 45 age group was the most susceptible to mental disorders, with 14 individuals reported to have such conditions. This finding aligns with previous research that middle-aged people are more susceptible to mental disorders (Binswanger et al., 2009,p.105). The second most common illness is reported as gastrointestinal disease, observed in 15 cases and closely followed by cardiovascular disease, for which 12 cases were reported among the different age groups.

In terms of educational achievement, most of the females in the correctional centre were found illiterate, consisting of 27 women, and their frequent complaints are mental disorders and gastrointestinal problems. The findings also reveal an association between low educational attainment and individuals with a history of incarceration have higher rates of chronic health conditions. These findings align with Johnson & Raphael (2009), in which imprisoned people with lower education levels have higher rates of chronic illnesses because they have restricted healthcare access, along with low health literacy and economic inequalities.

In the case of income levels of the incarcerated women, those earning less than 5000 before their sentence to jail had the highest reported health problems and they accounted for 33 cases, but these included a great deal of mental disorders and gastrointestinal conditions (Fazel & Seewald, 2012,p.367). Studies have shown that lower socioeconomic backgrounds are more susceptible to health problems, especially within the prison environment. Mental health problems are being found to be the most prevalent health issues among different demographic sections.

These findings give crucial information about what health conditions exist in different population groups. The presence of mental disorders is a risk to the individuals themselves as well as to their cellmates. Furthermore, the conditions can worsen with time. Therefore, it is suggested that alongside general treatments, persons in detention centres with mental disorders are needed for interventions to manage the psychological stress and social consequences of this kind of illness (Way, Sawyer, Lilly, Moffitt, & Stapholz, 2008).

4. 5 Correlation Analysis

The study is carried out on the self-assessed health condition, and it finds that among 60 women respondents, 52 reported their overall health condition as poor while they were in jail. Special focus was given to the mental health condition. The respondents reported that the medical care provided was poor and the quality of the medical care provided within the jail was poor. The research supports existing findings about the health status of incarcerated persons which shows inferior outcomes since incarceration and elevated mental illness prevalence among this population (Banerjee S, 2024,p.382; Butler T., Andrews, G., Allnutt, S., Sakashita, C., Smith, N. E., & Basson, J.p.273, 2004; Conklin, T. J., Lincoln, T., & Tuthill, 2000, p. 1940). Existing literature has also verified that serious mental disorders among the incarcerated population are 3 to 5 times greater compared to the overall population (National GAINS Centre, 1997). Moreover, an Italian research study found that people with a criminal record mostly perceive their health as bad (Nobile, Flotta, Nicotera, Pileggi, Angelillo, & Network, 2011,p. 4). Furthermore, findings on access to and perceived quality of care for incarcerated women align with general research that provides evidence of poor provision of healthcare when in custody, as there is no immediate access to community care and there is no option for providers for incarcerated persons (Nomakhosi, N. S., Mbaliyethemba, S., & Siyanda., 2023; Marshal T et al., 2001,p. 203-204; Feron JM et al., 2005,p. 654).

Table 4. Correlation analysis between mental health status and age group, education level and income level group

		Age group	Education Level	Income Level Group	Mental health condition
Age group	Pearson Correlation	1	-.292*	0.062	-.348**
	Sig. (2-tailed)		0.024	0.636	0.006
Education Level	Pearson Correlation	-.292*	1	.269*	0.227
	Sig. (2-tailed)	0.024		0.038	0.082
Income Level Group	Pearson Correlation	0.062	.269*	1	0.048
	Sig. (2-tailed)	0.636	0.038		0.717
Mental health condition	Pearson Correlation	-.348**	0.227	0.048	1
	Sig. (2-tailed)	0.006	0.082	0.717	

Source: Field Survey, July-August 2022

Listwise N=60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 presents the findings of a Pearson correlation analysis that tests for associations between age group, level of education, level of income group, and mental health condition. From the analysis, several interesting associations are found. The correlation between age group and mental health status is -0.348 with statistical significance at 0.01 (2-tailed). This result exhibits a moderate negative relationship between age category and mental health status, and it indicates that with an increase in age, there is a tendency for mental health status to decrease. Second, the correlation coefficient between age category and educational level is -0.292, and this is statistically significant at the 0.05 level (2-tailed). This indicates a weak negative relationship between age category and educational level, and it indicates that with an increase in age category, there is a tendency for the educational level to decrease.

On the other hand, incarcerated individuals with higher income groups tend to associate with high education levels, which is indicated by the positive correlation ($r = 0.269$, $p = 0.038$). Analysis findings show that different income levels, educational levels and age groups have strong connections to mental health disorder cases in the population.

In conclusion, the research findings show that mental health interventions should consider the impact of age groups, education levels, and income levels. The study further suggests continuing in-depth research to understand these correlations and formulate policies for increasing mental well-being in different demographic groups. Therefore, it is important to employ comprehensive strategies that address individual determinants as well as the general social and economic determinants of mental well-being. The findings of the research indicate a major issue of mental health that requires immediate intervention because prolonged exposure to such an environment raises the risk of self-harm and prison conflicts.

5. Conclusion

The nature of crime patterns committed by the incarcerated individuals of the state is geographically distinct, having a relation with the porous international border with Myanmar, where large-scale commercial smuggling is detectable in the districts of Churachandpur and Tengnoupal.

Most incarcerated women are found under trial and belong to Scheduled Tribes, with minimal education levels and low incomes. The incarcerated persons differ in terms of their marital status, educational levels, religious background, and social affiliations. The research findings indicate extensive mental health issues that urgently require intervention, as prolonged exposure to these conditions increases the risk of self-harm and conflicts within correctional facilities. An examination of correlations with demographic attributes shows that age, educational attainment, and income levels affect mental health status.

The research identifies the need to address healthcare sectors for incarcerated individuals who require specialized care appropriate to their specific circumstances. Improvement strategies for mental health must examine demographic influences upon these outcomes before implementing comprehensive health plans, including societal and economic mental health assessments. Educational institutions, alongside policy workers and healthcare professionals, should apply this knowledge to improve mental health standards for individuals who are incarcerated within the Manipur Central Jail.

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CONFLICT OF INTEREST

The authors, Dr. Naorem Bobby Singh, Department of Geography and Resource Management, Mizoram University, Aizawl, Mizoram, India and Kshetrimayum Dilip Singh, Department of Geography and Resource Management, Mizoram University, Aizawl, Mizoram, India, would like to declare that there is no conflict of interest regarding the publication of this paper. Currently, this paper is not under review for any publication house, and the data used in the article are all primary data collected through a field survey.