Original Article

Sociodemographic, Legal, and Clinical Profiles of Female Forensic Inpatients in Karnataka: A Retrospective Study

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ABSTRACT

Background: Forensic patients are often admitted to psychiatric hospitals without any details of illness or treatment. They pose a unique challenge for clinical services in the context of diagnosis, management, and particularly legal issues. **Materials and Methods:** We conducted a retrospective chart review using a structured data-extraction tool. A total of 23 female forensic inpatients were admitted under the Department of Psychiatry from January 2006 to June 2016. Data were analyzed by descriptive statistics. **Results:** The mean age of the patients was 31.3 ± 7.9 years. In total, 82.6% of them were married, 87% were from a nuclear family, and 78.3% were from an urban background. Totally, 73.9% were referred from prison and 26.1% from the court. However, 73.9% were referred for the purpose of diagnosis and treatment and 21.7% for assessment of fitness to stand trial. Moreover, 47.8% had an alleged charge of murder (of killing close family members). A total of 30.4% had schizophrenia and other psychotic disorders, and 47.8% had a mood disorder. The mean duration of inpatient care was 6.2 ± 7.4 weeks, and 87% had shown considerable clinical improvement at the time of discharge. **Conclusions:** The majority of female forensic patients were young adults from nuclear families. They had mood disorders, schizophrenia, and other psychotic disorders. They were referred primarily for treatment purposes. Prospective studies are required for a better characterization of the relationship between crime and psychiatric disorders.

Key words: *Female, India, legal profile, mental illness, prisoner*

Key messages: *a) Female forensic patients had mood disorders, schizophrenia, and other psychotic disorders. b) Female forensic patients were referred primarily for treatment purposes. c) Most female forensic patients were accused with the killing of close family members. d) Half of the female forensic patients had a mental illness at the time of occurrence of the crime.*

INTRODUCTION

Imprisonment for offending the law has been on the rise worldwide, including in India.[1] Worldwide, at any given point in time, there are over 10 million individuals in prison.[2] As per the Institute for Criminal Policy

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Research and National Crime Records Bureau 2015, the Indian prison population is estimated to be around 4,19,623, and among them, 4.3% are females.

Mental illness (MI) has been a major concern in the prison inmates. Previous research has consistently shown a high prevalence of MI among inmates of prisons, and moreover, a few countries have more mentally ill patients in prisons than in psychiatric hospitals.[2-5] MI is found to be higher in prison inmates than in the general population.[3] It may be because of the factors such as environmental stress, psychosocial factors, and substance use.[4,5] One study noted that imprisonment is severe enough stress or to precipitate MI in vulnerable individuals.[6]

Prison inmates are referred to psychiatric hospitals for various reasons which include assessment, diagnosis, and treatment of MI including behavioral problems and substance use disorders (SUD), general follow-ups of those who are already on medication, and assessment and certification for fitness to stand trial and insanity defence.[7] There is often a significant delay in referral when it comes to seeking medical help and psychiatric evaluation of prisoners.[8-10] This is probably due to lack of awareness among the prison officials about the MI and also deficient psychiatric beds in the general and psychiatric hospitals.

Western studies have shown that there is consistent evidence of depression and psychotic illness as the major diagnoses in psychiatric hospital referrals among the prison population.[2] A systematic review from 12 countries showed higher rates of MI in female prisoners, with 4% of them having psychotic illnesses, 12% major depression, and 42% personality disorders.[11] A special report by US Department of Justice revealed that nearly half (49%) of the mentally ill had committed violent offences such as robbery, homicide, and sexual assault, followed by property, drug, and public order offences.[12] Furthermore, there are very few forensic psychiatric beds for prison patients, and the available beds for forensic psychiatry are usually occupied by long-term patients who are incompetent to stand trial, found not guilty by reason of insanity, or sexually violent predators. Hence, beds are usually not readily available for new admissions.[9,13-15]

There are only a few studies from India until now on the profile of female patients admitted to a forensic psychiatric hospital. A study from Central Jail, Amritsar, on 500 convicted prison inmates, showed a point prevalence of 23.8% for MI, and among them, 56.4% had a history of substance use before imprisonment.[3] In another study from Rajasthan done in 2013, prison inmates showed a point prevalence of 33% for psychiatric disorders. Depressive disorders (16.1%) were more common than psychosis (6.7%), and 58.8% had a history of drug abuse/dependence prior to imprisonment.[16] The above two studies were done in Amritsar and Rajasthan central prison set up. A study from a forensic psychiatric hospital from south India on male prison inpatients showed that the majority of prisoners (85.7%) were under trial, murder being the most common charge, and psychiatric diagnoses were made in 122 (90.3%). The most common diagnoses were psychosis, including schizophrenia (28.2%).[7] Among the available studies, there are very few which looked into the female population exclusively.[17-20] Hence, there is an urgent need for studies on female forensic inpatients (FFI) referred from prison. In this paper, we aimed at studying socio-demographic, clinical, and legal characteristics of FFI.

MATERIALS AND METHODS

The study was carried out at the medico-legal unit , Department of Psychiatry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, India. It is a tertiary care center with research, academic, and training facilities in the area of forensic psychiatry in India. The forensic psychiatric inpatients receive care from a multidisciplinary team consisting of forensic psychiatrists, nurses, clinical psychologists, and psychiatric social workers.

Each forensic patient is evaluated by the multidisciplinary team using "Forensic Psychiatry Work-up Proforma" [Available as online supplemental material]. It was developed by revising the previous version of "NIMHANS Detailed Workup Proforma for Forensic Psychiatry Patients (NDPFPP)."[7] In addition, ward behavior of each patient is documented every day using the NIMHANS behavioral observation report,[7] and serial mental status examinations are done on a daily basis. Along with the above observation, we try to collate information about patients by getting central observation report from prison, past medical records, first information report (FIR), post-mortem report, crime details, and also by contacting the family and neighbors. All these details were collected by our multidisciplinary team with the patients informed consent. This provides a holistic understanding of the illness and also the person. Considering all the information, the forensic psychiatry team will come to a diagnosis as per the International Classification of Diseases (ICD-10). In some patients requiring another set of assessments, such as intelligence test or diagnostic psychometry, appropriate psychological instruments are used. Clinical improvement was assessed on the Clinical Global Impression (CGI) scale. It is a 3-items observer-rated scale that measures illness severity Clinical Global Impression-Severity (CGI-S), global improvement or change Clinical Global Impression-

Global Improvement (CGI-GI), and therapeutic response. The CGI–S scores range from 1 (very much improved) to 7 (very much worse). The CGI has proved to be a robust measure of efficacy in many clinical trials and is easy and quick to administer if the clinician knows the patient well.[21]

For this study, FFI were operationally defined as female forensic patients admitted to the closed ward of the institution for treatment, observation, or certification to stand trial and insanity defence through Honourable court or prison authority. A retrospective study design was employed by reviewing the case file of 23 forensic prison patients admitted to the female closed ward from January 2006 to June 2016. A year-wise list of names and inpatient registration numbers of patients who were admitted to the female closed ward was made as per the admission register maintained in the ward. This was counter-checked with the psychiatric inpatient's admission register maintained in the medical records department. The files could be retrieved from the medical records department after obtaining permission from the medical records division officer. An average of 60 to 90 min was needed to extract data from each case file. Personal information related to patients available in the case files was not shared with anyone.

A structured tool to extract necessary details was developed following suggestions from the experts in forensic psychiatry: most information was available in inpatient Forensic Psychiatry Work-up Proforma. The Forensic Data Extraction Schedule covered three dimensions: socio-demographic, clinical, and legal profiles. All the obtained information was used solely for the purpose of research.

Statistical analysis

Data were analyzed by descriptive statistics.

Ethical considerations

Institutional ethical committee approved the above study project by name "A file-based review of medico-legal referral to NIMHANS."

RESULTS

Table 1 shows socio-demographic details of FFI.

Table 2 shows the legal profile of FFI. We reviewed about the patient's MI by looking at past psychiatric treatment records, collecting information from family, and retrospective history clarification from patients and other possible sources. With this, we tried to find the relation between MI and alleged crime. Past history of MI was present in 8.6% (n = 2), meaning that these patients had a past episode of MI sometime before and they had recovered before the alleged crime. In total, 52.2% (n = 12) patients were experiencing the illness during the commission of a crime. However, 17.4% (n = 4) developed MI after the alleged crime and 4.3% (n = 1) during their confinement.

Table 1: Socio demographic profile of female forensic inpatients

Variable		*n*= 23
Age in years [Mean (SD)]		31.39(7.9)
Education [*n* (%)]	No formal education	6(26%)
	<7th	3(13%)
	8th-12th	10(43.5%)
	Above 12th	4(17.5%)
Occupation [*n* (%)]	Employed	7(30.3%)
	Unemployed/ homemaker	16(69.7%)
Religion [*n* (%)]	Hindu	18(78.3%)
	Muslim	3(13%)
	Christian	2(8.7%)
Type of family [*n* (%)]	Nuclear	20(87%)
	Joint family	3(13%)
Socio-economic status (SES) [*n* (%)]	BPL	10(43.5%)
	APL	13(56.5%)
Marital status [*n* (%)]	Single	4(17.4%)
	Married	19(82.6%)
Location [*n* (%)]	Rural	5(21.7%)
	Urban	18(78.3%)

BPL: Below poverty line; APL: Above poverty line

Table 2: Legal profile of female forensic inpatients

Variable		*n*= 23
Referring authority	Magistrate	6(26.1%)
	Medical officer/prison superintendent	17(73.9%)
Reason for referral	Treatment	18(78.3%)
	Fitness to stand trial	5(21.7%)
Legal status	UTP	20(87%)
	CTP	3(13%)
Legal charges	IPC 302	11(47.8%)
	Non-IPC 302	12(52.2%)
Homicide case against	Murdering husband	3(13%)
	Murdering own child	4(17.4%)
	Murdering neighbor	4(17.4%)
FIR copy at admission	Present	1(4.3%)
	Absent	22(95.7%)
The relation between the alleged crime and mental illness	Psychiatric illness before the crime	2(8.7%)
	Psychiatric illness before and during the crime	12(52.2%)
	Psychiatric illness After the crime	4(17.4%)
	Malingering	1(4.3%)

UTP: Under trial prisoner; CTP: Convicted trial prisoner

Table 3 shows the clinical profile of female forensic inmates.

DISCUSSION

The current study gives a glimpse of the socio-demographic, clinical and legal characteristics of

Table 3: Clinical profile of female forensic inpatients

Variable		*n*= 23
Primary psychiatric diagnosis [*n* (%)]	Schizophrenia and other psychotic disorder	7 (30.4%)
	Mood disorders (including unipolar and bipolar)	11 (47.82%)
	No psychiatric diagnosis	4 (17.4%)
	Malingering	1 (4.3%)
Co-morbid psychiatric Diagnosis [*n* (%)]	Mental retardation	2 (8.6%)
	Personality disorder	2 (8.6%)
Comorbid medical illness [*n* (%)]		4 (17.4%)
CGI severity at admission [*n* (%)]	Normal	5 (21.7%)
	Symptomatic	18 (78.3%)
Past admission [*n* (%)]	Present	3 (13%)
	Absent	20 (87%)
Medication used [*n* (%)]	Antipsychotic	8 (34.8%)
	Antidepressant	8 (34.8%)
	Mood stabilizers	2 (8.7%)
	No medication	5 (21.7%)
Treatment modalities [*n* (%)]	Oral	2 0(87%)
	Parenteral injection	5(21.7%)
	Electroconvulsive therapy	4 (17.4%)
CGI severity at discharge [*n* (%)]	Normal, Not at all ill	18 (78.3%)
	Mildly ill	2 (8.7%)
	Moderately ill	1 (4.3%)
	Severely ill	2 (8.7%)
Mean (SD) score on CGI severity at admission		5.9 (0.3)
Mean (SD) score on the duration of I P care in weeks		6.3 (5.8)
Mean (SD) Duration of illness in months		27 (26.2)
Mean (SD) score on CGI severity at discharge		1.73 (1.57)
Mean (SD) score on CGI global improvement at discharge		1.69 (1.52)

CGI - Clinical Global Impresssion

FFI who were cared for in a tertiary care neuropsychiatric institute. All patients were in their thirties. The majority had severe mental disorders, and they had MI during the commission of the alleged crime as per retrospective history and medical record evaluation. This profile throws light on many important issues related to FFI in India. In the current study, the mean age of the patients was 31 years (between 25 and 35 years), which is similar to the findings of other studies done in western countries and in India.[7,8,11] Most of them were unemployed or homemakers, married, living in nuclear families, and belonging to an urban population, which was consistent with earlier studies. Female prison population had been victims of rejection and humiliation, separation, adultery, domestic violence, substance abuse, and extramarital affairs. These are severe social and psychological stressors that may contribute significantly to the development of MI.[22]

The medical officer of the prison referred a majority of FFI for treatment purpose. This shows that prison authorities were referring patients just because of unmanageability, as most of the patients were severely ill at the time of admission as evidenced by the CGI-S scores. Behavioral observation reports were available for the majority of patients. These reports were used in making early diagnosis and starting treatment, which helped the short inpatient care in our sample, which is comparable to a study among male prison inmates in the same institute.[7]

In the current study, 20 inpatients (87%) were under trial prisoners, and 11 inpatients (47.8%) were registered under the Indian Penal Code (IPC) section 302. Among alleged case under IPC 302, murder of their close relative or family members was the most common, i.e., the murder of their child (17.4%) or husband (13%), followed by neighbors (17.4%). This is consistent with earlier study findings on incarcerated male and female patients with MI.[7,22]

The majority of the admitted female prisoners in the psychiatric ward had illness before and during the commission of the crime, most common being mood disorders (bipolar disorder and depression), followed by other psychotic illnesses. None in our sample had an SUD. This is in contrast to earlier studies that reported mainly the male prison population of having psychosis and SUD as the most common diagnoses followed by a mood disorder.[7,8] However, the findings of this study are supported by Math *et al.* study, where depressive disorders were the most common diagnosis, followed by psychosis.[4,22]

Murdering of own child, called maternal filicide, accounted for 17.4% in our study. Among those who committed that particular crime, 75% were suffering from severe depressive episode prior to and during the commission of the crime. This finding is in line with past studies on maternal filicide. In the past studies, maternal filicide was found to be associated with family stressors and mental disorders such as ongoing major depressive episode, psychosis, subnormal intelligence, and substance use.[23-25]

We propose the following recommendations according to our findings:

1. Increase awareness among prison authorities regarding MI: this will ensure early identification and referral to mental health facilities
2. A screening system for every prison inmate once they enter the prison. If MI is suspected, a systematic psychiatric evaluation has to be undertaken at the earliest
3. Referral to mental health facilities with FIR and behavioral observation reports, which would assist and aid in early diagnosis and decrease the duration of hospital stay
4. Start forensic wards in the mental health hospitals/establishment and wherever it is available already, increase the number of forensic beds so that more patients can be referred for treatment, which will help in early treatment and thereby reduce morbidity
5. Many FFI patients were referred for fitness to stand trial. However, in India, we do not have any scales, assessment tools, or schedule to assess fitness to stand trial. Therefore, there is an urgent need for the development of standardized, culturally relevant, acceptable tools for the Indian setting to assess the fitness to stand trial.

Limitations

It was a retrospective chart review. However, the records are well-documented in the institute. The sample size was small. However, this could have been a result of the lack of prompt referral to a psychiatric hospital from the prison.

Future direction

There is a need for further studies on FFI patients, and would help us understand the mental health care needs of women and how different they are from those of the males.

CONCLUSIONS

Most female forensic patients had mood disorders, schizophrenia, or other psychotic disorders. They were referred primarily for treatment purpose. Majority of them were charged with the killing of close family members. On retrospective evaluation, approximately half of the study sample had an illness at the time of occurrence of the crime. Prospective studies are required for better characterization of the relationship between crime and female patients with psychiatric disorders.

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Conflicts of interest

There are no conflicts of interest.

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