Section: Psychiatry

JAMP

Original Research Article

PSYCHOACTIVE SUBSTANCE USE PATTERNS AT A DE ADDICTION CENTER IN NORTH-EAST INDIA: A CROSS SECTIONAL STUDY

Received : *12/03/2026*
Received in revised form : *23/04/2026*
Accepted : *10/05/2026*

Keywords:
Alcohol dependence, De addiction, High risk behavior, Opioid dependence, Substance-use disorder.

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DOI: 10.47009/jamp.2026.8.3.70

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2026; 8 (3); 393-396

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ABSTRACT

Background: Substance use disorders (SUDs) are a major global public health problem, with rising prevalence in India — particularly in northeastern states, where easy drug availability and sociopolitical stress compound the issue. This study aimed to assess the pattern of psychoactive substance use and its association with sociodemographic variables among patients attending a de-addiction center in Manipur. **Materials and Methods:** A hospital-based cross-sectional study was conducted over 12 months in the Psychiatry ward of JNIMS Hospital, Imphal. Consecutive patients aged ≥18 years with SUDs (substance abuse or dependence) diagnosed per ICD-10 criteria were included. A semi-structured proforma collected sociodemographic and substance use data. **Results:** Eighty male patients (mean age 37.6 years) were included. Most were from urban areas (60%), married (67.5%), from nuclear families (82.5%), and educated up to higher secondary (56.3%). Alcohol was the main substance (61.3%), followed by heroin (27.5%) and other opioids (11.3%). Mean age at initiation was 19–25 years (52.5%), driven by peer pressure (41.3%) and curiosity (28%). Most patients (58.8%) had used substances for >10 years. High-risk behaviors (injection sharing, unsafe sex) were absent among alcohol users but present in 50% of opioid users. The majority (83.8%) had never sought treatment; 52.5% were forcibly brought by family. The main reason for abstinence was health problems (40%); the main reason for relapse was craving (51.3%). Alcohol dependence (58.8%) was the most common diagnosis, followed by opioid dependence (27.5%). **Conclusion:** Substance dependence in this region predominantly affects young urban males, with alcohol as the primary substance. Opioid users show higher risk behaviors and expenditure. Family coercion is the main route to treatment. Targeted interventions addressing peer pressure, early age of initiation, and harm reduction for opioid users are urgently needed.

INTRODUCTION

Substance abuse has reached epidemic proportions globally, with an estimated 190 million people using illicit drugs.[1] India is enmeshed in this crisis, with one million registered heroin users and an estimated five million unregistered.[2] The north-eastern states, including Manipur, are particularly vulnerable due to their proximity to the "Golden Triangle" (Myanmar, Laos, and Thailand), easy drug availability, sociopolitical unrest, and high unemployment.[3]
In Manipur, there are an estimated 40,000–50,000 drug users, nearly half being injecting drug users (IDUs).[3] Despite the severity of the problem, few studies have systematically examined substance use patterns in this region. This study was therefore, undertaken to evaluate the pattern of psychoactive substance use and its association with sociodemographic variables among patients attending the de addiction center at JNIMS, Imphal.

MATERIALS AND METHODS

Study design and setting
A hospital-based cross-sectional study was conducted in the Department of Psychiatry, Jawaharlal Nehru Institute of Medical Sciences (JNIMS), Imphal, Manipur.
Participants and sampling
Data were collected for 12 consecutive months from January 2024 to December 2024. Consecutive patients aged ≥18 years presenting with symptoms of

substance use disorders (abuse or dependence) per ICD-10 criteria.[4] and admitted to the Psychiatry ward were included. Patients too ill to give informed consent or those unwilling were excluded. All eligible patients during the study period were enrolled (convenience sample, n=80); no a-priori power calculation was performed, as the aim was descriptive.

Data collection tools

A semi-structured sociodemographic proforma and a semi-structured proforma for evaluating psychoactive substance use were used as assessment tools. These proformas were developed by the authors based on literature review and were pilot-tested on 10 patients (not included in the final sample) for clarity and comprehensiveness; no formal reliability measure was computed.

Diagnosis and procedure

Diagnosis was made independently by two consultant psychiatrists per ICD-10 criteria;[4] inter-rater agreement was 100% (kappa not formally calculated). Written informed consent was obtained from patients and caregivers. Data were collected via personal interview.

Statistical Analysis

Data were analyzed using SPSS version 15.0 (IBM, 2006). Descriptive statistics (mean, standard deviation, frequency, percentage) are reported. No inferential statistical tests were performed because the study was exploratory and the sample size was fixed by consecutive enrolment.

Ethical approval

Approval was obtained from the Institutional Ethical Committee, JNIMS, Imphal.

RESULTS

Sociodemographic characteristics (n=80)

All 80 patients were males. Mean age at presentation was 37.61 years (median, 37 years). The largest age group was 36–60 years (56.3%), followed by 25–35 years (37.5%). Most patients resided in urban areas (60%). Hindus comprised 86.3%, Christians 12.5%, Muslims 1.3%. Nuclear families dominated (82.5%). By marital status, 67.5% were currently married, 31.3% never married, 1.3% divorced/separated. By educational status, 56.3% were up-to higher secondary, 23.8% graduates, 12.5% secondary. Regarding employment, 23.8% were full-time employees, 23.8% self-employed, 18.8% presently unemployed, 17.5% never employed. By monthly family income, a majority (30%) had an earning of ₹5,000–10,000.

The pattern of Substance use is depicted in Table 1. Half of the study-participants (42; 52.5%) started substance use by the age of 19-25 years. A few participants (6; 7.5% started the using the same very early before they attained 12 years of age. The main reasons for initiation were peer pressure (33 (41.3%) and out of curiosity (25; 35.0%). Alcohol was the main substance used (49; 61.3%) which was followed by heroin and other opioids. More than half of them (47; 58.8%) have used the substance for more than 15 years. Majority of them (23; 28.8%) used to spend 2000-5000 INR per month for the purpose.

Table 1: Pattern of substance use

Variable	Frequency (%)
Age at initiation (in years)	
• <12	6 (7.5)
• 12-18	19 (23.8)
• 19-25	42 (52.5)
• 26-35	12 (12.5)
• >35	3 (3.8)
Rason for initiation	
• Peer pressure	33 (41.3)
• Curiosity	25 (35.0)
• Ritual/party	6 (7.5)
• Others	6 (7.5)
• Personal	4 (5.0)
• Fun	3 (3.8)
Main substance	
• Alcohol	49 (61.3)
• Heroin	22 (27.5)
• Other opioids	9 (11.3)
Duration of use (in years)	
• >10	47 (58.8)
• 5-10	16 (20.0)
• 1-5	12 (15.0)
• <1	5 (6.3)
Monthly expenditure (in INR)	
• 2000-5000	23 (28.8)
• <1000	18 (22.5)
• 1000-2000	18 (22.5)
• >10,000	14 (17.5)
• 5000-10,000	7 (8.8)

High-risk behavior and treatment history

- **High-risk behaviors:** 82.5% reported none; 8.8% engaged in both injection sharing and sexual risk behaviors; 5.0% reported injection sharing only; 3.8% reported sexual risk only.
- **Abstinence attempts:** 32.5% made 3–5 attempts; 30.0% made 1–2 attempts; 21.3% none; 16.3% >5 attempts.
- **Reason for abstinence:** Health problems (40.0%), multiple problems (27.5%), family problems (13.8%), no stated reason (13.8%).
- **Treatment sought:** 83.8% never sought treatment; only 16.3% had.
- **Reason for seeking treatment:** Forcibly brought by family (52.5%), self-seeking (47.5%).
- **Reason for relapse:** Craving (51.3%), other reasons (21.3%), peer pressure (16.3%), personal issues (7.5%), withdrawal symptoms (3.8%).

Table 2: Distribution by diagnosis made (n=80)

Diagnosis	Frequency (%)
Alcohol dependence	47 (58.8)
Opioid dependence	22 (27.5)
Polysubstance dependence*	8 (10.0)
Substance-induced psychosis	3 (3.8)

*Polysubstance dependence: patients with concurrent use of two or more substances without a single predominant substance; these are not counted in the "main substance" breakdown above.

Alcohol dependence was the main diagnosis made (47; 58.8%). The other diagnoses were opioid dependence (22; 27.5%), polysubstance dependence (8; 10%) and substance-induced psychosis (3 (3.8%). [Table 2]

Comparison across diagnoses

- **Mean age at initiation:** Substance-induced psychosis (19.67 years), alcohol dependence (20.70), polysubstance dependence (22.38), opioid dependence (24.04).
- **Mean age at presentation:** Polysubstance dependence presented earliest (32.63 years), alcohol dependence last (40.23 years).
- **High-risk behavior:** None in the alcohol dependence group; 50% of the opioid dependence group engaged in high-risk behavior (22.7% both injection sharing and sexual risk).
- **Place of purchase:** All alcohol users bought from shops; 95.5% of opioid users purchased from secret places.
- **Monthly expenditure on drugs:** Majority of polysubstance (50%) and opioid (36.4%) users spent >₹10,000/month; most alcohol users spent ₹1,000–2,000/month.

Family history

Ten percent of cases had a family history of mental illness. No patient met diagnostic criteria for antisocial personality disorder (ASPD).

DISCUSSION

This study provides a detailed profile of patients with substance use disorders at a tertiary care hospital in Manipur — a state heavily affected by drug trafficking and sociopolitical instability.[3]

Demographics: The exclusive male predominance (100%) is consistent with previous Indian studies (PGIMER Chandigarh reported 99.5% males).[5] The mean age (37.6 years) and urban majority (60%) reflect the pattern seen in north Indian de-addiction centers.[5] The high proportion of married patients (67.5%) from nuclear families (82.5%) suggests substance use occurs within ostensibly stable family structures.

Age of initiation: Most of the patients initiated substance use at 19–25 years (52.5%), similar to the Chandigarh study (mean 20.89 years).[6] Initiation during late adolescence/young adulthood highlights the critical window for prevention.

Reasons for initiation: Peer pressure (41.3%) and curiosity (35%) match findings from Ranchi (peer pressure/curiosity as main factors).[7] This underscores the need for school- and community-based programs targeting peer norms.

Main substances: Alcohol (61.3%) remains the most common substance nationally (National Household Survey: 21.4% current use, 4% dependence).[2] However, the high proportion of opioid use (heroin 27.5%, other opioids 11.3%) is particularly concerning for Manipur, where IDU fuels HIV transmission. A Sikkim study similarly found opioid abusers constituted 14.8% of their sample.[8]

High-risk behavior: A striking finding: no patient with alcohol dependence reported injection sharing or unsafe sex, whereas half of those with opioid dependence did so.[9] This distinction is clinically and epidemiologically crucial, as opioid users are a key target for harm reduction (needle exchange, safe sex education).

Treatment gap: 83.8% had never sought treatment, and 52.5% were forcibly brought by family. This reflects severe stigma, lack of awareness, and limited accessible de-addiction services. The primary reason for abstinence was health problems (40%) — suggesting that physical deterioration, not insight, drives cessation attempts.[6]

Relapse: Craving was the dominant reason (51.3%), consistent with neurobiological models of addiction.[10] Long-term pharmacological and psychological support is essential.

ISSN (O): 2687-5365; ISSN (P): 2753-6556

Comparison across diagnoses: Opioid and polysubstance users presented earlier, spent more money, used secret purchase channels, and engaged in riskier behaviors than alcohol users.[5] This calls for tailored interventions: alcohol users may benefit from brief interventions and family involvement; opioid users require agonist maintenance (e.g., buprenorphine) and harm reduction.

Strengths and limitations

Strengths: The present study deployed the Systematic ICD-10 diagnosis [4], consensus by two consultant psychiatrists, inclusion of consecutive admissions, and pilot-tested data collection tools.

Limitations: The study was a single-centered study with a relatively small sample size and also convenient sampling was used with no power calculation. Further all the study-participants were males. (no female patients were admitted during the study period, but this limits generalizability). Again, as the study was a cross-sectional one, causality could not be inferred. Also, there is a potential referral bias (hospital-based, not community). The exclusion of patients too ill to consent may have omitted the most severe cases. Lastly, we relied on self-reported initiation reasons (recall bias).

CONCLUSION

Substance dependence in Manipur predominantly affects young urban males. While alcohol is the most common substance, opioids represent a substantial burden associated with high-risk behaviors. Initiation is driven by peer pressure and curiosity during late adolescence/young adulthood. The treatment gap is substantial — most patients never seek help, and when they do, family coercion is often the impetus. Craving remains the primary driver of relapse.

Implications

- **Prevention programs** should target school- and college-going youth, focusing on peer resistance skills.
- **Opioid users** need integrated harm reduction (needle-syringe exchange programs, safe sex education, opioid substitution therapy).
- **De-addiction services** must be expanded and destigmatized to encourage voluntary treatment seeking.
- **Family-based interventions** are critical, given their role in bringing patients to care.
- **Future research** should include community-based surveys, female substance users, longitudinal follow-up to assess treatment outcomes, and inferential analyses to identify independent predictors of substance use patterns.

Conflict of Interest: None to declare
Source of Funding: None

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