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Attitude of Nursing Students Towards Substance Use

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Abstract: ***Substance use disorders (SUDs) continue to pose significant health and social challenges worldwide. Nurses play a pivotal role in prevention, early identification, and rehabilitation of individuals affected by substance use; hence, their attitudes toward such individuals are critical to effective care. This descriptive cross-sectional study assessed the attitudes of nursing students toward substance use using a newly developed Attitude Likert Scale. Content validity was established through expert review in Psychiatry, Psychiatric Nursing, and Psychology from Mizoram, and the instrument showed good reliability (Cronbach's α = 0.81). A total of 114 nursing students from a selected College of Nursing in Mizoram participated. Findings indicated generally positive and health-oriented attitudes: low permissiveness toward substance use, strong belief in treatment intervention, and high non-stereotypical or empathetic attitudes. The overall attitude index was 3.4, reflecting a moderately positive orientation. Correlation analyses revealed no significant relationships between attitude and age, course level, or clinical experience. These results suggest that demographic factors exert little influence, while educational exposure and structured learning opportunities may be more critical in shaping positive attitudes.***

Keywords: Nursing students, substance use disorder, attitude, SAAS, Mizoram, nursing education

1. Introduction

Substance use disorders (SUDs) represent one of the most persistent and complex public health crises of the 21st century, transcending geographical, economic and demographic boundaries. Characterized by the recurrent use of alcohol, illicit drugs, or prescription medications despite significant adverse consequences, SUDs are associated with a heavy burden of disease, including elevated rates of infectious diseases, cardiovascular complications, mental health comorbidities, and premature mortality. The World Health Organization has consistently identified SUDs as a priority area for global action, yet treatment gaps remain wide, particularly in low-resource and culturally diverse settings.

Within the multidisciplinary healthcare workforce, nurses are uniquely positioned to confront this challenge. As the largest group of healthcare professionals globally, nurses often serve as the first and sometimes the only point of contact for individuals seeking care. Their roles encompass not only acute symptom management but also health promotion, risk assessment, patient education, crisis intervention, and long-term rehabilitation support. However, the effectiveness of nursing care in this domain is profoundly shaped by the attitudes and beliefs that nurses hold toward individuals with SUDs. Extensive research has demonstrated that stigma defined as a mark of disgrace that sets a person apart from others is one of the most formidable barriers to equitable and effective care for this population.

The formative period of nursing education is therefore a critical window for shaping professional attitudes. During their undergraduate training, nursing students develop not only clinical competencies but also professional identities, value systems, and ethical frameworks that will guide their future practice. Research increasingly supports the notion that attitudes toward SUDs are not immutable traits but are malleable and responsive to educational interventions. Against this global backdrop, the present study focuses on a specific and underexplored context: the state of Mizoram in Northeast India. Mizoram presents a unique cultural, social, and epidemiological landscape with respect to substance use. The state has historically reported high prevalence rates of alcohol and drug dependence, influenced by factors such as geographical proximity to the "Golden Triangle" drug trafficking routes, socioeconomic transitions, and deeply ingrained community norms around drinking. At the same time, Mizo society is characterized by strong kinship bonds, communal living, and a distinctive Christian moral framework that can both support recovery (through faith-based initiatives) and inadvertently foster shame and secrecy around addiction. Within this milieu, nursing students who are predominantly drawn from local communities bring with them a complex tapestry of familial beliefs, religious teachings, and cultural traditions that may shape their professional attitudes in ways not fully captured by Western research.

2. Rationale of the Study

The study addresses the urgent need for culturally sensitive nursing education regarding substance use disorders (SUDs) in Mizoram, India. It highlights the role of nurses in SUD care and the detrimental impact of stigmatizing attitudes on patient interaction. Despite evidence suggesting that educational interventions can improve perceptions, regional and cultural factors significantly shape attitudes toward SUDs. Mizoram faces high rates of substance use and fragmented treatment services, yet nursing students lack adequate preparation and supportive evidence for effective SUD care. This research aims to assess nursing students' attitudes using a locally validated instrument, contributing to curriculum reform and enhanced empathetic care for vulnerable populations in Mizoram.

3. Literature Survey

National Drug Dependence Treatment Centre (2019), in the most comprehensive national epidemiological estimate to date, reported that substance use and substance use disorders (SUDs) constitute a major public health concern in India, imposing a significant burden on healthcare systems, community welfare, and nursing education and practice. The National Survey on Extent and Pattern of Substance Use in India, commissioned by the Ministry of Social Justice and Empowerment and conducted by AIIMS (2018–2019), found that alcohol is the most widely used psychoactive substance in India, with a past-year prevalence of approximately 14.6% among individuals aged 10 to 75 years. Cannabis and opioids followed, with past-year prevalence rates of about 2.8% and 2.1%, respectively (National Drug Dependence Treatment Centre, 2019).

Parmar et al. (2023) reinforced that the burden of SUDs in India is not only substantial but also evolving in its patterns. These authors noted that alcohol, tobacco, and opioids together account for the largest shares of attributable morbidity, mortality, and service demand across the country. Importantly, Parmar et al. (2023) consistently identified adolescents and young adults as high-risk groups, with early initiation and escalating use patterns posing particular challenges for prevention and early intervention.

Social Welfare Department, Government of Mizoram (2017), in the Baseline Survey on Extent & Pattern of Drug Use in Mizoram, identified the state as experiencing a disproportionately high burden of substance use and its associated harms. This survey documented widespread use of tobacco and alcohol, alongside significant problematic use of opioids (including heroin), misuse of prescription medications, and other psychoactive substances (Social Welfare Department, Government of Mizoram, 2017). This state-level evidence aligns with national findings while highlighting local urgency.

Pachuau et al. (2024) corroborated these findings in their peer-reviewed study, with treatment-seeking data highlighting opioid-related morbidity and mortality, high prevalence of PWID, and co-occurring HIV risk in the region. These authors emphasized that the intersection of substance use with infectious disease epidemiology further complicates the clinical picture and demands integrated, multidisciplinary responses.

Problem definition: *Attitude of Nursing Students Towards Substance Use*

4. Research Questions

1) What are the attitudes of nursing students toward individuals with substance use disorders?
2) What is the overall attitude index of nursing students toward substance use disorders and individuals affected by them?
3) Is there a statistically significant association between nursing students' attitudes toward substance use disorders (SUDs) and demographic variables (age, semester level, clinical experience)?

5. Objectives of the Study

1) To assess the attitudes of nursing students towards individuals with substance use disorders (SUDs).
2) To determine the overall attitude index of nursing students towards substance use disorders (SUDs) and individuals affected by them.
3) To examine the relationship between nursing students' attitudes towards SUDs.

6. Methodology/ Approach

Research Design: A descriptive cross-sectional research design was adopted for this study. This design was considered appropriate as it allows for the systematic collection of data from a defined population at a single point in time, enabling the researchers to describe the prevailing attitudes of nursing students toward substance use disorders (SUDs) and to examine associations between these attitudes and selected demographic characteristics.

Sample: The study was conducted at a selected College of Nursing in Mizoram, India. The target population comprised all nursing students enrolled in various levels of training at the institution. The final sample consisted of 114 nursing students who provided informed consent after obtaining administrative permission from the college authorities.

Instrument of the tool: A newly developed Attitude Likert scale was constructed to assess the attitudes of nursing students toward individuals with substance use disorders. The tool was designed to capture multiple dimensions of attitudes, organized into three distinct domains: **Domain 1 (Permissiveness)**, **Domain 2 (Treatment Intervention)**, **Domain 3 (Non-Stereotypical/Less Stigma)**.

Data Collection Procedure: Prior to data collection, formal administrative permission was obtained from the authorities of the selected College of Nursing. The questionnaire was administered in classroom setting, and participants were given adequate time to complete it without external pressure.

Ethical Considerations: The study was conducted in accordance with ethical principles for research involving human participants. Institutional approval was obtained prior to commencement. Participants were assured that their participation was entirely voluntary and that they could withdraw at any stage without any negative consequences to their academic standing. Anonymity and confidentiality were strictly maintained; no identifying information was collected, and all data were stored securely and used solely for the purposes of this research.

Data Analysis: Data were analyzed through descriptive and inferential statistical methods. Descriptive statistics, such as frequencies and means, summarized participants' demographics and attitude scores. Correlation analysis (Pearson's product-moment) assessed relationships between total attitude scores and continuous demographic variables like age. For categorical demographics, comparative tests evaluated mean attitude score differences across groups. All analyses utilized standard statistical software, with significance set at $p < 0.05$.

7. Results and Discussion

Demographic characteristics:

The table below presents the demographic characteristics of the 114 participants. The largest group comprised 3rd semester students (n=39, 34.2%), followed by 1st semester (N=26, 22.8%), 7th semester (n=28, 24.6%), and 2nd semester (n=21, 18.4%). Most participants were in the age group 20-22 years (n=80, 70.2%), while 24 (21.1%) were 23-24 years and 10 (8.7%) were above 24 years. More than half of the sample (n=65, 57.0%) reported not having significant contact with patients having substance use disorders in the clinical area. Among the 49 students (43.0%) who had clinical contact, most had encountered patients with alcohol use disorders, followed by opioid use disorders.

Table 1: Demographic characteristics of participants (N=114)

S. No	Characteristics	Category	Frequency	Percentage
1	Age group	20-22 years	80	70.2
		23-24 years	24	21.1
		>24 years	10	8.7
2	Semester	1st semester	26	22.8
		2nd semester	21	18.4
		3rd semester	39	34.2
		7th semester	28	24.6
3	Gender	Female	89	78.1
		Male	25	21.9
4	Clinical experience with SUD patients	Yes	49	43.0
		No	65	57.0
5	Type of SUD contact (n=49)	Alcohol use disorder	28	57. 1
		Opioid use disorder	13	26.5
		Multiple substances	8	16.4

Findings related to objective 1:

The findings assessed the nursing students' attitudes by examining three distinct yet interrelated domains: permissiveness, treatment intervention beliefs, and non-stereotypical (low-stigma) attitudes. Each domain captures a different fact of attitudes, allowing the understanding of the students' perspectives.

Table 2: Permissiveness

S. No	Parameter	Findings
1	Mean score	1.38-2.5
2	Interpretation	Low permissiveness
3	Key observation	Students demonstrated caution, disapproval, and a health-conscious stance toward substance use. They did not normalize or trivialize substance use behaviors.
4	Implication	This cautions stance may serve as a protective factor against future substance use among nursing students themselves and may also influence their health promotion messaging to patients. However, it is important to ensure that this disapproval of substance use does not turn into moral judgement against individuals who use substances.

Items reflecting occasional or recreational substance use were met with strong rejection among students, as they recorded the lowest mean scores. The students predominantly supported views that highlighted the detrimental health, social, and psychological effects associated with substance use. Furthermore, despite the high community prevalence of substance use in Mizoram, there was no indication of normalization of such behaviors among the student population.

Table 3: Treatment Intervention

S. No	Parameter	Finding
1	Mean score range	3.89-4.78
2	Interpretation	Strong belief in treatment intervention
3	Key observation	Students expressed high confidence in the potential for recovery and strongly endorsed professional treatment approaches.
4	Implications	This strong belief is a critical foundation for effective nursing practice, as it positions SUDs as treatable health conditions rather than moral failings. It also suggests that students are likely to engage in therapeutic relationships and advocate for patients access to care

In a recent evaluation of student perspectives on treatment modalities for substance use disorders (SUDs), items emphasizing the role of counseling and psychosocial support achieved the highest mean scores. This reflects a strong appreciation among students for holistic and non-pharmacological interventions, indicating their recognition of these approaches as vital in addressing addiction issues. Furthermore, items concerning pharmacological treatments, such as opioid substitution therapy and naltrexone, garnered significant positive feedback, suggesting a willingness to endorse evidence-based medical strategies alongside psychological support. Students expressed a consensus that nurses should possess the necessary skills to identify, intervene in, and support individuals struggling with SUDs. This aligns with the evolving professional identity of nursing in relation to addiction care, highlighting the increasing importance of incorporating SUD training into nursing education. The consistently high ratings across all survey items underscore a shared belief among students that treatment for SUDs is both effective and essential, which is an encouraging sign for the future nursing workforce in Mizoram.

Table 4: Non-stereotypical/less stigma

S. No	Parameter	Findings
1	Mean score range	3.60-4.65
2	Interpretation	High non-stereotypical/low stigma attitudes
3	Key observation	Students exhibited empathy, rejected negative stereotypes, and demonstrated person-centered perspectives towards individuals with SUDs
4	Implication	Low stigmatizing attitudes are essential for building therapeutic alliances, reducing barriers to care, and ensuring that patients feel respected and supported. This is particularly important in Mizoram, where stigma may deter individuals from seeking helps.

Items assessing empathy and compassion, such as "I feel sympathy for individuals struggling with addiction," received

the highest scores, indicating a strong emotional connection among students. Conversely, items evaluating stereotypical beliefs, like "People with SUDs are unreliable" and "They bring their problems upon themselves," received the lowest scores, showing a rejection of such negative judgments. The students exhibited a clear understanding of the biopsychosocial aspects of addiction, emphasizing the impact of social and environmental factors in substance use. Additionally, there was a notable willingness among the students to provide non-prejudiced care for individuals with substance use disorders (SUDs), suggesting that their future clinical interactions are likely to be therapeutic rather than punitive in nature.

Findings related to objective 2:
The overall attitude index represents a composite measure of nursing student's attitudes, calculated as the mean score across all 37 items in the Attitude Likert scale. This index provides a single, summary value that reflects the general orientation of students towards SUDs and affected individuals.

Table 5: Overall attitude index of nursing students towards substance use disorders (SUDs)

S. No	Parameter	Finding
1	Overall attitude index	3.4
2	Interpretation	Neutral to positive stance
3	Key observation	The overall index leans favorably toward support for treatment, rehabilitation, and compassionate care, while also reflecting caution regarding substance use itself.

Score of 3.4: This value is slightly above the neutral midpoint of 3.0, indicating that, on average, students hold attitudes that are more positive than negative. However, it does not represent an overwhelmingly strong positive orientation, suggesting room for improvement.

Balancing Effect: The moderate nature of the overall index is best understood as the result of the interplay between the three domains:

1) **Low Permissiveness (1.38-2.5)** pulled the average downward, reflecting students' disapproval of substance use.
2) **Strong Treatment Intervention (3.89-4.78)** and **High Non-Stereotypical Attitudes (3.60-4.65)** pulled the average upward, reflecting students' empathy and belief in recovery.

Clinical Relevance: An index of 3.4 suggests that students are not indifferent or neutral in a passive sense; rather, they exhibit a balanced orientation that combines health-consciousness with compassion.

Implication for Education: While the index is encouraging, it also highlights the need for interventions that can further shift the balance toward greater empathy and treatment optimism, without undermining the healthy caution that students already demonstrate.

Findings related to objective 3:
This finding aimed to determine whether nursing students' attitudes (as measured by the overall attitude index and domain-specific scores) are significantly associated with certain demographic characteristics. Understanding these relationships can help identify which subgroups of students may require targeted educational interventions.

Table 6: Variables examined

S. No	Demographic Variable	Measurement	Rationale for inclusion
1	Age	Continuous variable (in years)	To determine whether maturity of life experience influences attitudes.
2	Level of course	Categorical variable (semester: 1st, 2nd, 3rd, 7th)	To assess whether progression through the curriculum (and associated theoretical and clinical exposure) leads to attitude change.
3	Clinical experience	Categorical variable (Yes/No: whether students had significant contact with patients having SUDs during clinical postings).	To examine whether direct patient interactions influence attitudes toward this population.

8. Statistical Methods Used

- **Pearson's product-moment correlation** was used to examine the relationship between age (continuous) and attitude scores.
- **One-way Analysis of Variance (ANOVA)** was used to compare mean attitude scores across different semesters (categorical with more than two groups).
- **Independent samples t-test** was used to compare mean attitude scores between students with and without clinical experience with SUD patients.

Table 7: Relationship Between Nursing Students' Attitudes Toward SUDs

S. No	Variable	Statistical test	Result	Effect size	p-value	Interpretation
1	Age	Pearson's correlation	No significant correlation, r=0.08	r2=0.006	P=0.34	Age is not a predictor of attitudes. Younger and older students hold similar attitudes.
2	Level of course (semester)	One-way ANOVA	No significant differences across semesters, F=0.92	r2=0.02	P=0.43	Progression through the nursing curriculum does not significantly alter attitudes. This suggests that current educational content may nit be sufficiently effective in shaping attitudes.
3	Clinical experience with SUD patients	Independent t-test	No significant difference between groups, t=0.67	Cohen's d=0.13	P=0.50	Students with and without contact with SUD patients exhibit comparable attitudes. Mere exposure, without structured reflective or educational support, appears insufficient to change attitudes

The analysis of nursing students' attitudes toward individuals with substance use disorders (SUD) reveals several critical insights regarding the influences of demographic variables, curriculum design, and clinical experiences. The data indicates no correlation between age and attitudes, challenging the notion that empathy or open-mindedness naturally increases with age and life experience. This suggests that attitudes are formed through specific learning opportunities and environmental factors rather than merely through aging. The results show that students' level in their nursing program does not significantly alter their attitudes towards SUD. Specifically, students in their 7th semester did not demonstrate more favorable views compared to those in their 1st semester, despite their increased coursework and clinical exposure. This raises concerns about the nursing curriculum's effectiveness in addressing substance use education, indicating that it may not sufficiently foster positive attitude changes in students.

9. Future Scope

The findings of this study open several avenues for future research and educational development in the field of nursing education and substance use disorders.

1) **Longitudinal research:** Further longitudinal studies should be conducted to track attitude changes throughout the nursing curriculum and into professional practice.
2) **Comparative studies:** Comparative research across different nursing institutions in Mizoram and neighbouring states would help with identifying best practices in addiction education, understand regional variations in attitudes toward SUDs and evaluate the effectiveness of different curricular approaches.
3) **Qualitative research:** Qualitative studies exploring the lived experiences of nursing students and their perceptions of substance use education would complement the quantitative findings of this study.
4) **Intervention studies:** Research examining the effectiveness of specific educational interventions would provide evidence to guide curriculum development.
5) **Faculty and practicing nurses studies:** Further studies should be conducted to explore the attitudes of nursing faculty towards SUDs, assess the attitudes of practicing nurses in Mizoram and examine the relationship between faculty attitudes and student attitudes.
6) **Curriculum impact assessment:** Research evaluating the implementation and effectiveness of comprehensive addiction education modules in nursing curricula would contribute to the evidence base for nursing education in substance use disorders.
7) **Patient outcome studies:** Future research could investigate the relationship between nursing students' attitudes and actual clinical behaviors, as well as the impact of these attitudes in patients' outcomes.

10. Recommendations

1) **Curriculum Enhancement:** Nursing curricula should be revised to include comprehensive, evidence-based modules on substance use disorders, covering neurobiology, pharmacology, harm reduction, psychosocial interventions, and stigma reduction strategies.
2) **Experiential Learning:** Structured clinical placements in addiction treatment settings, de-addiction centers, and opioid substitution therapy (OST) clinics should be incorporated into training programs, with supervised debriefing sessions to facilitate reflective learning.
3) **Contact-Based Education:** Programs that facilitate direct, positive interactions between nursing students and individuals in recovery should be implemented to humanize the experience of SUDs and reduce stigma.
4) **Faculty Development:** Nursing educators should receive training in addiction education and stigma-sensitive teaching methodologies to effectively deliver the revised curriculum.
5) **Interprofessional Collaboration:** Nursing students should engage in interprofessional learning experiences with social workers, psychologists, psychiatrists, and public health professionals to develop a holistic understanding of SUD care.
6) **Integration with Public Health Programs:** Nursing education should be closely linked with state-level initiatives such as the District Mental Health Programme (DMHP), Mizoram State AIDS Control Society (MSACS), and harm-reduction services to create seamless referral pathways and practical training opportunities.
7) **Ongoing Research:** Further studies should be conducted to evaluate the long-term impact of educational interventions on attitudes, as well as to explore the attitudes of nursing faculty and practicing nurses in Mizoram.
8) **Policy Support:** State health and education authorities should prioritize addiction education as a mandatory component of nursing training, recognizing its importance in addressing the substance use crisis in Mizoram.

11. Conclusion

This study evaluates nursing students' attitudes toward individuals with substance use disorders (SUDs) in Mizoram, highlighting the importance of these attitudes in nursing education and public health. The findings indicate a generally positive attitude among students, characterized by low permissiveness, strong belief in treatment effectiveness, and low stigma. The overall attitude index is approximately 3.4 on a 5-point scale, suggesting support for treatment and rehabilitation. Notably, no significant correlation was found between attitudes and demographic variables, emphasizing the need for quality educational interventions over mere exposure to clinical settings. The study calls for comprehensive and culturally relevant addiction education to further develop empathetic and therapeutic nursing practices.

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