

Knowledge and Attitudes of Nursing Students About Opioids and Overdose Crisis

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Abstract: Adequate knowledge and positive attitudes toward opioids are crucial for nursing students to provide effective pain management while minimizing the risk of opioid misuse. Understanding students' perspectives on opioid use and overdose can help improve nursing education and patient care. **Objective:** To assess the knowledge and attitudes of nursing students regarding opioids and opioid overdose. **Methodology:** This cross-sectional study was conducted at Medicare Hospital of Nursing, Multan, from December 2023 to December 2024. A total of 100 full-time nursing students were selected. Data were collected through a 34-item questionnaire assessing demographic characteristics, knowledge, attitudes toward opioids and overdose, experience with pain management, and satisfaction with opioid policies. Responses were recorded on a Likert scale ranging from 0 (strongly disagree) to 5 (strongly agree). Statistical analysis was performed to compare knowledge and attitude scores across different academic years. **Results:** The mean knowledge score increased significantly with the student's educational progression, from 11.2 ± 2.76 in first-year students to 17.1 ± 2.58 in fourth-year students ($f(df3) = 21.34, p < 0.001$). Attitudes toward opioids were negative in 50% of students overall, but this percentage declined with academic advancement: 82% of first-year, 60% of second-year, 44.5% of third-year, and 40% of fourth-year students had negative attitudes. **Conclusion:** Nursing students demonstrated satisfactory knowledge and a moderate attitude toward opioids, with both improving as they progressed through their academic years. However, curriculum enhancement and hands-on clinical experiences are essential to refine their understanding further and promote better patient care.

Keywords: Knowledge, Nursing, Nurses, Opioids

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Introduction

Opioid overdose is a global pressing issue that has emerged as a public health crisis in recent times. In Pakistan, 250,000 people die every year due to overdose-related complications, and 4.25 million people administer opioids unsafely. (1) Since 1.25 million people are overdosing on prescription drugs, the role of clinicians and pharmacists is very prominent in this epidemic. (2, 3) A clear opioid policy in clinical practice is an effective way to mitigate this problem.

Nurses, an essential part of the healthcare system, are directly involved with the pain management of patients. (4) However, wrong perceptions and knowledge of nurses limit the effect of pain control. (5) Hence, nursing students must be aware of the risks and effects of the drugs to promote safe medication use in their patients in their practice. Limited studies have investigated the clinical judgment of nurses while prescribing drugs.

This study was conducted to evaluate the nursing students' knowledge and attitudes about opioids and their overdose.

Methodology

A cross-sectional study was conducted at the Medicare Hospital of Nursing, Multan, from December 2023 to December 2024. A total of 100 nursing students studying full-time at the institute were selected. The students who refused to participate were excluded. All participants provided their informed consent to participate in the study, which was approved by the hospital's ethical board.

Data was collected through a 34-item questionnaire, which inquired about demographic information, knowledge and attitudes about opioids and overdose, experience with pain management, and satisfaction with

opioids policy. The questions could be answered on a Likert scale from 0 to 5, with zero being strongly disagreed and five being strongly agreed. Only three open-ended questions could be answered in the text. One point was given for every correct answer. Students were not provided with any pain management information about opioids beforehand. However, didactic information, including physiology, pharmacology, and cellular biology, was a part of the curriculum and basic clinical training.

All data was analysed using SPSS version 24. Quantitative variables were assessed and presented by descriptive statistics in the form of percentage and frequency. ANOVA tests and Tukey's tests evaluated differences in survey variables. Logistic regression explored the impact of survey variables on the perspectives of participants. Gender, experience with opioids, knowledge score, place of residence, and clinical training in palliative care, oncology, or psychiatry departments were factors tested as probable predictors in multi-variable logistic analysis. A p-value of 0.05 was taken significantly.

Results

A total of 100 students were included in the analysis. Most participants were female (90%) and aged 18-20 (53%). 80% of students resided in urban areas, and 20% lived in rural areas. Almost all the students (95%) were familiar with opioid epidemics. The demographic details of participants are shown in Table I.

Among the participants, 50 (50%) students had negative attitudes towards opioids; however, the trend became more positive or neutral with an increase in learning years. 18 students out of 22 (82%) in 1st year, 12 out of 20 students (60%) in 2nd year, 8 out of 18 students (44.5%) in 3rd year, and 16 out of 40 students (40%) in 4th year had opposing opinions. When participants were inquired about the first word that comes to their mind



after hearing 'opioids', 30 (30%) responded that they associated the word 'drug', and 8 (8%) responded with the word 'epidemic'.

A total of 90 students (90%) agreed that opioid overdose was a major issue in Pakistan, 50 (50%) considered healthcare personnel responsible for this epidemic, and 20 (20%) thought that lack of awareness among the public and patients leads to overuse. Fifty-four students (54%) agreed that nurses play a pivotal role in pain management and safe administration of opioids, and 75 (75%) agreed that nurses can prevent and control the opioid epidemic. Logistic regression analysis found no statistically significant predictors that influenced participants' attitudes.

The difference between the knowledge scores of each year's students was statistically significant, with a mean score of 11.2 ± 2.76 in 1st-year students and 17.1 ± 2.58 in 4th-year students ($f(df3) = 21.34, p < 0.001$).

Tukey test showed significant difference in knowledge scores between 1st years ($\bar{x} = 11.8 \pm 2.79$) and 3rd years ($\bar{x} = 14.1 \pm 2.90$), 1st years ($\bar{x} = 11.8 \pm 2.79$) and 4th years ($\bar{x} = 17.2 \pm 2.73$), 2nd years ($\bar{x} = 14.2 \pm 2.95$) and 3rd years ($\bar{x} = 14.1 \pm 2.90$) and 2nd years ($\bar{x} = 14.2 \pm 2.95$) and 4th years ($\bar{x} = 17.2 \pm 2.73$).

A total of 40 (40%) participants reported that they or someone they know experienced untreated pain, 20 (20%) struggled with opioid misuse, and 70 (70%) had an injury or illness that required opioids (Table 2). 60 (60%) students had clinical experience in the oncology department, and half agreed that the experience was positive. While 20% of the 60 students with experience in the palliative care department reported the experience as neutral, 10% reported it as harmful.

Table 1: Demographic information of participants

Variables	N (%)
Gender	
Male	10 (10%)
Female	90 (90%)
Age (years)	
18-20	53 (53%)
21-22	45 (45%)
>22	2 (2%)
Place of residence	
Rural	20 (20%)
Urban	80 (80%)
Year	
1 st	22 (22%)
2 nd	20 (20%)
3 rd	18 (18%)
4 th	40 (40%)
Aware of opioid overdose	
Yes	95 (95%)
No	5 (5%)

Table 2: Experience of participants regarding pain management and opioid overdose

	N (%)
Experienced untreated pain	
Yes	40 (40%)
No	60 (60%)
Struggled with opioid misuse	
Yes	20 (20%)
No	80 (80%)
Required opioids as a result of disease or injury	
Yes	70 (70%)
No	30 (30%)

Discussion

This study was conducted to assess the knowledge and attitudes of nursing students towards opioids and their overuse. The results showed satisfactory knowledge and positive attitudes, especially with the progression of degree years. Previous studies have also highlighted the positive association between pain management knowledge and educational level. (6, 7) As clinical experience increases significantly between 2nd and 3rd years, the increase in knowledge between these

levels was noteworthy. However, the mean score of 4th-year students was 17.2 out of 22, above the average score of 77%; it may be insufficient to deal with patients and their relatives practically.

Students' attitudes also became more positive or neutral through the years, which can be due to an increase in knowledge and more clinical experience, particularly in the oncology and palliative care department, which helped them understand opioids and pain management better. (8, 9) 50% of participants considered the negligence of healthcare staff for the opioid epidemic, and 20% thought that lack of knowledge and

education among patients and relatives was the root cause of this issue. This points towards the fact that nurses' education, including pharmacology and associated risks of opioids and clinical training related to safe administration and prescription of medications and guidance of patients, plays a vital role in preventing the epidemic. (10) Therefore, we recommend that clinical training of nurses must be carefully selected and monitored, especially regarding opioid overdose. As opioid misuse is a common issue among the Pakistani population, patients must receive quality care without the bias and negative perspectives of healthcare providers. Sadly, 50% of the students in our study had negative attitudes and experiences about pain management. (11, 12)

Our study has some limitations. As the questionnaire was self-reported, bias may be a factor influencing the findings. However, we tried to limit it by keeping the responses anonymous and using neutral language. Secondly, the study was single-centered, which may have limited the generalizability of results with respect to the hospital's location. We included students of all years studying similar courses to those taught at other institutions in the country to increase the applicability of our results to different places.

Conclusion

Nursing students showed a satisfactory level of knowledge and moderate attitudes towards opioids and the opioid epidemic, which increases with progressive years. However, upgradation in curriculum and clinical experiences is needed to improve patient care.

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-NMCU-02322d-24)

Consent for publication

Approved

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

MZ (Post RN BSN), HS (Post RN, BSN)

Manuscript drafting, Study Design, Review of Literature, Data entry, Data analysis, drafting article.

AF (Vice Principal), AN (Statistician)

Conception of Study, Development of Research Methodology Design, Study Design, manuscript review, Manuscript revisions, critical input.

All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the integrity of the study.

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