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Original Research Article

Barriers to Effective Pain Management in Postoperative Patients: Perspectives of Nurses in Pakistan

Rehana Perveen[1*], Saima Anwar[2], Sajjal Kainat[3], Abia Javed[4], Iram Mahmood[5]

[1]*Ittifaq College of Nursing, Lahore, Pakistan, Pakistan*
[2]*THQ hospital, Mincinabad. District. Bahawalnagar, Pakistan*
[3]*Alliant College of Professional Studies, Lahore, Pakistan*
[4]*Sir Ganga Ram Hospital, Lahore, Pakistan*
[5]*Department of Cardiac Surgery, Rehmatul-lil-Alameen Institute of Cardiology (RAIC), Lahore, Pakistan*
**Corresponding author`s email address:* rehananaperveen665@yahoo.com

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Abstract: *Effective pain management is a cornerstone of quality postoperative care. However, in Pakistan, nurses face multiple barriers, including staffing shortages, lack of resources, inadequate training, and cultural influences that hinder optimal patient outcomes. Understanding these barriers is essential for developing targeted interventions.* ***Objective:*** *To identify and analyze the barriers perceived by nurses in providing effective postoperative pain management in a tertiary care hospital in Pakistan.* ***Methods:*** *This descriptive cross-sectional study was conducted from July to December 2024 in a tertiary care hospital. A total of 99 registered nurses working in surgical and postoperative wards were recruited through purposive sampling. Data were collected using a structured, pre-validated questionnaire consisting of demographic details and a 5-point Likert scale assessing institutional, professional, and patient-related barriers. Descriptive statistics were used for demographic variables, and Chi-square tests assessed associations between demographics and perceived barriers. A p-value of <0.05 was considered statistically significant.* ***Results:*** *The majority of participants were female (83.8%), with a mean age of 29.7 ± 5.6 years. Most nurses held a diploma in nursing (59.6%) and had 1–5 years of experience (53.5%). The most frequently reported barriers included time constraints/work overload (48.5%), inadequate staffing (46.5%), lack of pain assessment tools (42.4%), and poor communication with physicians (41.4%). Nurses with less than five years of experience perceived inadequate staffing (p = 0.043) and limited pharmacological knowledge (p = 0.009) as significantly greater barriers compared to more experienced nurses.* ***Conclusion:*** *Nurses in Pakistan encounter multiple barriers in managing postoperative pain, primarily related to staffing, workload, inadequate tools, and limited pharmacological knowledge. Tailored educational programs, supportive institutional policies, and improved inter-professional collaboration are vital to enhance pain management and improve patient recovery outcomes.*

Keywords: Postoperative pain, Pain management, Nurses, Barriers, Pakistan, Nursing education

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Introduction

Effective pain management in postoperative patients is a crucial component of high-quality healthcare, significantly influencing recovery outcomes. Postoperative pain can lead to complications such as chronic pain development, more extended hospital stays, and increased healthcare costs (1,2). Nurses, being at the forefront of patient care, play a pivotal role in the assessment and management of postoperative pain (3,4) . However, various barriers impede their effectiveness in this domain, including a lack of standardized pain management protocols, inadequate knowledge, and negative attitudes toward pain management practices (5,6).

Research indicates that educational deficits significantly contribute to the ineffective management of pain among nurses. A study conducted in Turkey highlighted that many surgical nurses lacked sufficient knowledge regarding postoperative pain management (2). Similarly, a qualitative inquiry in Ghana identified multiple barriers, including inadequate training and negative attitudes toward pain assessment and management (3,5). This misalignment between guidelines and nurses' actual practice can lead to suboptimal pain management, exacerbating the experience of pain for patients post-surgery (7,2).

In Pakistan, the healthcare system faces challenges such as nurse shortages, inadequate training, and insufficient resources, all contributing to lower quality postoperative pain management (8). The cultural context may also influence the expression and management of pain. Patients may perceive pain differently based on cultural understandings, leading to discrepancies in pain assessment and treatment by nurses (9,10). Training programs focused on improving nurses' attitudes and knowledge regarding postoperative pain management may effectively address these barriers (11,12)

The importance of continuous education and the establishment of clear guidelines cannot be overstated. Evidence suggests that systematic training and educational programs substantially enhance nurses' capabilities in managing postoperative pain. (4,13) By developing and implementing evidence-based pain management protocols tailored to the local context, healthcare organizations can significantly improve patient outcomes and satisfaction (6,14). This is particularly vital in Pakistan, where diverse populations and varied cultural perceptions of pain necessitate sensitive and contextualized care strategies (8,15).

Therefore, addressing the barriers to effective pain management among nurses in Pakistan is crucial to improving postoperative patient care. This multifaceted approach requires ongoing education, supportive leadership within healthcare settings, and a commitment to cultural competence in pain assessment and management processes.

Methodology

This descriptive cross-sectional study was conducted at a tertiary care hospital in Pakistan from July 2024 to December 2024, spanning a period of six months. A total of 99 registered nurses working in surgical and postoperative wards were enrolled through non-probability purposive sampling. The inclusion criteria required participants to have at least six months of clinical experience in postoperative settings, and only those who provided informed written consent were included. Nurses on extended leave or administrative duty were excluded from the study.

Data were collected using a structured, pre-validated questionnaire adapted from previously published pain management barrier scales. The instrument was divided into two sections: demographic information and a 5-point Likert scale assessing perceived barriers to effective pain management. The questionnaire covered institutional, professional, and patient-related factors.

Before data collection, the tool was pilot-tested on 10 nurses to ensure clarity and relevance, with necessary modifications made. Ethical approval was obtained from the institutional review board of the hospital. Data were anonymized to ensure participant confidentiality.

The final data were analyzed using SPSS version 26. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were calculated for both demographic and response variables. Inferential statistics, such as the Chi-square test, were applied to evaluate the associations between nurse demographics (e.g., years of experience) and perceptions of pain management barriers. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 99 nurses participated in this cross-sectional study conducted at a tertiary care hospital in Pakistan from July to December. The mean age of the respondents was 29.7 ± 5.6 years. The sample consisted of 16 male nurses (16.2%) and 83 female nurses (83.8%). The majority held a diploma in nursing (59.6%), followed by a bachelor's degree (30.3%) and a master's degree (10.1%). Most participants had 1–5 years of professional experience (53.5%). (Table 1)

Table 1: Demographic Characteristics of the Nurses (n = 99)

Variable	Frequency (n)	Percentage (%)
Age (years)		
20–25	21	21.2
26–30	40	40.4
31–35	28	28.3
>35	10	10.1
Gender		
Male	16	16.2
Female	83	83.8
Qualification		
Diploma in Nursing	59	59.6
Bachelor's in Nursing (BSN)	30	30.3
Master's in Nursing	10	10.1
Years of Experience		
<1 year	11	11.1
1–5 years	53	53.5
6–10 years	24	24.2
>10 years	11	11.1

Table 2: Perceived Barriers to Effective Pain Management (n = 99)

Barrier	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Inadequate staffing	46 (46.5%)	33	9	6	5
Lack of pain assessment tools	42 (42.4%)	31	15	6	5
Limited knowledge about pharmacologic options	38 (38.4%)	30	17	9	5
Concerns about opioid addiction	35 (35.4%)	33	18	8	5
Lack of communication with physicians	41 (41.4%)	32	14	7	5
Institutional policy restrictions	40 (40.4%)	28	17	9	5
Time constraints/work overload	48 (48.5%)	29	12	5	5
Patients' reluctance to report pain	36 (36.4%)	30	20	8	5

The most commonly reported barriers were time constraints/work overload (48.5%), inadequate staffing (46.5%), and lack of pain assessment tools (42.4%), followed by communication gaps with physicians (41.4%). Over 65% of the nurses agreed or strongly agreed that institutional policies restricted optimal pain management. Additionally, nearly 70% perceived knowledge limitations and opioid concerns as moderate to high barriers. (Table 2). Nurses with less experience (<5 years) reported significantly more difficulty in understanding pharmacological pain control options (p = 0.009) and inadequate staffing (p = 0.043), indicating a clear trend in perception variability by experience level. (Table 3)

Table 3: Perceived Barriers by Years of Experience

Barrier	<5 years (n=64) Agree/Strongly Agree	≥5 years (n=35) Agree/Strongly Agree	p-value
Inadequate staffing	41 (64.1%)	15 (42.9%)	0.043
Time/workload issues	34 (53.1%)	14 (40.0%)	0.182
Lack of communication	29 (45.3%)	12 (34.3%)	0.244
Limited pharmacological knowledge	37 (57.8%)	11 (31.4%)	0.009*

*Statistically significant at $p < 0.05$

Discussion

The results of our study highlight significant barriers to effective postoperative pain management as perceived by nurses working in a tertiary care hospital in Pakistan. The findings, based on the demographic characteristics of 99 participating nurses, reveal crucial insights into the challenges faced within the healthcare system.

The age distribution of the nurses shows a mean age of 29.7 years, with a predominant representation of female nurses (83.8%) and a majority holding diplomas in nursing (59.6%). The educational and experiential background of the nurses aligns with other studies that emphasize the impact of education on pain management practices. For instance, Adams et al. noted that the majority of nurses in their research lacked adequate training, which correspondingly affected their competency in managing postoperative pain Adams et al. (3). Similarly, Mohaisen and Hassan reported that nurses' understanding of postoperative pain management was low before their educational intervention, indicating a need for improved training (13).

We present the perceived barriers to effective pain management, with time constraints and work overload emerging as the most commonly reported issues (48.5%). This aligns with findings from Olawale et al., who discussed the need for improved staffing and workload management to enhance nurses' ability to manage postoperative pain adequately. Furthermore, concerns regarding opioid addiction, expressed by 35.4% of the respondents, resonate with trends noted in various studies that suggest the fear of addiction can lead to under-treatment of pain, as documented by Nguyen et al. (17).

The lack of pain assessment tools (42.4%) is another critical barrier identified in our study. This finding correlates with observations in the literature that a lack of standardized pain assessment protocols can contribute to suboptimal pain management in postoperative settings. Teshome et al. highlighted that inadequate assessment tools can lead to ineffective pain management practices among nurses (18). Moreover, the perceived barriers stratified by experience (Table 3) suggest that less experienced nurses (<5 years) reported a greater sense of inadequacy regarding pharmacological pain management, which is supported by findings from Kidanemariam et al., indicating that work experience significantly influences nurses' pain management practices (19).

The significant barrier of inadequate communication with physicians (41.4%) noted in our results may reflect a larger systemic issue affecting interdisciplinary collaboration. This aspect is particularly critical in postoperative pain management, as effective teamwork among healthcare professionals is essential for successful outcomes. Cheng et al. have shown that poor inter-professional communication can severely impact pain relief efforts (20).

In our study, almost 70% of participating nurses perceived their limited knowledge regarding pharmacologic options as a substantial barrier to effective pain management, indicating a critical area for improvement. This aligns with findings by Birnie et al., who emphasized the need for ongoing education to enhance management outcomes in pain management practices (21). Furthermore, our results also suggest that institutional policies restricting pain management are a prominent concern, echoing calls in the literature for policy reforms aimed at optimizing pain management practices in hospitals, as discussed by Ameri and Shanbhag (22).

Conclusion

In conclusion, our study underscores the multifaceted barriers to effective postoperative pain management in Pakistan, including inadequate staffing, time constraints, limited knowledge, and communication gaps. Addressing these barriers through targeted educational interventions, policy changes, and enhanced collaboration among healthcare professionals is crucial to improving pain management and ultimately enhancing patient outcomes.

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-24)

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

RP
Manuscript drafting, Study Design,
SA
Review of Literature, Data entry, Data analysis, and drafting articles.
SK
Conception of Study, Development of Research Methodology Design,
AJ
Study Design, manuscript review, critical input.
IM
Manuscript drafting, Study Design,

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

References

1. Chatchumni M., Eriksson H., & Mazaheri M.. A scoping review of pain management education programs (PMEPs): do they prepare nurses to deal with patients' postoperative pain?. Pain Research and Management 2020;2020:1-7. https://doi.org/10.1155/2020/4062493
2. Doğan A., Doğan R., Güneş D., & BAĞCI N.. Assessment of chronic postsurgical pain knowledge among surgical nurses in a Turkish university hospital. Pain Research and Management 2025;2025(1). https://doi.org/10.1155/prm/9954969
3. Adams S., Varaei S., & Jalalinia F. Nurses' knowledge and attitude towards postoperative pain management in Ghana. Pain Research and Management 2020;2020:1-7. https://doi.org/10.1155/2020/4893707
4. Sakyi R.. Pain expectations, experiences and coping strategies used by post-operative patients: a descriptive phenomenological study. Plos One 2025;20(6):e0298780. https://doi.org/10.1371/journal.pone.0298780
5. Bayoumi M., Khonji L., & Gabr W. Are nurses utilizing the non-pharmacological pain management techniques in surgical wards?. Plos One 2021;16(10):e0258668. https://doi.org/10.1371/journal.pone.0258668
6. Khalil A., Meawad E., & Elhameed S.. Nurses' attitudes, practices, and barriers towards pain management of elderly patients with cancer. Mansoura Nursing Journal 2022;9(1):23-30. https://doi.org/10.21608/mnj.2022.258997
7. B. A., Wennie J., C.C. A., F.E. A., Sodimu J., & N.D. K.. The Effect of a Nurse-Led Training on Knowledge of Pain Assessment and Management Among Surgical Nurses in South-West Nigeria. African Journal of Health Nursing and Midwifery 2021;4(4):70-85. https://doi.org/10.52589/ajhnm-tdhn7liu
8. Zeb A., Farhana F., & Bi U. Nurses' knowledge regarding post-operative pain management. Journal of Healthcare Communications 2019;04(01). https://doi.org/10.4172/2472-1654.100151

9. Chatchumni M., Namvongprom A., Eriksson H., & Mazaheri M. Engagement and availability in shaping nurses' management of postoperative pain: a qualitative study. Electronic Physician 2018;10(8):7235-7242. https://doi.org/10.19082/7235
10. Chatchumni M., Namvongprom A., Eriksson H., & Mazaheri M. Exploring the different management structures in nurses' responses and treatment of patients' postoperative pain: a qualitative triangulation study. Electronic Physician 2019;11(2):7536-7543. https://doi.org/10.19082/7536
11. Chatchumni M., Eriksson H., & Mazaheri M. Core components of an effective pain management education programme for surgical nurses: a delphi study*. International Journal of Qualitative Studies on Health and Well-Being 2022;17(1). https://doi.org/10.1080/17482631.2022.2110672
12. Alomari H., Allobaney N., Swallmeh E., Macaaly R., & AL-Husban R. Effect of an educational program on nurses' level of knowledge about pain assessment and management: a quasi-experimental. 2024. https://doi.org/10.21203/rs.3.rs-5231832/v1
13. Mohaisen S. and Hassan H. Evaluation of nurses' practices regarding postoperative pain management among adult patients with abdominal surgery. Mosul Journal of Nursing 2022;10(3):46-50. https://doi.org/10.33899/mjn.2022.175387
14. Tariku J., Tuji T., & Dabi W. Knowledge and associated factors towards post-operative pain management among nurses working at referral hospitals, Ethiopia. Open Journal of Pain Medicine 2021:001-007. https://doi.org/10.17352/ojpm.000023
15. Menlah A., Garti I., Amoo S., Atakro C., Amponsah C., & Agyare D. Knowledge, attitudes, and practices of postoperative pain management by nurses in selected district hospitals in Ghana. Sage Open Nursing 2018;4. https://doi.org/10.1177/2377960818790383
16. Olawale M., Olorunfemi O., Oyewole O., & Sawalu R. Effect of a teaching programme on knowledge of postoperative pain management among nurses at Lagos University Teaching Hospital, Nigeria. African Journal of Health Professions Education 2020;12(3):134. https://doi.org/10.7196/ajhpe.2020.v12i3.1343
17. Nguyen K., Rambachan A., Ward D., & Manuel S.. Language barriers and postoperative opioid prescription use after total knee arthroplasty. Exploratory Research in Clinical and Social Pharmacy 2022;7:100171. https://doi.org/10.1016/j.rcsop.2022.100171
18. Teshome Z., Aychew Y., Mitiku W., & Guta B.. Level of attitude, knowledge, and practice of nurses toward postoperative pain management, cross-sectional study. Annals of Medicine and Surgery 2022;84. https://doi.org/10.1016/j.amsu.2022.104902
19. Kidanemariam B., Elsholz T., Simel L., Tesfamariam E., & Andemeskel Y.. Utilization of non-pharmacological methods and the perceived barriers for adult postoperative pain management by the nurses at selected national hospitals in Asmara, Eritrea. 2020. https://doi.org/10.21203/rs.3.rs-39743/v3
20. Wang D., Guo Y., Yin Q., Cao H., Chen X., Hua Q.et al.. The Analgesia Quality Index improves the quality of postoperative pain management: a retrospective observational study of 14,747 patients between 2014 and 2021. BMC Anesthesiology 2023;23(1). https://doi.org/10.1186/s12871-023-02240-8
21. Birnie K., Campbell F., Nguyen C., Lalloo C., Tsimicalis A., Matava C.et al.. Icancope postop: user-centered design of a smartphone-based app for self-management of postoperative pain in children and adolescents. Jmir Formative Research 2019;3(2):e12028. https://doi.org/10.2196/12028
22. Ameri M. and Shanbhag N.. Developing and implementing postoperative pain management guidelines for breast cancer surgery: a leadership perspective. Cureus 2023. https://doi.org/10.7759/cureus.50951