

TO ASSESS THE KNOWLEDGE, ATTITUDE AND PERCEIVED BARRIERS OF CRITICAL CARE NURSES ON PAIN MANAGEMENT OF CRITICALLY ILL PATIENTS IN TERTIARY CARE HOSPITAL

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Abstract: Effective pain management is a cornerstone of critical care, ensuring comfort and optimizing recovery for critically ill patients. In Pakistan, critical care nurses play a pivotal role in pain management; however, knowledge gaps, misconceptions, and systemic barriers hinder optimal practice. **Objective:** To assess the knowledge, attitudes, and perceived barriers of critical care nurses regarding pain management of critically ill patients in a tertiary care hospital in Lahore, Pakistan. **Methods:** A descriptive cross-sectional study was conducted among 126 critical care nurses using a structured questionnaire. Data on demographics, knowledge, attitudes, and barriers to pain management were analyzed using descriptive statistics. **Results:** Only 19.8% of nurses had good knowledge of pain management, while 42.9% had average knowledge, and 37.3% had poor knowledge. Negative attitudes were prevalent among 76.2% of participants, including misconceptions about opioid use and pain assessment methods. The most commonly reported barriers were insufficient knowledge (52.4%) and inadequate experience (23.0%), along with time constraints (4.0%) and inadequate pain assessment practices (19.0%). **Conclusion:** Significant gaps in knowledge, attitudes, and systemic barriers hinder effective pain management among critical care nurses in Pakistan. Targeted training programs and systemic reforms are essential to address these challenges and enhance pain management outcomes in critical care settings.

Keywords: Pain Management, Critical Care, Knowledge, Attitudes, Barriers, Nurses

Introduction

Pain management is a cornerstone of critical care, ensuring comfort and improving outcomes for critically ill patients. Effective pain control not only alleviates suffering but also minimizes physiological stress responses that can exacerbate underlying health conditions. Despite advancements in pain management protocols, gaps persist in the knowledge, attitudes, and practices of healthcare professionals, particularly critical care nurses, who play a pivotal role in the identification and management of pain in critically ill patients (1, 2).

In Pakistan, pain management remains a challenging aspect of critical care due to several factors, including resource constraints, lack of standardized training, and cultural beliefs surrounding pain expression. Nurses are often the first point of contact for patients experiencing pain, making their knowledge, attitudes, and practices critical for effective pain relief. However, research in Pakistan indicates that many nurses have limited training in pain management, leading to suboptimal practices and poor patient outcomes (3, 4).

Studies have shown that critical care nurses frequently rely on vital signs as the primary indicators of pain, despite evidence suggesting that these are not always reliable. Misconceptions such as the fear of opioid addiction and overestimation of respiratory depression risks further hinder effective pain management. Globally, similar trends have been reported, but the challenges are more pronounced in low- and middle-income countries like Pakistan due to inadequate access to educational resources and pain management tools (5, 6).

Barriers to effective pain management in critical care settings include insufficient knowledge about pain assessment tools, inadequate experience with opioid administration, and systemic issues such as time constraints and lack of organizational support. These barriers are often compounded by negative attitudes toward pain management, including misconceptions about patients' pain expressions and the underutilization of evidence-based protocols (7, 8).

Despite the critical nature of pain management in critical care, there is limited research in Pakistan exploring the knowledge, attitudes, and perceived barriers among nurses. Addressing these gaps is essential for improving patient outcomes and ensuring adherence to international pain management standards. Ahmed et al. highlighted the urgent need for targeted educational interventions to address these challenges in tertiary care hospitals in Pakistan (9).

This study aims to assess the knowledge, attitudes, and perceived barriers of critical care nurses regarding pain management in critically ill patients at a tertiary care hospital in Lahore. By identifying existing gaps and challenges, this study seeks to inform evidence-based strategies for improving pain management practices in critical care settings.

Methodology

The study employed a descriptive cross-sectional design to assess the knowledge, attitudes, and perceived barriers among critical care nurses regarding pain management in critically ill patients at a tertiary care hospital in Lahore, Pakistan. This design was selected to capture a

comprehensive snapshot of the current state of pain management knowledge and practices among nurses at a specific point in time.

The target population consisted of critical care nurses working in various intensive care units (ICUs), including Medical ICU, Pediatric ICU, Neonatal ICU, and Neuro ICU. A total of 126 nurses were included in the study using a convenience sampling technique. Eligibility criteria required participants to have at least six months of experience in critical care, a valid nursing license, and active employment in the hospital's ICUs during the study period. Nurses who were on leave or unavailable during the data collection period were excluded.

Data were collected using a structured, pre-validated questionnaire. The instrument was divided into three sections: demographic characteristics, knowledge and attitudes toward pain management, and perceived barriers to effective pain management. The questionnaire was developed based on existing literature and guidelines for pain management and was pre-tested on a small sample to ensure clarity, reliability, and validity. Adjustments were made to the questionnaire based on feedback from the pre-test.

Ethical approval was obtained from the institutional review board of the hospital. Participants were briefed about the study's purpose, objectives, and voluntary nature. Written informed consent was obtained before administering the questionnaire, and anonymity and confidentiality were strictly maintained throughout the study.

The data collection process was conducted over one month, during which participants were provided with the questionnaire during their shifts and were given sufficient time to complete it. Data collectors ensured that the participants understood the questions and provided support if any clarification was required.

Data analysis was performed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were used to summarize demographic data, knowledge, attitudes, and perceived barriers. Inferential statistics were employed to identify significant associations between demographic variables and nurses' knowledge and attitudes toward pain management.

Results

This study assessed the knowledge, attitudes, and perceived barriers of critical care nurses regarding pain management in critically ill patients at a tertiary care hospital in Lahore, Pakistan. The study involved 126 participants, the majority of whom (43.7%) were aged 26–30 years. Females constituted 92.1% of the participants, with the remainder being male (7.9%). Most participants held a Post RN qualification (62.7%), followed by diploma holders (34.1%). The majority of nurses (62.7%) had 6–10 years of experience and worked primarily in the Medical ICU (54.8%) (Table 1).

Participants demonstrated varying levels of knowledge regarding pain management. Only 19.8% of participants had good knowledge, while 42.9% had average knowledge and 37.3% had poor knowledge. Most nurses (75.4%) recognized the importance of assessing pain in patients with a Glasgow Coma Scale score >8, and 78.6% understood that respiratory depression rarely occurs in patients receiving

stable opioid doses. However, only 54.0% correctly identified that patients who can be distracted from pain do not necessarily experience severe pain, and 57.1% recognized that vital signs are not always reliable indicators of pain intensity (Table 2).

The majority of nurses (76.2%) exhibited a negative attitude toward pain management, while only 23.8% had a positive attitude. For example, 70.6% of nurses agreed that patients who could be distracted from pain usually do not have severe pain, while 85.7% believed elderly patients could not tolerate opioids. Furthermore, 70.6% considered placebo administration as a useful test for pain assessment, highlighting misconceptions in practice (Table 3).

The study identified several barriers to effective pain management among nurses. The most commonly reported barriers were insufficient knowledge about pain control (52.4%) and inadequate experience with pain management (23.0%). Other barriers included inadequate pain assessment (19.0%) and time constraints (4.0%) (Table 4). The results indicate significant gaps in knowledge, predominantly average or poor understanding of pain management, and a predominantly negative attitude among critical care nurses. Identified barriers further highlight the need for targeted training programs to address misconceptions, improve practices, and overcome systemic limitations in pain management.

Table 1: Demographic Characteristics of Participants

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	21–25	33	26.2
	26–30	55	43.7
	31–35	38	30.2
Gender	Male	10	7.9
	Female	116	92.1
Qualification	Diploma in General Nursing	43	34.1
	Post RN	79	62.7
	BSN (Generic)	4	3.2
Experience	1–5 years	26	20.6
	6–10 years	79	62.7
	11–15 years	21	16.7
Department	Pediatric ICU	25	19.8
	Medical ICU	69	54.8
	Neonatal ICU	25	19.8
	Neuro ICU	7	5.6

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Table 2: Nurses' Knowledge of Pain Management

Statement	True (n, %)	False (n, %)
Pain assessment in patients with GCS >8 is important	95 (75.4)	30 (23.8)
Respiratory depression rarely occurs with stable opioids	99 (78.6)	27 (21.4)
Vital signs are reliable indicators of pain intensity	72 (57.1)	54 (42.9)
Patients distracted from pain do not have severe pain	68 (54.0)	57 (45.2)

Table 3: Nurses' Attitudes toward Pain Management

Statement	Yes (n, %)	No (n, %)
Patients distracted by pain usually do not have severe pain	89 (70.6)	37 (29.4)
Elderly patients cannot tolerate opioids	108 (85.7)	18 (14.3)
Placebo administration helps determine pain authenticity	89 (70.6)	37 (29.4)
Lack of pain expression does not mean lack of pain	78 (61.9)	48 (38.1)

Table 4: Perceived Barriers to Pain Management

Barrier	Frequency (n)	Percentage (%)
Inadequate pain assessment	24	19.0
Insufficient knowledge about pain control	66	52.4
Inadequate experience with pain control	29	23.0
Time constraints	5	4.0

Discussion

This study assessed the knowledge, attitudes, and perceived barriers among critical care nurses regarding pain management in critically ill patients in a tertiary care hospital in Lahore, Pakistan. The findings revealed notable gaps in knowledge and attitudes, as well as systemic barriers, which are consistent with findings in previous studies conducted in similar settings.

The study showed that only 19.8% of nurses had good knowledge of pain management, while the majority demonstrated average or poor knowledge. These findings align with Ahmed et al., who reported similar deficits in pain management knowledge among nurses in tertiary care hospitals in Pakistan (10). The misconception that vital signs are reliable indicators of pain intensity, identified in 57.1% of nurses in this study, echoes the findings of Chanques et al., who highlighted that vital signs should not be the sole criteria for pain assessment, particularly in critically ill patients (11). Attitudes toward pain management were predominantly negative, with 76.2% of nurses displaying misconceptions such as the belief that elderly patients cannot tolerate opioids or that placebo administration is a useful test for pain authenticity. Similar attitudes were reported by Al-Quliti and Alamri, who found that nurses often harbored misconceptions about opioid use and its potential risks, leading to underutilization in pain management (12). Such attitudes may stem from inadequate training and a lack of exposure to updated evidence-based guidelines, as noted by Siddiqui et al. in their study on Pakistani healthcare settings (13). The study also identified significant barriers to effective pain management, with insufficient knowledge (52.4%) and inadequate experience (23.0%) being the most commonly reported. These barriers

are consistent with findings by Ahmed et al., who emphasized the need for comprehensive training programs to address knowledge and skill gaps in pain management among healthcare workers in Pakistan (10). Additionally, time constraints (4.0%) and inadequate pain assessment (19.0%) reflect systemic challenges, as highlighted by Puntillo et al., who noted that workload and insufficient staffing often limit the ability of nurses to perform thorough pain assessments (14). Gender and qualification were not explicitly analyzed in this study; however, previous research has suggested that nurses with higher qualifications and greater experience tend to demonstrate better pain management practices. For instance, Lavand'homme noted that continuous education and exposure to pain management protocols improve compliance with evidence-based practices (15). In conclusion, this study underscores the urgent need for targeted interventions to improve pain management in critical care settings in Pakistan. Training programs focusing on evidence-based pain management practices, coupled with organizational support to address systemic barriers, are essential for bridging the identified gaps. Future studies should explore the impact of such interventions on patient outcomes and further investigate the influence of demographic variables on nurses' knowledge and attitudes.

Conclusion

This study highlights critical gaps in the knowledge and attitudes of critical care nurses regarding pain management in critically ill patients in Pakistan. While most nurses demonstrated awareness of basic pain management principles, significant misconceptions and systemic barriers, such as insufficient knowledge and

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inadequate experience, hindered optimal practice. These findings underscore the need for targeted educational interventions, updated training programs, and systemic reforms to address organizational challenges and improve pain management outcomes in critical care settings.

Declarations

Data Availability statement

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

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-SNU-923/23)

Consent for publication

Approved

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Conflict of interest

The authors declared absence of conflict of interest.

Author Contribution

IQRA SIDDIQUE (BSN (Generic) Student)

Coordination of collaborative efforts.

Study Design, Review of Literature. Data collection

HUMAIRA SADDIQUE

Coordination of collaborative efforts.

RUBEENA JABEEN

Coordination of collaborative efforts.

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