

KNOWLEDGE, ATTITUDE AND PRACTICE OF NURSES RELATED TO EVIDENCE-BASED ASSESSMENT REGARDING ACUTE PAIN IN PATIENTS WITH BURN INJURY

Madiha Riaz¹, Sonia Ramzan², Tahira Shaheen^{*3}, Shahzadi Afzal⁴, Farzana A Ghafoor⁵

¹Assistant Nursing Instructor, College of Nursing, DHQ Hospital, Kasur, Pakistan

²Assistant Nursing Instructor, College of Nursing, DHQ Hospital, Kasur, Pakistan

^{*3}Principal, College of Nursing Kasur, Pakistan

⁴Nursing Instructor, College of Nursing, DHQ Hospital, Kasur, Pakistan

⁵Head Nurse, Baba Bulleh Shah Hospital, Kasur, Pakistan

^{*3}ushnahamna@gmail.com

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Corresponding Author: *

Tahira Shaheen

Abstract

Background: Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. It is classified as acute (associated with trauma or injury) or chronic (lasting more than three months). Nurses play a crucial role in pain management as the primary observers of patient discomfort during continuous bedside care. Despite advances, pain from burn injuries remains frequently undertreated. Severe burns rank among the most painful forms of trauma; inadequate relief induces anxiety, reduces participation in rehabilitation, increases morbidity, and prolongs hospital stay.

Objective: To assess the knowledge, attitude and practice of nurses related to evidence-based assessment regarding acute pain in patients with burn injury at Jinnah Burn and Reconstructive Surgery Centre, AIMC, Lahore.

Methodology: A descriptive cross-sectional study was conducted at Jinnah Burn and Reconstructive Surgery Centre, a tertiary-care referral centre. Convenience sampling was employed. Data were analysed using SPSS.

Results: The majority of participants were female nurses aged 31–35 years holding a General Nursing and Midwifery diploma, with 6–10 years of professional experience. Fifteen percent of nurses agreed that evidence-based assessment (EBA) is less effective for acute than chronic pain, and 15% considered EBA difficult in emergency burn care. No nurse agreed that mild analgesics alone effectively relieve acute burn pain; strong analgesics (narcotics) were regarded as essential.

Conclusion: Gaps exist in nurses' knowledge and consistent application of evidence-based acute pain assessment in burn patients. Targeted education and institutional protocols are required to improve practice.

1. INTRODUCTION

Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. It is a complex and highly individual experience that is influenced not only by the severity of tissue injury but also by psychological, emotional, social, and

environmental factors. Pain may be classified as acute or chronic, with acute pain generally occurring suddenly in response to trauma, injury, surgery, or an acute disease process, whereas chronic pain persists or recurs for an extended period, commonly beyond three months. Regardless of its duration, uncontrolled pain can have substantial effects on physical

functioning, emotional well-being, sleep, mobility, recovery, and overall quality of life. Nurses occupy a pivotal position in pain management because they provide continuous and direct patient care, regularly monitor patients' responses to treatment, and act as patient advocates (Schofield, 2018). Accurate assessment of pain intensity by nurses is therefore a prerequisite for effective pain relief and appropriate clinical decision-making (Clarke et al., 1996).

In the acute hospital setting, pain assessment and management remain important components of nursing care. Nurses are frequently the first healthcare professionals to identify changes in a patient's pain status and are responsible for communicating these findings to other members of the healthcare team. Appropriate pain assessment enables nurses to determine the severity and characteristics of pain, evaluate the effectiveness of analgesic interventions, and identify the need for further treatment. In contrast, inadequate or inconsistent assessment may result in under-treatment, delayed administration of analgesics, unnecessary patient suffering, and impaired recovery. Multiple audits have demonstrated that pain, particularly among vulnerable populations, is frequently poorly managed despite the availability of effective assessment methods and analgesic interventions (Fitzgerald et al., 2017).

Burn injuries represent one of the most painful, sudden, and psychologically distressing forms of trauma. Burn pain may result from direct tissue injury as well as from repeated procedures such as wound cleaning, dressing changes, debridement, positioning, physiotherapy, and rehabilitation. Patients with burn injuries may experience varying levels of pain throughout their hospital stay, and the intensity of pain may change according to the type, depth, extent, and location of the burn and the procedures performed. Acute burn pain may also be accompanied by anxiety, fear, sleep disturbance, emotional distress, and reluctance to participate in necessary wound care and rehabilitation activities. Poorly controlled pain can consequently contribute to increased morbidity, delayed functional recovery, and prolonged hospitalisation (Yuxiang et al., 2012).

Evidence-based assessment (EBA) involves the use of reliable and validated approaches to identify, measure, document, and reassess pain. Commonly used pain assessment instruments include the Numeric Rating Scale (NRS), Verbal Rating Scale (VRS), and Visual Analogue Scale (VAS). These tools provide a structured method for determining pain intensity and can assist nurses and other healthcare professionals in making appropriate decisions regarding analgesic treatment. Standardised pain assessment also facilitates communication between healthcare professionals and allows changes in pain severity to be monitored over time. Regular reassessment following an intervention is particularly important because it helps determine whether the selected pain management strategy has achieved the desired effect.

Nurses' knowledge, attitudes, and clinical practices are closely interconnected in the delivery of effective pain care. Adequate knowledge provides the foundation for selecting appropriate assessment methods, while positive attitudes encourage nurses to recognise pain as an important clinical priority. Appropriate practice requires nurses to apply this knowledge consistently during routine patient care. Therefore, evaluating all three dimensions is important for identifying gaps between recommended evidence-based standards and actual clinical practice. Understanding these gaps may help healthcare institutions develop targeted educational programmes, improve clinical protocols, and strengthen monitoring and documentation systems.

2. LITERATURE REVIEW

Burn care requires a multidisciplinary approach involving physicians, nurses, physiotherapists, psychologists, and other healthcare professionals. Within this team, nurses have frequent contact with burn patients and are involved in almost every stage of their care. They assess pain, administer prescribed analgesics, monitor treatment responses, provide psychological support, assist with wound care, and educate patients regarding pain management. Their observations and decisions can therefore have a direct influence on the patient's comfort and recovery. Strengthening

nurses' competence in evidence-based pain assessment may improve the recognition of acute pain and support timely and appropriate interventions.

Effective pain assessment should not be considered a single event but rather a continuous process. Pain should be assessed at appropriate intervals, documented accurately, reassessed after interventions, and communicated effectively among members of the healthcare team. For burn patients, this continuous approach is especially important because pain may fluctuate considerably during wound care, dressing procedures, movement, and rehabilitation. Failure to recognise changes in pain intensity may result in inadequate treatment and unnecessary patient distress.

Therefore, evidence-based pain assessment represents an essential component of high-quality nursing care for patients experiencing acute burn pain. Evaluating nurses' knowledge, attitudes, and practices can help determine whether recommended assessment approaches are being incorporated into routine clinical care and can identify areas requiring further professional development. The present study therefore examined the **knowledge, attitude, and practice of nurses concerning evidence-based assessment of acute pain in patients with burn injury**, with the aim of identifying existing gaps and generating evidence that may support improvements in nursing education, clinical practice, and pain management services.

In the acute hospital setting, pain management remains primarily a nursing responsibility. Multiple audits have demonstrated that pain, particularly among vulnerable populations, is frequently poorly managed (Fitzgerald et al., 2017). Burns represent one of the most painful, sudden and demoralising forms of trauma. Acute burn pain induces anxiety and reluctance to participate in wound care and rehabilitation, thereby increasing morbidity and length of stay (Yuxiang et al., 2012).

Evidence-based assessment (EBA) utilising validated tools such as the Numeric Rating Scale (NRS), Verbal Rating Scale (VRS) and Visual Analogue Scale (VAS) is recommended to standardise evaluation and guide analgesia. Nevertheless, barriers including time pressure, staffing shortages, knowledge deficits and

organisational culture continue to impede consistent application. This study therefore examined the knowledge, attitude and practice of nurses concerning evidence-based assessment of acute pain in patients with burn injury.

A descriptive cross-sectional survey among emergency healthcare professionals demonstrated a positive association between knowledge, attitude, and pain-management practices, while also identifying important knowledge gaps and barriers affecting the implementation of effective pain care (Lourens et al., 2020). These findings suggest that possessing theoretical knowledge alone may not be sufficient to ensure appropriate clinical practice. Healthcare professionals require both a favourable attitude toward pain management and adequate opportunities to apply evidence-based principles in routine patient care. In busy emergency environments, high patient turnover, competing clinical priorities, limited time, and staffing constraints may further influence the consistency with which pain is assessed and managed.

In a multi-ward hospital study, nurses assessed 33.9% of patients as pain-free and 24.6% as experiencing moderate-to-severe pain; nearly one-third of assessments relied on clinical expertise rather than standardised pain scales (Heikkilä et al., 2016). This finding highlights an important gap between recommended systematic pain assessment and actual nursing practice. Although clinical judgement remains an important component of nursing assessment, reliance on professional judgement alone may lead to variation between individual nurses and may reduce the consistency and comparability of pain measurements. The use of validated assessment instruments can provide a more structured approach and allow changes in pain intensity to be documented and communicated more effectively.

Research among surgical nurses indicated that awareness of evidence-based practice increases with educational level, yet barriers such as limited access to literature, language constraints, time pressure, and insufficient medical leadership persist (Schroeder et al., 2016). These findings indicate that professional education is an important determinant of evidence-based nursing practice, but organisational factors can

either facilitate or restrict the application of acquired knowledge. Nurses may understand the importance of pain assessment but still experience difficulties incorporating recommended approaches into practice when adequate resources, institutional guidance, continuing education, or managerial support are unavailable.

Studies focusing on older adults emphasise the need for improved communication, greater knowledge of age-specific assessment principles, and organisational prioritisation of pain management (Brown & McCormack, 2006). Pain assessment may become particularly challenging when patients have communication difficulties, cognitive impairment, or difficulty expressing the intensity and characteristics of their pain. Such challenges demonstrate the importance of adapting pain assessment approaches according to individual patient characteristics rather than applying a single method universally. Although these findings were obtained in older populations, the broader principle of individualised and systematic pain assessment is relevant to other vulnerable patient groups, including patients with severe burn injuries.

Similarly, work in neonatal intensive care revealed that despite clear guidelines, recommended pain-management interventions are not routinely applied, underscoring the necessity of targeted education and continued professional development (Popowicz et al., 2022). The presence of guidelines does not automatically guarantee their implementation in clinical settings. Effective translation of evidence into practice requires nurses to understand the recommendations, recognise their clinical importance, and have sufficient institutional support to implement them consistently. Regular training, clinical supervision, audit, feedback, and accessible pain-management protocols may therefore be important strategies for improving adherence to evidence-based practice.

The challenges identified across different clinical populations are particularly relevant to patients with burn injuries. Burn patients may experience intense acute pain not only from the initial tissue injury but also during repeated procedures such as dressing changes, wound cleaning,

debridement, positioning, and rehabilitation. Consequently, pain assessment needs to be performed systematically and repeatedly rather than being limited to the initial patient assessment. Nurses caring for burn patients must be able to recognise changes in pain intensity, select an appropriate validated assessment instrument, document findings accurately, and reassess the patient's response following analgesic or non-pharmacological interventions. The literature also indicates that nurses' attitudes can influence the quality of pain assessment and management. Positive attitudes toward patients' self-reported pain may encourage nurses to take pain complaints seriously and respond promptly. Conversely, misconceptions about pain behaviour, concerns regarding analgesic-related adverse effects, or assumptions about patients' tolerance may contribute to inadequate assessment and delayed management. Developing a professional culture in which pain is regarded as an important clinical indicator may therefore support more consistent application of evidence-based assessment practices.

Collectively, the literature affirms that although validated pain-assessment tools are available, their consistent use by nurses is moderated by multiple interrelated factors, including knowledge, attitude, workload, clinical experience, educational preparation, communication, availability of resources, and institutional support. The evidence further suggests that improving pain-management practice requires more than simply introducing assessment tools; healthcare organisations must also address educational and organisational barriers that affect their routine use. These considerations are directly relevant to the burn-care setting examined in the present study, where accurate and timely assessment of acute pain is essential for improving patient comfort, facilitating wound care and rehabilitation, supporting appropriate analgesic decisions, and promoting better overall patient outcomes.

3.MATERIAL AND METHODS

3.1 Design, Setting and Duration

A descriptive cross-sectional design was employed. The study was conducted at Jinnah Burn and Reconstructive Surgery Centre

(JB&RSC), Allama Iqbal Medical College / Jinnah Hospital, Lahore—a tertiary referral centre receiving burn cases from across the province. Data collection spanned six months (10 September 2024 – 10 March 2025).

3.2 Population, Sampling and Sample Size

The target population comprised all charge nurses working in the outpatient and inpatient departments of JB&RSC. Head nurses and student nurses were excluded. Convenience sampling was used. Although an a-priori calculation suggested a larger sample, the final analytic sample consisted of 13 nurses who completed the questionnaire.

3.3 Instrument and Analysis

A structured questionnaire comprising demographic items and 14 Likert-scale statements (1 = Strongly Disagree to 5 = Strongly Agree) assessing knowledge, attitude and practice related to evidence-based acute pain assessment was administered. Data were entered and

analysed with SPSS. Descriptive statistics (frequencies, percentages, means and standard deviations) were computed.

The study design, parameter of interest, setting, study population and sample, inclusion and exclusion criteria, study process, tool description, intervention, and data analysis strategy are all covered in detail in this chapter's explanation of the methodology.

4.1 Demographic Characteristics

4. RESULTS

4.1 Demographic Characteristics

Of the 13 participants, 92.3 % were female and 7.7 % male. The majority (61.5 %) were aged 31–35 years; 23.1 % were 36–40 years and 15.4 % were 25–30 years. Professional experience was almost evenly split between 6–10 years (53.8 %) and 11–15 years (46.2 %). Over half (53.8 %) held a General Nursing diploma, 30.8 % held a Post-RN BSN, and 15.4 % reported other qualifications.

Table 1. Demographic Characteristics of Participants (N = 13)

Variable	Cat	Freq.	(%)
Age	25–30 years	2	15.4
	31–35 years	8	61.5
	36–40 years	3	23.1
Gender	Male	1	7.7
	Female	12	92.3
Experience	6–10 years	7	53.8
	11–15 years	6	46.2
Qualification	Nursing Diploma	7	53.8
	Post-RN BSN	4	30.8
	Any other	2	15.4

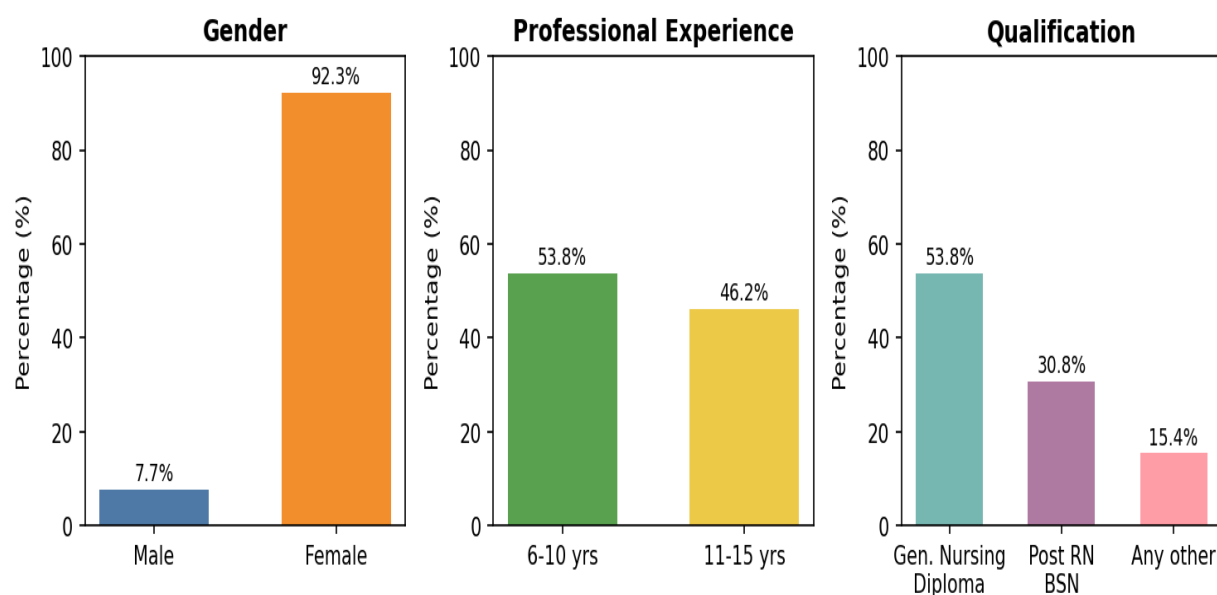
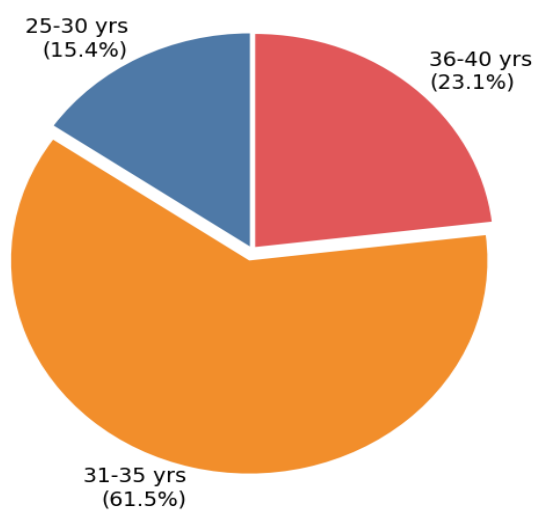
Demographic Characteristics of Participants (N=13)*Figure 1. Demographic profile of participating nurses***Age Distribution of Nurses (N=13)***Figure 2. Age distribution of nurses (N = 13)***4.2 Knowledge, Attitude and Practice Responses**

Table 2 summarises mean scores and response distributions for the 14 Likert items. Mean scores clustered around the neutral midpoint (2.77–3.31), indicating neither strong endorsement nor rejection of most statements. Notably, no participant agreed that mild analgesics alone suffice for acute burn pain (Item

B5), and a substantial proportion remained neutral on the routine use of validated scales.

Table 2. Descriptive Statistics and Key Response Patterns for Evidence-Based Assessment Items (N = 13)

Item	Statement (abbreviated)	Mean	Disagree %	Neutral %	Agree %
B1	EBA not more effective than for chronic pain	2.77	38.5	46.2	15.4
B2	EBA very difficult for emergency nurses	2.77	30.8	53.8	15.4
B5	Mild analgesics sufficient for acute burn pain	2.85	15.4	84.6	0.0
B7	EBA uses VRS / NRS / VAS	3.00	30.8	38.5	30.8
B8	Only narcotics relieve acute burn pain	3.23	15.4	53.8	30.8
B10	Pain is a major problem in older burn adults	3.31	0.0	69.2	30.8
B11	EBA not important for immediate relief in ED	2.92	30.8	46.2	23.1

Note: Disagree % combines Strongly Disagree + Disagree; Agree % combines Agree + Strongly Agree. Full item wording available in the original instrument.

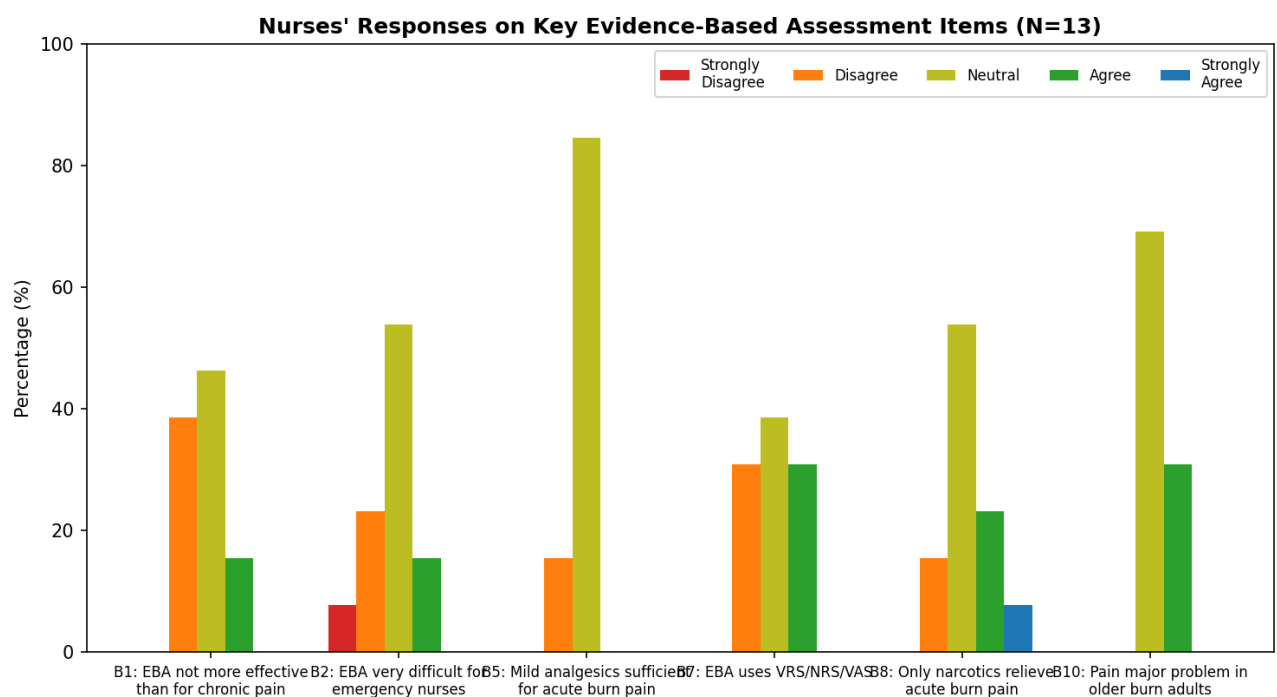


Figure 3. Distribution of responses on selected evidence-based assessment items

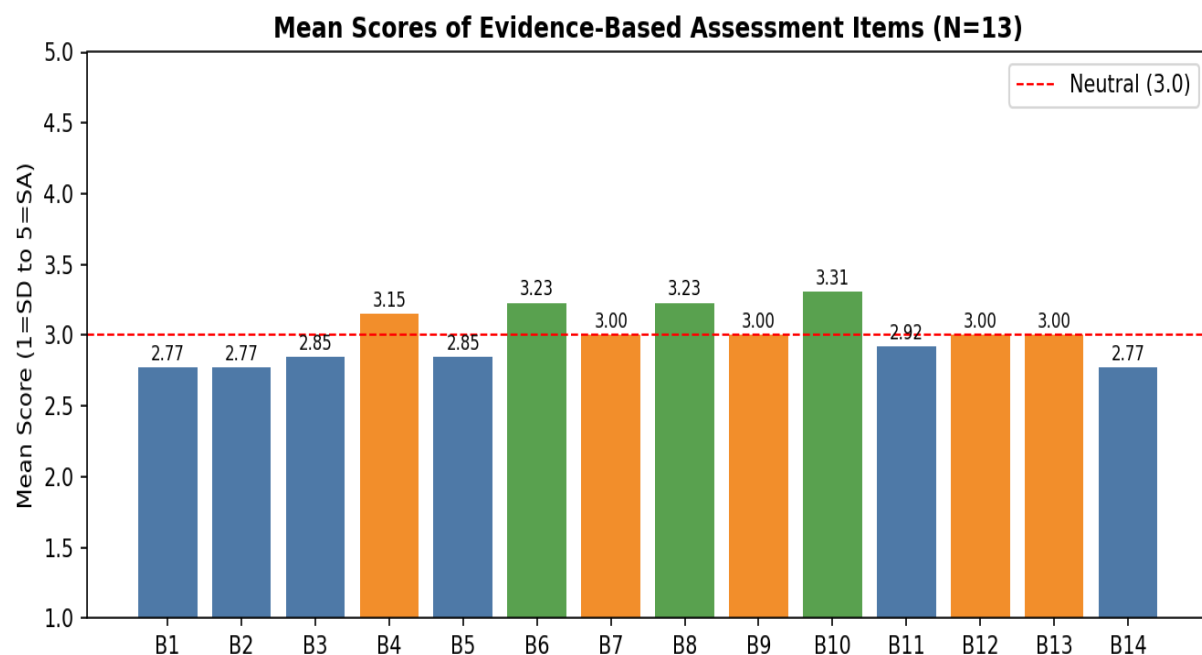


Figure 4. Mean scores of the 14 evidence-based assessment items (neutral reference line = 3.0)

5. DISCUSSION

The findings reveal a predominantly neutral stance among nurses toward several core principles of evidence-based acute pain assessment in burn care. The complete absence of agreement that mild analgesics suffice for acute burn pain aligns with clinical reality and underscores recognition of the severity of burn-related nociception. However, the high proportion of neutral responses regarding the routine use of validated scales (NRS, VRS, VAS) and the perception that evidence-based assessment may be difficult in emergency settings suggest incomplete translation of knowledge into practice.

These results are consistent with earlier studies that identified knowledge–practice gaps, time constraints and organisational barriers as impediments to optimal pain management (Lourens et al., 2020; Schroeder et al., 2016). The predominance of diploma-prepared nurses and the modest sample size limit generalisability, yet the pattern of responses points to a clear educational opportunity. Strengthening in-service training on validated assessment tools, embedding pain-assessment protocols into routine documentation, and ensuring adequate staffing during high-acuity periods could improve both assessment quality and patient outcomes.

6. CONCLUSION

Nurses at the study centre demonstrated awareness that acute burn pain requires strong analgesia, yet displayed limited consensus on the practical application of evidence-based assessment tools. Continuous professional development focused on standardised pain scales, simulation-based training for emergency scenarios, and institutional policies that prioritise regular pain reassessment are recommended. Future research with larger, randomly selected samples and mixed-methods designs would further illuminate barriers and facilitators of evidence-based pain assessment in burn units.

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