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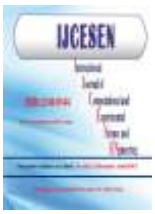

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Research Article

Pain Assessment and Management in Hospitalized Patients: A Review of Nursing and Healthcare Assistant Roles

Tahani Julayyil M Alanazi[1]*, Abdullah Awwadh Huyay Alrashidi[2], Tahani Almshne M Alanazi[3], Ghaidaa Fahad Aljabri[4], Albandri Hatab Ayed Alanazi[5], Hamdah Kawtim Alanazi[6], Basmah Muflih Z Alazmi[7], Mashael Faleh Alruwaili[8], Abeer Hattam R Alanazi[9], Hanan Khashm F Alruwaili[10], Majed Abdullah Khalaf Althomali[11]

[1]Nursing Technician – North Medical Tower – Northern Borders Health Cluster – Arar – Northern Borders – Saudi Arabia
* **Corresponding Author Email:** tjalenizi@moh.gov.sa- **ORCID:** 0000-0002-5007-7850

[2]Health Security Assistant – Faydat Athqab Primary Health Center – Hail Health Cluster – Al-Hait – Hail Region – Saudi Arabia
Email: aalrashidi29@moh.gov.sa- **ORCID:** 0000-0002-5247-7880

[3]Nursing Specialist – Northern Borders Health Cluster – Arar – Northern Borders – Saudi Arabia
Email: taalenezi@moh.gov.sa - **ORCID:** 0000-0002-5247-7870

[4]Nursing Specialist – King Abdullah Medical City – Makkah Health Cluster – Makkah – Makkah Region – Saudi Arabia
Email: ghaljabri@hotmail.com- **ORCID:** 0000-0002-5547-7850

[5]Nursing Specialist – North Medical Tower – Northern Borders Health Cluster – Arar – Northern Borders – Saudi Arabia
Email: Omyaqoub25@hotmail.com - **ORCID:** 0000-0002-5647-7850

[6]Nursing Technician – Maternity and Children Hospital – Northern Borders Health Cluster – Arar – Northern Borders – Saudi Arabia
Email: Hakalanzi@moh.gov.sa - **ORCID:** 0000-0002-5747-7850

[7]Nursing Technician – King Faisal Hospital in Qurayyat – Al Jouf Health Cluster – Al Qurayyat – Al Jouf – Saudi Arabia
Email: basmama@moh.gov.sa- **ORCID:** 0000-0002-5847-7850

[8]Nursing Specialist – King Abdulaziz Specialist Hospital – Al Jouf Health Cluster – Sakaka – Al Jouf – Saudi Arabia
Email: Zmuu7698@gmail.com- **ORCID:** 0000-0002-5947-7850

[9]Nursing Technician – North Medical Tower – Northern Borders Health Cluster – Arar – Northern Borders – Saudi Arabia
Email: abhaalanazi@moh.gov.sa- **ORCID:** 0000-0002-5547-7850

[10]Nursing Technician – Suwair Hospital – Al Jouf Health Cluster – Sakaka – Al Jouf – Saudi Arabia
Email: halrawaili@moh.gov.sa- **ORCID:** 0000-0002-4447-7850

[11]Nursing Technician / Hospital Administration Specialist – King Faisal Medical Complex – Taif Health Cluster – Taif – Makkah Region – Saudi Arabia
Email: maabalthomali@moh.gov.sa - **ORCID:** 0000-0002-3347-7850

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Abstract:

Effective pain assessment and management is crucial for improving patient outcomes and enhancing the overall healthcare experience in hospital settings. Nurses and healthcare assistants play pivotal roles in this process, employing various assessment tools to evaluate pain intensity, location, and quality. Utilizing standardized scales, such as the Numeric Rating Scale (NRS) or the Wong-Baker FACES Pain Rating Scale, these professionals can gather essential information to tailor interventions. Continuous monitoring and reassessment of pain are fundamental in the dynamic hospital environment, enabling healthcare teams to adjust treatment plans promptly and ensure adequate relief for patients. In addition to assessment, nurses and healthcare assistants are responsible for implementing and educating patients about pain management strategies. This may include administering prescribed analgesics, facilitating non-pharmacological techniques such as guided imagery or heat application, and supporting patients' understanding of pain management options. Collaboration with interdisciplinary teams is vital, as it allows for comprehensive care plans that integrate pharmacological and non-pharmacological approaches to alleviate suffering. By fostering a patient-centered approach and advocating for patients' needs, nursing and healthcare assistant roles are integral in promoting effective pain management and improving the quality of care in hospitalized settings.

1. Introduction

The experience of pain within a hospital setting represents a profound and multifaceted challenge, constituting not merely a sensory symptom but a complex biopsychosocial phenomenon with significant implications for patient recovery, satisfaction, and overall well-being. Despite being one of the most common reasons individuals seek medical care, pain remains notoriously under-assessed and suboptimally managed in hospitals worldwide, leading to what has been termed a silent epidemic of suffering [1]. Inadequate pain control precipitates a cascade of deleterious physiological consequences, including increased sympathetic nervous system activity, impaired immune function, and heightened catabolic metabolism, all of which can impede healing and prolong hospitalization [2]. Psychologically, unrelieved pain is a potent catalyst for anxiety, depression, sleep disturbances, and a diminished sense of control, eroding the patient's psychological resilience. Furthermore, from a socio-economic perspective, poorly managed pain contributes to extended lengths of stay, increased readmission rates, greater healthcare costs, and a significant erosion of trust in the healthcare system [3].

Within this critical landscape, the frontline roles of registered nurses (RNs) and healthcare assistants (HCAs), known variably as nursing assistants, patient care technicians, or auxiliary nurses in different regions, are absolutely pivotal. Nurses, as the healthcare professionals with the most continuous and direct patient contact, are fundamentally positioned as the coordinators, advocates, and primary executors of pain management plans [4]. Their role transcends mere administration of analgesics; it encompasses holistic assessment, vigilant monitoring, patient education, and therapeutic communication. Concurrently, healthcare assistants, working under the direction and delegation of registered nurses, provide invaluable, intimate bedside care that positions them as crucial observers and reporters of patient comfort and distress. The synergy and clear role delineation between these two groups form the bedrock of effective, compassionate, and individualized pain management [5].

2. The Complex Nature of Pain:

To effectively assess and manage pain, a foundational understanding of its nature is essential. The International Association for the Study of Pain (IASP) currently defines pain as "an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage" [4]. This updated definition crucially acknowledges that pain is always a subjective personal experience, influenced to varying degrees by biological, psychological, and social factors. Pain is not a direct readout of nociceptive signals but a conscious interpretation constructed by the brain. Broadly, pain in hospitalized patients can be categorized as nociceptive, neuropathic, or nociplastic. Nociceptive pain arises from actual or threatened damage to non-neural tissue (e.g., postoperative incisional pain, fracture pain) and is typically described as aching, throbbing, or pressure-like [5]. Neuropathic pain results from a lesion or disease of the somatosensory nervous system (e.g., diabetic neuropathy, post-herpetic neuralgia) and is often characterized as burning, shooting, or electric shock-like sensations [6]. Nociplastic pain, a newer classification, arises from altered nociception

despite no clear evidence of tissue damage or somatosensory system pathology, as seen in conditions like fibromyalgia [7].

The physiological journey of pain, or nociception, involves four key processes: transduction, transmission, modulation, and perception. Transduction occurs at the peripheral nerve endings (nociceptors) where noxious stimuli (thermal, mechanical, chemical) are converted into electrical signals. These signals are then transmitted via peripheral nerves to the spinal cord and ascend through tracts like the spinothalamic pathway to higher brain centers [8]. Crucially, this transmission is not a passive relay; it is subject to modulation at the spinal cord level, where descending pathways from the brain can either inhibit or facilitate the pain signal. Finally, perception occurs when these modulated signals are processed in cortical and subcortical brain regions, including the somatosensory cortex (localization and intensity), the limbic system (emotional affect), and the prefrontal cortex (cognitive evaluation) [9]. This complex pathophysiology underscores why pain is uniquely individual; identical injuries can produce vastly different pain experiences based on genetic predisposition, prior pain history, emotional state, cultural background, and contextual factors.

3. The Multidimensional Process of Pain Assessment:

Accurate and comprehensive pain assessment is the indispensable first step toward effective management. It is a dynamic, continuous process, not a one-time event, and forms the cornerstone of the nursing role. The guiding principle, endorsed by professional bodies worldwide, is that "pain is whatever the experiencing person says it is, existing whenever the experiencing person says it does" [10]. This necessitates accepting and acting upon the patient's self-report as the single most reliable indicator of pain. The classic mnemonic "OPQRST" (Onset, Provocation/Palliation, Quality, Region/Radiation, Severity, Time) provides a structured framework for initial assessment, but in practice, assessment must be more nuanced [11].

For patients able to communicate, the use of validated, standardized self-report tools is paramount. The Numerical Rating Scale (NRS, 0-10), Visual Analogue Scale (VAS), and Verbal Descriptor Scale are the most common unidimensional tools for measuring pain intensity [12]. However, intensity alone is insufficient. Multidimensional tools like the McGill Pain Questionnaire or the Brief Pain Inventory provide richer data on the sensory, affective, and evaluative dimensions of pain, as well as its impact on function [13]. For special populations, tailored tools are essential. The FLACC (Face, Legs, Activity, Cry, Consolability) scale is well-validated for infants and pre-verbal children [14], while the PAINAD (Pain Assessment in Advanced Dementia) scale, which observes breathing, vocalization, facial expression, body language, and consolability, is a gold standard for patients with advanced dementia or significant cognitive impairment [15]. The critical role of the healthcare assistant emerges powerfully here. Through activities of daily living (ADL) care—bathing, repositioning, transferring—HCAs are uniquely attuned to subtle, non-verbal cues of discomfort: a grimace during turning, guarding of a limb, reluctance to move, changes in usual behavior, or increased agitation. Their vigilant observations, when effectively communicated to the RN, are often the first alert to pain in non-communicative patients, making them an essential extension of the assessment team [16].

4. Central Coordinator, Advocate, and Clinician in Pain Management

The registered nurse's role in pain management is comprehensive, blending advanced clinical judgment with compassionate advocacy. It begins with the systematic assessment detailed above but rapidly expands into implementation, evaluation, and coordination of the multimodal management plan. Nurses are responsible for the safe and timely administration of prescribed analgesics, a task requiring profound pharmacological knowledge. This includes understanding the mechanisms of different drug classes (e.g., opioids, NSAIDs, adjuvants like antidepressants or anticonvulsants for neuropathic pain), their routes of administration, onset and duration of action, potential side effects, and monitoring requirements [17]. For opioid therapy, in particular, nurses are the frontline guardians against adverse effects. They must proactively assess for and manage common side effects like constipation (requiring a mandatory bowel regimen), nausea, sedation, and respiratory depression, utilizing monitoring tools such as sedation scores and capnography when appropriate [18].

Beyond pharmacology, nurses are key providers of non-pharmacological interventions (NPIs). These evidence-based strategies activate endogenous pain modulation pathways and empower patients. They include physical modalities like the application of heat or cold, massage, and acupuncture; cognitive-behavioral techniques such as guided imagery, distraction, relaxation breathing, and mindfulness; and patient education about pain and its

management [19]. Educating the patient and family demystifies pain, reduces anxiety, sets realistic expectations, and promotes active participation in the care plan. Crucially, the nurse serves as the patient's unwavering advocate, ensuring that their report of pain is believed and acted upon by the broader medical team. This advocacy is especially critical for populations at risk of biased under-treatment, including older adults, those with substance use disorders, and individuals from racial or ethnic minority groups, where disparities in pain management are well-documented [20, 21]. Finally, the nurse's role is cyclical: after any intervention, reassessment at an appropriate interval is mandatory to evaluate efficacy and guide further treatment, completing the "assess, intervene, reassess" loop fundamental to the nursing process.

5. The Healthcare Assistant:

Healthcare assistants, while not possessing independent clinical assessment or pharmacological responsibilities, are indispensable members of the pain management team by virtue of their proximity to the patient. Their contribution is foundational and occurs primarily in the domains of observation, communication, and basic comfort care. During the countless brief interactions that characterize ADL support, HCAs develop a nuanced understanding of a patient's baseline behavior and normal demeanor. This familiarity makes them exquisitely sensitive to deviations that may signal pain: a normally chatty patient becoming withdrawn, a change in eating or sleeping patterns, increased restlessness, or subtle facial expressions like clenching the jaw or furrowing the brow [22]. For patients unable to verbalize their pain due to dementia, critical illness, or language barriers, these behavioral observations are the primary data source for pain assessment.

The critical step that transforms observation into intervention is effective communication. HCAs must be skilled in accurately and promptly reporting their concerns to the supervising RN, using clear, descriptive, and non-judgmental language. A report such as, "Mr. Smith in room 204 is holding his left side tightly and winces every time I try to help him roll, even though he says he's fine," provides the nurse with actionable intelligence that a simple numeric score might miss [23]. Furthermore, HCAs are primary providers of comfort measures that can directly alleviate pain or augment pharmacological strategies. Gentle repositioning to offload pressure, ensuring clean and wrinkle-free linens, providing a quiet and calm environment, offering a warm blanket, or simply providing respectful, calming companionship can significantly influence a patient's pain experience and perception of care [24]. By building therapeutic rapport, HCAs also encourage patients to be more open about their discomfort, breaking down barriers to reporting. Their role, therefore, is one of human connection and vigilant support, creating the conditions in which formal pain management strategies can succeed.

6. Interprofessional Collaboration and Communication:

Effective pain management cannot be siloed within nursing; it demands seamless, respectful collaboration across the entire interprofessional team. Nurses and HCAs function as the central hub of communication, linking the patient's subjective experience with the prescriptive authority of physicians and the therapeutic expertise of other specialists. Clear, structured communication tools are vital. The use of SBAR (Situation, Background, Assessment, Recommendation) when contacting a prescriber about inadequate pain control ensures concise and effective information transfer: stating the current problem (S), relevant history (B), the patient's pain score and assessment findings (A), and a specific request for a change in the analgesic order (R) [25].

Collaboration extends to pharmacists, who are invaluable resources for pharmacokinetic advice, side effect management, and identifying potential drug interactions; physiotherapists, who can address musculoskeletal components of pain and improve mobility; and clinical psychologists or psychiatrists, who can help manage the affective and cognitive aspects of chronic or severe pain [26]. Within this framework, the relationship between the RN and HCA is a specialized microcosm of teamwork. It requires mutual respect, trust, and clear understanding of scope of practice. The RN must create an environment where the HCA feels empowered and expected to report observations without fear of being dismissed. Conversely, the HCA must understand the boundaries of their role and the importance of escalating findings rather than making independent clinical judgments. Regular huddles, shared documentation (where permitted), and a culture of shared accountability are hallmarks of units that excel in patient-centered pain management [27].

7. Challenges and Barriers to Optimal Pain Management in Hospital Settings

Despite established guidelines and best practices, significant systemic, educational, and attitudinal barriers persist, hampering optimal pain management. A pervasive challenge is the

phenomenon of "oligoanalgesia" – the under-treatment of pain. This stems from a complex interplay of factors, including persistent myths and misconceptions among both healthcare providers and patients. Common provider myths include unfounded fears of addiction when administering opioids for acute pain (the risk is exceedingly low in opioid-naïve patients), overestimation of the risk of respiratory depression with careful monitoring, and a tendency to underestimate pain, particularly in certain patient groups [28, 29]. Patients, on the other hand, may under-report pain due to beliefs that it is an inevitable part of hospitalization, a desire to be a "good" patient, fear of distracting caregivers from "more serious" work, or concerns about side effects of medications [30].

Systemic and organizational barriers are equally formidable. Chronic understaffing of nursing units leads to high patient-to-nurse ratios, leaving inadequate time for thorough, holistic pain assessments and the provision of time-consuming NPIs [31]. The relentless pace of acute care often prioritizes tasks over the more subtle, conversational work of pain evaluation and patient education. Furthermore, institutional policies may lag behind evidence, restricting access to certain modalities or creating cumbersome protocols. Deficits in education constitute a fundamental barrier. While pain management is a core component of RN curricula, depth can vary, and education for HCAs on pain recognition and communication is often minimal and inconsistent [32, 33]. This lack of standardized training leaves HCAs unprepared to maximize their potential contribution. Finally, the ongoing and complex public health crisis of opioid misuse has created a climate of fear and regulatory scrutiny that, while addressing a real problem, has had the unintended consequence of making some providers excessively cautious, potentially to the detriment of patients with legitimate severe pain needs [34].

8. Evidence-Based Strategies and Future Directions for Enhancing Practice

To overcome these challenges and elevate the standard of pain care, a multipronged approach targeting education, system design, and technology is required. First, enhancing education is non-negotiable. For RNs, ongoing professional development must move beyond pharmacology to emphasize advanced assessment skills, implicit bias training to mitigate disparities, and mastery of a wide range of NPIs [35]. For HCAs, mandatory, competency-based training programs focused on pain recognition in non-communicative patients, effective communication techniques, and their defined role within the team are essential investments [36]. Interprofessional education, where nurses, doctors, pharmacists, and assistants learn together, can break down hierarchical silos and foster a shared mental model for pain management.

Organizational and cultural strategies are equally critical. Hospitals must commit to adequate staffing levels to allow for the time-intensive nature of good pain care. Implementing a formal, standardized pain management protocol or clinical pathway, with clear algorithms for assessment, intervention, and escalation, can reduce variability and improve outcomes [37]. Cultivating a true culture of comfort, where pain relief is prioritized as a fundamental right and quality indicator, must start from leadership. This includes recognizing and rewarding teams that demonstrate excellence in this area. Technology offers promising tools for the future. Electronic health records (EHRs) with integrated, "smart" pain assessment flowsheets can prompt reassessment and track trends over time [38]. Patient-controlled analgesia (PCA) pumps empower patients and provide safe, consistent delivery. Emerging technologies like automated facial expression analysis using artificial intelligence are being explored as objective aids for pain detection in non-verbal patients, though ethical and practical considerations remain [39]. Ultimately, the most powerful strategy is reinforcing the synergistic partnership between RNs and HCAs through team training, clear role clarification, and fostering an environment of mutual respect, where every team member's contribution to alleviating suffering is valued and utilized.

9. Special Considerations in Pediatric and Geriatric Populations

Pain assessment and management require tailored approaches for vulnerable populations at opposite ends of the age spectrum. In pediatric care, pain is a source of significant distress for the child and family, and its under-treatment can have long-term consequences, including heightened pain sensitivity later in life [40]. The nurse's role is to utilize age-appropriate, validated tools consistently: the FLACC scale for infants, the Faces Pain Scale-Revised (FPS-R) for young children, and the NRS for older children and adolescents. Parental involvement is crucial, as parents are experts on their child's typical behavior and can provide critical contextual information. Management must consider developmental pharmacology, as drug metabolism and side effect profiles differ markedly from adults. Distraction (e.g., bubbles, interactive

toys, virtual reality), comforting touch, and parental presence are powerful NPIs in this population. HCAs in pediatric settings, through play and basic care, can be instrumental in providing distraction and observing for pain cues during interactive activities.

For the older adult, the challenges are multifactorial. Age-related physiological changes alter pharmacokinetics and pharmacodynamics, increasing sensitivity to opioids and risk of side effects like delirium and falls [41]. The high prevalence of cognitive impairment from dementia renders self-report unreliable, necessitating heavy reliance on behavioral observation tools like the PAINAD. Furthermore, older adults often have multiple co-morbidities and polypharmacy, increasing the risk of drug interactions. They may also harbor beliefs that pain is an inevitable part of aging, leading to under-reporting. The nursing approach must be meticulous, starting with low doses and careful titration, with vigilant monitoring for adverse effects. Non-pharmacological approaches, such as gentle mobility, managing environmental stimuli, and ensuring hearing and vision aids are used to reduce confusion, are paramount. HCAs, through their intimate care, are often the first to notice new onset of pain-related behaviors like agitation during personal care or changes in functional ability, such as a new reluctance to walk, which must be promptly communicated.

10. Conclusion

Pain in hospitalized patients is a formidable adversary, but it is not an invincible one. Its successful management is a fundamental measure of the quality, compassion, and efficacy of a healthcare system. This review has elucidated that at the heart of this endeavor lies the dynamic, interdependent partnership between registered nurses and healthcare assistants. The registered nurse brings to this partnership advanced clinical knowledge, skilled assessment, therapeutic intervention, and unwavering advocacy. The healthcare assistant brings unparalleled proximity to the patient, vigilant observational skills, and the capacity to provide fundamental human comfort and connection. Their roles are distinct but inseparable; the nurse's clinical decisions are informed by the assistant's frontline reports, and the assistant's care is given direction and purpose by the nurse's plan. Overcoming the persistent barriers of myth, understaffing, and educational gaps requires a concerted commitment to interprofessional education, systemic support for adequate resources, and the cultivation of a true culture where pain relief is an uncompromising priority. By empowering and synergizing the unique strengths of both nurses and healthcare assistants within a supportive, collaborative framework, healthcare institutions can move closer to the ideal of a pain-aware and pain-responsive environment, ensuring that the relief of suffering remains a central and achievable tenet of patient care.

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