Assessment of Pain Management Practice among Nurses in Selected General Hospitals, Lagos State

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Abstract
Pain persists as a multifaceted clinical challenge that profoundly affects patients' comfort, recovery, and quality of life. Nurses, positioned at the forefront of care delivery, are pivotal in conducting pain assessments, administering pharmacological treatments, and implementing non-pharmacological strategies. This study evaluated nurses' knowledge, assessment techniques, and pain management practices in selected hospitals in Lagos State. Employing a descriptive cross-sectional design, data were gathered from 74 registered nurses via a structured, self-administered questionnaire. Analysis utilized descriptive and inferential statistics at a significance level of 0.05. Results indicated robust knowledge of pain management principles, with all 74 (100%) participants recognizing the value of standardized assessments and patient self-reports as dependable measures. The Numeric Rating Scale (NRS) and Visual Analogue Scale (VAS) emerged as the predominant assessment tools. Pharmacological interventions were commonly implemented, as 61 (82.9%) adhered routinely to the WHO analgesic ladder. Non-pharmacological approaches, including cold/warm compresses (41; 54.9%), relaxation techniques (32; 42.7%), and patient education (41; 54.9%), were employed but with lesser consistency. Key barriers encompassed insufficient staffing, excessive workload, and restricted analgesic availability. A significant association existed between years of experience and utilization of both pharmacological and non-pharmacological pain management methods. The study concludes that nurses exhibit strong knowledge and effective practices, yet institutional limitations impede optimal execution. Recommendations include prioritizing recurrent training, sufficient staffing, and enhanced analgesic procurement to bolster evidence-based pain management and improve patient outcomes.

Keywords: pain management, pain assessment, pharmacological methods non pharmacological interventions

Chapter One

1.1 Background to the Study

Pain constitutes a universal human experience and a primary impetus for seeking healthcare services. The International Association for the Study of Pain (IASP, 2022) defines it as "an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage." Inadequate management of pain adversely impacts individuals' psychological, physical, social, and emotional well-being. This burden is particularly pronounced among hospitalized patients, rendering effective pain management a cornerstone of nursing practice. As frontline caregivers, nurses are instrumental in pain assessment, analgesic administration, intervention evaluation, and deployment of non-pharmacological measures (Ehwarieme et al., 2023). Despite advancements in evidence-based protocols and tools, many nurses lack sufficient knowledge and training for optimal pain management (Akpor & Dere, 2023). In hospital settings, especially in resource-constrained nations like Nigeria, pain is often under-assessed and undertreated due to factors such as excessive workloads, insufficient institutional support, limited training, and inconsistent application of standardized tools (Bilawu & Rasheed, 2022). Globally, pain management is evolving toward holistic, patient-centered models that integrate psychological, spiritual, and cultural dimensions. However, Nigerian hospitals frequently underutilize recommended tools like the Numeric Rating Scale (NRS), Visual Analogue Scale (VAS), and Wong-Baker Faces Scale (Okonkwo et al., 2023), compromising care quality, prolonging hospital stays, escalating complications, and diminishing

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patient satisfaction. Cultural beliefs further influence pain expression and nursing responses; for instance, stoicism may lead patients to underreport pain, while nurses might minimize its severity, particularly among children, the elderly, or those undergoing minor procedures (Okonkwo et al., 2023). In urban areas like Lagos, challenges are exacerbated by restricted access to continuing education, staffing shortages, and restriction on the use of some analgesic. Thus, examining nurses' knowledge, practices, and barriers in selected Lagos hospitals is essential to generate evidence-based recommendations enhancing care delivery and patient outcomes.

1.2 Statement of the Problem

Despite significant advancements in medical science, pain remains a pervasive global clinical problem, with suboptimal management persisting across various healthcare settings. In Europe, hospitalized patients frequently experience moderate to severe pain due to deficits in nursing knowledge and the absence of standardized institutional protocols (Schmidt et al., 2021). Studies conducted in Asia have similarly identified patterns of under-assessment and undertreatment, which are attributable to culturally influenced attitudes toward pain and the limited application of validated assessment tools (Jin et al., 2022). Within the African context, resource limitations, inadequate staffing ratios, and gaps in clinical training further contributed to the problem of unrelieved pain (Muleya et al., 2023).

In Nigeria, nurses encounter substantial barriers when translating theoretical knowledge into clinical practice, a difficulty compounded by heavy workloads, insufficient institutional support, and a scarcity of continuing education opportunities (Okafor & Alabi, 2022). In Southwest Nigeria specifically, systemic challenges—including chronic understaffing, an absence of specialized pain management training, and the deprioritization of pain care—continue to result in suboptimal nursing practices, even where moderate levels of awareness exist (Ogunlade et al., 2023). At the Selected Hospital in Lagos State, a vital secondary-level referral facility, inadequate nursing pain management poses significant risks, including prolonged hospital stays, increased patient complications, and diminished satisfaction. The scarcity of localized research underscores the urgent need to document current practices to promote care standards and improve patient well-being.

1.3 General Objective

To assess the pain management practices of nurses employed at the Selected Hospital in Lagos State.

Specific Objectives

i. To evaluate the level of knowledge regarding pain management among nurses.
ii. To examine the pain assessment practices utilized by nurses.
iii. To investigate the use of pharmacological and non-pharmacological pain management methods by nurses.

1.4 Research Questions

i. What is the current level of knowledge among nurses concerning pain management?
ii. Which pain assessment methods are most commonly employed by nurses?
iii.What pharmacological and non-pharmacological techniques do nurses utilize for managing patient pain?

1.5 Research Hypotheses

H_{01}: There is no statistically significant association between years of clinical experience and the use of pharmacological pain management techniques.
H_{02}: There is no statistically significant association between years of clinical experience and the use of non-pharmacological pain management techniques.

1.6 Significance of the Study

This study provides multifaceted value across several domains:

Nursing Practice: The findings will delineate current pain management practices at the Selected Hospital in Lagos State, identifying specific strengths and deficiencies in both pharmacological and non-pharmacological interventions. By promoting evidence-based adoption, the study aims to enhance patient comfort, facilitate recovery, improve satisfaction, and reinforce the concept of pain as the "fifth vital sign."

Nursing Education: Results will inform nursing educators by highlighting knowledge and skill gaps, thereby guiding curriculum enhancements and the development of targeted

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continuing professional development programs focused on evidence-based pain care.

Nursing Policy Making: The evidence generated will support hospital administrators and health policymakers in refining clinical protocols, securing necessary assessment and treatment tools, and allocating resources effectively. It may also influence the development of state-level pain management standards aligned with global best practices.

Nursing Research: This study contributes to the limited body of literature on pain management in Southwest Nigeria, establishing a foundational baseline for future investigations into intervention strategies, barriers to effective care, and the linkages between knowledge and clinical practice.

1.7 Scope of the Study

This study focuses exclusively on registered nurses working in clinical wards at the Selected Hospital in Lagos State, concentrating on their knowledge and practices related to pain management.

1.8 Operational Definition of Terms

Non-PharmacologicalInterventions: Medication-free strategies initiated by nurses (e.g., patient repositioning, deep breathing exercises, application of hot/cold compresses, distraction techniques, massage, therapeutic communication, and relaxation methods). These are measured via self-reported frequency on a questionnaire.

Nurses: Licensed and registered healthcare professionals who provide direct patient care at the selected hospital and serve as respondents to the study questionnaire.

Pain: An unpleasant sensory and emotional experience, either reported by the patient or inferred from observable behaviors (e.g., facial grimacing, guarding), and assessed using patient complaints or standardized tools such as the Numeric Rating Scale (NRS).

Pain Assessment Tools: Standardized instruments, including the Numeric Rating Scale (NRS), Visual Analogue Scale (VAS), and Verbal Rating Scale (VRS), used to determine the presence, intensity, and characteristics of pain. Utilization is evaluated through self-reported frequency of use and adherence to clinical protocols.

Pain Management: The systematic process of pain assessment, care planning, intervention implementation, and outcome evaluation. It is measured by self-reported use of pharmacological and non-pharmacological methods, as well as adherence to established guidelines.

Pharmacological Interventions: Medication-based approaches to pain relief, including the administration of opioids, non-steroidal anti-inflammatory drugs (NSAIDs), and adjuvant analgesics. Adherence is assessed based on compliance with the WHO analgesic ladder and prescribed medication regimens.

Chapter Two
Literature Review

2.0 Introduction

This chapter reviews literature pertinent to assessing pain management practices among nurses at selected hospitals in Lagos. Organized into four sections—conceptual review, theoretical review, empirical review, and literature summary—it addresses key concepts, underpinning theory, prior research aligned with objectives, and gaps.

2.1 Conceptual Review

Pain drives medical consultations and poses a central nursing concern. The International Association for the Study of Pain (IASP, 2020) defines it as an unpleasant sensory and emotional experience associated with, or resembling that from, actual or potential tissue damage. As a subjective phenomenon shaped by psychological, emotional, cultural, and environmental factors, pain demands individualized nursing assessment and management.

Concept of Pain Assessment

Pain assessment underpins effective nursing care, encompassing identification of presence, intensity, location, and characteristics via tools and patient dialogue. Patient self-report is paramount due to subjectivity, supplemented by behavioral/physiological indicators (e.g., expressions, posture, vital signs) for non-verbal patients (Herr et al., 2011).

Standardized Pain Assessment Tools

These tools promote consistent, objective evaluation, divided into unidimensional (intensity-focused) and multidimensional scales.

A. Unidimensional Scales measure solely intensity for clinical efficiency. Examples include:

Numeric Rating Scale (NRS): Patients rate pain from 0 (none) to 10 (worst imaginable).

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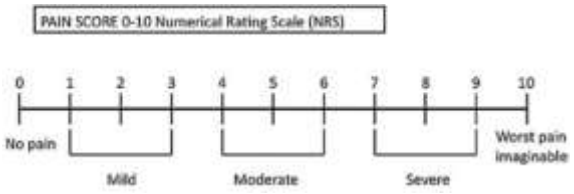
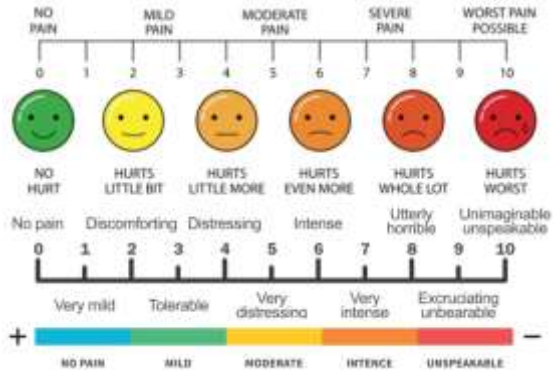
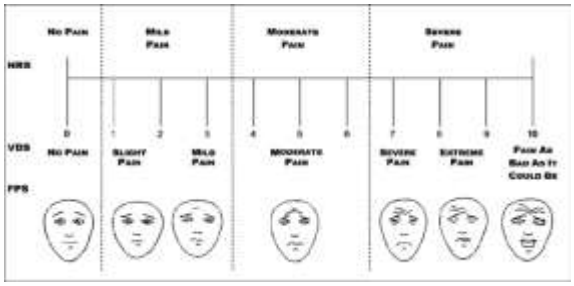
Valued for simplicity among literate adults, it tracks temporal changes and treatment efficacy (Okereke et al., 2022).





Visual Analog Scale (VAS)

The VAS comprises a 10-cm horizontal line with endpoints labeled as "no pain" and "worst imaginable pain." The patient marks a point on the line that corresponds to their pain level. It is more sensitive to small changes in pain but can be challenging for patients with visual or motor impairments (Ibrahim et al.,2022).



Wong-Baker FACES Pain Rating Scale

Originally developed for children, this tool uses facial expressions to indicate pain intensity ranging from a smiling face (no pain) to a crying face (worst pain). It is particularly beneficial for pediatric and cognitively impaired patients (Ehwarieme et al., 2023).

B.Multidimensional Pain Assessment Tools

These instruments evaluate multiple pain dimensions, including sensory, affective, and cognitive elements.

a. McGill Pain Questionnaire (MPQ)

The MPQ comprehensively assesses pain quality, intensity, and emotional impact through descriptive terms grouped into sensory, affective, and evaluative categories. While offering nuanced insights, its administration can be time-intensive (Adebayo et al., 2022).

b. Brief Pain Inventory (BPI)

The BPI gauges pain severity and its interference with daily activities such as sleep, work, and mood. Validated across cultures, including Nigeria, it is particularly prevalent in oncology (Chijioke & Salami, 2023).

c. Pain Assessment in Advanced Dementia Scale(PAINAD)

Designed for non-verbal or cognitively impaired patients, PAINAD scores pain via five observable behaviors: breathing, negative vocalization, facial expression, body language, and consolability (Usman et al., 2021).

Importance of Standardized Assessment

- **Consistent Evaluation Across Caregivers and Settings:** Standardized tools mitigate subjectivity, ensuring uniform interpretation and documentation. For instance, the NRS enables seamless continuity amid shift changes (Herr et al., 2021).
- **Monitoring Pain Intensity Over Time:** They facilitate tracking treatment responses, informing adjustments to medications or therapies (Ehwarieme et al., 2023).
- **Tailoring Interventions to Patient Needs:** By classifying pain (e.g., mild, moderate, severe), tools guide personalized strategies, minimizing under- or over-treatment (Akpor & Dere, 2023).
- **Systematic Improvement in Patient Outcomes:** Regular assessment accelerates

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recovery, shortens stays, enhances mobility, and bolsters mental health while reducing complications (Bilawu & Rasheed, 2022).

- **Nurses' Role in Early Identification and Reassessment:** As primary observers, nurses' tool proficiency ensures prompt interventions; training amplifies accuracy and safety (Adeyemi et al., 2024).
- **Need for Continuing Education and Clinical Guidelines:** Efficacy hinges on training and protocols; institutions should integrate these into orientations and policies (Okonkwo et al., 2023).

Pain Management Strategies

Pain management adopts a multimodal paradigm integrating pharmacological and non-pharmacological approaches.

Pharmacological Strategies encompass:

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Opioids
- Adjuvant analgesics (e.g., antidepressants, anticonvulsants for neuropathic pain)
- Local anesthetics (Adeyemi et al., 2021; WHO, 2022)

Despite efficacy, risks like side effects, dependency, and misuse demand vigilant nursing oversight and protocol adherence (Okonkwo et al., 2023).

Non-Pharmacological

Strategies complement pharmacotherapy:

- Massage and touch therapy
- Heat/cold applications
- Relaxation techniques
- Music therapy
- Cognitive-behavioral therapy (CBT) (Akpojaro et al., 2024; Bilawu & Rasheed, 2022)

In Nigeria, underutilization stems from knowledge gaps, resource shortages, institutional neglect, and cultural biases; nurses often default to pharmacotherapy (Ugochukwu & Ibeh, 2022; Olowokere & Olaogun, 2023).

Barriers to Effective Pain Management

Persistent obstacles include:

- **EducationalBarriers:** Insufficient formal/continuing training hampers competence (Bilawu & Rasheed, 2022; Akpor & Dere, 2023).
- **Organizational Barriers:** Staffing deficits, workloads, and absent protocols deprioritize pain care (Okonkwo et al., 2023; Agboola et al., 2023).
- **Cultural and Attitudinal Factors:** Opioid fears, exaggeration myths, and stoic norms skew responses (Ugochukwu & Ibeh, 2022; Adeyemi et al., 2021).
- **Documentation and Communication Challenges:** Inadequate recording disrupts continuity (Olowokere & Olaogun, 2023).

Mitigation requires interdisciplinary efforts, professional development, policy advocacy, and patient-centered models.

Role of Nurses in Pain Management

Nurses, through extensive patient contact, spearhead pain recognition, assessment, and control. Their knowledge, attitudes, and practices dictate intervention success; ongoing education and guideline adherence are imperative (McCaffery & Pasero, 2011).

Conceptually, nurses' knowledge informs accurate assessments, which dictate pharmacological/non-pharmacological selections—forming the analytical foundation for this study.

2.2 Theoretical Framework

Gate Control Theory of Pain

Proposed by Melzack and Wall (1965), this theory posits that pain perception transcends physical injury, modulated by psychological and cognitive factors. A "gate" in the spinal cord's dorsal horn regulates pain signal transmission to the brain. Open gates permit A-delta and C-fiber impulses, eliciting pain; closed gates block them via A-beta fibers or descending brain signals. Emotional states, attention, and prior experiences further influence gate status.

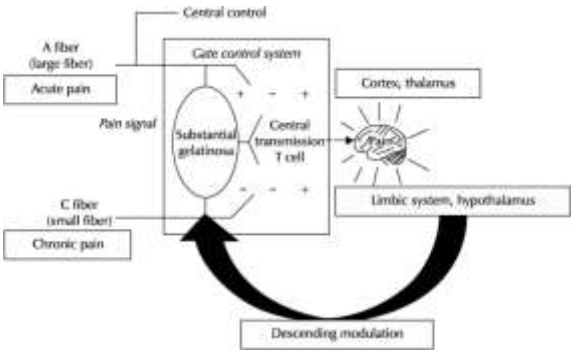

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Figure 2.1: Gate Control Theory of Pain Mechanism (Adapted from Melzack & Wall, 1965)

This theory endorses multimodal interventions—pharmacological and non-pharmacological—as each can modulate the pain gate, thereby altering perception.

Application of the Theory to Pain Management in Nursing

Nurses, as primary caregivers, can regulate the pain gate through:

- Non-pharmacological techniques like massage, touch, and repositioning, which activate large-diameter nerve fibers to close the gate.
- Psychological support via reassurance, distraction, and empathy, mitigating emotional pain amplification.
- Pharmacological administration and monitoring to inhibit nociceptive transmission from periphery to central nervous system.

Thus, effective pain management transcends pharmacotherapy, embracing holistic strategies addressing emotional, cognitive, and environmental influences.

Basic Assumptions of the Theory

1. Pain encompasses sensory, emotional, and cognitive dimensions.
2. A spinal gating mechanism controls pain signal ascent to the brain.
3. Non-noxious stimuli and psychological factors modulate gate function.

Relevance of the Gate Control Theory to This Study

The theory furnishes a neurophysiological rationale for nurses' interventions, elucidating how pharmacological and non-pharmacological methods shape pain perception. It emphasizes multidimensional management, mirroring this study's examination of nurses' knowledge, assessment practices, and strategy implementation in Lagos hospitals.

2.3 Empirical Review

Empirical investigations consistently probe nurses' knowledge, attitudes, and practices in pain assessment and management. Yildirim et al. (2018) in Turkey revealed nurses' awareness of pain management yet deficiencies in WHO analgesic ladder application, advocating sustained training. Aziato and Adejumo (2014) in Ghana reported moderate knowledge but sparse non-pharmacological use, attributed to workloads and institutional constraints. In Nigeria's Cross River State, Ojong et al. (2019) found 67% of nurses depended on verbal reports over standardized tools, urging scale-specific education. Oyeleke et al. (2019) in Kwara State noted 81% analgesic adherence alongside 64% integration of relaxation and compresses. Mohammed et al. (2021) linked experience to proficient multimodal relief, correlatingwith heightened patient satisfaction. Collectively, evidence highlights theoretical grasp amid praxis gaps in knowledge, assessment fidelity, and intervention consistency. This study addresses these by evaluating nurses' knowledge, assessment methods, and pharmacological/non-pharmacological application in selected Lagos hospitals.

Chapter Three

Research Methodology

3.0 Introduction

This chapter delineates the methodological framework, encompassing research design, study setting, target population, sampling procedures, data collection instruments, validity and reliability testing, ethical considerations, and analytical techniques.

3.1 Research Design

The study employed a descriptive cross-sectional design, ideal for capturing nurses' pain management practices at a singular temporal juncture without variable manipulation. Polit and Beck (2021) posit that such designs facilitate observation, description, and documentation of phenomena in their natural state, consonant with the study's objectives.

3.2 Study Setting

Data collection occurred at State Hospital, General Hospital Odan, Lagos, and Alimosho General Hospital, Igando, Lagos State, Nigeria. These public facilities, governed by the Lagos State Health service commission, serve local residents and adjacent communities with secondary-level care. General Hospital, Odan, was established in the year 1893 as a military Hospital to take care of the British Army that was sick during the colonial days.

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On October 1 1960, the hospital was handed over to the federal Government and on 7 May 1967, it was finally taken over by the Lagos state Government. The Hospital is strategically located at 1-3 between Broad Street, and Marina, Odan, Lagos Island in the Central Business district. It specializes in providing health solutions in General Medicine, Emergency, Chest Clinic, Surgery, Orthopaedics, Obstetrics and Gynecology, Ophthalmology, Physiotherapy, Radiology, pharmacy and Blood bank services. Alimosho General Hospital is a Secondary Health Care Institution dedicated to providing affordable services to the citizens of Lagos State, which was established under the purview of Health Service Commission on February 12th, 2006. It is located along Isheri/ LASU road in the Alimosho suburban region of Lagos State. Its topography spreads from the Isheri /LASU road anchoring some parts of the Idimu/Ikotun axis.

It offers Dental, Dermatology, Dialysis, Laboratory, Medicine, Mortuary, Obstetrics and Gynecology, Ophthalmology, Pediatrics, Physiotherapy, Radiology, Surgery, and VCT services, the hospital consists of Combined Clinics and Wards. It comprises about 150 nurses.

3.3 Target Population

The target population consisted of registered nurses at General Hospital, Odan, and Alimosho General Hospital, who deliver direct patient care.

3.4 Sample Size Determination

The sample size was determined using the Yamane formula (Yamane, 1967):

Where:

n = N / (1 + N(e) ^ 2)

- n = sample size
- N = estimated population of nurses in the hospital
- e = margin of error (0.05)

Inclusion and Exclusion Criteria

Inclusion Criteria

1. Registered nurses employed at General Hospital, Odan, or Alimosho General Hospital, Lagos State.
2. Nurses engaged in direct patient care and pain management in medical, surgical, pediatric, maternity, or emergency wards.
3. Nurses with at least six months of clinical experience in the hospital setting.
4. Nurses providing voluntary informed consent.
5. Male and female nurses across day and night shifts.

Exclusion Criteria

1. Student nurses, interns, or trainees not fully registered with the Nursing and Midwifery Council of Nigeria (NMCN).
2. Administrative/managerial nurses not involved in bedside care.
3. Nurses on leave or off-duty during data collection.
4. Nurses with fewer than six months of experience at the hospitals.
5. Nurses declining consent or withdrawing participation.

3.5 Sampling Technique

Stratified random sampling was employed, with wards (medical, surgical, maternity, emergency) as strata. Proportionate allocation preceded simple random selection within strata:

3.6 Instrument for Data Collection

A structured self-administered questionnaire, comprising four sections, facilitated data gathering:

- **Section A: Demographic Data** (6 items; nominal scale: age, gender, experience, ward/unit).
- **Section B: Knowledge of Pain Assessment and Management** (10 items; binary scale).
- **Section C: Pain Assessment Practices** (4 items; Likert scale assessing tool use and methods).
- **Section D: Pain Management Practices** (9 items; Likert scale on pharmacological/non-pharmacological utilization).

Closed-ended and Likert-scale formats ensured comprehensive, quantifiable responses.

3.7 Validity and Reliability of Instrument

Validity: Content and face validity were established via expert review in nursing research, pain management, and psychometrics, confirming relevance, clarity, and suitability.

Reliability: A pilot test on 10% of the sample (8 nurses) at a comparable facility (Gbagada general Hospital) yielded Cronbach's alpha > 0.70, deemed acceptable (Polit & Beck, 2021).

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3.8 Method of Data Collection

Post ethical approval and institutional permissions, questionnaires were distributed during shifts. Voluntary participation was emphasized, with completed forms retrieved promptly to safeguard confidentiality.

3.9 Method of Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics (frequencies, percentages, means, standard deviations) summarized demographics and responses. Inferential tests (Chi-square, Pearson correlation) examined associations, with significance at $p<0.05p<0.05$.

3.10 Ethical Considerations

Approval was secured from the Lagos State Health Service Commission Ethical Review Committee. Core principles upheld included:

1. **Non-Maleficence:** Nophysical, psychological, or emotional harm; sensitive topics handled judiciously to avert stigma.
2. **Beneficence:** Contributions to knowledge enhancing pain management policies and practices.
3. **InformedConsent:** Comprehensive briefings on purpose, procedures, risks, and benefits; voluntary written/verbal agreement sans coercion.
4. **Confidentiality and Privacy:** Anonymized data; untraceable responses.
5. **Justice and Fairness:** Equitable, inclusive selection representing diverse backgrounds.
6. **Autonomy:** Right to withdraw anytime without repercussions.

Chapter Four

Data Analysis and Results

4.0 Introduction

This chapter presents the analysis and interpretation of collected data. Descriptive statistics—frequencies and percentages—are deployed via tables and charts. Associations between variables were examined using Pearson's chi-square test, with statistical significance at $p<0.05p<0.05$. Findings address the research questions and hypotheses. Data processing utilized SPSS version 26. of 74 recruited respondents, all returned fully completed questionnaires, yielding a 100% response rate.

4.1 presentation of results

Table 1 demographic data

Variable	Category	Frequency	Percentage (%)
Age	20-30 years	35	47.30%
	31-40 years	14	18.90%
	41-50 years	17	23.00%
	51years and above	8	10.80%
Gender	Male	22	29.70%
	Female	52	70.30%
Marital status	single	23	31.10%
	Married	44	59.5%
	Divorced	2	2.70%
	Widowed	5	6.70%
Educational qualification	RN	8	10.80%
	RN\RM	21	28.40%
	BNSc	35	47.30%
	MSc	10	13.50%
Years of nursing experience	less than 1 year	2	2.70%
	1-5 years	30	40.50%
	6-10 years	20	27.00%
	10 years and above	22	29.70%
Current unit/ward	Medical	7	9.50%
	G.O.P.D.	16	21.60%

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	A&E	22	29.70%
	Pediatric	14	18.90%
	Maternity	9	12.20%
	Others	6	8.10%

Table 1 above delineates the socio-demographic profile of the 74 participating nurses.

- **Age Distribution:** The plurality (47.3%) fell within 20-30 years, with the smallest segment (10.8%) aged 51+ years.
- **GenderComposition:** Females predominated (70.3%), comprising over two-thirds, while males accounted for 29.7%.
- **Marital Status:** Married respondents were most prevalent (59.5%), contrasting with the fewest divorced (2.7%).
- **Educational Qualifications:** A plurality (47.3%) held Bachelor of Nursing Science (BNSc) degrees; the minority (10.8%) possessed Registered Nurse (RN) credentials alone.
- **Professional Experience:** The largest cohort (40.5%) reported 1-5 years, versus the smallest (2.7%) with <1 year.
- **CurrentWard/Unit:** Accidentand Emergency (A&E) hosted the most (29.7%), while "other" units had the fewest (8.1%).

These demographics reflect a relatively young, predominantly female, and early-career nursingworkforce

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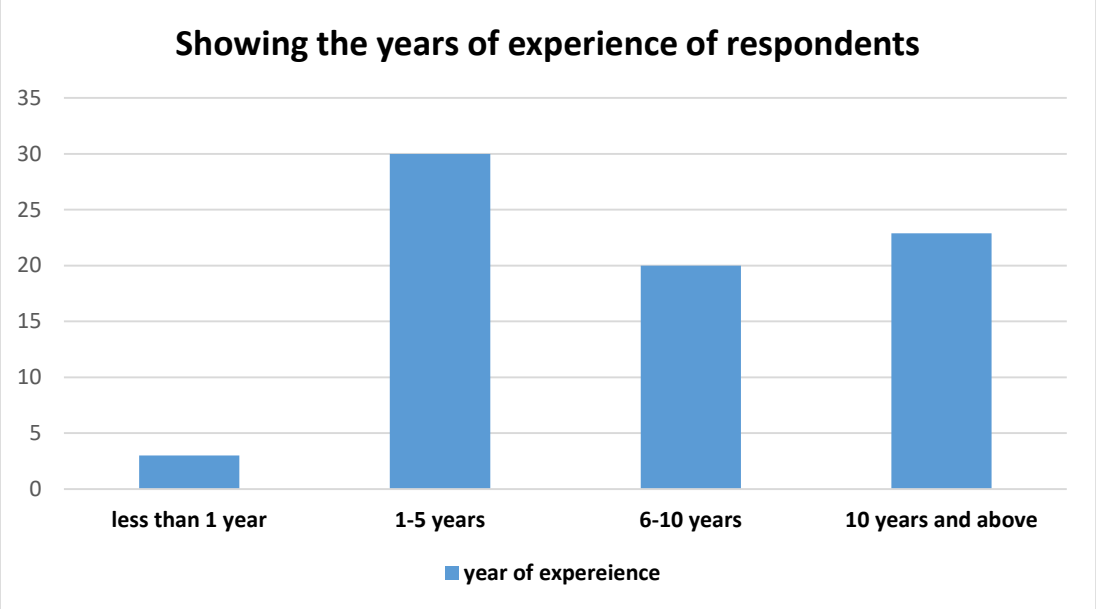

Fig. 4.1 Showing the year of experience of respondents

Table 2: Knowledge of Pain Assessment and Managemen

Variables	Yes (%)	No (%)
Pain is a subjective experience and should be assessed using a pain scale	74 (100.0%)	0 (0.0%)
The patient's self-report is the most reliable indicator of pain	74 (100.0%)	0 (0.0%)
Non-verbal cues (e.g. facial expressions, body movement) help in pain Assessment	74 (100.0%)	0 (0.0%)

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Pain assessment should be done routinely, not only when the patient complains	74 (100.0%)	0 (0.0%)
Knowledge of the WHO analgesic ladder is important for pain Management	74 (100.0%)	0 (0.0%)
Pain has physical, emotional, and psychological impacts	74(100.0%)	0 (0.0%)
Nurses are adequately trained on pain management during school or practice	74(100.0%)	0 (0.0%)
Pharmacological pain management includes opioids and non-opioids	74(100.0%)	0 (0.0%)
Non-pharmacological techniques (e.g. distraction, massage) are effective in managing pain	74(100.0%)	0 (0.0%)
Pain management is a shared responsibility between nurses and other healthcare professionals	74(100.0%)	0 (0.0%)

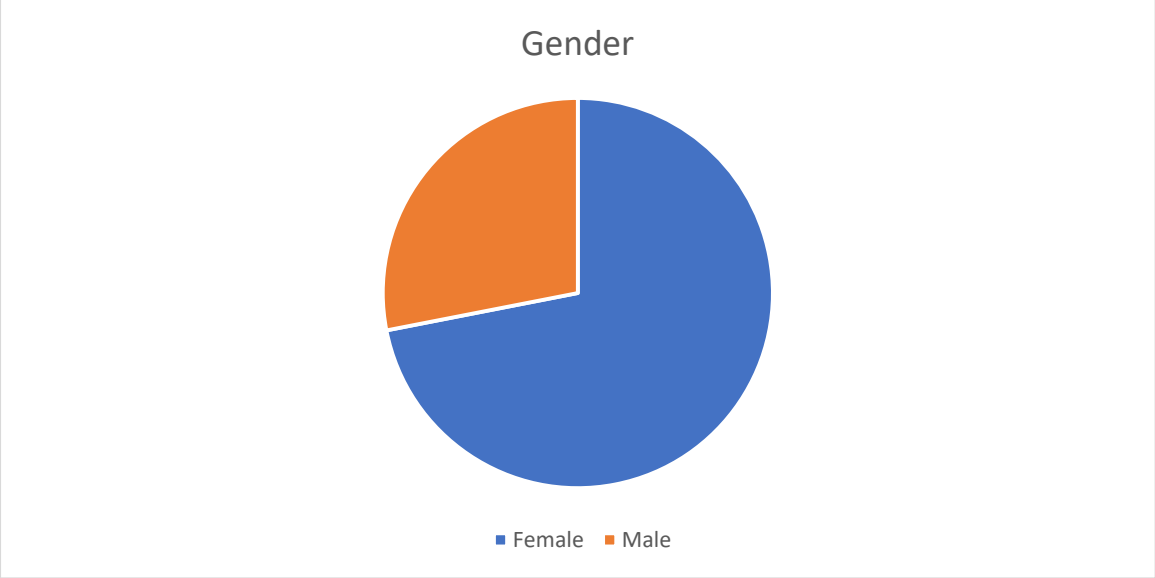

Fig. 4.2 Showing the gender distribution of respondents

Table 3: Table Assessment Practice

Variables	**Never** (%)	**Rarely (%)**	**Sometimes (%)**	**Always** (%)
I assess patient's pain routinely during shift	0(0.0%)	3(4.1%)	19(25.7%)	52(70.3%).
I use standardized pain assessment tool Such and NRS and VAS.	1(1.4%)	5(6.8%)	22(29.7%)	46(62.2%)
I document patients' score in nursing note	0(0.0%)	2(2.7%)	15(20.3%)	57(77.0%)

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I involve patients in identifying the most Painful area and describing pain severity	0(0.0%)	4(5.4%)	21(28.4%)	49(66.2%)

Table 3 above summarizes nurses' pain assessment practices among the 74 respondents.

- **Routine Assessment:** A majority (70.3%) consistently evaluated patient pain per shift; only 4.1% did so infrequently.
- **Standardized Tools:** Over three-fifths (62.2%) routinely employed NRS and VAS; 29.7% applied them occasionally.
- **Documentation:** Most (77.0%) invariably recorded pain scores in nursing notes, evidencing robust adherence.
- **Patient Involvement:** Two-thirds (66.2%) routinely solicited patients' input on pain location and severity, fostering collaborative assessment.

Collectively, these results indicate commendable pain assessment proficiency, underscored by routine evaluation, tool utilization, documentation fidelity, and patient-centered engagement.

Table 4: Pain Management Practices

A. Pharmacological Pain Management Practices

Variables	Never (%)	Rarely (%)	Sometimes (%)	Always (%)
I follow the WHO analgesic ladder Principles	0(0.0%)	0(0.0%)	13(17.6%)	61(82.4%)
I document pain scores and medication Effectiveness.	0(0.0%)	3(4.1%)	6(8.1%)	65(87.8%)
I evaluate the effectiveness of analgesics Administered	0(0.0%)	0(0.0%)	0(0.0%)	74 (100.0%)
I administer analgesics as prescribed	0(0.0%)	0(0.0%)	0(0.0%)	74(100%)

Table 4 (A) above elucidates pharmacological practices among the 74 nurses.

- **WHO Analgesic Ladder Adherence:** The majority (82.4%) invariably complied; 17.6% did so intermittently.
- **Documentation of Scores and Efficacy:** Most (87.8%) consistently recorded pain scores and medication outcomes; 4.1% rarely did.
- **AnalgesicEffectiveness Evaluation:** Universally (100.0%), nurses routinely assessed post-administration efficacy.
- **Prescribed Analgesic Administration:** All (100.0%) adhered strictly to prescriptions.

These data evince exceptional fidelity to pharmacological protocols, reflecting rigorous guideline compliance and professional diligence in pain mitigation.

B. Non pharmacological pain management practices

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Variables	Never (%)	Rarely (%)	Sometimes (%)	Always (%)
I apply cold or warm compress for pain relief	0(0.0%)	1(1.4%)	33(43.6%)	40(54.1%)
I use distraction techniques (e.g., music conversation)	0(0.0%)	0(0.0%)	40(54.1%)	34(45.9%)
I use relaxation techniques (e.g., deep breathing) for patients.	0(0.0%)	11(14.9%)	32(43.2%)	31(41.9%)
I educate patients on non-drug pain relief methods.	9(11.0%)	0(0.0%)	25(33.8%)	41(55.4%)
I encourage family involvement in supporting pain relief efforts.	0(0.0%)	0(0.0%)	20(27.0%	54(73.0%)

Table 4(B) above details non-pharmacological strategies among the 74 respondents.

- **Cold/Warm Compresses:** Over half (54.1%) applied them routinely; 44.6% occasionally.
- **Distraction Techniques (e.g., Music, Conversation):** Nearly half (45.9%) used them always; 54.1% sometimes.
- **Relaxation Techniques:** Moderate uptake prevailed (41.9% always, 43.2% sometimes); 14.9% rarely employed them.
- **Patient Education on Non-Drug Methods:** A majority (55.4%) consistently provided guidance; 10.8% never did.
- **Family Involvement:** This was most prevalent (73.0% always; 27.0% sometimes).

Overall, findings affirm robust integration of non-pharmacological modalities, with pronounced emphasis on education and familial engagement.

4.2 Response to Research Questions

Research Question 1: What is the level of knowledge of nurses regarding pain management at Selected Hospital in Lagos State?

Table 2 above reveals exceptional knowledge. Universally (100%), nurses affirmed pain's subjectivity, necessitating scale-based assessment and privileging patient self-reports. All recognized non-verbal cues' utility, routine evaluation irrespective of complaints, and WHO analgesic ladder relevance. Additionally, 91.9% acknowledged multidimensional impacts (physical, emotional, psychological), and 93.2% endorsed non-pharmacological efficacy (e.g., massage, distraction). Collectively, findings attest to comprehensive mastery of pain management tenets.

Research Question 2: What pain assessment methods do nurses commonly employ at Selected Hospital in Lagos State?

From Table 3 above, nurses integrate subjective and objective approaches. All (100%) utilized scales and self-reports alongside non-verbal indicators (e.g., expressions, movements). Documentation of scores and medication efficacy was routine for 77.0% (occasional for 23.0%), with universal (100%) post-analgesic evaluation. These patterns signify stringent protocol adherence in assessment, recording, and outcome appraisal.

Research Question 3: What pharmacological and non-pharmacological methods do nurses use for patient pain management at Selected Hospital in Lagos State?

Tables 4(A) and 4(B) above depict multimodal praxis. Pharmacologically, 82.9% invariably followed WHO ladder principles; all (100%) administered/evaluated prescribed analgesics, with 87.8% documenting outcomes. Non-pharmacologically, 54.9% routinely applied compresses and patient education, 54.1% distraction, 55.4% relaxation (e.g., deep breathing), and 73.0% family involvement. Results underscore holistic, integrated strategies optimizing relief.

4.3 Hypothesis Testing

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Decision Rule: Reject H_0 (accept H_1) if $p<0.05$*p*<0.05; otherwise, retain H_0.

Hypothesis 1: There is no significant association between years of experience and pharmacological pain management techniques among nurses at selected Lagos hospitals.

Table 5: relationship between years of experience and the use of pharmacological pain management techniques

		Years of Nursing Experience				Total		
		less than1 year	1-5 years	6-10 years	10 years and above	X^2	df	P Value
I follow the WHO	sometimes	2	9	0	3 14	17.123	3	0.001
analgesic ladder principles	Always	0	24	22	22 68			
I document pain scores and medication	Rarely	2	1	0	0 3	71.611	6	0.000
effectiveness	Sometime	0	0	0	7 7			
	Always	0	32	22	18 72			

Hypothesis 1 Results: Table 5 above scrutinizesexperience-pharmacological practice linkages. Significant associations emerged for WHO analgesic ladder adherence ($\chi2=17.123$, df = 3, $p=0.001$) and pain score documentation ($\chi2=71.611$, df = 6, $p=0.000$). Thus, H_{01} is rejected; experience significantly predicts these practices.

Hypothesis 2: There is no significant association between years of experience and non-pharmacological pain management techniques among nurses at selected hospitals in Lagos State.

Table 6: Relationship between years of experience and the use of non-pharmacological pain management techniques

		less than 1 year	1-5 years	6-10 years	10 years and above	X^2	df	p Value
I apply cold or warm	Rarely	0	**1**	**0**	**0 1**	4.759	6	0.575
Compress for relief	Sometimes	2	14	8	12 36			
	Always	0	18	14	13 45			
I use distraction	Sometimes	2	24	7	11 44	11.711	3	0.008
techniques (e.g., music, conversation)	Always	**0**	**9**	**15**	**14 38**			

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I use relaxation	Rarely	**0**	**8**	**0**	**3 11**	13.188	**6**	0.04
techniques (e.g.,	Sometimes	**0**	**9**	**14**	**9 32**			
deep breathing) for patients	Always	**2**	**16**	**8**	**6 32**			
I educate patients	Never	**0**	**9**	**0**	**0 9**	19.107	**6**	0.004
on non-drug pain	Sometimes	**2**	**9**	**7**	**10 28**			
relief methods	Always	**0**	**15**	**15**	**15 45**			
I encourage family	Sometimes	**0**	**1**	**14**	**7 22**	25.454	**3**	**0**
involvement in supporting pain relief efforts	Always	2	32	8	18 60			

Hypothesis 2 Results: Table 6 above reveals differential associations between experience and non-pharmacological practices. No significance for cold/warm compresses ($\chi 2=4.759$, $p=0.575$); H_0 retained. Significant relationships pertained to distraction techniques ($\chi 2=11.711$, $p=0.008$), relaxation techniques ($\chi 2=13.188$, $p=0.004$), patient education on non-drug methods ($\chi 2=19.107$, $p=0.004$), and family involvement ($\chi 2=25.454$, $p<0.001$); H_0 rejected. Experienced nurses evince greater propensity for diverse non-pharmacological interventions.

Chapter Five
Discussion, Summary, and Conclusions
5.1 Discussion of Findings

This study evaluated pain management knowledge and practices among nurses at selected Lagos State hospitals, emphasizing assessment methods, pharmacological/non-pharmacological utilization, and influencing factors.

Socio-Demographic Characteristics

The study cohort was predominantly female (70.3%), aged 20–30 years (47.3%), and held a Bachelor of Nursing Science (BNSc) degree (47.3%), reflecting the well-documented gender imbalance within the nursing profession (Okonkwo et al., 2023). A majority (40.5%) possessed 1–5 years of clinical experience, with a notable concentration in the Accident and Emergency unit (29.7%), suggesting a youthful, frontline-oriented workforce consistent with regional patterns reported in Southwestern Nigeria (Ogunlade et al., 2023). The limited representation of senior nurses may, however, constrain the application of advanced clinical judgment (Ehwarieme et al., 2023).

Knowledge Levels

Respondents demonstrated exceptional pain management knowledge. All participants (100%) endorsed the subjectivity of pain, the use of standardized scales, reliance on patient self-reports, routine pain evaluation, adherence to the World Health Organization (WHO) analgesic ladder, and the utility of non-pharmacological interventions. Furthermore, 91.9% recognized the multidimensional impacts of pain. These findings corroborate those of Ehwarieme et al. (2023) and exceed the knowledge deficits documented by Akpor and Dere (2023) and Ganesan et al. (2022), likely attributable to enhanced nursing education curricula. The implication is that while nurses are equipped for evidence-based decision-making, supportive institutional infrastructure remains essential to bridge persistent knowledge–practice gaps (Ogunlade et al., 2023; Okafor & Alabi, 2022).

Pain Assessment Methods

Pain assessment practices were characterized by multimodal routines, including the use of standardized scales, patient self-reports, and observation of non-verbal cues. Routine pain assessment was universal (100%), with 77.0% reporting consistent documentation. These

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practices align with recommendations from the International Association for the Study of Pain (IASP, 2020, 2022) and findings from Agboola et al. (2023). In contrast to studies reporting lower tool utilization elsewhere (Mahmud et al., 2023), the presence of institutional protocols in this setting likely enhanced assessment fidelity, thereby promoting continuity of care (Eze & Chukwu, 2022; Olowokere & Olaogun, 2023).

Pharmacological and Non-Pharmacological Practices

Excellence in pharmacological pain management was evident: 82.9% of respondents adhered to the WHO analgesic ladder, and 100% demonstrated rigor in prescription and efficacy monitoring (Adeyemi et al., 2021; Kim et al., 2023). Non-pharmacological practices included the use of compresses (54.9%), distraction and relaxation techniques (approximately 42–55%), patient education (54.9%), and family involvement (73.0%). While these approaches resonate with the Gate Control Theory of pain (Melzack & Wall, 1965), their inconsistent application (Okonkwo et al., 2023; Akpojaro et al., 2024) may be attributed to deficits in institutional support (Oni et al., 2022). A multimodal approach remains critical for optimizing patient outcomes.

5.2 Implications of the Study

This nursing research on pain management practices among nurses in selected general hospitals in Lagos State identifies key gaps and opportunities for clinical improvement, with implications spanning multiple domains.

Practice Implications: Targeted training initiatives can address identified deficiencies in pain assessment and intervention techniques. Hospitals may implement standardized protocols to reduce inconsistencies in both non-pharmacological and pharmacological approaches, thereby facilitating faster patient recovery and reducing complications such as prolonged hospital stays.

Policy Implications: The findings highlight system-related barriers, particularly resource shortages, urging hospital administrators and Lagos State health authorities to allocate budgets for analgesics and essential equipment. Policies mandating routine pain audits can enforce accountability and promote compliance with evidence-based guidelines.

Educational Implications: Nursing curricula in Lagos institutions should integrate evidence-based pain management modules that emphasize contextual barriers and cultural factors. Additionally, continuous professional development programs are needed to bridge knowledge gaps among practicing nurses.

Patient Care Implications: Enhanced pain management practices improve patient satisfaction, comfort, and activities of daily living, particularly for underserved populations in public hospitals. Effective pain relief also reduces the risk of chronic pain progression.

Research Implications: The study underscores the need for longitudinal follow-up studies to evaluate intervention impacts and comparative analyses across different Nigerian regions. It provides a baseline for future investigations into nurse-led pain management strategies in resource-limited settings.

5.3 Limitations of the Study

The study was constrained to secondary hospitals in Lagos State, limiting the generalizability of its findings.

The use of self-reported data introduces the potential for social desirability bias, and the cross-sectional design precludes causal inferences. Furthermore, the absence of direct observational methods limits the validation of reported behaviors.

5.4 Contribution to Knowledge

This research advances the field of nursing by documenting local pain management realities and identifying actionable gaps within selected general hospitals in Lagos State. Its contributions provide a foundation for targeted improvements in Nigerian healthcare.

Local Evidence Baseline: The study establishes a baseline for pain assessment and intervention practices specific to Lagos public hospitals, highlighting the prevalence of both non-pharmacological methods and pharmacological reliance. This fills a regional data void and enables comparisons with national trends.

Barrier Identification: It documents system-related barriers, including resource shortages and training deficits, contributing novel insights into contextual challenges within resource-limited settings. These findings expand understanding beyond clinical skills to

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encompass institutional determinants of care quality.

Demographic Influences: The research reveals associations between nurses' age, gender, education, and experience and pain management efficacy, adding nuanced demographic insights to nursing literature. This knowledge informs tailored interventions for diverse nursing workforces.

Patient Outcome Links: By connecting inadequate pain management practices to adverse outcomes such as prolonged hospital stays and chronic pain, the study contributes evidence on how nurse-led management affects recovery in underserved populations, thereby strengthening causal understanding in low-resource contexts.

Framework for Interventions: The study offers a replicable methodology for evaluating nurse competencies, serving as a model for future audits and training programs across Nigerian hospitals and supporting evidence-based policy development.

5.5 Summary

Among a cohort of young, qualified nurses, profound knowledge, standardized assessment practices, and pharmacological fidelity were prevalent. However, these strengths were tempered by inconsistent application of non-pharmacological methods and persistent barriers, including heavy workloads, staffing shortages, and resource constraints. Clinical experience significantly shaped practices, affirming that while theoretical knowledge is robust, systemic support is required to translate knowledge into consistent action.

5.6 Conclusion

Nurses in this study demonstrated superior pain knowledge and pharmacological practices, yet inconsistency in non-pharmacological pain management persisted amid institutional challenges. Greater experiential maturity enhanced multimodal efficacy. Sustained training, evidence-informed policies, and adequate resources are imperative to deliver evidence-based pain care and achieve superior patient outcomes.

5.7 Recommendations

1. Institute recurrent professional development programs focused on contemporary pain management protocols.
2. Enforce institutional policies aligned with WHO and IASP guidelines.
3. Augment staffing levels and procure adequate analgesics and pain assessment tools.
4. Promote the routine integration of non-pharmacological interventions into clinical practice.
5. Establish senior–junior mentorship programs to facilitate skill transference and clinical reasoning.

5.8 Suggestions for Further Research

1. Employ observational study designs to validate self-reported pain management practices.
2. Incorporate patient perspectives on the efficacy of pain management interventions.
3. Conduct comparative analyses across different Nigerian regions and healthcare levels (e.g., primary, secondary, tertiary).
4. Pursue qualitative inquiries into the sociocultural and institutional factors influencing pain management behaviors.

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