



The Attitude of Nurses Towards Pain Management in Older People. A Literature Review.

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The Attitude of Nurses towards Pain Management in older people: A literature review

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Abstract

Background: This literature review is about the factors influencing nurses' attitudes towards pain management in elderly people. The literature review goal was to investigate how these attitudes affect the way in which pain management care is delivered, by recognizing the research that has already been done on the topic, summarize the major elements of the research and suggesting ways to improve nursing practices in pain management for the elderly.

Task and Objectives: Used a narrative literature review and inductive analysis method with research question structured around the PICO framework, the study searched, screened, and analyzed publications from 2013 to 2024, using databases such as PubMed, CINAHL, and Web of Science.

Implementation method: After analyzing 11 selected studies, the themes of critical themes influencing nurses' attitudes, including individual knowledge gaps, professional practices, organizational barriers, patient-related challenges, and cross-cultural dynamics were gotten.

Result: The review highlighted the essential role of comprehensive education and training in improving nurses' attitudes towards elderly pain management. It suggested the need for standardized pain assessment tools, clear protocols, and interdisciplinary collaboration to enhance nursing confidence and attitudes. Addressing organizational and cultural barriers and promoting patient-centred care are pivotal for improving pain management outcomes for the elderly.

Conclusion: Emphasizing a psychological approach, the study advocated for holistic, empathetic, and informed nursing practices that can significantly improve the quality of life for older adults with pain.

Keywords

Pain management, Elderly care, Nursing attitudes,

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1 Introduction

According to the International Association for the Study of Pain (IASP) Council, the present definition of pain is as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage." (Raja et al., 2020). This definition is the context of elderly care because age-related physiological changes, comorbidities, and cognitive impairment can all affect an individual's feeling of pain and make it more difficult to measure and manage it (Treede, 2018).

This is a huge concern because the world demographic population is becoming more and more older. From the World Health Organisation (WHO) report, the number of people over 60 years will be equal to almost double that is from 1 billion in 2019 to 1.4 billion by 2030 and then rise to 2.1 billion by 2050 (WHO, 2023). This demographic trend demonstrates the need for healthcare systems to prepare for the growing number of older adults.

In managing pain in older patients, there are complexities in pain assessment, the multiple nature of health issues, and the risks associated with poly-pharmacy which often led to difficulties in treating pain in this population (Boreski & Johnson, 2015; Dagnino & Campos, 2022). Most times, having a team with doctors, nurses, and social workers is expected to help deal with these complex issues better (Reid et al., 2015).

Among these health care team, nurses are at the front of daily care and management face plenty challenges in managing pain among elderly patients. Since older people have different needs and responses to pain treatment, nurses play a super important but difficult role in assessing, managing, and monitoring their pain (Kailainathan et al., 2017; Nawai et al., 2019). From previous research it is seen that there is a difference in the range of understanding among nurses regarding pain management in geriatrics, with some studies indicating limited knowledge and poor attitudes toward pain management in different regions (Samarkandi, 2018; Nguyen et al, 2021). Thus, the impact of nurses' attitude on the quality of pain management provided to elderly patients cannot be overemphasized.

Inadequate pain management can lead to a lot of worse outcomes, such as reduced mobility, an increased risk of depression, and an overall worsened quality of life (Gilles, 2019). Differences in

how nurses perceive and manage pain can result from many kinds of attitudes. This understanding made it necessary to push for nursing education to address prevalent misconceptions about aging and pain and to promote compassionate kind of care approaches, since the different attitudes and approaches may have a major impact on patient outcomes (Germossa et al., 2019; Rababa et al., 2021).

The change in the management of pain among the elderly from a symptom-focused approach to a broader strategy represents transformation in the role of nurses in offering comprehensive care to this growing group of elderly people (Rhon et al., 2021). Despite existing research, such as by Ali et al. (2018) and Samarkandi (2018), which begins to explore nurses' knowledge and attitudes towards pain management, there is a clear need to integrate the findings of existing findings in a literature review, to identify possible strategies for improvement.

Given the critical role nurses play in pain management and the impact of their attitudes on practice, there is a pressing need to explore this issue further. This study aims to review existing literature on the factors that impact the nurse's attitudes in pain management for older patients. By doing so, it seeks to identify areas of strength and weakness in current nursing practices and propose evidence-based data for improvement.

2 Review of literature

2.1 Pain in the Older Population

Pain is considered a silent epidemic among the adult population in Europe (Figure 1) (Sessle, 2010). Pain in an elderly European population is characterized by worsening prevalence of chronic pain conditions within the elderly, and it is a huge public health concern. The prevalence of chronic pain in the aged population is one of a common cause of clinical, social, and economic challenges; it is usually considered a "silent epidemic" for a wider global problem (Domenichiello and Ramsden, 2019; Henschke et al., 2015).

Chronic pain is defined as that pain which lasts over three months, and this is prevalent among the elderly people in Europe, with about 25% and 60% of the older adult population experience chronic pain (Breivik et al., 2006). Cimas et al 2018, reported that about 35.7% of older adults suffer from chronic musculoskeletal pain; with remarkable differences noted between countries, being lowest in Switzerland at 18.6% and highest in France at 45.6% (Cimas et al., 2018).

Furthermore, 19% of the whole European population reported moderate-to-severe chronic non-cancer pain within the preceding 1 month, confirming once again the chronic nature of pain in the European population (Reid et al., 2011). Another study in Catalonia reported 73.5% of individuals of 65 years and over had experienced any kind of pain, with 94.2% of those being in a chronic way (Miro et al., 2012).

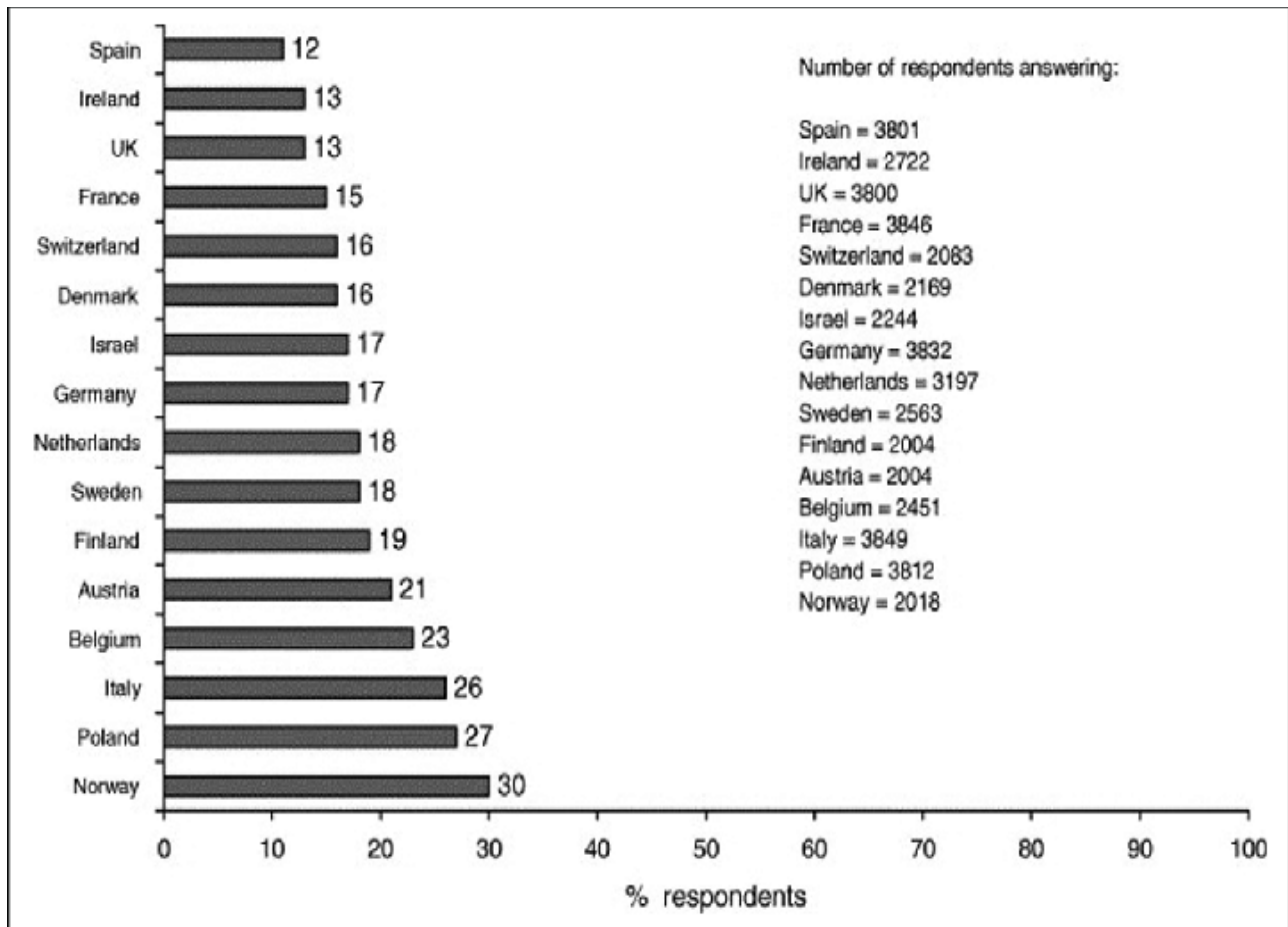


Figure 1: Prevalence of Chronic Pain in Europe

By gender, this chronic pain is more prevalent in older women than men. Cimas et al. identified that chronic musculoskeletal pain, which is reportedly declining in prevalence in men beyond the age of 75 years, was increasing in older women, revealing an age-related difference in the perception, or reporting of pain (Cimas et al., 2018).

Apparently, older women suffer from chronic pain more, because about 50% of them at home and about 60% in nursing homes experience this pain (Breivik et al., 2017). Generally, the prevalence of chronic pain increases with time, as evidenced by its increased prevalence rates across the years in Europe: 2.2% in 2004-2011 and 5.8% in 2013-2015 (Zimmer et al., 2020). These trends with its

implications for disability, health care utilization, productivity, and population health generally; they give a global indication of pain prevalence.

2.2 Causes of pain in older people

Understanding the causes of pain in older adults is important for effective management. The causes of pain in this demographic are multifactorial, often linked to chronic conditions and physiological changes associated with ageing (Dagnino and Campos, 2022).

Physiological Changes

Age and sex-related physiological changes are the common non-modifiable biological factors that affect pain as they influence the body in ways that cannot be modified (Eltumi and Tashani¹, 2017). This involves changes that follows physiological alterations in the body's structure and function, which can influence pain perception and processing. While the normal ageing processes do not necessarily guarantee pain, older adults are more likely than middle- to younger adults to have developed conditions that can lead to pain (Mullinms et al., 2022). These changes that occur as part of the ageing process increase the susceptibility to pain, affect pain tolerance and the capacity to recover from injury (Mullinms et al., 2022).

Generally, the changes associated with pain processing in ageing are complex. One of these changes is the diminishing pain pathway common in older adults making them less able to tolerate higher intensities of pain and experience a longer period of hyperalgesia (Hadjistavropoulos et al., 2014). Older people have an altered pain experience, characterized by changes in pain processing mechanisms, that might be associated with the degeneration of circuits that modulate the descending inhibitory pathways of pain (Hadjistavropoulos et al., 2014). Also, certain factors associated with ageing, like the emotional impact of losing someone close, low energy, trouble walking, poor or average self-rated health, and sleep issues, are known to increase pain risk (Raggi et al., 2020).

Women, especially, are at a higher risk of experiencing more pain due to biological reasons, with a higher likelihood of chronic diseases, psychological stress, and less physical activity contributing to

their pain (García-Esquinas et al., 2019). These findings highlight the complex relationship between ageing, gender, and pain, for the need for tailored approaches to pain management in older adults.

Chronic Conditions

The presence of chronic conditions among older adults plays a significant role in the complexity of understanding pain origins. Common chronic conditions such as arthritis, osteoporosis, diabetic neuropathy, and cancer significantly contribute to long-term pain in older individuals (Dagnino and Campos, 2022). Additionally, pain related to cancer, either from the disease itself or the treatments used to combat it, represents a cause of distress in this age group. Chronic, unresolved health issues, including dementia, inflammatory conditions, and viral infections, continually activate pain signals, either through direct tissue damage or nerve dysfunction, leading to persistent pain in the elderly (Dagnino and Campos, 2022).

Research by Dagnino and Campos in 2022, alongside a study by Baker et al. in 2017, analyzed seven chronic medical conditions, found these conditions to explain over half of the variance in chronic pain, highlighting the impact of heart disease, musculoskeletal disorders, and micro vascular diseases as significant contributors to the pain experienced by older adults.

2.3 Pain Management Strategies

Pharmacological Approach

The National Institute for Health and Care Excellence (NICE) recommends oral non-steroidal anti-inflammatory drugs (NSAIDs) or selective COX-2 inhibitors as considerations when paracetamol or topical NSAIDs does not provide sufficient pain relief for patients with osteoarthritis (NICE,2014). Also, when the benefits of using NSAIDs outweigh the risks, the shortest course at and lowest effective dose with regular reviews can be considered (NICE, 2014; Chan and Chan, 2022). Generally, the use of opioids for treatment in the elderly has increased within the past few years due to complications of adverse gastrointestinal and cardiovascular conditions associated with NSAIDS (Borsheski , 2014); and for management of cancer related pain in older population (Postran et al., 2016).

Also, the WHO has guidelines for managing pain that involve giving medication on a regular schedule, by mouth, and following a step-by-step approach depending on how severe the pain is, from acetaminophen for mild pain to stronger opioids for severe pain, sometimes with additional medicines to help these work better (Ali et al., 2018). Additionally, the optimal choice of pharmacologic therapy depends on the type of chronic pain syndrome, and the patient's medical status (Tauben and Stacey, 2023).

Given the complexity of managing multiple health issues in older adults, using many medications at once is common in treating pain in this group (Kardas et al., 2023). However, this creates challenges in treatment, such as uncertainty about the long-term safety and effectiveness of pain medicines, limited knowledge about how common types of pain progress, and difficulty in applying research findings to real-world treatments (Reid et al., 2011). It's important to have treatment plans that are suitable for older adults to improve how pain is managed with medication.

Nurses' attitudes towards using medication to manage pain in older adults are key to carrying out treatment plans effectively, ensuring patients are well-informed, and working together with other healthcare professionals. Their views affect how medications are chosen and given, advocate for patients, and the overall quality of pain management, highlighting the need for focused efforts and evidence-based methods to enhance care.

Non-Pharmacological Approach

Besides medication, non-drug treatments play a crucial role in managing pain for older adults, particularly for pain caused by trauma, injury, or illness (Tang et al., 2019). These treatments focus on reducing pain and enhancing overall well-being through methods like physical therapy, massage, acupuncture, cognitive-behavioural therapy (CBT), and relaxation techniques (Borsheski and Johnson, 2014). Psychological strategies such as CBT can also support medical treatments effectively (Chan and Chan, 2022). However, the availability and use of these non-drug approaches (NPIs) vary widely across different European countries, with a relatively low number of these interventions being used despite their potential benefits for health (Koojimans et al., 2023).

There is a growing need to raise awareness about these effective non-medication treatments for pain and to ensure healthcare workers and leaders are educated in their benefits and how to apply them (Heather et al., 2018). Non-pharmacological interventions are especially valuable for older adults who might be more susceptible to adverse side effects from drugs or issues arising from using multiple medications at once. Nurses should work together with other healthcare team members to evaluate what patients prefer and need, and to include suitable non-drug treatments in a comprehensive plan for managing pain.

2.4 The Impact of Pain on Quality of Life in Older Adults

According to research, the chronic pain in older adults is linked, high money costs in the society and poor quality of life of the seniors experiencing it Bernfort et al. (2016). This impact is in multiple levels affecting physical, psychological, and social dimensions of well-being. Chronic pain can cause harm such as physical limitations, psychological suffering including depression, anxiety, and sleep difficulty (Molton and Terrill, 2014; Yiengprugsawan et al., 2020), and social isolation, which increase the risk of loneliness (Emerson et al., 2017).

The direct consequence of chronic pain on quality of life (QoL) shows the interconnectedness of its physical, psychological, and social repercussions. Each dimension of pain not only contributes to a decline in the other areas of QoL but also amplifies the overall burden of living with chronic pain. In Johansson et al. (2021) research, he mentioned that the characteristics of pain negatively influence various part of life like the physical, psychological, and social parts of life, thereby reducing an individual's total sense of good health and ability to function independently.

Effective pain management becomes important in this context, as it highlights the need for personalized care plans. Such approach seeks to alleviate the multiple negative consequences of pain, thereby improving the quality of life for older adults. So, nurses, with a positive attitude towards pain management in older adults, are at the front of making these decisions. Their proactive approach in assessing pain, acknowledging its complex nature, and employing comprehensive pain management strategies is vital.

Nurses are essential members of the medical team in the multidisciplinary approach that is required to handle the broad challenges caused by chronic pain. By focusing on the physical, psychological, and social aspects of pain, they can necessarily improve the quality of life for older adults, enabling them to maintain independence and engage more fully with life despite the limitations caused by of chronic pain.

3 Study Aim, Purpose, And Research Question

Aim of the study

To investigate the factors that impact nurses' attitudes towards pain management in elderly people and assess how these attitudes affect the delivery of pain management care.

Purpose of the study

To summarise literature evaluating factors that impact nurses' attitudes and offer evidence-based data that can be used by nurses for improving elderly patients' (aged 65 years and above).

Research question

What are the factors that influences attitudes of nurses towards pain management in older people (aged 65 years and above)?"

4 Research Methodology

4.1 Literature Review

In this study, a narrative literature review was conducted following a structured process based on the six key steps outlined by Paré & Kitsiou (2017, pp. 139-154). The process began with formulating research questions and objectives, proceeded through a search and screening of existing literature, an assessment of the quality of the primary studies, and concluded with data extraction and analysis (Figure 2) (Paré & Kitsiou, 2017, pp. 139-154).

In the field of nursing, as in other academic disciplines, literature reviews have gained prominence as a practical synthesis of evidence and relevant information for the profession (Aveyard & Bradbury-Jones, 2019; Silva et al., 2022). A literature review study design is particularly valuable in research as it serves multiple purposes. It aids in comprehending existing knowledge, identifies gaps that warrant further investigation, and guides the formulation of additional research questions for primary research endeavour (Snyder, 2019).

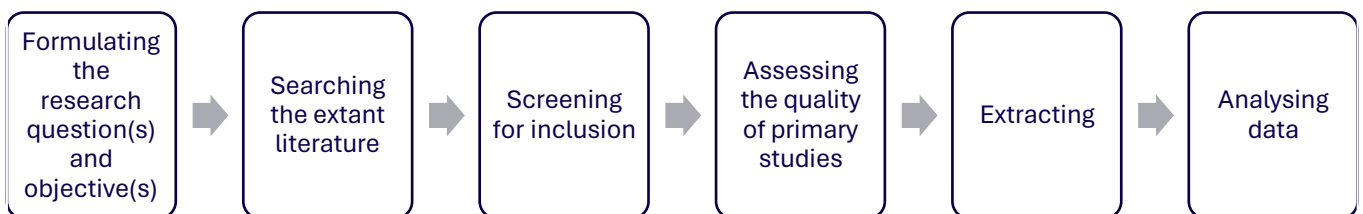


Figure 2: Steps of Literature Review

4.2 Literature Search

The research questions and objectives were developed using the Population, Interest, Comparison, Outcome (PICO) framework, which assisted in creating a focused and purposeful literature search strategy (Table I) (Smith and Noble, 2016). The primary research question was: "What are the

attitudes of nurses working in healthcare settings toward pain management for older patients aged 65 years and above, including pharmacotherapy and non-pharmacotherapy management?"

Table I: PICO Framework

PICO Element	Research Component
Population (P)	Nurses working in healthcare settings
Interest (I)	Attitudes towards pain management (pharmacotherapy and non-pharmacotherapy) in older patients
Context (C)	Healthcare settings (hospitals, nursing homes, community care)
Outcome (O)	Impact of attitudes on pain management practices.

The literature search was conducted using electronic databases, including PubMed, CINAHL, and the Web of Science (Appendix 1). These databases are credible nursing-related literature sources (Oermann et al., 2020). Key concepts from the research question were used to establish search terms (Table II). The search involved Boolean operators to create search terms to ensure more literature exploration. The search will be limited to studies conducted from 2013 to 2024.

Table II: Search Terms

(nurses attitude OR perception) AND ("pain management" OR "pain relief" OR pain) AND (elderly pain OR "older adults pain" OR geriatrics pain)

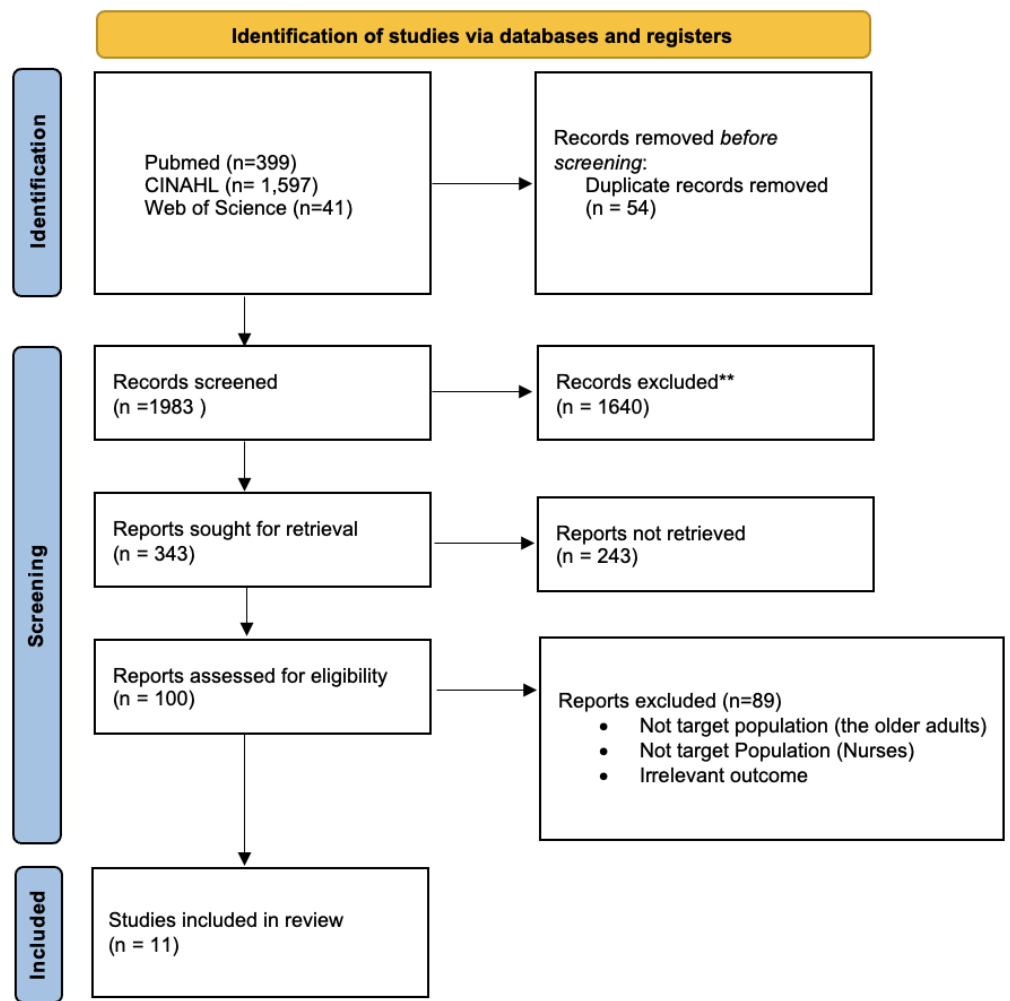
The initial screening involved evaluating titles and abstracts for relevance to the research question, followed by a full-text review to confirm eligibility based on inclusion and exclusion criteria (Paré & Kitsiou, 2017, pp. 139-154; Snyder, 2019). The criteria were applied to select studies for the review, and the selection process was documented (Table III).

Table III: Eligibility Criteria

Criteria	Inclusion Criteria
Population	Studies involving nurses
Interest	Studies that examine attitudes towards pain management in older patients.
Context	Studies conducted in healthcare settings (hospitals, nursing homes, community care).
Outcome	Studies that assess the impact of nurses' attitudes on pain management practices.
Study Design	Written in English, published between 2013 and 2024, peer-reviewed, with full text access to JAMK students.

4.3 Study Selection

The study's screening and search results were reported following the Jamk reporting guideline and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). In this review, a total of 2,037 records were identified across PubMed, CINAHL, and Web of Science, with 11 studies ultimately meeting the inclusion criteria for relevance to the target populations and outcomes (Figure 3). After screening and assessing for eligibility, most records were excluded, highlighting the rigorous selection process involved in synthesizing relevant literature.



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

Figure 3: PRISMA Flowchart

4.4 Data Analysis

Data extraction was conducted using a standardized form to capture study details such as authors, publication year, study design, sample size, setting, and key outcomes. This information was tabulated and synthesized to present the findings clearly, facilitating comparison across studies (Appendix 4). This process was guided by the research question and aimed at extracting the information useful to the research questions of this study. Overall, for this study on nurses' attitudes towards pain management in elderly patients, an inductive approach to data analysis was used. Inductive analysis involves looking at specific observations and examples from the data to identify broader patterns, themes, and categories.

This bottom-up approach allows theories and conclusions to emerge from the data itself, rather than starting with a predetermined theory to test (Thomas, 2006). If a deductive approach had been used instead, with predetermined ideas guiding the research, some key findings may have been missed if the analysis only looked for themes based on an initial theory (Patton, 2002). The inductive analysis process began by carefully reading through all the data extracted from the literature review. Initial codes were created by looking for common topics, ideas, and examples across the different studies.

These codes were then grouped into broader potential themes and categories. These were reviewed multiple times to ensure the final themes accurately captured the key factors influencing nurses' attitudes towards elderly pain management emerging from the data (Braun & Clarke, 2006). An inductive approach has some key advantages for a study like this. It allows the analysis to remain flexible and open to capturing the complexities of human attitudes and behaviors, rather than trying to fit responses into predetermined categories (Elo & Kyngäs, 2008). Using inductive reasoning was particularly valuable because of the limited prior research specifically examining influences on nurses' attitudes towards elderly pain management. It enabled new themes like individual factors, organizational barriers, and the role of assessment tool use to arise from looking across the various studies (Sandelowski, 2000).

Allowing themes and theories to inductively emerge from the raw data provided rich insights into this important issue of nurses' attitudes impacting pain care for the elderly (Creswell & Poth, 2017).

Using the inductive analysis method, the themes and their categories of the factors that influences nurses' attitude towards pain management in the elderly from literature were identified (Figure 4).

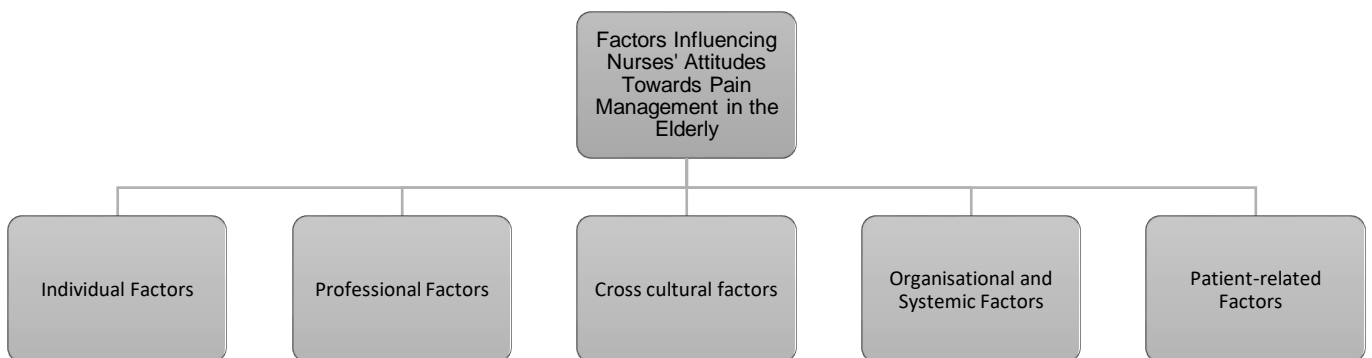


Figure 4: Themes

5 Result

The inductive analysis of the data extraction table has revealed several thematic categories, which are critical in understanding the nature of the attitude of nurses towards pain management in the elderly (Table IV). These themes are discussed below in relation to the findings of the individual studies.

Table IV: Result of Inductive Analysis

Themes	Categories
Individual Factors	-Knowledge and Education
	-Experience and Training
	-Demographic Factors (Gender)
Professional Factors	- Use of pain assessment tools
	- Accuracy and consistency in assessment
	- Understanding of Nursing role
Organizational and Systemic Factors	- Organizational Barriers
	-Health-care System Issues
	-Communication Difficulties
Patient-related Factors	-Nonverbal Cues
	-Difficulty in Verbalizing Pain
	-Complexity of Pain in Older Adults
Cross-cultural Factors	- Nurses' Country of Practice

5.1 Individual Factors

Knowledge and Education

At the individual level, deficits in knowledge and education about pain management principles and practices emerged as a significant factor influencing nurses' attitudes toward pain management in the elderly. Several studies, including Nguyen et al. (2021), Perri et al. (2018), and Gropelli & Sharer (2013), showed gaps in nurses' knowledge, with a significant percentage exhibiting poor understanding, resulting in negative attitudes toward pain management.

Experience and Training

The impact of experience and training on nurses' attitudes toward pain management was also highlighted in the reviewed literature. Also, Kjällman Alm & Norbergh (2013) found that even experienced nurses could provide inadequate pain medication, suggesting that experience alone does not necessarily translate into improved attitudes or practices. However, Burns & McIlpatrick (2015) noted that experience in dementia care was associated with more positive attitudes toward pain management, probably because specialized training in dementia care improved nurses' knowledge and attitudes regarding pain management in this population.

Demographic Factors

Demographic factors, such as gender, also played a role in shaping nurses' attitudes toward pain management in the elderly. Al Omari et al. (2021) found that female nurses had more knowledge and positive attitudes better than their male coworkers.

5.2 Professional Factors

Use of Pain Assessment Tools

Several studies highlighted the importance of utilizing standardized pain assessment tools in shaping nurses' attitudes towards pain management in the older population. The study by Rababa et al. (2022), conducted across various hospitals in Jordan, found that most nurses acknowledged the significance of using validated assessment instruments to accurately determine pain levels in older adults. Similarly, Gorawara-Bhat et al. (2017) suggested that nurses' attitudes towards assessing pain in older patients with communication challenges can be better with the use of pain assessment tools.

Accuracy and Consistency in Assessment

Building on the issue of pain assessment instruments, various research found that accuracy and consistency in pain assessment are important factors influencing nurses' attitudes. Khalil et al. (2022) conducted a study in an oncology centre in Egypt that showed the difficulty that nurses face when correctly assessing pain levels in senior patients, particularly those with severe pain conditions or communication challenges. Inconsistencies in pain assessment practices, whether due to a lack of standard protocols or individual differences in nursing approaches, could lead to sub-optimal pain management and negatively impact nurses' attitudes toward this aspect of care.

Understanding of Nursing Role

Another professional factor that emerged from the reviewed studies was the importance of nurses' understanding of their role in pain management for elderly patients. The study by Burns and McIlpatrick (2015), conducted in nursing homes in the United Kingdom (UK), found that a clear understanding of nurses' responsibilities as caregivers in pain management was associated with more positive attitudes and improved practices. Nurses who saw pain management as an essential part of their job were more likely to prioritize pain assessment, argue for appropriate interventions, and work well with other healthcare professionals to ensure their senior patients had pain relief.

5.3 Organizational and Systemic Factors

Organizational Barriers

Organizational barriers have been shown in multiple studies to be a huge barrier to providing older patients with adequate pain management. Nurses' attitudes on this part of treatment have been influenced. In one of the studies, Gropelli and Sharer (2013), studied the effects of a number of lacks clear guidelines and disorganization in care processes on nurses' capacity to deliver the best pain management in a skilled nursing facility in the United States. According to the 2013 study by Gropelli and Sharer, strict protocol rules can have a negative impact on nurses' attitudes and level of annoyance because they may not fully address the special needs and difficulties of pain management in elderly patients.

Health-care System Issues

Beyond organizational barriers, several studies also highlighted the influence of broader health-care system issues on nurses' attitudes toward pain management in the older population. The study by Youngcharoen et al. (2016), conducted across surgical units in three hospitals in the United States, identified issues such as overcrowding, lack of medical support, and ineffective communication within healthcare teams as significant obstacles to effective pain management practices. Similar findings were reported by Mezdrzycka-Dabrowska Wioletta et al. (2016) in their study across surgical wards in Polish hospitals, where organizational barriers, including time constraints, lack of resources, and rigid protocol limitations, were identified as major challenges to nurses' positive attitude.

Burns and McIlpatrick (2015), study in nursing homes in the UK, reported the impact of these resource limitations on nurses' ability to provide comprehensive pain management for elderly

residents. The Burns and McIlpatrick, (2015), also reported insufficient time to conduct thorough pain assessments, administer treatments, and monitor responses, with low staffing levels and limited access to medical experts, as the factors that lead to frustration, burnout, and negative attitudes among nurses (Burns and McIlpatrick, 2015).

Communication Issues

Effective communication within healthcare teams and with patients was also highlighted as essential for fostering positive attitudes toward pain management. Mezdrzycka-Dabrowska Wioletta et al. (2016), Gropelli & Sharer (2013), and Gorawara-Bhat et al. (2017) all showed that communication failures impacted pain management practices, suggesting the need for improved interprofessional collaboration and patient engagement.

5.4 Patient-related Factors

Nonverbal Cues

Several studies emphasised the importance of recognising and interpreting nonverbal pain cues as a critical factor influencing nurses' attitudes towards pain management in the elderly population. The study by Kjällman Alm and Norbergh (2013), conducted in nursing homes and home care units in Sweden, reported the challenges faced by nurses in accurately assessing pain levels in elderly patients with cognitive impairments or communication difficulties.

Difficulty in Verbalising Pain

Apart from the difficulties caused by nonverbal signs, multiple research investigations have also shown that the obstacles elderly individuals may encounter while communicating their pain feelings. According to Gorawara-Bhat et al. (2017), several factors, like memory loss, language obstacles, and cultural norms that block open communication of discomfort, make it difficult for older persons to articulate their pain effectively. It's possible that nurses who had trouble getting their older patients to describe their pain completely and fully may have become frustrated, which made them less likely to support pain management techniques in general.

Complexity of Pain in Older Adults

Plenty of research has showed how important it is for nurses to consider the complexity of pain issues in older individuals when creating their opinions about pain management. The research conducted in an oncology centre in Egypt by Khalil et al. (2022) pointed out the difficulties associated with the type of pain that older patients experience, which involves multiple comorbidities, polypharmacy, and age-related physiological changes. Pain management approaches for this population may have been seen negatively by nurses who felt unable to handle these detail or who did not have access to specialised training and resources, believing it to be a hard and difficult task.

5.5 Cross-cultural Factors

Nurses' Country of Practice

Several studies included in this review were conducted across various countries, highlighting the potential impact of cross-cultural factors on nurses' attitudes toward pain management in the older population. The study by Al Omari et al. (2021), conducted in Ireland and Jordan, found that cultural beliefs, values, societal norms, and expectations regarding healthcare provider roles influenced nurses' perspectives and approaches to pain management. Similarly, the study by Nguyen et al. (2021), conducted at the national geriatric hospital in Vietnam, revealed that cultural factors played a role in shaping nurses' attitudes and practices related to pain management for older adults.

This literature review indicates that the way nurses think and feel about managing pain is not just a matter of personal or professional opinion. It is tied to their culture; this includes what people generally believe, how they talk to each other, how families get involved in making decisions about health care, and what society expects from those who provide health care. In other words, the surrounding culture shapes nurses' approaches to handling pain.

6 Discussion

6.1 Overview of major findings

The aim of this literature review was to explore the factors influencing nurses' attitudes toward pain management in the elderly population. Through a systematic analysis of 11 studies conducted across various countries including Vietnam- national geriatric hospital (Nguyen et al., 2021), Jordan- various hospitals (Rababa et al., 2022) Jordan and Ireland (Al Omari et al., 2021), Egypt- oncology center (Khalil et al., 2022), Sweden- municipal nursing homes and home care units (Kjällman Alm & Norbergh, 2013), Canada- continuing chronic care facility (Perri et al., 2018), USA in skilled nursing facility and surgical units across three hospitals respectively (Gropelli & Sharer, 2013; Youngcharoen et al., 2016), UK nursing homes (Burns & McIlfatrick, 2015) Poland- surgical wards across hospitals (Mezdrzycka-Dabrowska Wioletta et al., 2016), and USA in emergency department (Gorawara-Bhat et al. (2017), several key themes emerged.

These provide insights into the individual, professional, organisational, systemic, patient-related, and cross-cultural factors that shape nurses' perspectives and practices in this domain. At the individual level, gaps in knowledge and education regarding pain management principles and practices were identified as significant barriers to positive attitudes among nurses (Nguyen et al., 2021; Perri et al., 2018). Deficits in understanding fundamental concepts, such as pain assessment, pharmacological and non-pharmacological interventions, and the unique considerations for older adults, contributed to suboptimal pain management practices (Nguyen et al., 2021).

The impact of experience and training on nurses' attitudes was highlighted, with specialised education in areas like dementia care shown to improve knowledge and foster more positive perspectives (Kjällman Alm & Norbergh, 2013). The professional factors that emerged centred around the use of standardized pain assessment tools and nurses' perceived understanding of their role in pain management (Rababa et al., 2022). While most nurses acknowledged the importance of using validated assessment instruments, variability in their perceived accuracy and consistent implementation was observed (Rababa et al., 2022). Additionally, a clear understanding of nurses' responsibilities as caregivers in pain management was associated with more positive attitudes and improved practices (Burns & McIlfatrick, 2015).

At the organisational and systemic levels, barriers such as lack of clear guidelines, poorly structured care processes, inadequate staffing, time constraints, lack of resources, overcrowding, and rigid

protocol limitations were identified as significant hindrances to effective pain management (Gropelli & Sharer, 2013; Mezdrzycka-Dabrowska Wioletta et al., 2016). Effective communication within healthcare teams and with patients was also highlighted as essential for fostering positive attitudes and promoting optimal pain relief strategies (Gorawara-Bhat et al., 2017).

Patient-related factors, such as the ability to interpret nonverbal cues, the difficulty in verbalizing pain, and the complexity of pain conditions in older adults, posed significant challenges for accurate pain assessment by nurses (Kjällman Alm & Norbergh, 2013). Recognising and interpreting nonverbal pain cues were particularly crucial in caring for older adults with cognitive impairments or communication difficulties.

Finally, cross-cultural factors played a role in shaping nurses' attitudes and practices related to pain management in the elderly population (Al Omari et al., 2021). Differences in cultural beliefs, values, societal norms, communication styles, family involvement in care decisions, and expectations regarding healthcare provider roles were found to influence nurses' perspectives and approaches to pain management.

On the other hand, the findings from this literature review also highlight the importance of adopting a biopsychosocial (BPS) approach to pain management in elderly patients (Figure 5) (Gatchel et al., 2007; Fillingim, 2017). The BPS model created in 1977 by (Engel, 1977), is a framework for understanding the various aspects of chronic pain by considering how biological, psychological, and social factors are connected. The BPS model can be used to explain how nurses' attitudes toward pain management is a necessary factor that can influence the effectiveness of pain assessment, and the quality of care provided to elderly patients (Reid, Eccleston, & Pillemer, 2015).

This really highlights how important it is for nurses to have a good attitude towards managing pain and to really understand it well. The way nurses think about, and handle pain can make a big difference in how well elderly patients get better and how happy they are with their care.

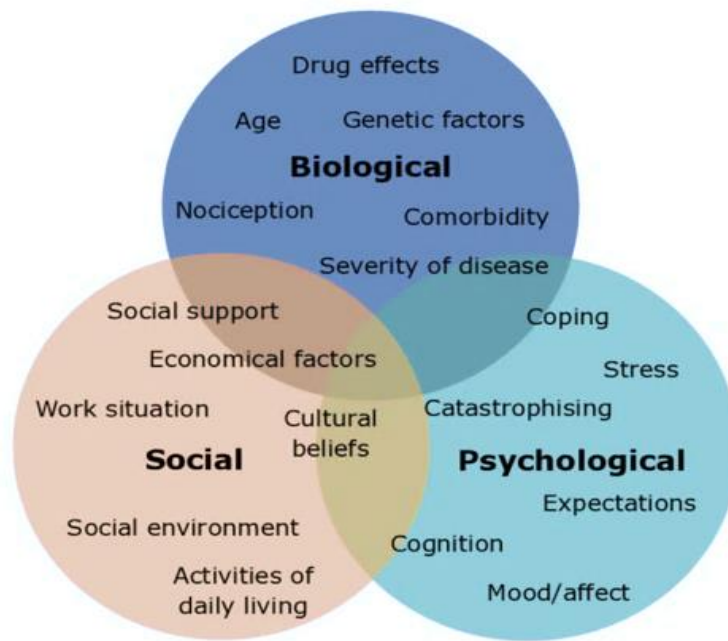


Figure 5: The Biopsychosocial (BPS) Model of Pain

The biological part of the BPS model includes the physical aspects of health, the physiological mechanisms underlying pain perception and the impact of age-related changes on pain experiences.

The themes of this literature review show the need for nurses to develop a deep understanding of the complexities of pain in older adults, and the need for nurses to recognise the challenges due to comorbidities, cognitive impairments, and the difficulties in verbalising pain that are often present in the elderly (Gorawara-Bhat et al., 2017; Kjällman Alm & Norbergh, 2013). Positive attitudes toward recognising and addressing these biological factors are essential for accurate pain assessment and tailored management strategies (Reid, Eccleston, & Pillemer, 2015).

Aging is associated with various physiological changes that can affect pain perception and response, including alterations in sensory function, changes in pharmacokinetics and pharmacodynamics, and an increased prevalence of comorbidities (Mullins et al., 2022). Nurses need to have knowledge about these age-related changes and their impact on pain experiences. For instance, conditions like dementia or stroke can limit an individual's ability to communicate pain effectively, leading to reliance on observational skills and nonverbal cues for accurate assessment (Kjällman Alm &

Norbergh, 2013). Furthermore, the presence of multiple comorbidities and polypharmacy in older adults can complicate pain management, requiring a nuanced approach to balancing pain relief with potential drug interactions and adverse effects (Schneider et al., 2021).

The psychological dimension of the BPS model includes the mental health aspects that influence illness, including emotions, thoughts, behaviours, and stress (Engel, 1977). The studies reviewed emphasises the importance of nurses' attitudes in interpreting nonverbal cues and addressing the psychological impact of chronic pain on elderly patients (Kjällman Alm & Norbergh, 2013). To improve the pain therapy and even the seniors' psychological health, nurses need to show positive attitudes of empathy, patience, which will boost effective communication (Nichols et al., 2011). Talking about psychological health, chronic pain affects the psychology of the elderly, leading to conditions such as anxiety, depression, and social isolation.

So, nurses' important role in understanding and dealing with psychological elements of pain, can help to better patients' quality of life and overall well-being (Saleh, 2023). According to this review, one of the way nursing can do so is through positive attitudes to support patients by encouraging open communication and promoting coping strategies that address the emotional and cognitive aspects of chronic pain.

Furthermore, the social dimension of the BPS model highlights the influence of societal, economic, and cultural factors on health and well-being (Engel, 1977). The findings from Al Omari et al. (2021) reported the potential impact of cross-cultural differences on nurses' attitudes and practices related to pain management. By adopting a biopsychosocial approach to pain management, nurses can better understand and address the multidimensional nature of chronic pain in elderly patients (Miaskowski et al., 2019).

This dimension of Engel's BPS model encourages pain management ideas that align with the patient's social and cultural status. The social and cultural contexts in which older adults live can shape their pain experiences and attitudes toward pain management. Nurses need to be aware of these influences and tailor their approaches accordingly (Al Omari et al., 2021). For example, in certain cultures, there may be societal norms or beliefs that discourage the open expression of pain or influence perceptions of appropriate pain management strategies (Al Omari et al., 2021).

Also, socioeconomic factors can impact access to healthcare resources and support systems, further compounding the challenges faced by elderly patients with chronic pain (Youngcharoen et al., 2016; Mezdrzycka-Dabrowska Wioletta et al., 2016; Burns and McIlfatrick, 2015). However, for this integrative approach to be successful, nurses must possess positive attitudes that embrace the BPS model's principles. Nurses can enhance the quality of life for older patients by applying BPS, adopting a complete, patient-centred approach, and recognising the multidimensional nature of chronic pain as explained by the BPS model (Fillingim, 2017).

In conclusion, the findings of this literature analysis show the relevance of a biopsychosocial approach in pain management for elderly patients. By recognising the connection between the biological, psychological, and social factors, and encouraging positive attitudes among nurses, healthcare systems can address the unique challenges faced by the elderly and provide comprehensive, individualised care that addresses all aspects of chronic pain.

6.2 Implication for practice

The findings of this review highlight key implications for nursing practice in pain management for older adults. Comprehensive education and training are vital for improving nurses' attitudes toward elderly pain management, focusing on tailored assessment techniques, pharmacological and non-pharmacological interventions, and the application of the biopsychosocial model (Nicholas et al., 2011; Reid, Eccleston, & Pillemer, 2015).

Integrating case-based learning, simulations, and interdisciplinary collaborations can enhance educational effectiveness (Nguyen et al., 2021; Perri et al., 2018). Consistent use of pain assessment tools is crucial, supported by clear protocols, guidelines, and ongoing training to reinforce nurses' confidence in their utility (Rababa et al., 2022; Zwakhlen et al., 2006). Emphasising nurses' important role in pain management through professional development, and fostering interdisciplinary collaboration is essential (Khalil et al., 2022; Herr et al., 2011).

Addressing organisational barriers such as updating protocols, improving staffing, and promoting patient-centered cultures can positively influence attitudes (Gropelli & Sharer, 2013; Mezdrzycka-Dabrowska Wioletta et al., 2016). Strategies to improve interpretation of nonverbal cues and understanding pain complexity in older adults should be developed, along with cultural competency training to address cross-cultural factors (Kjällman Alm & Norbergh, 2013; Al Omari et al., 2021;

Nguyen et al., 2021). Empowering patients and families to participate in pain management decisions can also foster positive attitudes among nurses towards managing pain in elderly patients, emphasizing a holistic and inclusive approach to care (Youngcharoen et al., 2016; Narayan, 2010)

6.3 Critical appraisal, Ethical considerations

All the eleven studies included in this review were of high quality. In addition, maintaining ethical standards is paramount when conducting research involving human participants or using existing data (Suri, 2019). For this literature review exploring nurses' attitudes towards pain management in elderly patients, the key ethical considerations relate to the appropriate use and representation of the published data from the included studies (Suri, 2019; Wagger and Wiffin, 2011). First and foremost, it was crucial to properly cite and acknowledge all sources used in the review (Appendix 2). Failure to do so would have constituted plagiarism and violated academic integrity standards (Wagger and Wiffin, 2011).

Accurate citation allows readers to verify sources and evaluate the credibility of the information presented. Secondly, the findings and conclusions from each study were accurately portrayed. This was ethical as selectively reporting or misrepresenting data would introduce bias and undermine the integrity of the research synthesis; care was taken to objectively represent the original study results without distortion (Suri, 2020; Vergnes et al., 2010). This ensured that the conclusions drawn were based on the evidence, with transparent acknowledgement of any potential limitations or biases (Suri, 2019; Wagger and Wiffin, 2011; Vergnes et al., 2010). Also, a critical appraisal evaluating the quality and validity of the reviewed literature was essential.

The selected studies underwent quality assessment using the Critical Appraisal Skills Programme (CASP) UK (2023) Checklist to evaluate research design and methods and identify potential biases (Appendix 3). This step ensured the reliability and validity of the studies included in this review (Long et al., 2020). The studies included in the literature review were well-designed, methodologically sound, and conducted with appropriate ethical considerations. The clear objectives, suitable methodologies, and rigorous data analysis contribute to the high value and quality of these studies.

To maintain the reliability of the study, data sources like Web of Science, CINAHL, and PubMed were used to search for the studies (Appendix 1). These are well-recognised and extensively used

databases in the fields of healthcare and nursing research, ensuring that the studies included in the literature review are from credible and peer-reviewed sources (Oermann et al., 2020). On the other hand, the materials for the theoretical background were obtained from the Jamk Library. Therefore, the findings from this body of research can provide valuable insights into nurses' attitudes towards pain management in elderly patients and inform strategies for improving care practices.

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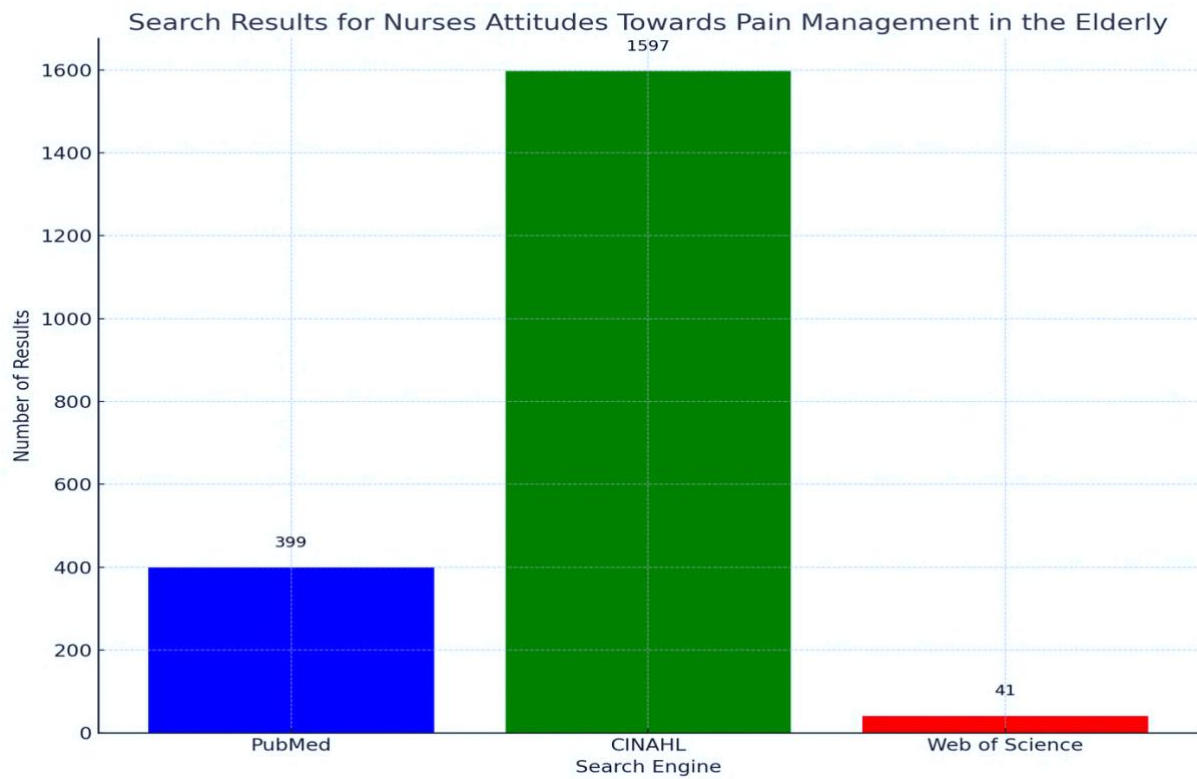
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Appendices

Appendix 1: Database Search



Appendix 2: Citation of Included Studies

Study Name	Citation
Nguyen et al. (2021)	Nguyen, A. T., Dang, A. K., Nguyen, H. T. T., Nguyen, T. X., Nguyen, T. N., Nguyen, T. T. H., Pham, T., Nguyen, A. L., Nguyen, T. T. N., Nguyen, H. T., Nguyen, T. H., Nguyen, S. H., Tran, B. X., Latkin, C., Ho, R. C. M., Ho, C. S. H., & Vu, H. T. T. (2021). Assessing Knowledge and Attitudes Regarding Pain Management Among Nurses Working in a Geriatric Hospital in Vietnam. <i>Journal of Multidisciplinary Healthcare</i> , 14, 799–807. https://doi.org/10.2147/JMDH.S285044
Rababa et al. (2022)	Rababa, M., & Al-Sabbah, S. (2022). Nurses' Pain Assessment Practices for Cognitively Intact and Impaired Older Adults in Intensive Care Units. <i>Dementia and Geriatric Cognitive Disorders Extra</i> , 12, 115–121. https://doi.org/10.1159/000525477
Khalil et al. (2022)	Khalil, A. M., Meawad, E. B., & Abd Elhameed, S. H. (2022). Nurses' Attitude, Practices and Barriers towards Pain Management of Elderly Patients with Cancer. <i>Mansoura Nursing Journal</i> , 9(1), 23. Print ISSN: 2735-4121. Online ISSN: 2735-413X.
Kjällman Alm & Norbergh (2013)	Kjällman Alm, A., & Norbergh, K.-G. (2013). Nurses' Opinions of Pain and the Assessed Need for Pain Medication for the Elderly. <i>Pain Management Nursing</i> , 14(2), e31-e38. https://doi.org/10.1016/j.pmn.2010.07.007
Gropelli & Sharer (2013)	Gropelli, T., & Sharer, J. (2013). Nurses' perceptions of pain management in older adults. <i>Medsurg Nursing</i> , 22(6), 375-382.
Burns & McIlfatrick (2015)	Burns, M., & McIlfatrick, S. (2015). Nurses' knowledge and attitudes towards pain assessment for people with dementia in a nursing home setting. <i>International Journal of Palliative Nursing</i> , 21(10), 479-485. https://doi.org/10.12968/ijpn.2015.21.10.479
Youngcharoen et al. (2016)	Youngcharoen, P., Vincent, C., Park, C. G., Corte, C., Eisenstein, A. R., & Wilkie, D. J. (2016). Nurses' Pain Management for Hospitalized Elderly Patients with Postoperative Pain. <i>Western Journal of Nursing Research</i> , 38(11), 1409-1432. https://doi.org/10.1177/0193945916652896
Al Omari et al. (2021)	Al Omari, D., Alhababbeh, A., Subih, M., & Aljabery, A. (2021). Pain management in the older adult: The relationship between nurses' knowledge attitudes and nurses' practice in Ireland and Jordan. <i>Applied Nursing Research</i> , 57, 151388. DOI: 10.1016/j.apnr.2020.151388
Gorawara-Bhat et al. (2017)	Gorawara-Bhat, R., Wong, A., Dale, W., & Hogan, T. (2017). Nurses' perceptions of pain management for older patients in the Emergency Department: A qualitative study. <i>Patient Education and Counseling</i> , 100(2), 231–241. https://doi.org/10.1016/j.pec.2016.08.019
Perri et al. (2018)	Perri, G.-A., Yeung, H., Green, Y., Bezant, A., Lee, C., Berall, A., Karuza, J., & Khosravani, H. (2018). A Survey of Knowledge and Attitudes of Nurses About Pain Management in End-Stage Liver Disease in a Geriatric Palliative Care Unit. <i>American Journal of Hospice and Palliative Medicine</i> , 35(1), 92–99. https://doi.org/10.1177/1049909116684765
Mezdrzycka-Dabrowska Wioletta et al. (2016).	Mędrzycka-Dąbrowska, W., Dąbrowski, S., & Basiński, A. (2016). Perception of barriers to postoperative pain management in elderly patients in Polish hospitals - a multicentre study. <i>Journal of Nursing Management</i> , 24(8), 1049-1059. https://doi.org/10.1111/jonm.12405

Appendix 4: Data Extraction from Included studies.

Study	Country	Year	Study Design	Sample Size	Setting	Key Findings	Factors Influencing Attitudes/ Practices	Recommendations
Nguyen et al. (2021)	Vietnam	2021	Survey	154 nurses	National Geriatric Hospital	Deficits in nurses' knowledge and attitudes regarding pain management; 72.2% exhibited poor knowledge.	Previous training on pain management and use of pain assessment tools were significant factors.	Enhance education on pain management in nursing curriculums and encourage active participation in pain management using assessment tools.
Rababa et al. (2022)	Jordan	2022	Descriptive correlational study	200 nurses	Various hospitals in Irbid	Majority used pain assessment tools, differences in perceived importance of these tools. Identified as the most accurate assessors of pain.	Perception of role, importance of pain assessment tools, and perceived ability to manage pain.	Further research to explore barriers to effective pain assessment; intervention studies targeting nurses' practices.
Khalil et al. (2022)	Egypt	2022	Descriptive correlational research design	122 nurses	Oncology Centre, Mansoura University	82.8% had a positive attitude toward pain management but 91% exhibited poor practices.	Inadequate knowledge about pain management and opioids as main barriers.	Development of standard guidelines and in-service training programs to enhance competence in cancer pain management.
Kjällman Alm & Norbergh (2013)	Sweden	2013	Descriptive study using scenarios	56 nurses	Municipal nursing homes and home care units	Nurses' pain assessments and medication choices were influenced by	Nonverbal cues and years of experience influenced pain	Targeted education programs and quality improvement projects in pain

						<i>nonverbal cues (smiling vs. grimacing patient). More experienced nurses often provided inadequate medication.</i>	<i>management decisions.</i>	<i>management for elderly patients.</i>
Perri et al. (2018)	Canada	2018	<i>Descriptive cross-sectional survey</i>	35 nurses	<i>Continuing chronic care facility</i>	<i>Nurses showed inadequate knowledge and attitudes towards pain management in ESLD. Only 26% scored above 80% in knowledge assessment.</i>	<i>Experience level did not significantly affect knowledge scores.</i>	<i>Targeted educational programs and quality improvement initiatives in pain management for ESLD patients.</i>
Gropelli & Sharer (2013)	USA	2013	<i>Qualitative descriptive design</i>	16 subjects (15 females, 1 male)	<i>Skilled nursing facility in the north-eastern United States</i>	<i>Effective pain management seen as achievable; education on pain management lacking. Communication failures impact pain management.</i>	<i>Lack of education, biases, institutional policies, communication barriers.</i>	<i>Enhance education on pain management, improve communication strategies, implement individualised care plans.</i>
Burns & McIlfatrick (2015)	United Kingdom	2015	<i>Cross-sectional survey</i>	32 responses (96 targeted)	<i>17 nursing homes across a health care trust in the UK</i>	<i>Majority displayed good knowledge on pain assessment and management in dementia patients.</i>	<i>Experience with dementia care, training received, and availability of guidelines influenced nurses' attitudes. Lack</i>	<i>Development of pain education programs and clear guidelines for nurses caring for older people with dementia. Improved communication and coordination of pain treatment.</i>

						<i>Uncertainty over analgesic choice and use of specific dementia pain assessment tools.</i>	<i>of time, poor staffing, and inadequate medical support were barriers.</i>	
Youngcharoen et al. (2016)	USA	2016	Cross-sectional survey	140 nurses	Adult surgical units at three different hospitals	<i>Nurses' behavioural, normative, and control beliefs had direct effects on their attitudes, perceived norms, and perceived behavioural control regarding pain management. Attitudes and perceived norms had direct effects on their pain management intentions.</i>	<i>Nurses' beliefs about the benefits of pain management, the expectations of others (normative beliefs), and their perceived ability to manage pain significantly influenced their attitudes towards pain management for elderly postoperative patients.</i>	<i>Education that enhances nurses' perceptions of pain management benefits, the influence of normative referents, and their ability to assess pain and administer pro re nata (PRN) opioid analgesics is recommended.</i>
Al Omari et al. (2021)	Ireland and Jordan	2021	Quantitative correlational comparative and cross-sectional survey	267 nurses	Two large Private teaching hospitals in Ireland and Jordan	<i>Nurses' general knowledge and attitude towards pain management were associated with their pain management practice. Irish nurses scored higher than Jordanian</i>	<i>Nurses' knowledge and attitudes towards pain management, country of practice (Ireland vs. Jordan), and gender significantly influenced pain</i>	<i>More research combining knowledge, attitude, and practice concepts in pain management. Enhanced education at all levels to improve nurses' knowledge and practices.</i>

						<i>nurses, and female nurses scored higher than male nurses.</i>	<i>management practices.</i>	
<i>Mezdrzycka-Dabrowska Wioletta et al. (2016).</i>	<i>Poland</i>	<i>2016</i>	<i>Mixed method descriptive exploratory survey and qualitative content analysis</i>	<i>1602 nurses</i>	<i>Surgical wards in clinical, provincial, and municipal hospitals</i>	<i>Barriers to optimal postoperative pain management in elderly patients often related to poorly organised systems of care, obstacles in discussing pain management within the team, and lack of uniform pain measurement. Clinical hospitals faced more issues related to system organisation and communication barriers.</i>	<i>Organisational barriers, health-care system issues, communication difficulties with physicians, and lack of standardized pain assessment methods were significant.</i>	<i>The study suggests the need for improved communication, better-organised care, and access to clinical guidelines. Emphasises the necessity of developing practical guidelines or management algorithms for nurses to enhance the implementation of effective pain management practices</i>