KNOWLEDGE AND ATTITUDES TOWARDS PAIN AMONG NURSES

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Summary

Pain stands as the primary symptom reported by the majority of individuals seeking medical attention globally. Among healthcare professionals, nurses have the most frequent interactions with patients, and they play a pivotal role in pain assessment and management. The knowledge and attitudes of nurses regarding pain can significantly impact the quality of pain management. Hence, it is imperative to ensure that nurses have good knowledge and positive attitudes towards pain assessment and management.

This systematic review aims to review and analyze scientific literature about nurses' knowledge and attitudes towards pain management.

Methods: A systematic search in three databases (PubMed, Google Scholar, Web of Science) was carried out between September 2023 and January 2024.

Results: Five studies that fulfilled inclusion criteria show that out of 1,042 nurses only 29.76% nurses had good or fair knowledge about pain management. Mean accurate response score was 44%. Most nurses from selected studies 70.24% had poor knowledge and poor attitudes towards pain management. Nurses with additional pain management training during studies and nurses with more experience had better knowledge about pain management.

Conclusion: The knowledge of nursing professionals about pain was below the recommended level of 80% and their attitudes were not correct towards pain assessment and management. This review revealed a positive correlation between pain knowledge and prior pain management training. Consequently, there is an urgent need to implement continues educational initiatives to enhance the knowledge level of pain management among all healthcare personnel, including nursing professionals.

Introduction

The American Pain Society (APS) and the International Association for the Study of Pain (IASP) define pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage"(1,2). Pain is the primary symptom experienced by most patients seeking medical services worldwide (3) and accounts for two-thirds of visits to emergency units in the United States (4). In Europe, it is known that almost 19% of the adult population has suffered an episode of low to medium intensity pain where the management was incorrect (3). Pain is a global health concern and a universal human experience affecting all races, genders, ages, geographical locations, and socioeconomic classes (1).

Adequate pain management is closely linked to the healthcare provider's level of knowledge about pain and other sociocultural, economic, and administrative factors (3). Due to its multifaceted and subjective nature, influenced by an individual's culture, beliefs, previous pain experiences, and coping abilities (1), pain poses a considerable challenge for healthcare professionals (3). Self-report of pain is considered the "gold standard" of pain assessment and is often referred to as the "fifth vital sign" (5). It is also considered the only reliable measure to assess the presence and intensity of pain. As stated by Alnajar (6), "Pain is, however, the experienced person describes it, and it exists whenever he says it does."

Although it serves as a protective mechanism prompting people to seek healthcare services, pain is a major stressor influencing a person's physiological, psychosocial, emotional, and financial status (1). Every patient has the right to optimal pain management, and all medical practitioners have a duty to provide it (7). Effective pain management is a crucial and sensitive measure indicating the quality of nursing and healthcare (1). However, research studies suggest that acute pain management in adults in hospital settings is inadequate, with almost 80% of patients experiencing moderate to severe pain (4). Inadequate pain management has been shown to impact patients outcome by potentially increasing hospital stay and delaying recovery (8). Unrelieved

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pain causes physiological and psychosocial stress responses that affect every system in the patient's body and produce harmful effects. These effects include fear, anxiety, sleep disturbance, hopelessness, weak memory, decreased cognitive function, social isolation, and a lowered quality of life (1).

The role of nurses is of key importance in assessing and treating patients' pain, involving systematic monitoring of pain levels, choosing and administering appropriate treatment to reduce pain, including non-pharmacological interventions, educating patients and their families about pain, and advocating for patients (6). A high level of knowledge about pain assessment and management and positive attitudes regarding pain management in nurses are considered critical factors in providing effective pain management (9).

Healthcare practitioners' lack of understanding of the evaluation of pain, gaps in knowledge about pain assessment and treatment, leads to ineffective pain therapy, and approximately 79% of hospitalized patients suffer from it (7,8). The challenges to pain management by nurses worldwide include negative attitudes, inadequate recordkeeping, insufficient patient assessment, and improper analgesic use (9).

Nurses can significantly influence pain control with sufficient knowledge and positive attitudes towards pain management. However, they consistently underestimate the severity of pain and deliver substandard pain control and treatment worldwide (10). Therefore, it is imperative that nurse educators and hospitals assess nurses' knowledge and attitudes towards pain management. The "Knowledge and Attitudes Survey Regarding Pain" is widely
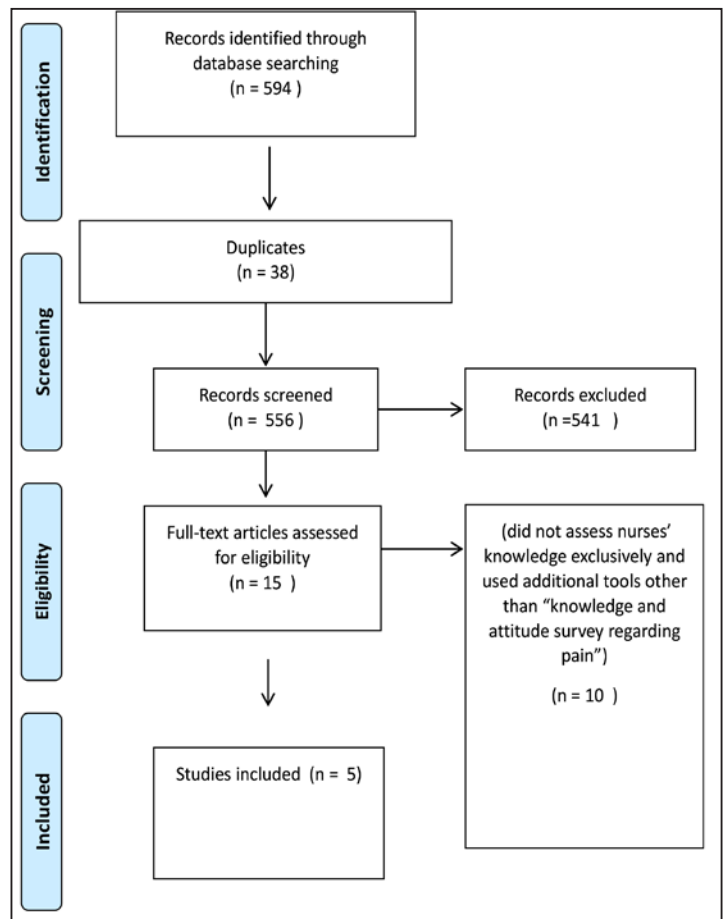

Fig. 1. PRISMA flow chart

used and accepted tool by professionals to do so and this review is focused on studies which used this instrument (3).

This systematic literature review aims to answer following research question: What are nurses' attitudes towards pain management and what is the knowledge level about pain assessment and management among nurses?

Methods

This systematic review was performed according to The Preferred Reporting Items for Systematic Reviews method and Meta Analysis (11) The search for scientific articles was carried out in 3 databases including PubMed, Web of Science and Google Scholar. English keywords were used for the search: Nurse; nursing; knowledge; attitude; pain management; pain assessment. The articles were filtered according to the language of publication (English) and the date (2018-2023). The PubMed database used the conjunctions "and" "or". This systematic review includes scientific articles with any research design which meet the specified criteria (see table 1).

Table.1 Inclusion/Exclusion criteria

Inclusion criteria	Exclusion criteria
Study participants were nurses/ nursing students	Literature reviews
Articles published in the last 5 years (2018-2023)	Articles not in English
Articles which used the instrument "Knowledge and attitudes survey regarding pain"	Study participants were doctors, paramedical or pharmacists.
Full text available	Articles which did not use the instrument "Knowledge and attitudes survey regarding pain"

Results

Search results

After the database searches, 592 articles were found. And after removing duplicate items, 556 articles were screened with the titles and abstracts. Finally, 15 full texts articles were assessed for eligibility which resulted in 5 articles that met the inclusion criteria. The 10 articles were excluded since they did not assess nurses' knowledge exclusively and/ or used additional tools other than "knowledge and attitude survey regarding pain".

Description of the studies All included studies used knowledge and attitudes survey as an instrument and all measured knowledge of nurses. Study design, participants demographics, used instrument and key findings from these studies are provided in table 2.

Results of the included studies

In this literature review, a total of 1042 study participants were included from five studies. The calculation of pain management knowledge and attitude scores varies across the studies. All studies suggested that 68% to 84% nurses had poor knowledge and attitudes towards pain assessment and management knowledge about pain management 30.9% (1) and lowest level of nurses knowledge about pain management was reported in King Fahad Hospital nurses in Saudi Arabia with 7.1% with good knowledge and 16.1% with fair knowledge (12). Overall, this meta-analysis found

that out of 1,042 nurses only 29.76% nurses had adequate or above adequate levels of knowledge about pain assessment and management with the mean accurate response score of 44% when 80% is considered adequate. This clearly shows that nurse's current knowledge about pain is far from being adequate.

The items answered correctly most frequently focus on pain medication and administration, while the most commonly incorrect answers were mainly related to pain assessment and pharmacological intervention. (1,10). This result is consistent with the previous studies suggesting that the current nursing education system does not adequately emphasize students' abilities to assess their patients' needs and in response intervene properly (6). This finding may be because of nursing inexperience in pain assessment training in clinical practice. (3).

Nurses who attended a formal course in pain management or obtained information via lectures were more likely to score higher on KASRP. In terms of pain management information sources, knowledge acquired from books, advice from pain experts, or training in the hospital department was positively related with higher KASRP scores (9).

The comparison of the responses of some items showed a disagreement between the nurses' knowledge and beliefs (attitudes). Although 57.73% of the nurses agreed that pain is subjective and the best evaluation method to assess pain intensity is the self-report of the patient, 72% nurses agreed to

Table.2 Summary of the included studies

Author and year of publication	Study design	Participant demographics	Instrument	Key findings
(Nguyen et al., 2021)	cross-sectional survey	154 nurses working in Geriatric Hospital of Vietnam	KASRP knowledge and attitudes survey regarding pain	72.2% nurses had poor knowledge and attitudes towards pain management. Nurses' knowledge of pain assessment was poor, with the proportion of correct answers to nine questions ranging from 2.6% to 50%. The correct mean score was 45.2%. Nurses who had training regarding pain at medical in universities had significantly higher scores of knowledge and attitude compared to those without training.
(Al-Sayaghi et al., 2022)	quantitative, cross-sectional, descriptive design using a self-administered survey	Out of 660 registered nurses working in the Emergency Department, critical care units, inpatient and outpatient departments at King Fahad Hospital in Al-Medinah, Kingdom of Saudi Arabia 291 completed survey	The Knowledge and Attitude Survey Regarding Pain (KASRP) standardized questionnaire was used.	Most of the participants (70.1%) had a poor level of knowledge and attitudes (score < 50%). With the mean score of 45.29%. Nurses working in the outpatient department scored significantly higher than the group working in the Emergency Department and inpatient wards. Deficient knowledge and negative attitudes were found, and nurses continue to underassess and undertreat pain.

(Jamal et al., 2023)	descriptive cross-sectional study	112 critical (intensive care units and emergency department) care nurses working at King Fahad Hospital in Saudi Arabia. Majority of nurses (62.5%) were in between 25-35 years old.	Modified knowledge and attitude survey regarding pain (KASRP)	Among 112 participants only 8 nurses (7.1%) had a good level of knowledge and attitude. 54 nurses (48.2%) had a poor level. Followed by 32 nurses (28.6%) with average level of knowledge and 18 nurses (16.1%) with fair level of knowledge and attitude towards pain. A significant association between knowledge and attitude was also observed.
(Shdaifat et al., 2020)	A cross-sectional design	193 undergraduate nursing students from a nursing school at a Saudi university completed the questionnaires. Mean age of participants was 24.3 years .52.3% were male and 58.5% were single.	Knowledge and Attitudes Survey Regarding Pain (KASRP)	The mean knowledge on pain management was 42.6%. 81% of nurses got poor and 19% got fair knowledge and attitude towards pain. And mean knowledge of pain management was 42.6%. No significant association was observed between knowledge and attitude score and marital status, educational level or age of participants.
(Fenta et al., 2023)	Cross-sectional study	292 nurses participated in the study from 4 hospitals of South Gondar Ethopia.141 male and 151 female nurses with majority of nurses aged between 20-29. More nurses n= 222, 76.0% had up to five years of working experience.	Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain	A large proportion of the nurses (n = 218, 74.7%) had insufficient knowledge and a poor attitude towards pediatric pain assessment and management. With the mean score of 43.1% The nurses with more than 5 years' experience and the ones having special courses regarding pain management significantly scored better.

use a placebo (an ethically unacceptable practice) as a useful method to assess pain and reliability. The case scenarios in question 38 and 39 demonstrated additional inconsistency as only 26.8% correctly assessed the level of pain while the patient is smiling and joking, and only 43.64% assessed the level of pain correctly of the grimacing and quiet patient (1,12).

This suggests that our current nursing curriculum is not preparing nurses enough to systematically assess pain, make strong nursing care decisions, and use pain relieve medicine and methods properly and effectively. Besides, this could be result of the lack of workshops or continuous education for nurses in hospitals as such courses depend on resources from donors (3,4,10).

Discussion

Pain is today the most common symptom of visiting the doctor's office around the world, but at the same time, pain is the main complaint that is not adequately treated or alleviated. In this sense, persistence of pain is an important public health problem around the world and represents giant economic costs of healthcare. Despite the important advancement in the understanding, teaching, and learning of pain in the past decade, patients continue suffering needlessly and obtaining a poor quality of life (3).

Effective pain management is important for patient recovery and high-quality safe care. However, many studies report poor levels of nurse's knowledge with subsequent accompanying negative attitudes about pain assessment and management as the cause of poor pain management (4,5). This meta-analysis supports this with less than half, 29.76% nurses having fair or adequate knowledge about pain assessment and management. The fact that 50% of nurses never got exposed to pain training programs and therefore, the lack of skill development might be an interfering factor on the poor knowledge among half of the nurses (12).

In the current systematic review, five articles were included, all of them focused on the pain knowledge evaluation with the Knowledge and Attitudes Survey Regarding Pain tool in nurses working in different healthcare settings (1,9). The Knowledge and Attitudes Survey Regarding Pain

(KASRP) is a standardized and validated tool designed to assess both knowledge and attitudes related to pain across six distinct areas. These areas include medication, assessment, intervention, addiction, spiritual/cultural considerations, and pathophysiology. The KASRP has been employed to compare the scores of nurses at different levels of expertise, providing a comprehensive evaluation of their knowledge and attitudes regarding pain management. This tool serves as a valuable instrument in the measurement of nurses' proficiency and perspectives in various facets of pain-related practices, contributing to a better understanding of their capabilities and attitudes in pain management scenarios (3).

Although all five studies in this review suggested nurses lack knowledge about pain management, there is huge difference in percentage of nurses with sufficient knowledge. The reason behind the difference is that some authors evaluated the level of knowledge as adequate or not adequate while others evaluated it as poor, fair, sufficient, and good (1,10,12).

The study conducted in Vietnam showed that 44.8% of the participants rarely or never used pain assessment tools. On the contrary, inadequate knowledge regarding pain management can be explained by the fact that nurses mainly rely on the patients' appearance or their behaviors in assessing the pain instead of patient's self-reporting. As our analysis shows as well that only 26.8% nurses correctly assessed the level of pain while the patient is smiling and joking These findings are consistent with previous studies indicating that nurses most likely underestimate patients' pain intensity and under-administer analgesics (9,12).

Another possible explanation for nurse's lack of knowledge can be that most nurses carry out physicians' orders about pain medications and are less likely to make decisions about what pain medications, what doses, and when to give pain medications (9,13).

Advantages and limitations
All reviewed articles used the same instrument and results of all included studies were similar which makes this review more reliable and definite.

Sample size in all reviewed studies was small, a study with large number may provide more confident results that can be generalized. Findings of this review, even though provide important insight about nurse's knowledge and attitudes towards pain assessment and management, they may not be generalized to other healthcare professionals or settings beyond nursing.

Conclusion
Evidence suggests that the level of all nurses' knowledge about pain was inadequate and weighed less than the suggested level of 80%. Nurses' attitudes towards pain assessment and management were poor. This implies that patients suffering from pain typically have not received optimal care.

Nurses with pain management training or having theoretical knowledge by reading books or listening to lectures in university showed better knowledge and positive attitudes towards pain assessment and management but the number of these nurses is less than 50%. Lack of proper pain management programs in nursing curriculum appears to be a big contributor towards nurse's lack of knowledge and negative attitudes towards pain management.

It should be encouraged for nurses to actively participate in pain treatment. Nurses should increase their knowledge and develop positive attitudes towards pain management by gaining theoretical knowledge and by taking part in pain management training programs.

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SLAUGYTOJŲ ŽINIOS IR POŽIŪRIAI Į SKAUSMĄ
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Santrauka

Skausmas yra pagrindinis simptomas, apie kurį praneša dauguma asmenų, ieškančių medicininės pagalbos visame pasaulyje. Tarp sveikatos priežiūros specialistų slaugytojai dažniausiai bendrauja su pacientais ir atlieka pagrindinį vaidmenį vertinant ir valdant skausmą. Slaugytojų žinios ir požiūris į skausmą gali reikšmingai paveikti skausmo valdymo kokybę. Todėl būtina užtikrinti, kad slaugytojai turėtų geras žinias ir teigiamą požiūrį į skausmo vertinimą ir valdymą.

Šia sistemine apžvalga siekiama peržiūrėti ir išanalizuoti mokslinę literatūrą apie slaugytojų žinias ir požiūrį į skausmo valdymą.

Metodai: Sisteminga paieška trijose duomenų bazėse (PubMed, Google Scholar, Web of Science) buvo atlikta nuo 2023 m. rugsėjo iki 2024 m. sausio mėn.

Rezultatai. Penki tyrimai, kurie atitiko įtraukimo kriterijus, rodo, kad iš 1,042 slaugytojų tik 29.76% slaugytojų turėjo gerų ar pakankamų žinių apie skausmo valdymą. Vidutinis tikslaus atsako balas buvo 44 %. Dauguma slaugytojų iš atrinktų tyrimų 70,24% turėjo prastas žinias ir prastą požiūrį į skausmo valdymą. Slaugytojai, turėję papildomus mokymus studijų metu apie skausmo valdymą, ir slaugytojai, turintys daugiau patirties, turėjo geresnių žinių apie skausmo valdymą.

Išvada. Slaugos specialistų žinios apie skausmą buvo mažesnės už rekomenduojamą 80% lygį ir jų požiūris į skausmo vertinimą ir valdymą nebuvo teisingas. Mūsų sisteminė apžvalga atskleidė teigiamą koreliaciją tarp žinių apie skausmą ir ankstesnių praktinių mokymų apie skausmą. Todėl yra būtina skubiai įgyvendinti švietimo iniciatyvas, kurios būtų besitęsiančios, siekiant pagerinti visų sveikatos priežiūros darbuotojų, įskaitant slaugos specialistus, žinių apie skausmo valdymą lygį.