

Nurses levels of Knowledge towards Pain Management Barriers at Saudian Emergency Department Setting

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Abstract

Inadequate pain management affects the patient outcome. Pain assessment and management are fundamental in nursing care, and nurses must be equipped with adequate knowledge and a positive attitude toward pain assessment and management.

Objectives: The present study aimed to explore and identify Saudi Arabia Emergency Department nurse knowledge relating to pain management and barriers.

Materials and methods: This study was conducted in Altaif area Kingdom Saudi Arrabia. This study was conducted in Altaif area Kingdom Saudi Arrabia. The inclusion criteria for those eligible for the study was include male and female registered nurses and nursing unit managers who have worked in the Emergency Department for a minimum of three months.

Results: The Overall knowledge of nurses towards pain management was satisfactory among 48.9% and not satisfactory among 51.1% with mean total score of knowledge of $22.5 \pm (.1)$. Gender, years of experiences and education were significantly associated with nurse level of knowledge regarding pain management and barriers.

Conclusion: knowledge of nurses regarding pain management was no satisfactory and there were gaps in knowledge. Therefore, educational programs are a potential method of improving nurses' knowledge of pain management and provide an opportunity to address negative attitudes and beliefs.

Keywords: *Knowledge, pain management, Emergency department*

1.1.Introduction:

In order to evaluate the background and prior research on this topic, the CINAHL and PubMed databases were searched using a combination of keywords. The keywords included “nurs*”, “pain management”, “barrier”, “knowledge”, “emergency department” and “accident and emergency”; these were combined in different variations with Boolean operators to expand and narrow the search results. Studies were only included if they were published after 1st January 2018, were available in full text, involved human studies and were published in English. The relevant resulting articles were evaluated with the Critical Appraisal Skills Program (2019) checklist and ten articles were chosen for inclusion.

It is well-recognized within the literature that poor pain management practices are a significant public health issue that contributes to poor rates of morbidity and mortality as well as poor patient experience (Al-Mahrezi 2017; Brant *et al.* 2017). It has been recommended that pain management education is a part of the core curriculum offered to nurses; such core curriculum should include information about the barriers to proper pain assessment and management. It is important that this new addition to the curricula occurred as the research indicates a large amount of barriers present that relate to the health care professionals, the patient and the environment; these various different barriers affect the likelihood that the patient will receive proper pain relief and management (Al-Mahrezi 2017). For instance, a common barrier is a fear of side effects and drug dependency and this can reduce the amount of opioids administered within the Emergency Department, thus pain may not be reduced for patients (Duignan and Dunn 2008; Pretorius *et al.* 2015). Some other barriers can relate to patient and health care professional communication barriers (Pretorius *et al.* 2015).

The literature demonstrates that when nurses have a sound understanding of the various different barriers to effective pain management, they have the ability to adapt nursing practice effectively, and are thus able to deliver better pain management and pain relief (Wang and Tsai 2010). Brant *et al.* (2017) found that knowledge of pain management practices and barriers to pain management was significantly lacking amongst nurses. This was confirmed in a study by Samarkandi (2018), who also found that nurses in the Emergency Department did not have a high level of knowledge regarding pain management and barriers. Nuseir, Kassab and Almomani (2016) found that amongst 662 health professionals, only 24% of nurses responded correctly to answers relating to pain management and barriers to this. In addition to this, Bennetts *et al* (2012) found that many health professionals are only aware of pain management barriers that relate to organizational and environmental barriers; the majority of health professionals interviewed did not identify any barriers related to themselves as practitioners including a fear of opioid addiction and side effects. These studies clearly demonstrate that knowledge pertaining to pain management and barriers, particularly barriers relevant to the health professional, are significantly lacking, and thus this means patients are not receiving adequate pain management. Based on the evaluated studies, it is clear that in the past, nursing knowledge of pain management and barriers to effective pain management are significantly lacking. However, the results of the research indicated that many studies are outdated and there are few recent studies that sought to explore the level of knowledge relating to pain management and barriers, particularly amongst Saudi nurses in the Emergency Department setting. As such, the proposed study may be the first study to explore and identify Saudi Arabia Emergency Department nurse knowledge relating to pain management and barriers.

MATERIALS AND METHODS:

1.2.1. RESEARCH DESIGN

The study design was included a quantitative survey study design, as the study seeks to determine levels of knowledge regarding pain management as an objective, consistent form of knowledge that exists across the nursing workforce with the Emergency Department setting. This study design is most appropriate as it involves a positivist paradigm, thereby denoting the use of quantitative research techniques

(Ryan, 2018). This study includes a survey design in order to remain cost-effective; a survey is a valid means of capturing large amounts of data across a sample at low-cost, although the researchers will need to consider the potential for response bias (Polit and Beck 2013).

1.2.2. STUDY AREA

This study was conducted in Altaif area Kingdom Saudi Arrabia.

1.2.3. STUDY POPULATION

The population chosen for this study includes registered nurses as well as nursing unit managers working in Saudi Arabia Emergency Department settings. The population must have worked within a Saudi Arabia Emergency Department for a minimum of three months and must also have successfully completed the pain management core curriculum program.

1.2.4. SELECTION CRITERIA

1.2.4.1. Inclusion criteria:

The inclusion criteria for those eligible for the study was include male and female registered nurses and nursing unit managers who have worked in the Emergency Department for a minimum of three months. Nurses who work for an agency and have not received the pain management core curriculum training will not be eligible for the study. It is important that these criteria are included, as otherwise sampling bias may occur, which would be detrimental to the study outcome and would not reflect a true result (Palinkas *et al.* 2013).

1.2.4.2. Exclusion criteria:

Those who refuse to participate in the study and those who are not found at the time of data collection.

1.2.5. SAMPLE SIZE AND SAMPLING TECHNIQUES

The study was aimed to sample all eligible nurses working within the Emergency Department setting in the selected location, thereby representing a purposeful sampling technique (Polit and Beck, 2013).The sampling approach was include probability sampling, which was use a random selection of study participants from the population of interest. This method has been chosen as it is the most appropriate and effective way

to analyze nursing knowledge because it directly selects nurses in the setting and thus will directly answer the proposed research question. For instance, where a nurse has not been working within the ED for more than three months, they may not have completed the department's core curricula related to pain management and as such would not accurately reflect or answer the study question.

Three main hospitals in the selected city were approached with a letter and proposal of the research, asking for the hospital to advertise the study and participate in the research. Subjects that meet the selection criteria were required to complete information sheets with their personal details and experience in nursing and the Emergency Department. Selected participants were notified by telephone as to their inclusion in the study. A sample size of at least 150 nurses was chosen, as this is a number sufficient to accurately demonstrate the knowledge and to meet the research question (Polit and Beck, 2013). This sample size was allow for a clear clinically important result to be demonstrated as it will allow for sufficient participants to have their knowledge assessed and thus the findings can be generalized to the greater population.

1.2.5.6. DATA COLLECTION

The data was collected directly from the participant through written material. The data collection approach was including utilizing the Nurses' Knowledge and Attitudes Survey. This was a pre-validated tool that has been demonstrated to be useful for capturing quantitative data regarding the amount of knowledge that a nurse has, specifically related to pain management; other studies have utilized this same survey tool and have demonstrated that the tool is effective, reliable and accurate (Brant *et al.* 2017; Shoqirat *et al.* 2019). Therefore, the availability and use of this tool versus others or, one which is created by the researcher promotes the validity and reliability of the study's findings (Polit and Beck 2013).

1.2.5.7. DATA MANAGEMENT AND ANALYSIS

The completed surveys was returned by the mail; once they have been returned, they were scanned into a computer so an electronic copy is available and was then be stored in a locked filing system. The scores on the survey was examined and analyzed for professional and personal predictors for knowledge and attitudes about pain. Descriptive statistics including means, percentages, frequencies and standard deviations was be utilized examine knowledge and attitudes about pain responses.

Additionally, ANOVA and t-tests was utilized in order to test for comparison and determine any relationships between the dependent variable of knowledge about pain and the independent variables, such as area of practice, nursing degree and nursing experience.

This study was compared directly to the findings of those in the existing pool of research, which helps to contribute to the overall pool of evidence-based findings and may be relevant to others looking to perform similar studies. The data was collected shortly after all participants have been enrolled. After the participants have confirmed their selection and participation by telephone, they were being mailed the Nurses' Survey. The participants were asked to return the survey within two weeks of it being posted. A follow up telephone call was made to participants who have not returned the survey within this time period. When the surveys have been returned by post, they were collected for management and analysis.

1.2.5.8. Ethical consideration:

The relevant Human Research Ethics Committee (HREC) for this proposal is Ministry of health and it is approval. This hospital classified under of the public hospital Saudi Arabia government health. The main ethical consideration to be taken into account with this research relates to the data management and storage and protection of the identities of the participants. The data was stored in both a locked filing cabinet and a computer that is password protected; only the two researchers had access to these, which means privacy of the participants was upheld. The study does not include vulnerable populations although cultural considerations can be made if any participants tick that they are from an Indigenous background; the survey was culturally competent. All participants were also being given the option to withdraw from the study at any time, thereby protecting the right to autonomy and making their own decisions.

Additionally, the researchers do not anticipate that any harm or risk was delivered to the participants for their involvement in this study, but was aware and manage any potential harm or risk that does arise. If any emotional harm occurs as a result of participants answering questions about pain, counseling services was recommended, although this was not anticipated.

1.3.Study findings:

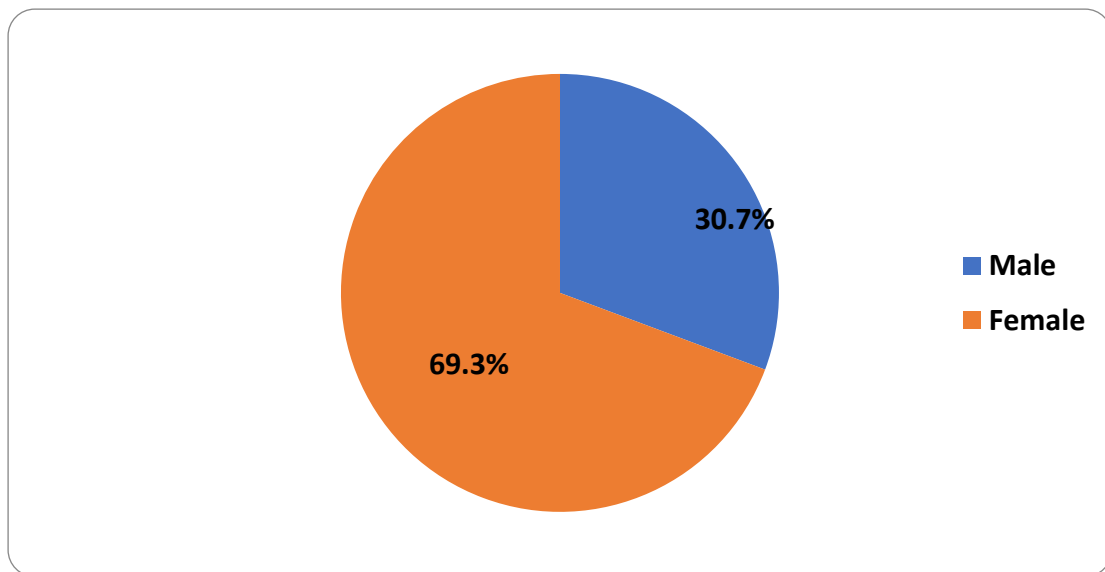


Fig.1: Distribution of nurses according to gender (n=150)

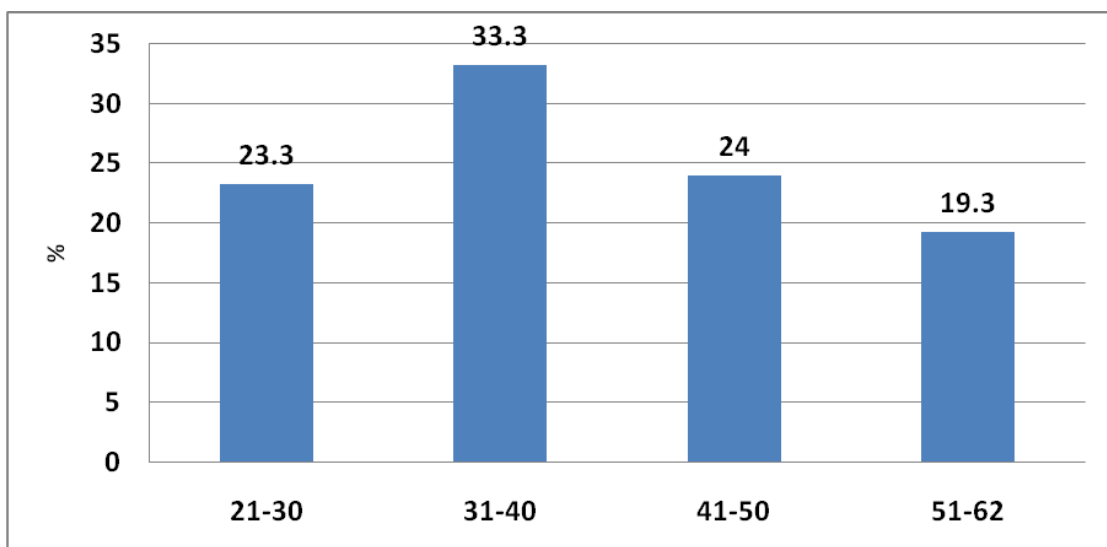


Fig.2: Distribution of nurses according to age group (n=150)

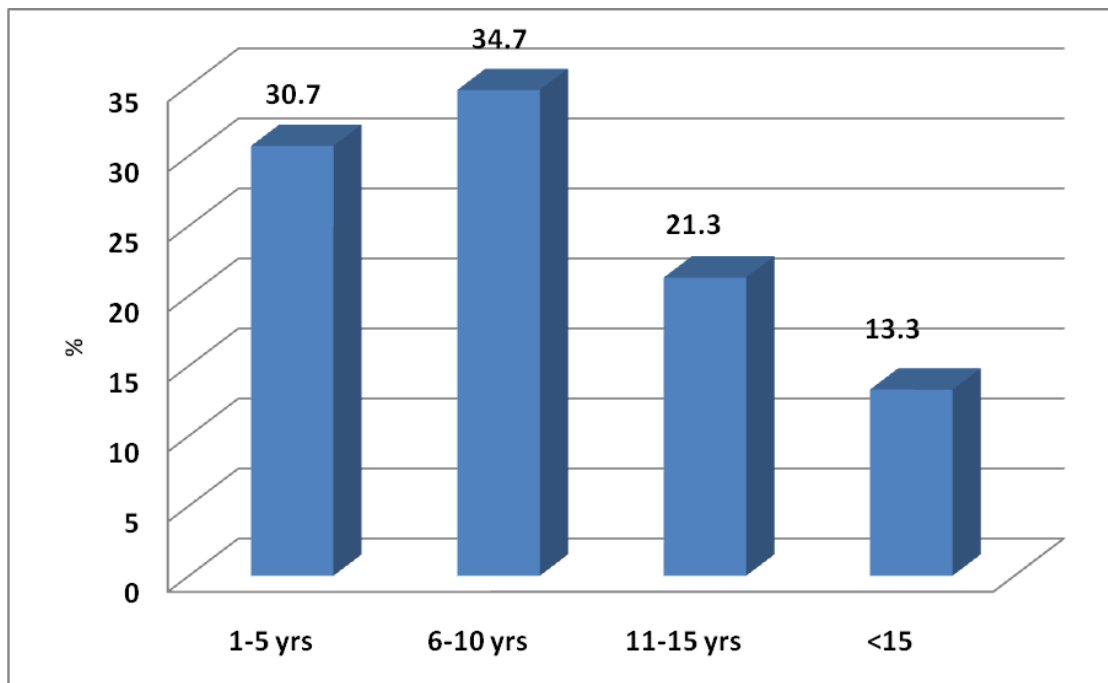


Fig.3: Distribution of nurses according to years of experience (n=150)

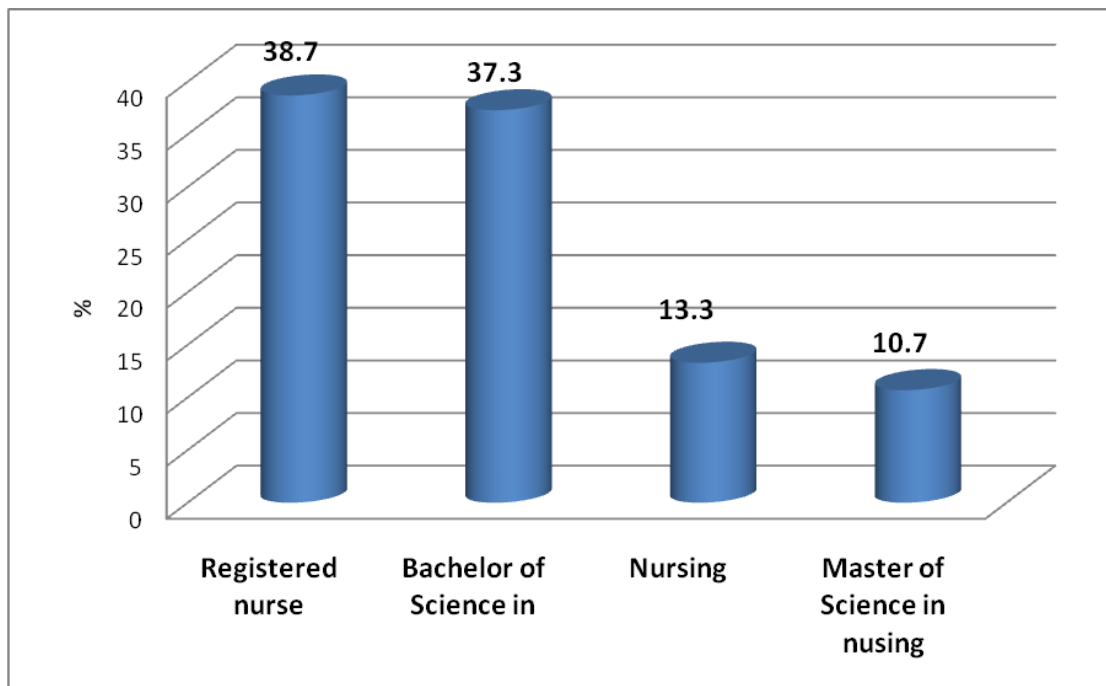


Fig.4: Distribution of nurses by education level (n=150)

Table 1: Overall knowledge of nurses towards pain management barriers at Saudi Emergency Department Setting

Knowledge	Satisfactory		Not satisfactory	
	No.	%	No.	%
I have convenient access to evidence-based practice journals related to pain	49	32.7	101	67.3
I am able to develop an evaluation plan to monitor practice improvements...	68	45.3	82	54.7
I could explain evidence-based practice to a peer.	67	44.7	83	55.3
The majority of the mes, my bosses are cooperave in the implementation...	64	42.7	86	57.3
I am aware of nursing research related to pain assessment and pain	91	60.7	59	39.3
I am aware of evidence-based practice implemented in my seng.	106	70.7	44	29.3
In general, I care about evidence- based practice.	75	50.0	75	50.0

I am aware of evidence-based nursing practice applicable to pain...	72	48.0	78	52.0
I am willing to try out new innovators based on research that I read about...	68	45.3	82	54.7
I can read a nursing research report and make a sound judgment about its...	62	41.3	88	58.7
For successful evidence-based nursing practice , I need information on how...	51	34.0	99	66.0
Someone to assist with a literature search and obtain articles would increase...	61	40.7	89	59.3
know where to find evidence (e.g., research findings or evidence-based...	91	60.7	59	39.3
I am aware of evidence-based practice in general	101	67.3	49	32.7
Overall knowledge	1026	48.9	1074	51.1

Mean total score of knowledge=22.5 ± (.1)

Table 2: Association between overall knowledge of nurses towards pain management barriers at Saudian Emergency Department Setting and gender

Gender	Mean	Std. Error of Mean	Sig.
Male	22.6	.2	.008*
Female	22.5	.2	
Total	22.5	.1	

*P-value considered significant at less than 0.05 levels

Table 3: Association between overall knowledge of nurses towards pain management barriers at Saudian Emergency Department Setting and age group

Age group	Mean	Std. Error of Mean	Sig.
21-30	22.6	.27	.243
31-40	22.9	.27	
41-50	22.0	.32	
51-62	22.5	.37	
Total	22.5	.1	

*P-value considered significant at less than 0.05 levels

Table 4: Association between overall knowledge of nurses towards pain management barriers at Saudian Emergency Department Setting and years of experience

Years of experience	Mean	Std. Error of Mean	Sig.
1-5	22.4	.26	.041*
6-10	22.6	.26	
11-15	22.3	.37	
<15	22.9	.387	
Total	22.5	.1	

*P-value considered significant at less than 0.05 levels

Table 5: Association between overall knowledge of nurses towards pain management barriers at Saudian Emergency Department Setting and education level

Education	Mean	Std. Error of Mean	Sig.
Registered nurse	22.6	.24	.000*
Bachelor of Science in	22.6	.24	
Nursing	22.4	.44	
Master of Science in nursing	22.2	.52	
Total	22.5	.1	

*P-value considered significant at less than 0.05 levels

1.4. DISCUSSION:

This descriptive cross-sectional hospital based study was conducted among 150 nurses in Altaif area, kingdom Saudia Arabia in three main hospitals. The study purpose was aimed to assess nurses' levels of knowledge towards pain management barriers at Saudian Emergency Department Setting. The study

reveals that the Overall knowledge of nurses towards pain management was satisfactory among 48.9% and not satisfactory among 51.1% with mean total score of knowledge of $22.5 \pm (.1)$. However the satisfactory knowledge of nurses was ranged from 32.7% o 70.7%. This score was below the acceptable level in the literature review. An acceptable pass score has been identified in the literature as 80% (McCaffery and Robinson, 2002; Brown, Bowman, and Eason, 1999).

In contrast studies to our study findings conducted by Lewthwaite, 2011; Wang and Tsai, 2010; Rahimi-Madiseh, Tavakol and Dennick, 2010; Yildirim *et a* 2008; Lui, So, and Fong, 2008; Bernardi, Catania, and Tridello, 2007; Matthews and Malcolm, 2007; Plaisance and Logan, 2006). Also the knowledge in our study is low compared t o a study conducted by Matthews and Malcolm (2007) reported an average correct response rate of 73.8% for their participants. However, in accordance study conducted by Yildirim and colleagues (2008) to measure the knowledge amongst Turkish nurses using the same tools (KASRP) showed an average correct response rate of 35.4%, which was lower than that of the current study (Yildirim *et al.*, 2008).

The study showed that only 32.7% of the nurses were convenient access to evidence-based practice journals related to pain. This lower score may indicate out-of-date knowledge

about pain (Ferrell and McCaffery, 2005). Nurses in Saudi Arabia have limited access to online resources and updated information from books and journals (Almalki, Fitzgerald, and Clark, 2011). Therefore, it is possible that their responses might have been based on what they learned during their preregistration nursing education.

Nearly half of the nurses 48% were aware of evidence-based nursing practice applicable to pain. In contrast findings from earlier studies have provided evidence supporting the notion that nurses should assess pain depending on non-verbal cues, behavioural manifestations, and they may include physiological changes in vital signs. According to some respondents, patients in pain are unable to sleep. Nonetheless, respondents demonstrated

knowledge deficits in this area too, as indicated by a substantial proportion (35.6%) of them having a false belief that patients who can be distracted easily from pain are those who usually do not have pain of any considerable severity. The belief among nurses that

patients whose sleeping habits are unchanged do not have severe pain is a common observation in other studies as well (Wang and Tsai, 2010; Yildirim, Cicek, and

Uyar, 2008; Lui, So, and Fong, 2008; Bernardi, Catania, and Tridello, 2007; Tsai *et al.*, 2007; Coulling, 2005). Distraction and relaxation are strategies that help in diverting the attention away from pain (Macintyre *et al.*, 2010; Mandeville, 2010; Tse and Chan, 2004). Coulling (2005) and these techniques may help patients to feel less pain. Patients do, on their own, utilize coping strategies such as distraction techniques and sleeping to divert their attention away from pain.

There was association between overall knowledge of nurses towards pain management barriers at Saudian Emergency Department Setting and gender, years of experiences and education $p < 0.05$. Comparable studies conducted by Liyew *et al.* (2020), Yaqoob and Nasaif (2015), Al Qadire and Al Khalaileh (2014), and Al-Quliti and Alamri (2015) reported similarly that age, gender, nationality, marital status, qualification, clinical area, and work experience had no significant effects on the score of the nurses' knowledge towards pain. However, Umuhoza *et al.* (2019) reported that gender, qualification, and working experience significantly affected the knowledge of nurses. Brant *et al.* (2017) found that nursing experience, qualification, and in-service education affect the nurses' score. Admass *et al.* (2020) and Kahsay and Pitkjärvi (2019) reported that the qualification significantly affected the knowledge and attitude scores of the nurses.

Conclusion:

In conclusion the study showed that knowledge of nurses regarding pain management was no satisfactory and there were gaps in knowledge. Therefore educational programs are a potential method of improving nurses' knowledge of pain management and provide an opportunity to address negative attitudes and beliefs.

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