



The Knowledge of Pain Management among Nursing Students in Kirkuk City

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Abstract

Background: Poorly managed pain is a problem that affects individuals, entire health-care systems, and societies worldwide. Nurses are involved in pain management, yet little is known about the knowledge and attitudes of nursing students.

Objectives: The aims of the study are to assess students' knowledge about pain management and measure the relationship between knowledge of pain management and nursing students' sociodemographic characteristics.

Methods: Cross-sectional Descriptive study design carried out among (100) nursing students in Kirkuk city selected by purposive sample. The data collected from the sample by self-report questionnaire.

Results: among of 100 students (74%) of sample at age (21-25) years, (58%) of sample are females, (57%) of them at third stage in nursing college. (77%) of sample has moderate level of knowledge about pain management and at mean score is (16.4). there is significant statistical relationship between student age and level of knowledge at p value (0.032).

Conclusion: students have good knowledge about pain management. It is important to follow up the students knowledge and skills about pain assessment and management.

Key words: Knowledge, Pain Management, Nursing Students.

Introduction:

Disease process can be healed early if it cured wisely and timely. Key role can be played by nurses in evaluating and managing pain. Nurses must be highly competent, knowledgeable and possess positive attitudes towards pain management so that pediatric patients receive high quality pain management practices to facilitate optimal pediatric patient health outcomes. The nurse's assessment, implementation, and evaluation of pain relief methods are critical for positive child outcomes (Javed et al., 2020)

Pain is one of the most prevalent symptoms associated with the health disorders that nurses manage daily. Although it is a protective mechanism that makes people seek healthcare services, pain is a major stressor that influences a person's physiological, psychosocial, emotional, and financial status. Unalleviated pain triggers physiological and psychosocial stress responses that affect every system in the pediatric patient's body, resulting in harmful effects (Duke et al., 2013)

Pain is a usual occurrence that is considered as one of the most municipal and opposing stimuli to humans at any stage of life. Most of the times, it could be as a result of nociceptive feelings, injury, surgery, or illness which cause pediatric patients to seek health-



The Peerian Journal

Open Access | Peer Reviewed

Volume 30, May, 2024

ISSN (E): 2788-0303

Website: www.peerianjournal.com

Email: editor@peerianjournal.com

care services. Pain is a subjective data that are personally experienced and reported by the patients which makes it difficult for others to assess, evaluate, and manage. It is important for nurses and other health-care providers to possess a good mastery and a positive disposition regarding pain management because they spend the bulk of time with the pediatric patients (Salameh, 2018)

The reports of moderate to severe pain experiences in pediatric patients are worrying. If child pain is not managed properly and effectively, it can lead to physical injuries, psychological consequences, and complications such as delayed recovery, increased length of stay, increased health care costs, and decreased child satisfaction (Sedighie et al., 2020)

Pain is the most common side effect of trauma, illness or surgery, and 81% of hospitalized pediatric patients report moderate to severe pain. Lack of pain reduction leads to anxiety, decreased interactions with others, sleeps disturbances, movement defects, loss of appetite and restlessness, decreased quality of life and increased health care and hospitalization costs (Arzani et al., 2020)

Because pain is a multifaceted and subjective phenomenon influenced by an individual's culture, beliefs, previous pain experience, and ability to cope, it is defined as "pain is whatever the experiencing person says it is, existing whenever he says it does". Pain cannot be verified, and self-report is the only reliable measure to assess the presence and intensity of pain (Alnajjar et al., 2021)

The high prevalence of pain has been attributed to several factors, including values and beliefs about treatment of pain amongst health care professionals and/or inadequate knowledge about pain theory. These factors may affect pain management decision making, knowledge translation, use of available evidence, and prioritization of pain assessment and management at individual and institutional levels (Hroch et al., 2019)

Pain management practices are the activities that are provided by nurses and other health care professionals to ensure that the pain is managed effectively. An examination of the prevalence of acute pain in hospitalized children, by way of a systematic review (Majeed et al., 2020)

The problem of pain under-assessment and under-treatment persists and the children patient's suffering due to pain continues. Poor knowledge and a negative attitude about the assessment and management of pain might be the result of a lack of attention given to pain related topics and the lack of sufficient time devoted to this topic in nursing school curricula. These results in the insufficient preparation of nurses during their undergraduate education, as well as the lack of in-service education programs related to pain. Nursing schools and educators have to focus on teaching and training nursing students in this vital subject (AL-Sayaghi et al., 2022)

Based on the up-to-date knowledge, a positive attitude and a good practice of pain management by the nurse will minimize the consequence and complications of pain; as a result, the nurse is obliged to possess an updated knowledge and understanding of pain (Adams et al., 2020)

Inadequately managed pain has many consequences for the pediatric patient, family, health professionals, and society. Patients may have emotional reactions related to pain such as sleeplessness, anxiety and hopelessness. These reactions can be followed by unusual behaviors expressed by the child patient in response to the unpleasant life experience. Untreated pain has additional risks such as prolonged hospital stay, delayed recovery, and the development of chronic and persistent pain. It is also known that poor analgesia leads to immobility and might also



The Peerian Journal

Open Access | Peer Reviewed

Volume 30, May, 2024

ISSN (E): 2788-0303

Website: www.peerianjournal.com

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increase cardiovascular, respiratory, and gastrointestinal complications (Kahsay & Pitkääjärvi, 2019)

Nurses are a key member of the multidisciplinary team in healthcare facilities that specialize in providing health care to older people. Nurses play a pivotal role in treating pain effectively through accurate assessment, timely intervention, and the evaluation of pain relief interventions. 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 (Nguyen et al., 2021)

In previous study the finding indicated that the overall average correct response rate for the knowledge scale was 72.2%, indicating poor knowledge of pain management. Knowledge of pain management was significantly and negatively related to perceived barriers to pain management. Knowledge of pain was not correlated by nurses' education level or years of experience. The results indicated a need to strengthen pain education. Pain education should target knowledge deficits and barriers to changing pain management approaches for all nurses (Craig, 2014)

It has been noticed that students have insufficient knowledge related to pain management, which leads to poor management of pain. Pediatric students even don not know the appropriate pain assessment techniques, if so, is the case then how can they manage patient pain effectively? The current study was aimed to exam students' knowledge regarding pain and pain management.

Objectives of the study:

The aims of the study are:

1. To assess knowledge of pain management among nursing students
2. To find out relationship between knowledge of pain management and nursing students sociodemographic characteristics

Research questions:

1. What is the knowledge of pain management among nursing students?
2. Is there relationship between knowledge of pain management and nursing students' Sociodemographic characteristics?

Methods:

Study design:

Descriptive (Cross-sectional) study design conducted at the period of 1st of November 2021 to 18st April 2022 to assess the knowledge of pain management among pediatric nursing students. The study conducted at college of nursing in Kirkuk University.

Sampling:

The study sample is 100 nursing students selected by non-probability sampling (purposive sample). The pediatric students are at the third and fourth stage in the college.

Instrument:

The study tool is a questionnaire composed from 2 parts. first part related to the socio demographic characteristics of the nurses (age, gender, stage). The second part is pain knowledge form taken from the original authors (Aslan & Dikmen, 2021). This form was designed by the researchers based on a review of models available in the relevant literature. It is a form with



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Volume 30, May, 2024

ISSN (E): 2788-0303

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30 statements regarding pain management, which include general knowledge on pain and also the pain knowledge form consists of three subdimensions. The participants had to respond in options categorized as “true, false, and do not know.” The first group of 10 statements in the form addresses general knowledge on pain, the second group of 10 statements in the form includes knowledge about pharmacological methods, and the third group of 10 statements in the form includes knowledge about nonpharmacological methods that are used in pain management (Aslan & Dikmen, 2021)

Rating and scoring:

Regarding to the evaluation of the responses, every statement indicated as “true” was scored with one (1), and statements indicated as “false” and “do not know” with zero (0) . The level of general knowledge on pain management was evaluated on a scale varying between 0 and 30 scores; the total scores achieved showed whether the participant had higher or lower level of knowledge. The form does not include cut point. Therefore, evaluation of the form was determined according to total score (30), which was accepted as (0-10) low, (10-20) middle, and (20-30) high (Aslan & Dikmen, 2021)

Validity and Reliability:

The pain management scale is valid and reliable according to the original study (Aslan & Dikmen, 2021)

Ethical consideration:

The researcher sends E-mail to the Original authors of the study (Mr. Burcu Totur Dikmen) and ask his agreement to using the scale in the present study. After take the consent the researcher began the present study.

The researcher take permission from the nursing college of Kirkuk university to take the students as a sample from the third and fourth stage. Also, the study and the objectives explained to the sample then ask them for verbal agreement to participate in the study. The investigator collects the data through use of self-report method.

Data analysis:

The statistical data analysis done by (SPSS) version 22 through use of descriptive and inferential statistical data analysis

Results:

Table (I) distribution of demographic characteristics of the sample

	Variables	Frequency	Percent
Age	Less than 20 years	9	9.0
	21-25	74	74.0
	26-30	17	17.0
	Total	100	100.0
Gender	Male	42	42.0
	Female	58	58.0
	Total	100	100.0
Stage	Third stage	57	57.0



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Open Access | Peer Reviewed

Volume 30, May, 2024

ISSN (E): 2788-0303

Website: www.peerianjournal.com

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	Fourth stage	43	43.0
	Total	100	100.0

The study result in table (I) shows that (74%) of sample at age (21-25) years, (58%) of sample are females, (57%) of them at third stage in nursing college

Table (II) the correct response of student to pain management scale (n=100)

Items	Correct response	
	f	%
General Knowledge on Pain		
Pain is an indicator of an illness	T	82 82.0
Pain should be accepted as the fifth vital sign	T	59 59.0
Pain is a measurable indicator	T	56 56.0
Treatable pain is not a serious pain	F	33 33.0
Pain has a negative effect on one's life quality	T	71 71.0
The first stage in pain management is pain assessment	T	72 72.0
It is the person herself/himself who can correctly assess the pain	T	66 66.0
During assessment, a person's self-report of pain has to be taken seriously	T	75 75.0
As pain provides clues in diagnosis and treatment of diseases, it should be accepted as a vital sign	T	62 62.0
Visual comparison scale should be used in every patient	F	42 42.0
Knowledge on Pharmacological Methods		
Drugs should be used in effective dosages in pharmacological applications	T	75 75.0
In pain treatment only pharmacological methods should be used	F	46 46.0
Analgesics should only be administered through the oral way	F	52 52.0
Analgesics should be administered to the patients who have pain where necessary	T	63 63.0
Short acting opioids should be used in patients with dull pain	F	24 24.0
Patients should be informed about probable adverse effects of the analgesics used in pain management	T	66 66.0



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Proper dosage should be administered to patients who have pain on a continual manner T	47	47.0
Pain treatment in surgical patients should start with strong pain-killers F	28	28.0
The dosage should be tailored in line with the needs of patients T	59	59.0
If Patient-controlled analgesia is to be applied, patients should be informed about the device, alarm system and usage of buttons T	59	59.0
Knowledge on Non-Pharmacological Methods		
Nurses can apply non-pharmacological methods proper for the characteristics and general condition of a patient. T	63	63.0
Nurses should do planning for the reasons that cause an increase in pain T	66	66.0
Nurses should eliminate the factors that increase pain. T	73	73.0
In case of pain the position should be frequently changed T	42	42.0
In using music in pain management, it is important to choose the type of music the patient treated likes and prefers T	38	38.0
Techniques like vibration, meditation, aromatherapy and acupuncture are non-pharmacological methods T	33	33.0
Aromatherapy relieves pain by distracting the patient or reducing the pain sensation T	36	36.0
Therapeutic touches reduce the pain by relaxing the patient T	41	41.0
Acupuncture treatment should only be used to treat headaches and pains in abdominal area F	28	28.0
Vibration is a method that can be used in acute and chronic muscle spasm pains, phantom pains and malign pains T	37	37.0

T= true, F= false

Regarding to students general knowledge on pain, (82%) know pain is an indicator of an illness, (59%) pain should be accepted as the fifth vital sign, (56%) pain is a measurable indicator, (33%) treatable pain is not a serious pain, (71%) pain has a negative effect on one's life quality, (72%) the first stage in pain management is pain assessment, (66%) it is the person herself/himself who can correctly assess the pain, (75%) during assessment, a person's self-report of pain has to be taken seriously, (62%) as pain provides clues in diagnosis and treatment of



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diseases, it should be accepted as a vital sign, (42%) visual comparison scale should be used in every patient.

Regarding to knowledge on pharmacological methods, (75%) know drugs should be used in effective dosages in pharmacological applications, (46%) in pain treatment only pharmacological methods should be used, (52%) analgesics should only be administered through the oral way, (63%) analgesics should be administered to the patients who have pain where necessary, (24%) short acting opioids should be used in patients with dull pain, (66%) patients should be informed about probable adverse effects of the analgesics used in pain management, (47%) proper dosage should be administered to patients who have pain on a continual manner, (28%) pain treatment in surgical patients should start with strong pain-killers, (59%) the dosage should be tailored in line with the needs of patients, (59%) if patient-controlled analgesia is to be applied, patients should be informed about the device, alarm system and usage of buttons.

Regarding to knowledge on non-pharmacological methods, (63%) of student know that nurses can apply non-pharmacological methods proper for the characteristics and general condition of a patient, (66%) nurses should do planning for the reasons that cause an increase in pain, (73%) nurses should eliminate the factors that increase pain, (42%) in case of pain the position should be frequently changed, (38%) in using music in pain management, it is important to choose the type of music the patient treated likes and prefers, (33%) techniques like vibration, meditation, aromatherapy and acupuncture are non-pharmacological methods, (36%) aromatherapy relieves pain by distracting the patient or reducing the pain sensation, (41%) therapeutic touches reduce the pain by relaxing the patient, (28%) acupuncture treatment should only be used to treat headaches and pains in abdominal area, (37%) vibration is a method that can be used in acute and chronic muscle spasm pains, phantom pains and malign pains.

Table (III) distribution of study sample level of knowledge

Level of knowledge	Frequency	Percent
Low (0-10)	8	8.0
Moderate (10-20)	77	77.0
High (20-30)	15	15.0
Total	100	100.0

This finding indicated that (8%) of sample has low level of knowledge, (77%) of sample has moderate level of knowledge, and (15%) of sample has high level of knowledge.

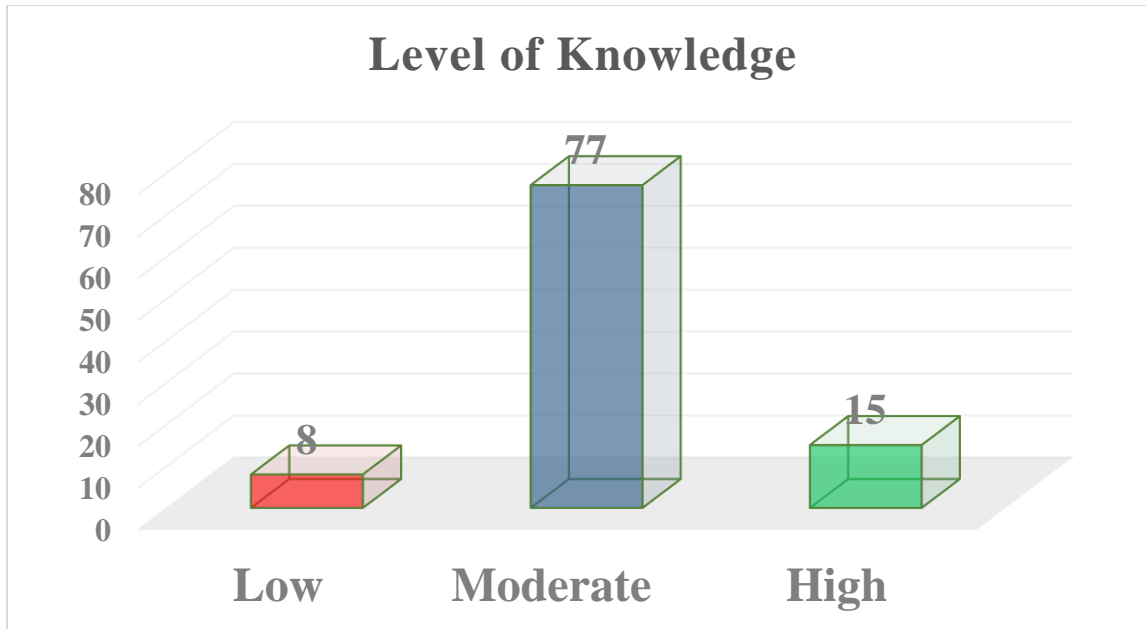


Figure (I) distribution of study sample level of knowledge

Table (IV) Knowledge Scores of Students Relating to Pain Management

Knowledge on pain management (score range)	N	M	SD	MIN	MAX
General Knowledge on Pain (0-10)	100	6.39	2.07	0	10
Knowledge on Pharmacological Methods (0-10)	100	5.34	2.1	0	10
Knowledge on Non-Pharmacological Methods (0-10)	100	4.63	2.3	0	10
Total scores (0-30)	100	16.4	4.46	0	27

Regarding the mean score for the 1st domain general knowledge on pain is (6.39), 2nd domain Knowledge on Pharmacological Methods is (5.34), 3rd domain Knowledge on Non-Pharmacological Methods is (4.63), and total score is (16.4)

Table (V) distribution of students score obtained from knowledge related pain management

Scale	Age	N	Average	SD	X ²	p
Knowledge	Less than 20	9	17	1.8	6.86	0.032*
	21-25	74	15.7	4.7		
	26-30	17	18.9	3.41		
Scale	Gender	N	Average	SD	T	p
Knowledge	Male	47	17.13	3.99	1.64	0.105
	Female	53	15.68	4.77		
Scale	Stage	N	Average	SD	t	p



The Peerian Journal

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Volume 30, May, 2024

ISSN (E): 2788-0303

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Knowledge	Third stage	42	16	3.87	0.68	0.49
	Fourth stage	58	16.6	4.86		

This table shows that there is significant statistical relationship between student age and level of knowledge at p value (0.032). while, there is no significant statistical relationship between students' knowledge regarding pain management with gender, and stage

Conclusion:

The study findings concluded that pediatric nursing students have good level of knowledge about pain management. There is difference between the mean score of pain management knowledge among pediatric students age group.

Recommendation:

It is important to follow up the pediatric students' knowledge and skills about pain management. Teach students about pain assessment tools. Also, educate them about pharmacological and non-pharmacological pain management.

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Volume 30, May, 2024

ISSN (E): 2788-0303

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