



ORIGINAL ARTICLE

Nurses' knowledge and barriers regarding post-operative pain management at teaching hospitals in Erbil city / Iraq

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Abstract

Background and aim: Pain management is an important aspect of patient care and nurses play a significant role in the acute care setting in providing pain assessment and treatment. Objective for this study was to assess nurses' knowledge and attitude regarding post-operative pain management at Erbil teaching hospitals.

Methods: A cross-sectional study was conducted on a non-probability purposive sample of (53) of post-operative nurses. The questionnaire was constructed for data collection consist of three parts; part I included socio-demographical characteristics of nurses, part II about Nurses' knowledge on post-operative pain management and part III included; barriers of pain management. Data were collected by self-reports by nurses and analyzed through the application of descriptive and inferential analysis measures (frequencies and percentages, chi-square) by using SPSS version 21.

Results: The results show that overall correct answer score of nurse's knowledge on post-operative pain management was 61.76%, and overall level of nurse's knowledge was fair with 81.1%. Nurses were had many barriers toward pain assessment and management like Lack of protocols & guidelines for pain assessment and management with 90.1% followed by nurse's workload and patients in ability to communication with 81.1%.

Conclusion: Nurses need to follow protocols & guidelines for pain management and continuous courses on pain management.

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1. Introduction

Pain management is one of the most critical aspects of patient care, and nurses have a key role in effective pain management. Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or is described in terms of such damage [1]. Effective postoperative pain control is an essential component of the care of the surgical patient. Improper management of postoperative acute pain can contribute to medical complications, be life-threatening, cause prolonged hospitalization, chronic post-surgery pain, and even be fatal [2]. Studies showed that more than three-quarters of patients report moderate, severe, or

extreme postoperative pain in the postoperative period [3-8]. Moreover, the treatment provided to patients is inadequate and inconsistent with international recommendations and standards. Postoperative pain may originate in skin or deeper somatic and visceral structures. It can be divided into nociceptive somatic (from skin, muscles, and bones), nociceptive visceral (from organs of the thoracic and abdominal cavity), and neuropathic (caused by damage to neural structures). Usually, it is a combination of several types of pain [9]. Recent studies indicated that inadequacy of pain management could be due to nurses' lack of knowledge and training regarding pain management. In addition, nurses hold negative perceptions, attitudes, and misconceptions regarding

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pain. Misconceptions include the belief that patients seek attention rather than report real pain [10]. Nurses are usually the vital care component of managing postoperative pain; they provide 24-hour care and work closest with the patients [11]. The nurse's role in the management of patients' postoperative pain includes the following assessment of the patient's pain, considering the patient's self-report of pain where possible, and utilizing a pain assessment tool (PAT) to determine the intensity of their pain; documentation of pain assessment and management; selection of the medication and route of administration as ordered by the physician; administration of fixed-schedule analgesics; administration of pro re nata (PRN) analgesics as requested by the physician; implementation of non-pharmacological interventions; regular evaluation of the effectiveness of interventions provided; and monitoring of any side effects associated with interventions [3, 5]. Assessment and management of acute postoperative pain are essential in the care of postoperative patients. Effective postoperative pain management is one of the most critical aspects of patient management after surgery. Nurses are responsible for managing pain effectively; as a result, they need the requisite knowledge and skills about pain management. When pain is not effectively managed, it brings about physical and emotional stress responses, which inhibit healing, increase the risk for other complications, and increase the length of stay in critical care [8]. In general, analgesic medications act by inhibiting ascending pain signals, either in the periphery or centrally in the spinal cord and brain, and facilitating descending inhibitory spinal pathways. This leads to decreased nociceptive transmission and interpretation of these signals as pain by higher neurological centers. Drugs with different mechanisms of action are combined to produce synergistic effects, allowing the use of lower doses, thus reducing the burden of side effects from single-drug strategies. The combinations have core components according to the type of surgery performed [12]. There are several approaches for pain management after surgery. Systemic analgesics can be used alone or in combination between them or in combination with regional techniques. The systemic analgesics commonly used are paracetamol, morphine, NSAID, ketamine, or the Coadministration of opioids and NSAID. The drug is usually administered intravenously, but other routes, such as intramuscular or subcutaneous, are acceptable, although not commonly used [3]. For effective post-operative pain management, nurses need the knowledge, skills, and attitude to select appropriate assessment strategies and interventions. This study, therefore, assesses nurses' knowledge and attitude about postoperative pain assessment and management in Erbil city / Iraq.

2. Methods

A quantitative descriptive cross-sectional study assessed nurses' Knowledge and barriers to postoperative pain management in Hawler and Rizgary teaching hospitals/Surgical wards in Erbil city / Iraq. The study sample included a non-probability purposive sample, including 53

nurses who worked in surgical wards during the data collection period from October 2021 to the end of April 2022, and 30 nurses refused to participate in this study. Data were collected through the nurse's self-report method using a constructed questionnaire based on an extensive review of relevant literature. The questionnaire consisted of three parts. The first part was sociodemographic characteristics of the nurses, which include (age, marital state, level of education, and experience in the job). The second part consisted of nurses and Knowledge about postoperative pain management based on 13. The third part included the nurses' barriers to pain assessment and management. Before data collection, formal permission was obtained from the ethical approval of the ethical committee at the College of Nursing, and official permission was obtained from the Erbil Directorate of Health. Data were analyzed through the SPSS (Statistical Package for Science Service) for Windows V.21 for statistical data analysis, including descriptive and inferential statistical analysis (frequency, percentage, overall correct answer score), calculated by the sum of percentages divided by several items. Chi-square was used to find the association between nurses' Knowledge of postoperative pain management and sociodemographic variables like age, marital status, level of education, and years of experience. The P value of each test ≤ 0.05 is considered statistically significant. Regarding Knowledge, nurses who included 15 questions scored 1 for correct and 0 for incorrect answers. Knowledge was categorized into 1-5 poor level, 6-10 fair level, and 11-15 good level.

Table 1: Sociodemographic characteristics of nurses (no.53)

Sociodemographic characteristics of nurses		F	%
Age of nurses	20_29	13	24.5%
	30_39	19	35.8%
	40_49	21	39.6%
Marital status of nurses	Single	13	24.5%
	Married	40	75.5%
Educational levels	Secondary nurse	9	17%
	Institute nurse	31	58.5%
	College nurse	13	24.5%
Years of experiences	1-10 years	23	43.4%
	11-20 years	16	30.2%
	21-30 years	14	26.4%

According to this table most of nurses (75.4%) were their age between (30-49) years, 75.5% of them were married and more than half (58.5%) of them graduated from nursing institute and (43.4%) were had from 1-10 years of experiences

Table 2: show the nurse's knowledge regarding post-operative pain management the results show that overall correct answer scores were 61.76%. The best answers were within items (15, 9, and 1) with percentages (86.8%, 83%, and 81.1% respectively) and the worse answers with items (3, 14, and 12) with percentages (9.4%, 32.1%, and 49.1% respectively).

Table 2: Nurse's knowledge on post-operative pain management

	Nurse's knowledge on post-operative pain management	No of correct answer	%
1	Vital signs are always reliable indicators of the intensity of a patient's pain. F	43	81.10%
2	Patients who can be distracted from pain usually do not have severe pain. F	30	56.60%
3	Patients may sleep in spite of severe pain. T	5	9.40%
4	Aspirin and other nonsteroidal anti-inflammatory agents are NOT effective analgesics for painful bone metastases. F	31	58.50%
5	Combining analgesics that work by different mechanisms (e.g., combining an NSAID with an opioid) may result in better pain control with fewer side effects than using a single analgesic agent. T	33	62.30%
6	The usual duration of analgesia of 1-2 mg morphine IV is 4-5 hours. F	32	60.40%
7	Opioids should not be used in patients with a history of substance abuse. F	29	54.70%
8	Elderly patients cannot tolerate opioids for pain relief. F	38	71.70%
9	Patients should be encouraged to endure as much pain as possible before using an opioid. F	44	83%
10	Patients' spiritual beliefs may lead them to think pain and suffering are necessary. T	41	77.40%
11	After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with the individual patient's response. T	40	75.50%
12	Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real. F	26	49.10%
13	If the source of the patient's pain is unknown, opioids should not be used during the pain evaluation period, as this could mask the ability to correctly diagnose the cause of pain. F	36	67.90%
14	Benzodiazepines are not effective pain relievers unless the pain is due to muscle spasm. T	17	32.10%
15	Analgesics for post-operative pain should initially be given around the clock on a fixed schedule. T	46	86.80%
Overall correct answer score		53	61.76

Table 3. Regarding barriers of nurses toward pain assessment and management, the results show that nurses had many barriers like lack of protocols & guidelines for pain management (90.6%), nurse's work load and patients in ability to communication with (81.1%)and lack of training course on pain management with (73.6%) of nurse.

Table 3: Barriers of nurses toward pain assessment and management

No	Nurse's barriers		F	%
1	Nurses workload	No	10	18.9
		Yes	43	81.1
2	Lack of protocols & guidelines for pain assessment and management	No	5	9.4
		Yes	48	90.6
3	Lack of training course on pain management	No	14	26.4
		Yes	39	73.6
4	Sedation interfering with pain assessment	No	25	45%
		Yes	28	50.40%
5	Patients in ability to communication	No	10	18.9
		Yes	43	81.1

Table 4: Over all nurse's level of knowledge on post-operative pain management

Over all nurses level of knowledge on pain management		F	%
Levels of nurses' knowledge	Fair	43	81.1
	Good	10	18.9
	Total	53	100

In this table regarding level of nurse's knowledge on post-operative pain management the results show that most of nurses (81.1%) were had fair level of knowledge on postoperative pain management while only 10% of them were had good knowledge. Table 5 revealed the results show no statistically significant relationships between levels of nurse knowledge with their sociodemographic characteristics at P.value > 0.05, while there was a statistically significant relationship between knowledge of nurses and their marital status; married nurses had better understanding than singles at p.value 0.043.

3. Conclusions and Discussion

In Erbil, even in Iraq, no previous study was done on nurses' Knowledge regarding postoperative pain management; hence, this study aims to assess nurses' Knowledge and barriers regarding postoperative pain management in Erbil. In this study, the results show that a higher percentage of nurses were their age from 40-49 years, married, had diploma in nursing, and had less than ten years of experience; this result disagrees with the result of the previous study [2], which done on Rwanda nurses which revealed that the majority of the nurses were married and had attained an advanced diploma in nursing also having working experience of more than five years. Regarding nurses' Knowledge of postoperative pain management, the current study findings revealed that (61.7%) of the overall questions were answered correctly by nurses. It may be related to the majority of nurses having diplomas in nursing. This finding is consistent with the study [7] in Ethiopia, which revealed that 56.5% of respondents had adequate Knowledge of postoperative pain management.

Table 5: Association between levels of nurse's knowledge with their sociodemographic characteristics

No.	Nurses sociodemographic characteristics		Levels of nurses knowledge		Total	P-value
			Fair	Good		
1-	Age of nurses	20_29	12	1	13	P. 0.483
		30_39	15	4	19	
		40_49	16	5	21	
	Total	43	10	53		
2-	Marital status of nurses	Single	13	0	13	P.0.043
		Married	30	10	40	
	Total	43	10	53		
3-	Educational levels	Secondary nurse	7	2	9	P.0.495
		Institute nurse	24	7	31	
		College nurse	12	1	13	
	Total	43	10	53		
4-	Years of experiences	1_10 years	19	4	23	P.0.517
		11_20 years	14	2	16	
		21_30 years	10	4	14	
	Total	43	10	53		

In the current study, 81.1% of nurses had a fair level of overall Knowledge of postoperative pain management; this is because most nurses have a medium level of education; this result, along with results of studies done in Iran [8] and in Jordan [1] which revealed that majority of nurses have moderate level of Knowledge, In addition, the current result disagree with the results of studies which done [2] in Rwanda [6] in Ethiopia they revealed that majority of nurses had good Knowledge about pain management. Furthermore, the result of the current study, not along with the studies [14] in Cairo [15] in Nigeria [10] in Jordan, mentions that the majority of the nurses (93.3% & 95%) had an unsatisfactory knowledge of postoperative pain management. Regarding nurses' barriers toward postoperative pain management in this study, the results show that nurses had many obstacles, including a lack of protocols & guidelines for pain assessment and management, nursing workload, and patient's inability to communicate. These results are supported by the results of studies [16] in Oman [14] in Cairo and [17] in Makkah Al-Mukaramah; they revealed in their research that nurses had many barriers related to postoperative pain management like nurses' workload, unwillingness of patients, patient's instability, poor documentation and communication of pain assessment and management priorities.

In the current study, there were no significant associations between nurses' Knowledge of postoperative pain management and their sociodemographic characteristics at a P-value of more than 0.05, while there was a significant association with marital status at a P-value 0.043 married nurses had better Knowledge than singles; this may be related to that majority of nurses were married, this result agrees with the result of the study that was done in Tehran [8] they mentioned that majority of nurses were married. They have a significant knowledge of postoperative pain management.

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