Research Article

Knowledge and practice of Nurses' about post operated pain management at neurosurgery department in Tertiary Care Hospital, Lahore

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Abstract

To evaluate knowledge, and practice knowledge, and practice about post operated pain management at Punjab institute of neurosciences Lahore. Descriptive cross-sectional design having convenient random sampling of 100 nurses. An adopted questionnaire from previous study was used to collect data. Descriptive statistics used to analyze percentage, Frequency, and standard deviation for all variables. The Likert scale was used for questions measurement. Majority nurses had high knowledge. (Level of knowledge was divided into high (80-100%), moderate and Low (79-70%) and below mark (70%). While had moderate practice. (Good Practice was (80-100%), Moderate practice was (70-79%) while low level of practice was below (70%). 100% of participants were female, and majority were registered nurses having diploma in nursing (69%) with less than five years' experience. Current study revealed that nurses had high level of knowledge about post operated pain management at neurosurgery whereas level of practice was moderate. Hospital administration should prominence on conduction, observe, and appraised skills requirements, and extension of professional advancements. These innovative skills will improve quality in neurosurgery pain management.

Keywords: Knowledge; Nurses Practice; Neurosurgery Post operated; Pain management

Introduction

Pain is an unpleasant sensory and emotional experience related with actual and potential tissue injury". Patients globally have acute and chronic pain due to injuries, illnesses treatment or diagnostic and therapeutic surgical procedures. Post-operative pain is harsh, troublesome, and distressing during first three days and required timely management. Neurosurgical procedures

cause significant rating of postoperative pain. Pain is severe and typically lasts for 3 days. Similar to other surgical specialties, neurosurgeons continually oppose postoperative pain management issues [1]. Numerous neurosurgical procedures like craniotomies, tumor resection, aneurysm clipping, neuro radiological procedures, and other brain surgeries can cause postoperative pain. In past neurosurgical procedures, pain

management has been unmanaged for many reasons [2].

Craniotomies pain is less than pain causing additional procedures; it is undermanaged in early stage of recovery in many patients. A research piloted by, [3] concluded that in first 24 hours, 55% patients have moderate to harsh pain after craniotomy. People gone through with brain surgeries have pain. Hypertension, distress, delayed recovery, and chronic headaches caused by this pain [4].

In assessment and management of postoperative pain, nurses' role is very crucial. Nurses devote their quality time with patients rather than other health care professionals. Ultimately in pain management nurse's role is very important. It is need to identify by nurses that they must comprehend pain pathophysiology and identify importance of pain management in recovery of patients. Assessment and reassessment of pain are components of nurses' role that are vital in pain management. Under managed post operated pain is related by insufficient staff knowledge, low pain judgment, and analgesics administration obstacles.

Studies concluded that there was little knowledge, and poor attitudes about pain assessment and management among health care providers. After literature review, it was identified that there were certainly not studies have piloted to categorize nurses' knowledge, and practice about pain management at neurosurgery specialty. This has left a huge gap in research of nurses' knowledge, and practice about pain management at neurosurgery. Research questions addressed the knowledge, and practice of nurses about post operated pain management at neurosurgery and quality of nurses 'neurosurgery postoperative pain management and quality of life of patients. Particularly present study was designed to aim to: Examine the level of nurse's

knowledge, and practices about post operated neurosurgery pain management.

Methodology

A descriptive cross-sectional study design was conducted among nurses in Punjab Institute of Neurosciences Tertiary Care Hospital Lahore. One hundred volunteers were selected from neurosciences department Lahore general hospital. Bachelor degree and diploma holder nurses were included. Nurses who were on leave, nursing assistants, and nursing students were excluded from this research.

Research instrument

Questionnaire was used as a research tool from [5]. Data collection instrument was consisted of two sections. First section of questionnaire was about demographics of participants and consisted of five (5) items about age, gender, Year of experience, educational level, and area of practice. Second section was nurse's knowledge, and practice about post operated pain management at Punjab Institute of Neurosciences, Lahore and 20 items were assessed. Knowledge subscale was had 9 items and practice had 11 items. Knowledge, and practice ranks scale was adopted from previous study of [6].

The feedback to knowledge, and practice questioning graded on Likert scale. The favorable answers labeled as higher score, and minimum favorable answers known low score. The highest achievable number for knowledge part on postoperative neurosurgery pain management was 23, though lowest number was 10. 20 to 23 points, (80-100%) were labeled high ranks of knowledge. Moderate and low ranks were from 10 to 19 points, (79%-70%), and less than 10, (70%) shown very low. Practice section contained 10 questions in arrangement of True, or False for ranking. Highest achievable score was 20, and lowest was 11. Good rank practice of 21-25 numbers, (80-100%), Moderate practice was 15 - 20,

(70-79%) though low rank of practice was less than 15, (70%). Highest achievable score was 20, and the lowest was 11. Good practice of 21–25 points, (80–100%), Moderate practice was 15 – 20, (70–79%) while low level of practice was below 15, (70%).

Data analysis

Data analyzed and prepared by statistical package for social sciences software (SPSS) version 26. Both the sections and subscales were analyzed by measuring mean, and standard deviation. Categorical data was presented in percentages and numbers. Research study outcomes were presented by using tables and graphs.

Results

Demographic data

Study questionnaire was completed and returned by 100 nurses. In (Table 1) shown that 100% females participants with mean age of 1.53 (SD .577) and range between 25 to 30 years. Mostly participants were registered nurses had a diploma in nursing (69%) with working in neurosurgery ICU, EAR, Wards, and HDU had mean scores of 40%, 23%, 20%, and 17%, respectively

and maximum nurses have work experience of ICU. (80%) nurses having working experience of less than five years. 12% of participants had a baccalaureate, 19% specialized nurses in different fields or none had higher degree level (MSN).

Nurses' knowledge regarding postoperative neurosurgery pain management

Majority (57%) nurses' had information from hospital in service training/workshop (49%). Exceptional number of nurses (46%) rated effective level of managing pain in neurosurgery. Forty five (45%) participants had satisfactory knowledge about pain assessment tools and more than half nurses (69%) had utilized international or national pain assessment tools.

Half nurses (57%) demonstrated moderate knowledge of post operated neurosurgery pain management. Greater number of nurses (87%) conveyed about support for knowledge improvement. More than half (73%) participants were reported about span of 1-2mg analgesia administration needed after 4 to 5 hours (Fig. 1).

Table 1. Frequency distribution of participants' demographics

Demographic variables	Frequency (%)	MEAN (SD)
Age:	20-25 Years 51%	1.53 (.577)
	26-30 45%	
	31-35 4%	
Gender:	Females 100%	2.00(.000)
Year of Experience:	0-5 Years 80%	1.24(1.24)
	6-10 16%	
	11-15 4%	
Educational Level:	Diploma 69%	1.43(.7)
	Specialty 19%	
	BSN 12%	
Area of Practice:	ICU 40%	2.14(1.128)
	ER 23%	
	Ward 20%	
	HDU 17%

Figure 1. Frequency distribution of participant's knowledge about neurosurgery pain management

Nurses' Practice regarding postoperative neurosurgery pain management

The result of (Fig. 2) shows that majority (95%) participants conveyed inaccurately that change in vital signs always indicate pain intensity. (51%) nurses were reported falsely that severe pain could be distracted. Mostly (63%) nurses wrongly stated that pain sufferer can sleep comfortably in harsh pain. Greater number (77%) truly reported that stable dose of opioids cause respiratory distress. Majority (81%) corrected reported about the combination use of opioids and other analgesics effective rather than used separately.

However (56%) nurses accurately stated that opioids should not be administered to addict. (51%) participants accurately answered that opioids cannot tolerate by older. (65%) respondents correctly expressed that before administering opioids, patients encourage to

bear pain. Majority (81%) participants correctly answered that further doses of opioids must be regulate on sufferer's response. (78%) nurses correctly answered that throughout opioids administration, sedation assessment tool required.

Participants' Ranks of knowledge and practice regarding postoperative neurosurgery pain management

Total score of Minimum, and maximum were (10- 23) on the knowledge section with mean score of 14.0, (SD = 2.50). Greater number of nurses had high knowledge of postoperative neurosurgery pain management.

Respectively practice, total score of minimum, and maximum (11- 20) on the practice section were with mean score of 14.6, (SD = 1.58). Nurses had moderate practice of post operated neurosurgery pain management (Table 2).

Figure 2. Frequency distribution of participants practice about neurosurgery pain management

Table 2. Level of knowledge and practice about Neurosurgery pain management

Level of Score	Minimum/Maximum	MEAN (SD)
Level of knowledge		
High Level 20 to 23 (80-100%)	10- 23	14.0 (SD=2.50)
Moderate /low levels 10 to 19 (79–70%)		
Low mark 10 (70%)		
Level of Practice		
Good score practice 21–25 (80–100%)	11-20	14.6 (SD=1.58)
Moderate practice 15 to 20 (70–79%)		
Low level of practice below 15 (70%)		

Discussion

Results of this study shows that nurses of Punjab Institute of Neurosciences, Lahore through self-report, have moderate knowledge regarding postoperative pain management in neurosurgery as this confirms the findings of current study similar to previous research of passing score for nurses

Knowledge, attitude survey was persuaded before as 80%, which indicate high knowledge, and attitude of nurses about post operated pain management [7]. But in this study nurses demonstrate only 57% knowledge.

Factors such as graduation year and work place had a suggestive effect on nurse's

knowledge levels. Nurses' age and knowledge about nonpharmacological pain management were substantial only in some extents of knowledge and practice. Results of this study revealed that age was an important factor; however its effect was not consistent. Hamers *et al.* [8] study emphasized that nurse's age to be an important factor.

It was observed that knowledge and practice had not associated with year of nursing experience. In this study majority (80%) nurses had less than five years work experience. This results was opposite of study of Lui *et al.* [9].

Education was a more substantial factor and makes a difference. Specialized nurses in different subjects knew additional nonpharmacological pain management than diploma nurses and got the lowest ranks in knowledge of pain management. Similar results findings were seen in a study conducted by [10]. Only 12% nurses had BSN degree but their knowledge and practice were better.

Three fourths (77%) respondents wrongly answered that opioids caused respiratory distress. The U.S. federal clinical practice guidelines indicate that prolonged opioids treatment especially oral morphine administration does not cause respiratory distress [11].

Utilization of international and national recognized pain assessment tools by nurses in neurosurgery department was reported in a high number. These results were contradicted to a research where limited nurses utilize a fore mentioned tools [12].

Majority 95% of nurses inaccurately believed that changes in vital signs always indicate pain intensity. [13] Verified that variations in vital signs might not be caused by pain. Additionally, mostly nurses wrongly reported such sufferers can sleep and distracted in severe pain. These finding also similar to other study in which nurses confidently

answered that patients are not able to sleep or distracted with severe pain [14].

Conclusion

Study findings shown, that best part of nurses' participants had a good knowledge, and moderate practice about post operated neurosurgery pain management regardless of any formal trainings, or workshops. Age, gender, educational level, Year of Experience, and area of practice were significantly connected with nurses' knowledge, and practice at neurosurgery department of Tertiary Care Hospital in Lahore. Postoperative pain management. Age, educational level, and experience are related factors with practice. Many limitations during this study need compelling into description. Sample of 100 nurses may be considered to be small. However, all nurses employed in selected Neurosurgery Department of Tertiary Care Hospital in Lahore were included in this study. Consequently, results cannot be generalized. Accurate measurement of level of knowledge might have been determined by knowledge experiment, and practice level with observance checklist, respectively. Though, practice questions were converted from attitude questions. Tools used in this study have not been given accurate measurement of practice regarding post operated neurosurgery pain management. It was need to evaluate quality of nurses' assessment, attitude, and documentations towards post-operative pain management at neurosurgery.

Authors' contributions

Designed the idea, data collection & Paper writing: H Pervaiz, Analysis data and critical review and correction: N Yousef.

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