

Knowledge and Attitudes of Pediatric Nurses Regarding Pain Management in Palestinian Hospitals in West Bank

Ahmad Bajjali

Al Quds University, Palestine

*Corresponding author

Ahmad Bajjali, Al Quds University, Palestine, E-mail: ahmad_bajjali@hotmail.com

Submitted: 20 Aug 2018; Accepted: 28 Aug 2018; Published: 10 Jan 2019

Introduction

Pain is one of the most stressful situations that every child will experience in some point, it is often described as the most distressing part of the hospital stay, whether it is from common bumps and bruises, or because of more chronic conditions such as gastrointestinal issues, headaches, or diabetes [1]. Further pain prevalence studies done thereafter, have reported similar prevalence rates ranging between 20% and 27% [2]. Nursing staff spend more time with patients in pain than any other health care providers. In most hospital settings, nurses are the first health personnel approached by admitted patients requiring assistance. Moreover many painful procedures are routinely performed by nursing staff. So nurses need to get appropriate knowledge about pain to understand, assess, evaluate, and do best intervention to relieve pediatric pain. Under-treated chronic pain can limit daily activities, increase disability, negatively affect the quality of life, create suffering, cause anxiety, depression, anger, fear, and increase the risk for suicide. A previous study reported that children with poorly managed pain may have longer stays in hospital, higher readmission rates, more frequent outpatient visits, delayed healing of wounds, and altered immune functions [3]. Unfortunately, health professionals, including nurses, have historically underestimated the existence of pain in children; therefore, pain management has often been less than optimal [4]. The role of the nurse in pain management includes the entire nursing process. The nurse do assessment for presence of pain, makes plan of pharmacological and non-pharmacological pain management strategies with the medical team, implements the plan, and evaluates the effectiveness of the interventions. Many factors have been identified that influence effective pain management such as lack of knowledge and attitudes on the side of health care providers. In addition to inaccurate, insufficient, and poor nurses' knowledge and attitudes in assessing and managing children's pain. The aim of the present study was to assess the level of knowledge and attitudes regarding pain management of nurses working at pediatric units in West Bank.

Method

Descriptive, quantitative cross sectional study was performed at 14 hospitals among 256 nurses who work in general pediatric wards. It was performed to explore the level of nurse's knowledge and attitudes related to pain management of children in West Bank.

Instrument

Data were collected using a questionnaire; Pediatric Nurses Knowledge and Attitudes Survey Regarding Pain (PNKAS). The PNKAS is a self-administered questionnaire that includes 2 parts: demographic data of participants such as age, sex, experience years, educational background, membership in medical organizations. Second part: 17 multiple choice, 25 true and false questions. Questions aim to measure knowledge and attitudes of pediatric nurses in pain assessment and management, pharmacologic and non-pharmacologic interventions.

Analysis

Data were analyzed by using the Statistical Package for Social Sciences (SPSS) software version 22. Frequencies, percentages, means, and standard deviations were used to describe the nurses' demographic characteristics. Nurses' knowledge and attitudes about pain management data were analyzed and presented in terms of frequencies, percentages, means, standard deviations, and minimum and maximum scores t test, and one way ANOVA.

Results

Results Of 320 sample size, 256 nurses participated in this study with 80% respond rate. As shown in the following tables, 67.6% were female, and 32.4% were male. The majority of participants' age 52.7% were between age group 20-24 years, and 0.4% was between age group of 35-39 years. Most participants had bachelor's degrees 67.2%, 26.2% had diploma's degrees, and 6.2% had master's degrees, and 0.4% had PhD. Additionally, majority of respondents 48% had 1-5 years of pediatric experience, and 37.1% with 5-10 years of experience in pediatrics. Around 49.4% of nurses reported that there is no pediatric pain management protocols in their hospitals, however 35.9% answered with yes, and 4.7% they were not sure about pediatric pain protocols. About 62.5% of nurses stated that there is no pain management committee in their hospitals, while 26.2% stated that there is a pain management committee, and 11.3% they don't know.

According to PNKAS results, the majority of participants (83%) had less than 60% of correct answers, while (15%) of nurses their scores were between 60-79%, however only (2%) of nurses passed with a score of 80% or greater in PNKAS scores.

Nurses were asked to answer 25 true/false, and 17 multiple choice questions which were categorized in 3 subscales as the following: pharmacologic related questions, pain assessment and management questions, and non-pharmacologic related questions. It was found that total mean score of nurses' knowledge and attitudes regarding pediatric pain management was $M = 50.4\%$, lowest score was 25% , and highest score 84.8% . Since mean score was 50.4% , and it's lower than 60% , This means that nurses' knowledge and attitudes level was low. One-way ANOVAs, t-test were conducted to test relationships between 3 subscales of questionnaire and demographic, professional variables (i.e, gender, age, education, experience, presence of pain management protocols and committees). However, no significant relationship was found.

Top ten questions that answered incorrectly were analyzed to determine the areas that the nurses answered incorrectly, as the following table:

No	Questions most frequently answered incorrectly	Frequency	Percentage
38	Narcotic/opioid addiction is defined as psychological dependence accompanied by overwhelming concern with obtaining and using narcotics for psychic effect, not for medical reasons. How likely is opioid addiction will occur if treating pain with opioids?	252	98.4
31	A child with chronic cancer pain has been receiving daily opioid analgesics for 2 months. The doses increased during this time period. Yesterday the child was receiving morphine 20 mg/hour intravenously	243	94.9
37	What do you think is the percentage of patients who over report the amount of pain they have? Circle the correct answer	233	91
26	The recommended route of administration of opioid analgesics to children with continuous persistent pain is	218	85.2
34	Which of the following drugs are useful for treatment of pain in children?	179	69.9
2	Because of an underdeveloped neurological system, nurses assume that children under 2 years of age have decreased pain sensitivity and limited memory of painful experiences	169	66
33	The most likely explanation for why a child/ adolescent with pain would request increased doses of pain medication is	148	57.8
39B	Your assessment is made two hours after he received morphine 2 mg IV. After he received the morphine, his pain ratings every half hour ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. Check the action you will take at this time.	146	57
25	In order to be effective, heat and cold should be applied directly to the painful area.	145	56.6
5	Comparable stimuli in different people produce the same intensity of pain.	143	55.9

Discussion

Effective pain management for children requires adequate knowledge, appropriate attitudes, and assessment skills. According to results taken from the survey, gender, age, years of pediatric nursing experience, and education level of the nurses didn't affect their knowledge and attitudes about pain management. These results have some similarities with the results taken from other research, Manworren (2000). Another study in Finland in 2007 found that nurses demographic variables such as gender, education, and age do not affect their knowledge and attitudes level significantly. However it founds that as experience increases, knowledge and attitudes about pain management improve as well. Stanley & Pollard, (2013) found years of pediatric experience in pediatric nursing to have a positive relationship to level of knowledge and high PNKAS scores among nurses.

Most of the nurses answered the questions about pharmacology and addiction incorrectly. For example, in this study 98.4% of nurses had misconception about incidence of opioid addiction, 94.9% of them also had knowledge deficit about incidence of respiratory depression in opioids by 85.2% of nurses. The majority of surveys show that nurses had insufficient knowledge about pharmacologic interventions in pain management. Vincent (2005) found that in the assessment of children's pain, nurses knowledge deficits about analgesic drugs. Ellis et al. (2007) stated that nurses have limited knowledge about analgesic drugs. Tiernan (2008) stated that Irish nurses have pharmacologic knowledge deficits [5]. In our study showed that 91% of nurses believe that children over-report their pain, in addition 66% of nurses incorrectly think that due to an underdeveloped neurological system, children under 2 years of age have decreased pain sensitivity and limited memory of painful experiences. This consistent to Vincent study in 2005 which was about nurses' knowledge, attitudes, and practice regarding children's pain. According to the study, nurses believe that about 20% of children over-report their pain, and nurses believed that children had no memory of pain perception due to the immature development of the nervous system. However James et al. (2002) found that less than 10% of children may over-report when they are in pain. About 76.2% of participants in our study answered incorrectly the question about the most accurate judge of the intensity of the child's/ adolescent's pain, which is considered a major area of negative attitude related to patient self-report. Similar findings was identified that when nurses were thinking about assessing children's pain, 35% did not include self-report in their cognitive representations, and 20% did not consider the child's behavior [2]. In addition mixed methods exploratory study was conducted to describe pediatric nurses' cognitive representations of the assessment and management of children's pain, it showed that nurses endorsed behavior more frequently than self-report for assessment of children's pain. Also nurses often relied on the child's behavior to judge pain intensity and to administer morphine. Moreover, Mathew and Singhi conducted study in India to assess knowledge, attitudes, and practice for critical care pediatric nurses toward pain, study found the absence of any objective scoring systems in use to assess pain in children [6]. This may possibly be due to the lack of awareness of such scoring systems, and importance of self-report assessment which is considered a golden standard for pain assessment, lack of time and increased nurse patient ratio are also another factors that affect implementation of scoring systems. Around 71.9% of nurses answered correctly about non pharmacologic interventions, such as the question that said "Non-drug interventions (e.g. heat, music, imagery, etc.) are very

effective for mild-moderate pain control but are rarely helpful for more severe pain". Some studies found that most of the time nurses routinely use pharmacological interventions in relieving children's pain rather than non-pharmacological interventions. Other studies have examined the types of non-pharmacological approaches used by children and their parents and have found that distraction is a method that is commonly used such as watching television, playing and reading or talking with their parents [7]. Health care systems also can be a barriers to adequate pain management through lack of pain assessment instruments, equipment for treatment, no designed areas for charting pain, lack of institutional policies for pain assessment, and lack of pain management guidelines [8]. The existing curriculum in nursing education is another important factor that contributes to preparing nurses in providing care for optimal pain relief in their practice. The key areas of deficiency described above are likely to be attributable to the insufficient teaching on pain assessment and management in our educational institutions. Pain may be an neglected topic in our nursing schools. It is important to note that good pain management is predicated on attitudes developed through sound knowledge of pain and its treatment. Lack of proper understanding of important concepts of pediatric pain management as described above, leads to under treatment of pain in children, ultimately impacting the quality of care given to the patient. According to the literature, nurses still have knowledge deficits in pain management especially concerning post-operative pain care. The deficient areas of nurses' knowledge and attitudes include pain assessment, pharmacological and non-pharmacological pain management [9-11].

Conclusion

The findings showed that pediatric nurses in Palestine still have insufficient knowledge and improper attitudes that may influence effective pain management. Educational programs, continuous training may be beneficial related to this issue.

Recommendations

Construct and implement several strategies to enhance nurses' understanding and application of relevant knowledge and practice by educational programs, continuous training in clinical field. Moreover nursing faculties should examine the content of nursing courses for depth, accuracy, and relevance of pain assessment and management information that reflect current standards of practice.

In addition developing an integrated approach to teach students about pain management and providing students with the opportunity to take successive pain courses and implement reflective learning intervention.

References

1. Turk DC, Dworkin RH (2004) What should be the core outcomes in chronic pain clinical trials? *Arthritis Res Ther* 6: 151-154.
2. Taylor EM, Boyer K, Campbell FA (2008) Pain in hospitalized children: A prospective cross-sectional survey of pain prevalence, intensity, assessment and management in a Canadian pediatric teaching hospital. *Pain Res Manag* 13: 25-32.
3. Smart S, Cottrell D (2005) Going to the doctors: the views of mothers of children with recurrent abdominal pain. *Child Care Health Dev* 31: 265-273.
4. Wells N, Pasero C, McCaffery M (2008) Improving the Quality of Care Through Pain Assessment and Management.
5. Tiernan EP (2008) A survey of registered nurses's knowledge and attitudes regarding pediatric pain assessment and management: an Irish perspective. *Arch Dis Child* 93: 18.
6. Mathew P, Mathew J, Singhi S (2011) Knowledge, attitude and practice of pediatric critical care nurses towards pain: Survey in a developing country setting. *J Postgrad Med* 57: 196-200.
7. Idvall E, Holm C, Runeson I (2005) Pain experiences and non-pharmacological strategies for pain management after tonsillectomy: a qualitative interview study of children and parents. *J Child Health Care* 9: 196-207.
8. Miftah R, Tilahun W, Fantahun A, Adulkadir S, Gebrekirstos K (2017) Knowledge and factors associated with pain management for hospitalized children among nurses working in public hospitals in Mekelle City, North Ethiopia: cross sectional study. *BMC Res Notes* 10.
9. Van Hulle Vincent C (2005) Nurses' knowledge, attitudes, and practices: regarding children's pain. *MCN Am J Matern Child Nurs* 30: 177-183.
10. McCaffery M, Ferrell BR (1997) Nurses' knowledge of pain assessment and management: how much progress have we made? *J Pain Symptom Manage* 14: 175-188.
11. Yates P, Edwards H, Nash R, Walsh A, Fentiman J, (2002) Barriers to Effective Cancer Pain Management: A Survey of Hospitalized Cancer Patients in Australia.

Copyright: ©2019 Ahmad Bajjali. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.