ความรู้ ทัศนคติ และการปฏิบัติพยาบาลที่เกี่ยวข้องกับการจัดการอาการปวดหลังผ่าตัด ในเมืองเคบูเมน ประเทศอินโดนีเซีย*

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บทคัดย่อ

การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อการอธิบายองค์ความรู้และทัศนคติด้านพยาบาลศาสตร์ในการปฏิบัติการรักษาความเจ็บปวดหลังศัลยกรรมในเขตเมืองเคบูเมน ประเทศอินโดนีเซีย เป็นการวิจัยแบบสำรวจเชิงพรรณนา โดยมีการศึกษากลุ่มประชากรที่เป็นพยาบาลวิชาชีพในแผนกผู้ป่วยหลังศัลยกรรม 5 โรงพยาบาล ทั้งหมด 65 คน และสามารถเก็บแบบสอบถามได้ทั้งหมด 63 กรณี มีการพัฒนาเครื่องมือการวิจัยโดยผู้เชี่ยวชาญ 5 ท่าน ระยะเวลาในการเก็บข้อมูการวิจัยตั้งแต่วันที่ 15 ตุลาคม ถึง 15 พฤศจิกายน พ.ศ. 2558 โดยใช้ SPSS ใน การวิเคราะห์ความสัมพันธ์ระหว่างตัวแปรโดยใช้สัมประสิทธิ์สหสัมพันธ์ของสเปียร์แมน

ผลการศึกษาพบว่า องค์ความรู้ของพยาบาลวิชาชีพด้านพยาบาลศาสตร์เกี่ยวกับการปฏิบัติการรักษาความเจ็บปวดหลังศัลยกรรมอยู่ในระดับสูงถึงร้อยละ 42 ในขณะที่ทัศนคติและการปฏิบัติต่อการรักษาประเภทนี้อยู่ที่ระดับปานกลาง ร้อยละ 96.8 และ 66.7 ตามลำดับ องค์ความรู้มีความสัมพันธ์กับการปฏิบัติอย่างมีนัยสำคัญทางสถิติ (r_s = 0.626, p ‹ 0.01) ถึงแม้ว่า องค์ความรู้ของพยาบาลวิชาชีพจะอยู่ในระดับที่สูง แต่การศึกษาในบางกรณีค้นพบว่า ยังมีความคลาดเคลื่อนต่อการประเมินความเจ็บปวดของผู้ป่วยในเชิงการเปลี่ยนแปลงทางพฤติกรรมและทางจิตวิทยา ดังนั้น พยาบาลวิชาชีพจึงมีความต้องการเพิ่มพูนองค์ความรู้และทัศนคติด้านการพยาบาลในการปฏิบัติการรักษาความเจ็บปวดหลังศัลยกรรมเพื่อที่จะดูแลผู้ป่วยอย่างมีประสิทธิภาพและความแม่นยำมากขึ้น

Knowledge, Attitudes, and Nursing Practice Regarding Postoperative Pain Management in Kebumen, Indonesia

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Abstract

The objective of this study was to describe nurses' knowledge and attitudes regarding postoperative pain management in Kebumen, Indonesia. A descriptive survey design was used in this study. The sample consisted of 65 bachelor nurses who were working in the postoperative wards of five hospitals; however, only 63 nurses returned the questionnaires. The instruments used in this study were developed by the researcher and were determined for their reliabilities by five experts. The data were collected from October to November 2015. The Statistical Package for Social Sciences (SPSS) program was used to analyze the data and Spearman's correlation was used to determine the correlations between variables.

From the results of this study, it was showed that about half of the subjects (49.2%) had a high level of knowledge regarding postoperative pain management. Most of the subjects (96.8% and 66.7%) had a moderate level of attitudes and practice (regarding postoperative pain management at the moderate level and respectively. There was significantly between knowledge with practice (r_s = 0.626, p < 0.01). Despite the majority of nurses' knowledge in high level, but in some statements they showed they were still wrong about patients may sleep in spite of severe pain and pain assessment is based on the patient's behavior and physiological changes only. Nurses need to update their knowledge, attitude about postoperative pain management in order to accurate and effective when they give nursing care to postoperative patients.

Keywords: Nurses' knowledge and attitudes, pain management practice, postoperative pain.

Introduction

Surgery is always associated with incisions which can cause adverse effects, such as pain, complaint and discomfort.[1] The surgical process requires preoperative, intraoperative and postoperative care.[2] Pain is defined as "an unpleasant sensory and emotional experience associated with actual and potential tissue damage".[3] Likewise, pain is also defined as "Whatever the experiencing person says it is, existing whenever he/she says it does".[4] Pain is a common problem currently felt by hospitalized patients with operative procedure. Generally, pain can be experienced by the patients after they were placed in the ward[5], especially the patients who have tissue trauma.[6] It is a reason why the patients seek help from health care providers.

Unrelieved pain after surgery can affect both physiological and psychological aspects of the patient. Physical pain can result in impaired respiration, disturbances in sleep and appetite, immobility[7], and delayed wound healing[8], whereas psychological pain is associated with anxiety, depression, and hostility.[9] Effective management of postoperative pain is important to avoid adverse effects and it is a duty of healthcare providers. Although new techniques and guidelines have been growing to advance sufficient pain management, a lot of patients still endure pain.[10, 11]

To increase the quality of care and effective pain relief, nurses must have knowledge, attitudes, and practice regarding postoperative pain management including assessment, intervention, and evaluation of pain.[12] As one of the professionals in multidisciplinary team, nurses play a significant role in managing pain and must have adequate knowledge on how to assess pain, implement interventions, and evaluate the outcomes.[13, 14]

The researcher conducted a pilot study on August 10th to October 11th, 2014 at one of the hospitals in Purwokerto district which the researcher obtained a phenomenon related to nursing practice in the postoperative ward. Nurses still believed that measuring vital signs like blood pressure and pulse was an accurate way to determine the level of pain in postoperative patients. They also believed that patient's facial expression can be used to assess pain. Nurses did not believe in the patients' reports about pain because they thought that the patients were spoiled and needed attentions from nurses.

Based on some of the above phenomena, the researcher was interested in conducting a study to explore nurses' knowledge, attitudes, and practice regarding postoperative pain management. The findings of this study can provide information for further rectification in the pain area.

Objectives

1. To describe the level of nurses' knowledge, attitudes, and practices regarding postoperative pain management in Kebumen, Indonesia.
2. To examine the correlations between selected demographic variables, nurses' knowledge, attitudes and practices regarding postoperative pain management in Kebumen, Indonesia.

Research Methodology

A descriptive cross-sectional design was used in this study. Data were collected from five hospitals located in Kebumen district, Central Java, Indonesia, including Kebumen Hospital, Purbowangi Hospital, Muhammadiyah Gombong Hospital, Muhammadiyah Sruweng Hospital, and Permata Medika Hospital. The study was conducted from October to November, 2015. Sixty-three bachelor nurses who were working in postoperative wards of five hospitals participated in this study. Inclusion criteria for selecting the subjects were: 1) being willing to participate in the study, 2) having at least 6-month experiences in caring for surgical patients, and 3) having a bachelor degree in nursing. Nurses who were off duty, on a vacation, or in a training program were excluded.

Instruments used in this study consisted of a demographic data form, a questionnaire on nurses' knowledge regarding postoperative pain management, a questionnaire on nurses' attitudes toward pain management, and a questionnaire on nurses' practice in pain management. A demographic data form was used to obtain the information about nurses' characteristics, including gender, age, race, religion, experiences in a surgical ward, experiences in their own pain, and experiences in training related to pain management. A questionnaire on nurses' knowledge regarding postoperative pain management consists of nurses' principles of pain assessment, nursing interventions (pharmacological and non-pharmacological) and a standard of care for postoperative pain. This instrument comprises of 15 items with true and false options.

The total score ranges from 0 to 15. A score ranging from 0-7 (<50%) is rated as a low level, from 8-11 (75%) is rated as a moderate level, and from 12-15 (>75%) is rated as a high level. A higher score indicates a higher level of knowledge. Cronbach's alpha coefficient of this instrument is .87.

A questionnaire on nurses' attitudes toward pain management was modified by the researcher after getting an approval from the original developer.[15] This questionnaire consists of 21 items with a 4-point Likert scale. A higher score indicates a higher level of attitudes. A total score ranges from 21 to 84. Cronbach's alpha coefficient was .77.

A questionnaire on nurses' practice in pain management was developed by the researcher and used to assess nurses' performance related to pain assessment, interventions, and evaluation of the outcomes. This instrument comprises of 17 items with true and false options. The highest score is 17 and the lowest score is 0. A score ranging from 0-7 (<50%) is rated as a low level, from 8-13 (75%) is rated as a moderate level, and from 14-17 (>75%) is rated as a high level. Cronbach's alpha coefficient was .81.

Ethical Consideration: Prior to data collection, the study was approved by the Institutional Review Board (IRB) of Khon Kaen University, Thailand.

Data Collection Procedure

After getting an ethical approval from the Institutional Review Board of Khon Kaen University, the researcher sent a letter to Kebumen district research department to get a permission to conduct the data collection. After that, the researcher sent official letters to the directors of five hospitals, met the head of nursing department of each hospital, and met the head nurse of each postoperative ward to explain the purpose of the study. Then, the researcher met potential subjects and asked them to participate in the study. The purpose of the study, benefits of study, the procedure for the subject to participate in the study, and the subject's rights were described to the potential subjects prior to getting an informed consent. The subjects were asked to fill in a demographic data form and three questionnaires as mentioned above

Data Analysis

Descriptive data were analyzed by frequency, percentage, mean, and standard deviation distribution and correlations among variables were analyzed by Spearman's correlation analysis. The Statistical Package for Social Science (SPSS) program version 21.0 was used to analyze the data.

Results

For the sample's characteristics, most of the nurses were female (65.1%), aged between 23 and 30 years old (74.6%) with mean age of 26.45 ± 2.04, had one year of working experience (60.3%), and had their own experience of abdominal pain (68.3%). All of the nurses were Muslim and Javanese.

Regarding nurses' knowledge of postoperative pain management, nurses gave their responses for 15 statements which covered main domains, such as pain assessment, pharmacological and non-pharmacological interventions for relieving pain, and standard of care for pain. The statements which are most responded by nurses (98.4%) are "A pain-rating scale (such as a 0-10 scale) is appropriate for patients to use to identify their pain" and 'Pain stimuli in different patients result in different pain intensity". Only (9.5%) of the nurses stated that, "Patients may sleep even though they have severe pain". Table 1 presents nurses' knowledge of postoperative pain management.

Table 1 Nurses' knowledge of postoperative pain management (n = 63)

	Statements	Frequency	Percentage
2.	A pain- rating scale (such as a 0-10 scale) is appropriate for patients to use to identify their pain.	62	98.4
8.	Pain stimuli in different patients result in different pain intensity.	62	98.4
11.	The administrations of paracetamol or anti-inflammatory medication with opioid analgesia result in effective pain relief.	55	87.3
12.	The most common side effect of morphine is respiratory depression.	55	87.3
1.	The most accuracy of pain intensity is from the patient himself/herself.	52	82.5
3.	A patient's pain should be assessed at rest and during movement	52	82.5
6.	Patients who can be distracted from pain usually do not have severe pain.	52	82.5

	Statements	Frequency	Percentage
13.	Elderly patients cannot tolerate opioids for pain relief.	52	82.5
5.	Changes in vital signs and/or behaviors of the patient can be used to confirm his/her statement of pain.	50	79.4
15.	The most reason that a patient with pain requested more doses of opioid analgesia is related to drug addiction.	49	77.8
10.	Patients with a history of substance abuse should not be given opioids (e.g. morphine) for pain relief.	46	73.0
9.	Based on spiritual beliefs, a patient may think that pain and suffering is necessary.	45	71.4
14.	Administering a sterile saline injection (placebo) is a useful test to determine if the pain is real.	33	52.4
4.	Pain assessment is based on the patient's behaviors and physiological changes only.	31	49.2
7.	Patients may sleep even though they have severe pain.	6	9.5

For nurses' attitudes toward postoperative pain management, four statements were in a high level; whereas, fifteen statements were in a moderate level and two statements were in a low level. The statement that showed the highest level is that, "Distraction and diversion of patient's attentions (e.g. use of music and relaxation) can decrease the perception of pain (Mean = 3.08, SD = .517); whereas "A patient should experience discomfort prior to getting the next dose of pain relieving medication" was a statement that showed the lowest level (Mean = 1.86, SD = .737). For the frequency and percentage for each statement on 4-point Likert scale (from 1 = strongly disagree to 4 = strongly agree), the highest mean score was on the statement number 17 which 77.8% of nurses had agreed on. On the other hand, the lowest mean score was on the statement number 2 which 63.5% of nurses had agreed on. The results of nurses' attitudes toward postoperative pain management are presented in Table 2.

Table 2 Nurses' attitudes toward postoperative pain management (n = 63)

	Statements	Mean	SD	Level
17.	Distraction and diversion of patient's attentions (e.g. use of music and relaxation) can decrease the perception of pain.	3.08	.517	High
3.	Continuous assessments of pain and medication effectiveness are necessary for good pain management.	3.03	.671	High
4.	Patients and/or family members have the right to expect total pain relief as a goal of treatment.	3.03	.567	High
14.	Patients should be maintained in a pain-free state.	3.03	.567	High
16.	If a patient continues having pain after receiving pain relieving medication(s), the nurse should contact a physician.	2.94	.644	Moderate
13.	Patients having severe and chronic pain need higher dosages of pain relieving medications, compared to those used for acute pain.	2.89	.650	Moderate
18.	A constant level of analgesics should be maintained in the blood to control pain effectively.	2.83	.555	Moderate
7.	Estimation of pain by physicians or nurses is more valid than patients' self-report.	2.73	.787	Moderate
11.	Patients with chronic pain should receive pain relieving medications at regular intervals with or without the presence of discomfort.	2.73	.700	Moderate
9.	Patients can be maintained in a pain free state.	2.68	.839	Moderate
15.	Lack of pain expression does not necessarily mean lack of pain.	2.68	.737	Moderate
6.	Patients receiving opioids on a prn basis are more likely to develop clock-watching behaviors.	2.68	.668	Moderate
1.	Giving opioids on a regular schedule is preferred over a prn schedule for continuous pain.	2.63	.747	Moderate
5.	Patients and/or family members may hesitate to ask for pain relieving medications due to their fears about the use of opioids.	2.44	.690	Moderate
19.	Increasing analgesic requirements and physical symptoms are signs of patient's addiction to narcotic drugs.	2.44	.642	Moderate

	Statements	Mean	SD	Level
8.	Patients in pain can tolerate high doses of opioids without sedation or respiratory depression.	2.38	.682	Moderate
20.	The nurse can make a more accurate assessment of the patient's pain than the patient and/or family.	2.17	.750	Moderate
10.	If a patient and/or family member reports pain relief and euphoria, the patient should be given a lower dose of analgesics.	2.16	.677	Moderate
21.	Cutaneous stimulations (e.g. heat, massage, ice) are only effective for mild pain.	2.08	.630	Moderate
12.	Patients receiving around the clock opioids are at risk for sedation and respiratory depression.	1.97	.507	Low
2.	A patient should experience discomfort prior to getting the next dose of pain relieving medication.	1.86	.737	Low

In regard to nurses' practice on postoperative pain management, it was shown that giving prescribed pain drug to patients on a fixed schedule, such as every 4 hours or every 6 hours during 24-48 hours after surgery was the action that was highly conducted by nurses (93.7%). The action that was least conducted by nurses was evaluating psychological, social and cultural background among patients with pain in their daily clinical work (19.0%). Nurses' practice on postoperative pain management was shown in Table 3.

Table 3 Nurses' practice on postoperative pain management (n= 63).

	Actions	Number	Percentage
11.	You gave prescribed pain drug to patients on patients on a fixed schedule, such as every 4 hours or every 6 hours during 24 – 48 hours after surgery	59	93.7
13.	You helped patients to position comfortably after surgery	58	92.1
2.	Do you assess pain intensity among patients with pain in your daily clinical work?	56	88.9
4.	Do you evaluate site of pain among patients with pain in your daily clinical work?	56	88.9
8.	Do you screen for pain upon admission?	54	85.7
15.	You helped patients to ambulance such as sitting up from lying down, sitting with the leg hanging at the side of bed, or standing up	54	85.7
16.	You helped/ suggested your patients to support the pain area when they moved or cough	53	84.1
3.	Do you evaluate pain quality (for instance: burning, shooting, etc.) among patients with pain in your daily clinical work?	52	82.5
9.	Do you perform pain reassessment after injection of analgesics?	52	82.5
10.	Do you record your pain assessments?	51	81.0
17.	You demonstrated about non-pharmacological interventions for pain management to postoperative patient	50	79.4
5.	Do you evaluate pain onset and course of pain among patients with pain in your daily clinical work?	46	73.0
14.	You helped patients to have enough sleep after surgery	45	71.4
7.	Do you evaluate effect of pain (on function) among patients with pain in your daily clinical work?	41	65.1
1.	Do you used a standard pain assessment tool?	34	54.0
12.	You gave patients pain drug as necessary (prn)	22	34.9
6.	Do you evaluate psychological, social and cultural background among patients with pain in your daily clinical work?	12	19.0

The Spearman's correlation analysis was used to assess the correlations among the selected demographic variables, knowledge, attitudes, and practices. Age had a significantly positive correlation with duration of working experience (r_s =.629, $p < 0.01$). Duration of working experience had a significantly negative correlation with types of pain (r_s = .226, $p < 0.05$). Knowledge had a significantly positive correlation with practices (r_s = .626, $p < 0.01$). The correlations among variables are shown in Table 4.

Table 4 Correlations among variables

Variables	Gender	Age	Duration of working experience	Types of pain	Pain management Training	Knowledge	Attitudes	Practice
1. Gender	1.000	-.044	-.113	.184	-.165	.077	.133	.107
2. Age		1.000	.629**	-.091	.165	.160	-.105	.199
3. Duration of working experience			1.000	-.226*	-.033	.101	.040	.160
4. Types of pain				1.000	.149	-.061	.036	-.090
5. Pain management 6. Training					1.000	-.193	-.064	-.172
7. Knowledge						1.000	.019	.626**
8. Attitude							1.000	.082
9. Practice								1.000

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Discussions

The result showed that nurses had the high level of knowledge regarding postoperative pain management. Several factors might contribute to this result. Firstly, all participants had their nursing education at a bachelor level. The level of nursing education was found to have a positive relationship with the level of knowledge and attitudes. Secondly, a bachelor nurse in Indonesia can enrich their knowledge and nursing skills. But there were some items that reflected nurses' misconceptions. For example, nurses assumed that a placebo injection was recommended as "a test" to determine pain. Without the informed consent of a patient, the use of placebo medication constitutes deception and should be restricted to Institutional Review Board approved clinical trials.[16]

From Table 1, the finding indicated that the patient was the most accurate person who identified pain. Since behavioral and physiological responses are unreliable indicators of the presence of pain, these parameters should not be the only considerations during pain assessment.[8] Nurses also had misconception about the presence of pain as they said that "If the patients can sleep, it means they have no pain, especially at the night time. Therefore, pain assessment should be performed when the patients are awake. This indicates the need to improve nurses' knowledge about pain management.

For nurses' attitudes regarding postoperative pain management, they said that the hospital system makes them not able to give their attentions every time to the patient. Also, they said that the little proportion of nurses cannot cover all patient needs.

For nurses' practice regarding postoperative pain management, the majority of nurses were in the moderate level. Some nurses stated that the hospitals did not use a standard tool to assess patient's pain. A previous study mentioned that some hospitals in Indonesia did not have standard pain assessment tool yet.[7] It is very important to measure patient's pain and determine what types of nursing care should be given to the patient. Another study revealed that nurses who had attended pain management courses were more likely to have a high percentage of appropriate patient's response than those who had not attended courses.[3]

For the correlations among variables, age had a significantly positive correlation with duration of working experience ($r_s = .629$, $p < 0.01$). Some nurses in this study said that senior nurses tend to share their knowledge to junior nurses when taking care of postoperative patients. Factors such as age and duration of working experience can influence on nurses' performance. A senior nurse tends to have high quality of care compared to junior nurse. However, senior nurses have no desire to update their knowledge and often reject new technology.[3]

In addition, there was a significantly positive correlation between nurses' knowledge and their practice. This finding was consistent with theoretical of knowledge-attitude-practice model.[17] This finding is also consistent with the previous study which found that there was a relationship between knowledge and competency of nurses.[18]

Conclusion

The findings indicated that nurses had a high level of knowledge, and a moderate level of attitudes and practice regarding postoperative pain management. Moreover, there were a significantly positive correlation between age and duration of working experience and between nurses' knowledge and their practice. On the other hand, there was a significantly negative correlation between duration of working experience and types of pain experienced by the nurse.

Implications and recommendations

Nursing education

Although this study proved that nursing graduates had adequate knowledge and attitudes toward the practice on pain management, many nurses stated that they had a lack of trainings related to pain management. If nurses are given the opportunity to attend the trainings, their levels of knowledge, attitudes, and practice can be increased.

Nursing practice

Although the results of this study showed that nurses' practice on pain management was in a moderate level, it may not reflect the real situation as discussed earlier. Based on observations by the researcher, nurses sometimes didn't have not adequate time to use a pain measurement tool due to their workload. Hence, effective strategies are needed to motivate nurses to use the tool.

Nursing administration

Nursing department can use the results of this study to motivate nurses to participate in training programs related to pain management. It is expected that this action can increase the quality of nursing care in pain management.

Further research

The findings indicated that nurses had a high level of knowledge; whereas, attitudes and practice were in a moderate level. Therefore, it is necessary to improve nurses' attitudes and practice on postoperative pain management in Kebumen, Indonesia. It would have been better if the researcher accompanied with the respondents while they were filling in the questionnaires to avoid doubts that might happen from misunderstanding the statements.

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