



# Nursing Care of Patients in the Postoperative Pain Management in Bangladesh

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## Abstract

Patients frequently experience moderate to severe pain in the postoperative period. Although the pain management is an integral and important part of the nursing care, studies suggest that, nursing management of postoperative pain remains inadequate. Postoperative care nurses are responsible to assess the patient's pain, teach the patient strategies to deal with the pain, apply the analgesic treatment plan, monitor the results of treatment, educate the patient and the family on pain management and document the pain management outcomes. The nurses' holistic approach to pain management minimizes the patients' discomfort caused by pain in the postoperative period after the surgery. In this article, nurses' approaches to postoperative pain management are discussed.

**Keywords:** *Postoperative pain, pain management, nurse.*

## INTRODUCTION

Postoperative care begins in the recovery room and continues throughout the recovery period. Critical concerns are airway clearance, pain control, mental status, and wound healing. Other important concerns are preventing urinary retention, constipation, deep venous thrombosis, and BP variability (high or low). For patients with diabetes, plasma glucose levels are monitored closely by fingerstick testing every 1 to 4 h until patients are awake and eating because better glycemic control improves outcome.

According to Hawthorn and Redmond (1999) nurses play a significant role in pain management. Pain is a multidimensional phenomenon and it is the nurses' task to identify the factors that may influence the patients' way of experience and express pain. Williams (2005) writes that nurses have an ethical obligation to relieve pain and decrease related physiologic risks but Hughes (2004) states that both nurses and physicians underestimate the patients' pain. According to a study by Lekule (2003) at KCMC, 59 percent of the patients suffered from severe pain postoperatively despite routine analgesics. Pain management has to be prioritized and visible in the daily care of patients with pain (Williams, 2005). Hawthorn and Redmond write that it is of great importance that the patients get adequate pain treatment. This will alleviate the treatment of other symptoms. It is possible to suffer from different kinds of pain; every type of pain needs specific measures and treatments. With patients who have a high risk of getting pain, for example patients that will do an invasive procedure, adequate measurements and treatments are especially important (Hawthorn & Redmond, 1999). Evaluation about acute pain should be done frequently to be able to notice if the pain treatment is adequate (Hawthorn & Redmond, 1999).

## Management of Post-operative Pain

There are two main approaches that can be used when managing post-operative pain; the use of pharmacological interventions and comfort measures. These approaches work best when used together, although there is a tendency in clinical practice to minimize the importance of comfort measures and emphasize the importance of pharmacological and technological interventions.

## Post-operative Care and Nurse

Postoperative care is the management of a patient after surgery. This includes care given during the immediate postoperative period, both in the operating room and post-anesthesia care unit (PACU), as well as during the days

following surgery. The goal of postoperative care is to prevent complications such as infection, to promote healing of the surgical incision, and to return the patient to a state of health. Postoperative care involves assessment, diagnosis, planning, intervention, and outcome evaluation. The extent of postoperative care required depends on the individual's pre-surgical health status, type of surgery, and whether the surgery was performed in a day-surgery setting or in the hospital. Patients who have procedures done in a day-surgery center usually require only a few hours of care by health care professionals before they are discharged to go home. If post-anesthesia or postoperative complications occur within these hours, the patient must be admitted to the hospital. Patients who are admitted to the hospital may require days or weeks of postoperative care by hospital staff before they are discharged.

### Roles of Post-operative Nurse

The primary roles of a Post-operative nurse are a combination of three very important areas of care- providing Post-operative care, managing physical conditions and also providing differential diagnosis and assessments of drugs that are needed to treat the illness. Several nurses work in post-operative unit settings.

The expanded roles in Post-operative Nursing Care are:

- Nurse practitioner/ Clinical Nurse Specialist/ The Nurse Clinician
- Nurse Researcher
- Nurse advocate
- Nurse Counselor
- Nurse Therapist
- Nurse Administrator
- Nurse Educator
- Community Health Nurse

### OBJECTIVES OF THE STUDY

1. Find out the concept on nursing care of patients with post-operative pain management among nurses.
2. Identify the complication during post-operative ward regarding pain after operation.
3. Illustrate the pain management protocol in post-operative ward.
4. Determine the socio-demographic status of the respondents.

### Variables

#### A. Socio-demographical variables:

- Age
- Gender
- Marital Status
- Religion
- General Educational Qualification
- Professional Educational Qualification
- Duration of Service
- Training on Post-operative Ward Management.
- Training on pain Management

#### B. Variables related to Nurses' knowledge of Pain Management

- Concept regarding Pain Management
- Influencing Factors regarding Pain Management.
- Complication in Post-operative Ward regarding Pain
- Management Protocol regarding Pain Management.

### METHODOLOGY OF THE STUDY

This chapter deals with methodology adopted for the proposed study. It includes study design, study area, study period and duration, study population, sample size, sampling technique, sample selection criteria, data collection tools, data collection techniques, ethical consideration, data collection procedures, data management, plan for data analysis and presentation of findings.

#### Study Design

This study will descriptive type of cross-sectional study conducted to explore the level of knowledge and attitude on nursing care of patients with post-operative pain management.

### Study Area

The study will be conducted among three tertiary care of hospitals in the Dhaka city which are named as below;

- Dhaka Medical College Hospital[DMCH]
- Bangaboundhu Sheikh Mujib Medical University
- Shohid Sorowardi Medical College Hospital

#### □ Dhaka Medical College Hospital[DMCH]

The study was conducted at Dhaka Medical College and Hospital (DMCH) which is Government hospital. It was established in 1946 during the British colonial rule, is the top medical college in Bangladesh. Situated at the heart of the city in the academic zone along with University of Dhaka and Bangladesh University of Engineering and Technology. Total capacity of the hospitals is 1000 where the total number of nurses in the hospital is 700. It provides both preventive and curative care services to peoples at the tertiary level.

#### □ Bangaboundhu Sheikh Mujib Medical University [BSMMU]

The study was accompanied at Bangabandhu Sheikh Mujib Medical University (BSMMU) that is the only medical university in Bangladesh. The university was established in 1999 and has developed as a compact campus with a 1,500 bed hospital, which provides a large range of departments and services. Total number of nurses in the hospital is 780. This hospital is autonomous type which is located in Shahbag, a district of the capital city of Dhaka.

#### □ Shohid Sorowardi Medical College Hospital [SSMCH]

### Study Population

Study population will all nurses of selected at three tertiary care of hospital.

### Sample Size

Sample size for the study will be calculated by following equation:

Formula for calculating sample size is:

$$n = \frac{z^2 pq}{d^2}$$

n = Desire sample size

z = Value of standard normal distribution as given level of significant (Confidence level) usually considered 1.96 at 95% confidence interval (CI)

p = prevalence of knowledge on Intravenous Cannulization (p= 50% or 0.5)

q = 1-p, therefore 1-0.5 = 0.5

d = Allowable error in the study 5% (0.05%)

So the equation or Sample size (n) =  $(1.96)^2 \times 0.5 \times 0.5 / (0.05)^2 = 384.16 = 390$

### Sampling Technique

Two stages sampling technique will be adopted in the current study.

- Firstly, three tertiary care hospitals selected purposively in Dhaka city. These hospitals named will be accordingly- Dhaka Medical College Hospital, Bangaboundhu Sheikh Mujib Medical University and Shohid Sorowardi Medical College Hospital which will indifferent characteristics. These characteristic will Government, Autonomous.
- All nurses name will be collected from nurses' register.
- Selection of sample will be followed by a Simple Random Sampling Technique with population proportional to size accordingly. Our sample size was 390. A hospital to hospital survey will be done in each of the sample till target population was achieved which will be based on Knowledge.
- 25% sample will be assessed the level of practice among the staff nurses from the total number of sample.

## Sample Selection Criteria

### Inclusion Criteria:

- Staff Nurses must be registered from Bangladesh Nursing Council (BNC).
- Staff Nurses' registration must be valid.
- Staff Nurses having at least two year clinical job experience in the clinical setting.
- Staff nurses who will be willing to participate in the study and present at the time of data collection.

### Exclusion Criteria

- Staff Nurses who are working in neonatal and pediatric unit.
- Nurses who will on leave and training.
- Those who will designated as an Aid Nurse and attendant Nurse.

### Data Collection Tool

Questionnaire and observational checklist

### Data Collection Technique

Structured Questionnaire that will be included; socio-demographic data, knowledge based questionnaire and Observational Checklist.

### Pre-test:

To find out the reliability, validity and practicability for the modification of questionnaires, pre-test had been done among 10(ten) staff nurses working in the National Institute of Cardiovascular Diseases& Hospital (NICVDH) before finalizing the instruments. According to the result of pre-test necessary modification was done.

### Data Collection Procedure

- Written permission to conduct the study will be obtained from the Nursing Superintendent and medical directors of the respective hospitals.
- A letter to the respondent stating the study's purpose and significance will be attached to the front page of each questionnaire to obtain a free and informed consent.
- Participants was assured that their responses would remain confidential, any information that may reveal their identity would not be recorded, and only aggregated data was communicated.
- The questionnaires was placed on each nurse's station in a labeled envelope with instructions concerning the survey.
- The researcher was collected the completed surveys. The results was compiled and analyzed.

### Data Management

All interviewed questionnaire was checked for its completeness accuracy and consistency to exclude missing or inconsistent data. Data was checked cleaned and edited properly before analysis.

### Data Analysis

Data analysis was done through SPSS16 and EXCEL and was evaluated by frequency, percentage, mean, median, range, and standard deviation of selected variables. Cross tabulation was compared by the variables related to level of knowledge and socio demographic variable.

## RESULTS AND DISCUSSION

The aim of this study was to explore the level of knowledge and practice on nursing care of patients with post-operative pain management in the Dhaka city, Bangladesh. This chapter deals with the findings of the study obtained from analysis and interpretation of data. Descriptive methods were employed to fulfill the aim of the study. This chapter presents the descriptive results related to characteristics of the sample population and the distribution of the outcome variables. Data was collected by self-administered questionnaire at three selected tertiary care hospital in the Dhaka city. The overall results of the study have been presented in tabular, graphical and narrative form thereby interpreting the result in this chapter under the following main headings.

**Table-1: Distribution of the Respondents by Educational Classes on Pain Management**

Educational Classes On Pain Management	Frequency (n)	Percentage (%)
Yes	22	11.2
No	175	88.8
<b>Total</b>	<b>197</b>	<b>100.0</b>

Table 1 shows that Majority of respondents 88.8 % (n=175) did not get classes on Pain Management but very few respondents 11.2 (n=22) were achieved classes.

**Table-2: Distribution of the Respondents by Reading Article/ Journal on Pain**

Reading Article/ Journal on Pain	Frequency	Percent
Yes	13	6.6
No	184	93.4
<b>Total</b>	<b>197</b>	<b>100.0</b>

Table-2 shows that Majority of respondents 93.4 % (n=184) did not read any kind of article or journal or textbook on Pain Management but very few respondents 6.6% (n=13) were read.

**Table-3: Distribution of the Respondents by applying acquired the knowledge in clinically**

Applied Acquired The Knowledge In Clinically	Frequency (n)	Percentage (%)
Yes	8	4.1
No	189	95.9
<b>Total</b>	<b>197</b>	<b>100.0</b>

Table-3 shows that Majority of respondents 95.9 % (n=189) had applied acquired knowledge in clinically but were not get opportunities to apply their acquired knowledge in post-operative ward properly.

**Table-4: Distribution of the Respondents by Personal Experience with Pain**

Personal Experience with Pain	Frequency (n)	Percentage (%)
Yes	197	100.0

Table – 4 shows that Majority of respondents 100 % (n=197) had personal experience with pain management in his/ her personal life or clinically area.

**Table-5: Distribution of the Respondents by experienced with acute or chronic pain**

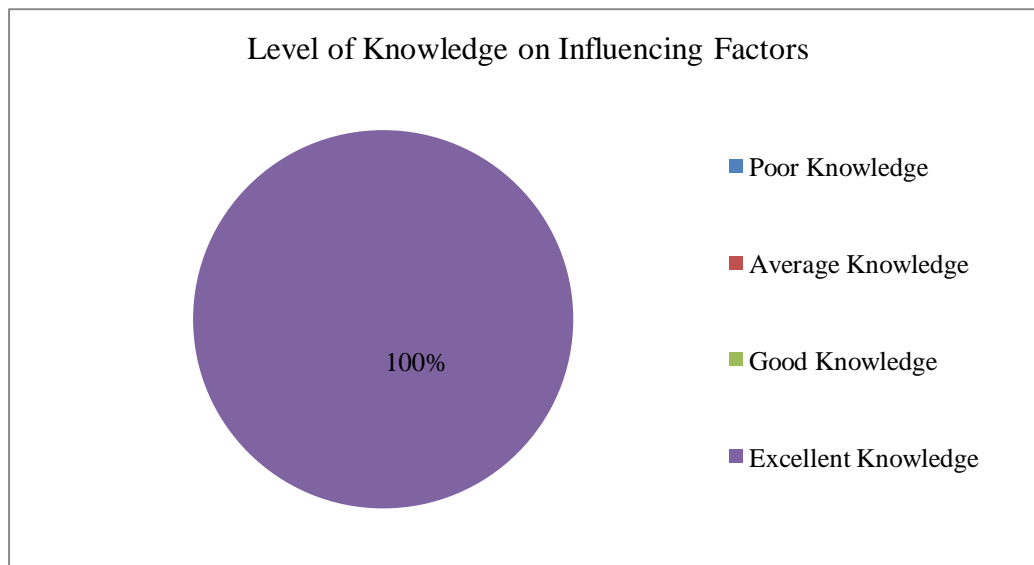
Acute Or Chronic Pain	Frequency (n)	Percentage (%)
Acute	185	93.9
Chronic	12	6.1
<b>Total</b>	<b>197</b>	<b>100.0</b>

Table – 5 shows that Majority of respondents 93.9 % (n=185) had experienced with acute pain and minority of respondents 6.1% (n=12) had faced with chronic pain in post-operative ward during on duty.

**Table-6: Distribution of the Respondents by Managing Pain on Patients**

Managing Pain On Patients	Frequency (n)	Percentage (%)
Positively	187	94.9
Negatively	10	5.1
<b>Total</b>	<b>197</b>	<b>100.0</b>

Table – 6 shows that Majority of respondents 94.9 % (n=187) had managed pain by positive attitude and minority of respondents 5.1% (n=10) had handled pain by negatively in post-operative ward during on duty.



**Figure 1: Distribution of Respondents' Level of Knowledge of Influencing Factors by Pain Management**

The figure 1 shows that level of knowledge among the respondents on influencing factors by Pain Management. A majority of 100% (n=197) had poor knowledge.

**Table-7: Distribution of Respondents' Knowledge on sign arises during received operative patient**

Sign Arises During Received Operative Patient	Frequency (n)	Percentage (%)
Tachycardia	61	14.6
Bradycardia	150	35.9
High Blood Pressure	9	2.2
Low Blood Pressure	1	.2
Normal Parameter	197	47.1
<b>Total</b>	<b>418</b>	<b>100.0</b>

Table -7 explain distribution of respondents' knowledge on sign arises during received operative patient. About 14.6% (n=61) were received tachycardia correspondingly 35.9% (n=150) bradycardia, 2.2% (n=09) high blood pressure, 0.2% (n=01) low blood pressure and 47.1% (n=197) normal parameter. Whereas maximum of respondents had received normal parameter and minority of respondents were 0.2% (n=01) got low blood presure.

**Table-8: Distribution of Respondents' Knowledge on Sign Develops In Post-Operative Ward**

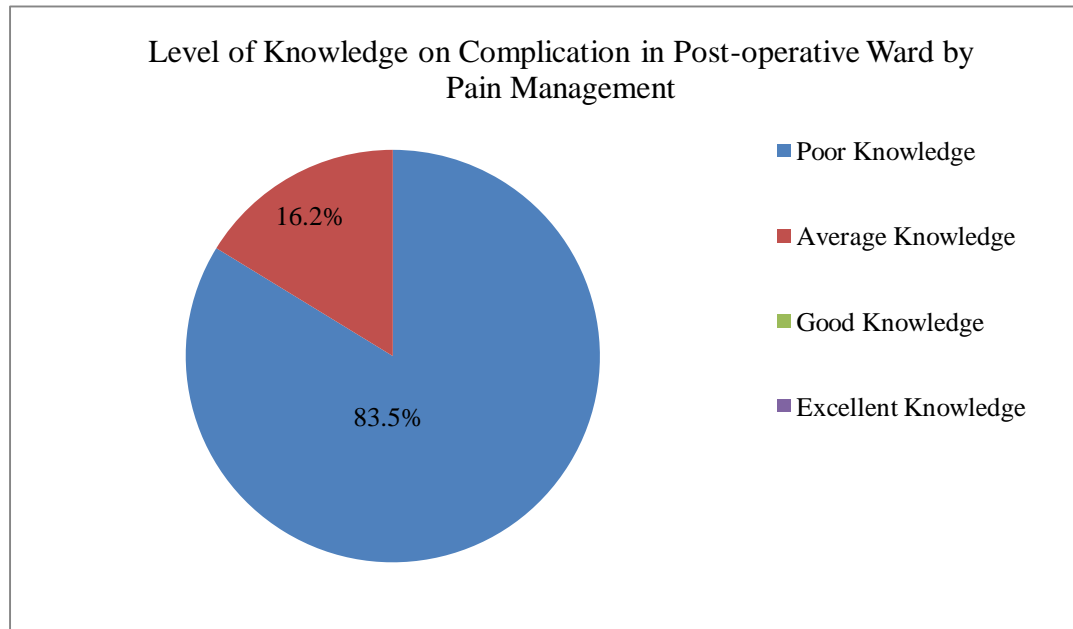
Sign develops in post-operative ward	Frequency (n)	Percentage (%)
Bradycardia	1	.4
High Blood Pressure.	75	33.3
Haemodynamically Stable	92	40.9
Abnormal Vitals	57	25.3
<b>Total</b>	<b>225</b>	<b>100.0</b>

Table -8 explain distribution of respondents' knowledge on Sign Develops in Post-Operative Ward. About 0.4 % (n= 01) were bradycardia, 33.3 % (n=75) were expressed High Blood Pressure, 40.9 % (n=92) were stated Haemodynamically Stable and 25.3 % (n=57) were stated abnormal vitals. Maximum respondents are 40.9 % (n=92) which were expressed Haemodynamically and minimum were 0.4 % (n=01) which was Bradycardia.

**Table-9: Distribution of Respondents' Knowledge on complication in operated**

Complication in operated	Frequency (n)	Percentage (%)
Syncope	14	5.5
Bleeding	196	76.9
Unconscious	33	12.9
Cardiac arrest	12	4.7
Total	255	100.0

Table -9 illustrate distribution of respondents' knowledge on complication in operated. About 5.5 % (n= 14) were Syncope, 76.9 % (n=296) were expressed Bleeding, 12.9 % (n=33) were stated Unconscious, and 4.7% (n=12) were stated Cardiac arrest. Maximum respondents are 76.9 % (n=196) which were expressed Bleeding and minimum were 4.7 % (n=12) which was Cardiac arrest.

**Figure 2: Distribution of Respondents' Level of Knowledge of Complication in Post-operative Ward By Pain Management**

The figure -2 shows that level of knowledge among the respondents on Complication in post-operative by Pain Management. A majority of 83.5 % (n=165) had poor knowledge and minority of 16.2% (n=32) had average knowledge.

**Table-10: Distribution of Respondents' Knowledge on increased doses of Pain Medication**

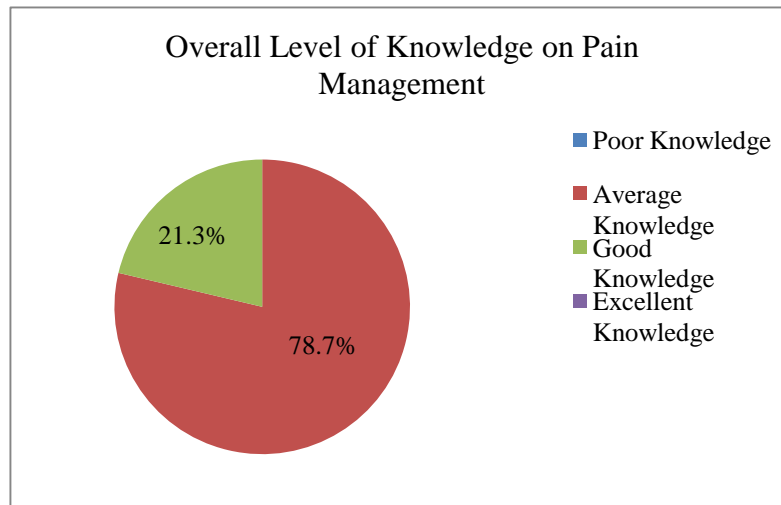
Increased Doses of Pain Medication	Frequency (n)	Percentage (%)
The patient is experiencing increased pain	13	5.6
The patient is experiencing increases anxiety or depression	197	85.3
The patient is requesting more staff attention	21	9.1
Total	231	100.0

Table -10 illustrate distribution of respondents' knowledge on increased doses of Pain Medication. The respondents' were stated that About 5.6 % (n= 13) were responded to require increased doses of medication when the patient is experiencing pain, as well as 85.3% (n=197) The patient is experiencing increases anxiety or depression and 9.1% (n=21) The patient is requesting more staff attention. Maximum respondents are 85.3% (n= 197) stated that requirement of doses of medication when the patient is experiencing increases anxiety or depression and minimum were 5.6 % (n=13) which were the patient is experiencing increased pain.

**Table-11: Distribution of Respondents' Knowledge on Using Pain Measurement Instruments**

Using Pain Measurement Instruments	Frequency (n)	Percentage (%)
Never	197	100.0%
Total	197	100.0%

Table -11 demonstrate distribution of respondents' knowledge on Using Pain Measurement Instruments. Majority of respondents' 100% (n=197) were avowed that Never use any pain measurement instruments in post-operative ward during patients suffering.

**Figure 3: Distribution of Respondents' Overall Level of Practice by Pain Management**

The figure -3 shows that overall level of knowledge among the respondents on Pain Management. A majority of 78.7% (n=155) had **average knowledge** and 21.3% (n=27) had **good knowledge**.

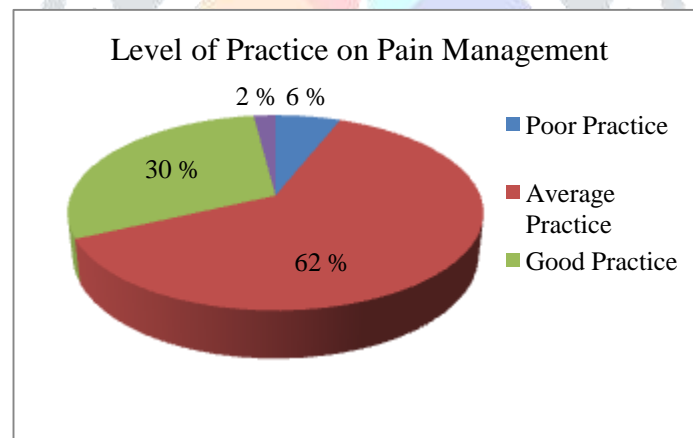
**Figure 4: Distribution of Respondents' Overall Level of Knowledge by Pain**

Figure - 4 illustrates level of practice on. About 2 % (n=01) respondents had Excellent, 30 % (n=15) had Good, 62 % (n= 31) had Average Practice and 6 % (n=03) had poor practice. Whereas overall level of practice was AVERAGE 62% (n=31) from n=50 on Pain Management.

## RECOMMENDATION

Based on experience of the present study, the following recommendations are made;

- A similar study can be undertaken with a large sample to generalize the result findings.
- A comparative study on Assessment of the level of Knowledge and Practice on pain management among Nurses.
- A comparative study on Assessment of the level of Knowledge and Practice on Intravenous Cannulization among Staff Nurses between Government and private hospitals.
- A planned teaching programme can be developed on Pain Management.
- A planned to arrange in-service educational programmes, continuous education, orientation or awareness program, short term courses on pain management.



## CONCLUSION

Post-operative patient care has been proved to be very effective to provide better health care facilities at all the level i.e. primary, secondary and tertiary level hospitals. It is quite clear from the current statistics. Therefore, it is important for the nurses to equip themselves with the necessary knowledge, skills and positive attitudes. The need by relevant nursing institutions to develop pain management guidelines is inevitable. Additional classes on pain management can also be organized by the nursing institutions involved to help the nurses to update their knowledge on the latest issues.

This study indicates through its results that the level of knowledge and practice of nurses is satisfactory. However, the majority of nurses still do not consider the regularity of assessing pain important. Various factors were discovered to have an impact on the nurses' level of knowledge and practice towards pain management. The factors were; working experience, reading of journals or articles and practical application of knowledge acquired, occupational status (part-time/full-time) and the nurses' previous experiences on pain management. Pain assessment is an important part of pain management process and as such nurses ought to be in the forefront. The suitability of pain assessment techniques for the elderly including those with cognitive deterioration should be identified and used. The use of evidence-based information should be a priority due to the challenges that nurses face during the implementation of pain management process. Nursing institutions should also equip their employees with the necessary knowledge by developing pain management guidelines based on their wards and offering additional educational classes to the nurses.

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