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## Nurses Practices Regarding Pain Management in Jordan

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**Abstract:** This research pursued to study the level of nurses' practices required in the pain management. Two hundred and sixty six registered nurses (RN) were chosen through cluster sampling technique from thirteen hospitals in Jordan. The instruments were made up of two sections: nurses' personal characteristics and pain management practices. Four experts ratified the content of the questionnaire. The analysis results appeared that nurses had moderate level of pain management practice (M = 71%). Thus, it is necessary to enhance their pain management practices in Jordan.

**Keywords:** pain management practice, nurses, public hospitals

### I. INTRODUCTION

Pain is one of the usual symptoms felt by patients [1]. Uncontrolled pain has a direct impact on the patient physical condition by affecting most of human systems [2,3]. As nurses are the key position between the physician in charge and their patient, they are the main responsible to manage the patients' pain [4,5]. Set of actions that should be delivered successfully by nurses to get rid of pain in patients' are the definition of pain management activities [6]. It includes evaluating the patients' pain by appropriate pain assessment tools [7], nurses offering applicable interventions to get rid of the patients' pain [8] and after intervention, reevaluating the patients' pain are carried out [9]. There are few studies assessed on the nurses' practices level concerning pain management [6,10,11]. The level of pain management practices of Jordanian nurses is slightly known. Thus, this article meant to study the level of nurses' practices concerning pain management in Jordanian hospitals.

## **II. LITERATURE REVIEW**

### **(A) Pain Management Practices**

Pain is defined as “unpleasant sensory or emotional experience associated with actual or potential tissue damage, or described in terms of such damage” [12, p.1]. Because pain management is a worldwide problem, studies of pain management have spanned for over 60 years in various countries, both developed and developing [13]. Previous works have generally accepted that pain management is a multiphase process consisting of assessment, intervention, and reassessment and reported that deficiency occurs in all phases.

Pain management practices are defined as a set of activities that should be provided by nurses to relieve the patients’ pain effectively [6]. It includes assessing the patients’ pain by using appropriate pain assessment tools [7], providing appropriate nurse’s interventions to relieve the patients’ pain [8], and reassessing the patients’ pain after intervention [9].

Many studies have been conducted on pain management practices to describe or assess their relationship with other variables. Some of these studies assessed the nurses’ practices by evaluating the nurses’ pain assessment and documentation procedures [14, 15, 16], non-pharmacological intervention [17, 18], and pharmacological intervention [19, 20, 21].

Previous studies assessed pain management in various ways. The first method of assessing the pain management practices is by auditing the patients’ file to check whether the pain management practices implemented adhere to the pain management standards. The auditing results of a retrospective study to review the patients’ files in five hospitals in USA showed that the pain management process was not optimal in most phases of assessment, documentation, pharmacological intervention, and reassessment of the patients’ pain [22].

The second method is by observing the nurses in practicing pain management. A study observed 13 nurses over 36 shifts on pain management practices in a children’s surgical department in England found that the pain management practices were under optimal [23]. For instance, he observed that the nurses waited the children to be in pain to give their analgesic and the non-pharmacological intervention was not usually performed.

The third method of assessing the pain management practices is by directly evaluating the patients’ pain. A study investigated the intensity of patients’ pain and pain management practices among 1,308 patients diagnosed with cancer [24]. They demonstrated that more than 50 percent of the patients reported pain, which impaired the function of 36 percent of them, suggesting that the pain management practices were not optimal. Similarly, a study of 93 post-operative patients reported their pain between moderate to severe [25]. In another related study, 114 patients suffering from cancer diseases were surveyed to assess the existence and the severity of the patients’ pain [26]. Their result showed that 58 percent of the patients reported the existence of pain and more than 50 percent rated their pain as mild pain or discomfort pain.

Another way to assess the pain management practices is by using questionnaire to gather the required data from health care providers. This technique is widely used because it is able to involve large sample, cost effective, and easy to apply. A study assessed the pain management practices among 93 nurses working in pediatric surgical units at public Bangladesh hospitals by using a comprehensive scale that has 59 questions [6]. The result indicated a moderate level of pain management practices.

The correlation between patients' rating of their pain and nurses' rating was also examined among 103 patients diagnosed with cancer by using a visual analogue scale [27]. Their result showed a significant relationship between the rating of the pain by the patients themselves and the rating by their nurses.

### **III. RESEARCH METHODOLOGY**

This study was carried out in thirteen hospitals in Jordan. The registered nurses who were employed in the public hospitals were the population of the study. A sampling table was used to estimate the sample size, yielding a sample size of 368 registered nurses [28]. Over sampling was done to increase at least 40% of sample size to avoid low response rate from uncooperative respondents [29]. Thus, 600 questionnaires were distributed to registered nurses in the public hospital.

The questionnaire consisted of two sections: participant information and pain management practices. The participant information section contains questions about working and personal characteristics. It includes six questions regarding nurses age, gender and level of nursing education. Furthermore, it also includes questions about professional experiences, pain experience and attending training program in pain management.

Pain management practices section includes items to measure nurses' behavior concerning pain management using Caring Behavior Regarding Pain Management Questionnaire". This questionnaire was acquired from [30] and modified for this study. Moreover, this section includes thirty six questions regarding three stages of pain management: assessing of patient pain [7], suitable intervention in relieving patient pain [8] and reassessment after the interference [9]. The internal consistency (Cronbach's alpha) for this scale was found 0.87 which was appropriate [10].

The total score of each subject (ranged from 0 to 36) was changed to percentage. The percentage education creating it to be more meaningful [30]. The ranges of scores were: very intense (90-100%), high (80.00-89.99%), moderate (70.00-79.99%), low (60.00-69.99%), very low (< 60%). The higher scores implied the higher level of pain management practices.

After obtaining letter of approval from the target hospitals, the researcher visited the human resources department in each hospital (13 hospitals) to take a list of employees' names and position. The questionnaires were administered to subjects by the charge nurses of a hospital unit, ward or emergency room and the researcher collected the complete questionnaires from the charge nurses.

Out of 600 hundred registered nurses, only 307 completed the questionnaires (51% response rate). The data were evaluated using the Statistical Package for Social Sciences (SPSS version 20)

### **IV. FINDINGS**

#### **(A) Personal Information**

The study mean age of participants was 30 years (SD = 5.809), fit in to the majority age group of 26-30 years old. The mainstream of participants had a bachelor degree (86.8%), and more than half of them were female nurses (60.2%). Also, the mainstream of the participants (85 nurses) have their professional experiences in the range of 6 to 10 years (32%). In addition, this study showed that most nurses (195 nurses) did not attend a pain management training program (73.3%). Finally, the majority of nurses (210 nurses) stated, they had experience in pain in their lifetime (78.9%).

## (B) Pain Management Practices

The scores obtained from the respondents were categorized according to the learning outcomes of McDonald [31]. The scores were categorized into five grades (A, B, C, D, and F) of the learning outcomes for multiple choice examination. It can also be categorized according to five levels ranging from very high, high, moderate, low to very low) (see Table 1).

**Table I**  
**Learning Outcomes of Multiple Choice Examinations**

<i>Grade</i>	<i>Composite Percent Score</i>	<i>Levels</i>
A	90.00 – 100%	Very high
B	80.00 – 89.99%	High
C	70.00 – 79.99%	Moderate
D	60.00 – 69.99%	Low
F	< 60%	Very low

<sup>a</sup> *Source:* [31]

To meet the objectives of this study, the instrument used to measure pain management practices was made up of 36 items, whereby respondents could indicate their answers on a 7-point Likert scale, making the range from ‘never’ to ‘constantly’. Each of the item was accorded a score of seven for ‘constantly’ and a score of one for ‘never’, giving a range of 36 up to 252.

The items were as follows: (i) pain assessment with the management performance; (ii) the utilization of the different pain measurement tools in the valuation of pain which are appropriate to the age of the patient; (iii) the consumption of the pharmacological and the non-pharmacological measures for pain management; (iv) displaying adequate consciousness as well as readiness to deal with patients suffering adverse effects of pain medication that has been administered; and (v) carrying out pain reassessment so as to evaluate how effective the pain medication is as well as how frequently PRN (*Pro Re Nata*) pain medication is used in the management of pain.

The study result indicated that the pain management practices of the nurses on the whole is at a moderate level ( $M = 71\%$ ,  $SD = .19$ , minimum = .22% and maximum = 100%). Besides, the researcher analyzed the ranking orders. This was done to identify which are the areas where the nurses have a high level of performance in managing pain in the clinical practices. Five highest ranking orders of constant high performance were found: “I asked my patients to locate the area of pain”, “I asked my patients about the intensity of pain before giving pain killers” and “I asked my patients to describe the pain by own words” (each one is 74%); “I helped patients when they need help” and “I asked my patients about the intensity of pain after giving pain drug” (each one is 73%). Meanwhile, these are the five lowest ranking orders of the constant high performance. “I taught my patients alternative methods to reduce pain” (65%); “I explained to my patients the drug addiction to reduce their fear”, “I spent time with my patients to reduce their pain” and “I gave prescribed pain medication to my patients on a fixed schedule” (each one 68%); and “I used observation to determine patients’ pain” (69%).

## V. CONCLUSION AND DISCUSSION

The current study indicates the moderate level of pain management practices among nurses with the mean score percentage of 71%. The study findings are consistent with [6, 10, 11], who found moderate level of practices in pain management among nurses. In this study, nurses reported some practices they rarely performed in providing care for patients who had pain. These include: 1) taught the patients alternative methods to reduce pain (65%); 2) explaining to the patients the drug addiction to reduce their fear (68 %); 3) spending the time with the patients to reduce their pain (68 %); 4) giving the patient the prescribed pain medication on the fixed schedule (68%); 5) using observation to determine patients' pain (69%).

In this study, nurses reported some practices they rarely performed in providing care for patients who had pain. Based on these results, the universities and hospitals should mainly focus on these items to enhance pain management practices provided by nurses. Specifically, they should provide proper training and education in pain management to the Jordanian nurses. The education and training must involve in- analgesic side effect, consequences of unrelieved pain and pain management process (i.e. assessment, intervention and reassessment).

The finding found several limitations First, the present study adopts a cross- sectional design which does not allow causal inferences to be made from the population. Therefore, future study should consider the use of a longitudinal design to measure the theoretical constructs at different points of time. Second, the result might be skewed as it focused on nurses' practices among Jordanian's Public Hospital. Third, the participants of this study were registered nurses as they were the main function in managing the patient pain but they are not the only staff responsible to relieve the patient pain. Thus, future research should also consider assessing the pain management practices in other populations such as physicians and patients. The study concluded that there are several lacunae in the pain management practices of nurses in Jordan which need to be improved.

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