Improving the Quality of Nurses' Postoperative Pain Assessment and Management Practices

Inshirah K. Qadri,[1] Maysoon S. Abdalrahim,[2] Sawsan A. Majali [3] Margareta Warrén Stomberg, [4] Ingegerd Bergbom [5]*

Abstract

Objective: The purpose of this intervention study was to evaluate nurses' postoperative assessment and management practices after the intervention of a pain management program in surgical wards.

Method: The program was evaluated using a quasi-experimental design. A total sample of 240 surgical patients (120 patients for the control group and 120 patients for the intervention group) were recruited from two surgical wards in a university hospital. Three instruments were used to collect data for this study: a) a self report questionnaire designed by De Rond, de Wit, Van Dam and Muller to assess patients' communication about pain; b) the numerical rating scale to assess the intensity of the patients' pain; and c) the Pain and Anxiety Audit Tool to audit patients' records for documentation of pain.

Results: The results showed that after the implementation of the pain management program, patients' satisfaction with the pain control became higher (91.7% vs. 63.3%, $p < .05$). There was a significant agreement between the pain ratings of the researchers' and the nurses', and there was a significant improvement in the nursing documentation of postoperative pain.

Conclusion: This intervention study highlights the effectiveness of implementing a postoperative pain management program for nurses' aim of improving pain assessment and management practices. The results will help nurses working in surgical wards to accentuate the importance of introducing educational programs into their services and therefore improve pain treatment outcomes.

Keywords: Postoperative pain, pain assessment, pain management, intervention study.

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Introduction

Pain is a subjective experience and reported to be the most significant symptom that surgical patients experience. More than 50% of surgical patients experience significant postoperative pain(POP).[1]

Patients have the right to be assessed and educated about pain.[3] Effective pain relief is important because unrelieved pain decreases quality of life, alters immune function, and may develop to chronic pain. [2]

1. **Faculty of Nursing, University of Jordan, Amman, Jordan.**
2. **RN, MScN, PhD, Associate Professor of Nursing, Director, Prince Zain Foundation.**
3. **The Sahlgrenska Academy at Göteborg University, Institute of Health and Care Sciences, Gothenburg, Sweden.**

**** Correspondence should be addressed to:***
Inshirah K. Qadri
E-mail: : r.qadri@ju.edu.jo

Pain following surgery continues to be a problem despite the advancement of pain relief methods.[2,3,4] One of the reasons patients have poorly managed pain is that health care professionals often lack skills and knowledge to manage pain. It has been shown that nurses often fail to recognize patients' pain and frequently underestimate its intensity.[5]

The ongoing task of monitoring POP falls on the nursing staff. It's not enough for nurses to administer analgesia for patients; nurses should have the ability to assess pain intensity through the use of rating scales, take pertinent decisions regarding the use of pharmacological and non-pharmacological interventions, and demonstrate the ability to evaluate patients' responses to therapy.[4,6] Numerous studies have described the inadequate assessment and treatment of pain by nurses.[7,8] They have unreal fears about opioid side effects, especially about addiction, and they tend to under-administer analgesics.[9]

Nurses are also responsible for the documentation of POP assessment and management. In surgical wards, the documentation of POP provides comprehensive information on the patients' assessment and management practices. Previous studies have demonstrated that nurses' documentation of assessment, interventions and treatment outcomes were inconsistent and infrequent.[10] Manias conducted a study in which nurses' notes in 100 surgical patients' records were audited. The study showed that nurses documented inadequately in four major areas: pain assessment, use of pharmacological and non-pharmacological interventions, and outcome interventions. [11]

Education to support nurses with knowledge should be included in the hospitals' quality improvement programs.[10] Several studies proved the effectiveness of educational programs for nurses in improving pain assessment and documentation.[3,12,13] Abdalrahim et. al completed a chart audit of 240 patients to determine the effect of educational programs on the documentation of pain. The study found out that the experimental group experienced an increase of more than 85% in the documentation of pain intensity, quality, and duration.[14]

Hospital administrations in Jordan have recently become aware of the importance of pain management, but there have been limited studies that investigate Jordanian nurses' POP management practices. One recent study described the nursing documentation of POP assessment and management in six large hospitals in Jordan.[14] The results revealed that there was no evidence of pain assessment documentation in the first day of surgery in 113 (35%) of the patient's records, and more than half of the records lacked information about the prescribed analgesia. Therefore, it was concluded that there is a need to introduce a postoperative pain management (POPM) program that is directed toward teaching nurses working in surgical wards about pain, its assessment, and the use of pain scales. The purposes of the study were:

1. To assess the patients' satisfaction with nurses' interventions before and after POPM program implementation.
2. To evaluate the quality of nurses' POP assessment before and after POPM program implementation.
3. To evaluate the nurses' documentation practices of POP assessment and management before and after POPM program implementation.

Materials and Methods

This intervention study had the approval of the Research Committee Board at the University of Jordan. Access to patients' records in the selected surgical wards was gained before starting data collection assuring that confidentiality and anonymity would be maintained for both patients and nurses. Formal approval from the hospital's administration was also obtained to implement the POPM program. Every patient and Registered Nurse involved in the study was provided with a clear explanation of the study and they signed an informed consent form.

Setting and Sample

The study was conducted in two selected surgical wards at a teaching university hospital in Jordan. Routine care in these wards did not follow specific protocol regarding pain assessment and management, and nurses generally treat patients' pain by providing the prescribed analgesia. Prescription of analgesia was individualized and depended on the attending surgeon. Moreover, there were no documentation standards and pain assessment tools had not been used by the health care professionals.

The POPM program for nurses was evaluated by means of a quasi-experimental design with a nonequivalent control group. In such a design, the control group and the intervention group are not drawn from the same population, and the sample is naturally occurring.[21] Two patients' groups from the same surgical wards were selected, one as a control group and the other as an intervention group. All consecutively admitted patients to the two selected wards were screened for inclusion till a number of 120 patients per ward was reached.

Those patients represented the control group and were given the regular nursing care. After implementation of the program, the intervention group (120 patients per ward) who met the same inclusion criteria was included in the study. Patients were included if they were in postoperative pain or if they had a prescription for analgesics. They also were older than 16 years and with a planned stay in the surgical ward for at least three days postoperatively.

Data Collection Procedure

Data were collected during the three months period before the implementation of the POPM program and the three-month period after the implementation of the program.

The study was conducted through three main phases.

Phase 1: The Pre-intervention Phase

Before the implementation of the POPM program, patients from the control group were interviewed twice, once in the first 24 hours post-surgery and once in the third postoperative day. At the end of the second interview, the patients' communications with the nurses about their pain and their satisfaction with the nurses' interventions were assessed by means of a self report questionnaire designed by De Rond, de Wit, Van Dam and Muller.[15] It included the following questions:

1. Did you discuss pain with nurses?
2. Did you receive information about pain from nurses?
3. Did you receive your medications in a timely manner?
4. Were you satisfied with how well your pain was controlled?
5. How do you rate your satisfaction of pain management service? (0 = very unsatisfied, 1= moderately satisfied, 2 = very satisfied)
6. How do you evaluate the quality of the information provided? (4 = very good, 3= good, 2= fair, 1= not good)

In order to evaluate the quality of the nurses' pain assessment, the main author and two trained research assistants assessed the intensity of the POP for patients after each interview. The assessment was based on a numerical rating scale (NRS) from 0 (no pain) to 10 (greatest pain). Based on the literature, using a numerical rating scale can be a valid tool to determine patients' intensity of pain. [8,16,17]

Nurses then were asked to estimate the patient's present pain intensity on the same scale. The nurses' assessment was evaluated by comparing the mean pain intensity scores of the researchers' ratings and the nurses' ratings. The researchers considered agreement between the nurses' assessment and researchers' assessment of pain when the ratings were identical or within a range of +1 and -1 of each other. Nurses' pain ratings that were more than 1 point higher or lower than researchers' pain ratings were considered underestimations or overestimations, respectively.

Additionally, control group patients' records were audited for the documentation of pain using section three of the Pain and Anxiety Audit Tool (PAAT) developed by Manias. [15] Its focus was to examine the presence of four main items in the pain documentation (Table 1). This tool was tested for validity and reliability and the two research assistants audited a random sample of 32 (10%) patients' records, and the agreement was 96%.

Phase 2: The Intervention Phase

After the data collection of the control group patients was completed, the POPM program was implemented for three months. The program consisted of the following steps:

- All registered nurses in the two selected surgical wards joined the educational program. The program focused on teaching nurses the POP assessment, treatment with analgesics, the use of non-pharmacological pain treatments, and pain documentation.
- Nurses then were asked to implement what they learnt in the educational program while caring for patients in the surgical wards.
- Nurses were asked to rate the patients' intensity of pain on a NRS, and the researcher provided the ward with a sufficient number of scales to be used when needed.
- A pocket-sized "Postoperative Pain Assessment and Management" guide designed and collected by the authors were handed out to all nurses in the two wards.
- A Compact Disk that contained selected recent full-text research articles and information addressing POPM issues was handed out to each registered nurse.
- Posters on pain assessment and management were posted in the wards, to remind nurses to assess patients' pain.
- Two trained research assistants were frequently attending rounds on all patients and nurses to ensure implementation of the POPM management and the documentation process.
- The researchers were available on call for any questions or issues raised by nurses.

Phase 3: The Post Intervention Phase

Three months after implementation of the POPM program, the intervention group patients were included in the study. The patients were interviewed twice, on the day of surgery after recovery from anesthesia and on the third postoperative day. The same interview questions were used as for the control group. The quality of the nurses' pain assessment was also evaluated using the same comparative method used in the pre-intervention phase.

Finally, the intervention group patients' charts were audited for the documentation of pain using section three of the Pain and Anxiety Audit Tool (PAAT) developed by Manias. Again the charts were audited twice, once on the day of surgery and once on the third postoperative day.

Statistical Analysis

Data were analyzed using the Statistical Package for the Social Science for Windows (SPSS). Descriptive statistics (including frequency distributions and measures of central tendency) were used to organize and summarize the data. Results were recorded as a number (percentage), mean and standard deviation. To determine the effect of the POPM program, two sample t-tests were used to compare data from the control group with the intervention group, and one sample t-test was used to evaluate the differences in nursing documentation before and after the implementation of the program. A p-value of less than 0.05 was taken to be significant.

Results

Patients' Characteristics

In total, 240 patients were eligible for participation of which 156 (65%) patients were male, and their average age was 42.4 years (SD = 15.3). There were no significant differences in patients' characteristics such as mean age, gender, and type of anesthesia. The majority of patients were admitted for orthopedic surgeries (69, 28.8%) and intra-abdominal procedures (77,

32.1%). Most patients received general anesthesia (199, 82.9%). Table (1) contains further demographic information about the patients' sample.

Table (1): Demographic Profile of Patients in the Control Group and the Intervention Group.

Patients' Demographic	*Control group N (%)*	*Intervention group N (%)*	*Total N (%)*
– ***Age (Mean, SD)***	*41.9, 16.1*	*42.8, 14.5*	*42.4, 15.3*
17-20	*8 (6.7)*	*4 (3.3)*	*12 (10)*
21-30	*32 (26.7)*	*20 (16.7)*	*52 (43.4)*
31-40	*21 (17.5)*	*38 (31.7)*	*59 (49.2)*
41-50	*19 (15.8)*	*24 (20)*	*43 (35.8)*
51-60	*24 (20)*	*20 (16.6)*	*44 (36.6)*
61-70	*10 (8.3)*	*8 (6.7)*	*18 (15)*
≥ 71	*6 (5)*	*6 (5)*	*12 (10)*
– ***Gender***			
Male	*88 (73.3)*	*68 (56.7)*	*156 (65)*
Female	*32 (26.7)*	*52 (43.3)*	*84 (35)*
– ***Type of surgery***			
Intra-abdominal	*33 (27.5)*	*36 (30)*	*69 (28.8)*
Renal	*21(17.5)*	*25 (20.8)*	*46 (19.2)*
Orthopedic	*38 (31.7)*	*39 (32.6)*	*77 (32.1)*
ENT	*12 (10)*	*10 (8.3)*	*22 (9.1)*
Intra-thoracic	*16 (13.3)*	*10 (8.3)*	*26 (10.8)*
– ***Types of anesthesia***	*101 (84.2)*	*98 (81.7)*	*199 (82.9)*
General	*19 (15.8)*	*22 (18.3)*	*41(17.1)*
Regional			
Total	***120 (100)***	***120 (100)***	***240 (100)***

Communication about Pain between Patients and Nurses

During the interview, patients were asked questions that reflected the communication with nurses about their pain and their satisfaction with the pain management service. Results were shown in Table (2). Although the number of patients who talked about pain complaints with nurses was almost the same in both control group and intervention group, there were 86 patients (71.1%) in the intervention group who received information about pain and pain management from the nurses compared to only 16 patients (13.3%) in the control group. Similarly, the proportion of patients who were satisfied with the pain control were higher after the implementation of the POPM program (91.7% vs. 63.3%, $p < .05$).

Most of the patients in both groups were moderately satisfied with the pain management service even though the percent of very satisfied patients was higher in the intervention group as compared with the control group (27.5% vs. 6.7%, $p<.05$). The majority of patients in the intervention group (102, 85%) rated the quality of the information about the pain given by nurses as very good and good, while 106 patients (88.3%) in the control group rated the quality of information as fair and not good (Table 2).

Table (2): Communication about Pain between Patients and Nurses.

	Control group N (%)	***Intervention group N (%)***	***Sig. (p value)***
– ***Did you discuss pain with nurses?***			
yes	*70 (58.3)*	*78 (65)*	*.29*
no	*50 (41.7)*	*42 (35)*	
– ***Did you receive information about pain from nurses?***			
yes	*16 (13.3)*	*86 (71.7)*	
no	*104 (86.7)*	*34 (28.3)*	*.000*
– ***Did you receive your medications in a timely manner?***			
yes	*91 (75.8)*	*114 (95)*	
no	*29 (24.2)*	*6 (5)*	*.001*
– ***Were you satisfied with how well your pain was controlled?***			
yes	*76 (63.3)*	*110 (91.7)*	
no	*44 (36.7)*	*10 (8.3)*	*.000*
– ***How do you rate your satisfaction of pain management service:***			
very satisfied	*8 (6.7)*	*33 (27.5)*	*.000*
moderately satisfied	*92 (76.7)*	*73 (60.8)*	
very unsatisfied	*20 (16.6)*	*14 (11.7)*	
– ***How do you evaluate the quality of the information provided?***			
very good	*2 (1.7)*	*31 (25.8)*	*.000*
good	*12 (10)*	*71 (59.2)*	
fair	*85 (70.8)*	*10 (8.3)*	
not good	*21 (17.5)*	*8 (6.7)*	
Total	***120 (100)***	***120 (100)***	

NS= not significant

The Quality of Nurses' Pain Assessment

The rating of pain on the NRS by both the researchers' and the attending nurses were carried out on two occasions (the day of surgery and on the third day of surgery) for the control group and the intervention group of patients (Table 3). Before implementation of the POPM program, the mean score difference between the researchers' ratings and the nurses' ratings were more than one point on the day of surgery (2.17 mm) and on the third day of surgery (1.72 mm). Thus, the results demonstrated that the nurses tended to underestimate patients' pain intensity.

After the implementation of the POPM program, there was a significant agreement between the pain ratings of the researchers' and the nurses' on the two occasions of assessment (Table 3). Since the mean differences were less than one point, it was estimated that nurses in the post-intervention phase were accurate in their assessment of patients' pain intensity.

Table (3): Agreement between Researchers' and Nurses' Pain Rating Scores.

Assessment Phase		Mean (SD)	Mean (SD) Difference	Sig. (p-value)
Pre-intervention	*Researcher's assessment-Day of surgery*	*8.12 (1.41)*	*2.17 (1.37)*	*.001*
	Nurse's assessment-Day of surgery	*5.96 (1.7)*		
	Researcher's assessment 2rd postoperative day	*5.59 (2.05)*	*1.72 (1.25)*	*.000*
	Nurse's assessment 2rd postoperative day	*3.88 (1.86)*		
Post-intervention	*Researcher's assessment Day of surgery*	*8.32 (1.59)*	*0.44 (0.63)*	*.000*
	Nurse's assessment Day of surgery	*7.88 (1.52)*		
	Researcher's assessment2rd postoperative day	*6.68 (2.36)*	*0.76 (1.03)*	*.001*
	Nurse's assessment 2rd postoperative day	*5.92 (2.14)*		

Documentation of Postoperative Pain

The documentation of pain management is related to four major areas: pain assessment, use of non-pharmacological interventions, use of pharmacological interventions, and outcome of interventions. The frequencies and percentages of these areas are presented in Table 4.

Before implementation of the POPM program, there was no evidence of the pain assessment documentation in 81 (67.5%) of the patient's records. There were 37 notes (30.8%) concerning the location of pain which was the most frequent information recorded for pain assessment. The next frequently documented pain assessment information was the location of pain in 30 records (25%) and the quality of pain in 26 records (21.7%). None of the nurses used pain scales for the assessment of the patients' pain.

Non-pharmacological interventions, such as coughing and deep breathing, turning, education, positioning for comfort, massage, and relaxation were not documented in 94 (78.3%) of the patients' records. Although two thirds of the patient's records contained information about the medication administered, most of the documented information 88 records (73.3%) provided only the quantifiable amounts. Furthermore, the outcomes of the interventions were not described in 110 (91.7%) of the patients' records, and the nurses' notes lacked documentation on all the items in this category.

After the implementation of the POPM program, there was a significant increase in the entire documentation items mainly in the pain assessment category. There were 102 notes (85%) concerning the location of pain which was the most frequent information recorded for pain assessment. All the other assessment information in the patients' records were increased, mainly the description of the location (100, 83.3%), the duration (80, 66.7%), and what improves the pain (98, 81.7%). In addition, most of the nurses used scales to evaluate the patients' pain.

In spite of the limited nurses' notes concerning the use of non-pharmacological interventions in the post-intervention phase, there was a significant increase in most of the items representing this category (Table 3). On the other hand, nurses' notes related to the use of massage (3, 2.5%) and relaxation (13, 10.8%) were still limited. For the documentation of non-pharmacological interventions, a similar pattern to the pre- intervention phase was shown in nurses' notes, where nurses tended to document more the quantifiable amount of medication (101, 84.2%). Furthermore, there was a significant increase in the examined patients' records in the intervention phase that described the outcomes of the interventions. Nevertheless, most of nurses' notes were devoted to the description of the side effects of the analgesics or sedatives (78, 65%) and there was no significant increase in the other items in this category (Table 4).

Table (4): Nature of Documentation Relating to Pain Management Provided in Nursing Notes.

Nature of documentation	***Pre-intervention N (%)***	***Post-intervention N (%)***	***Sig. (p value)***
Pain assessment			
No documentation	*81 (67.5)*	*12 (10)*	*.001*
Verbal statement about pain	*37 (30.8)*	*102 (85)*	*.001*
Location	*30 (25)*	*100 (83.3)*	*.001*
Use of pain scale	*0 (0)*	*102 (85)*	*.001*
Duration of pain	*10 (8.3)*	*80 (66.7)*	*.001*
What improves pain	*19 (15.8)*	*98 (81.7)*	*.001*
What aggravates pain	*2 (1.7)*	*56 (46.7)*	*.001*
Quality of pain	*26 (21.7)*	*66 (55)*	*.001*
Observation of non-verbal behavior	*6 (5)*	*4 (3.3)*	*.132*
Non-pharmacological interventions			
No documentation	*94 (78.3)*	*32 (26.7)*	*.001*
Cough and deep breathing with a towel	*6 (5)*	*22 (18.3)*	*.001*
Turning	*11 (9.2)*	*32 (26.7)*	*.001*
Education	*4 (3.3)*	*32 (26.7)*	*.001*
Position for comfort	*22 (18.3)*	*60 (50)*	*.001*
Massage	*4 (3.3)*	*3 (2.5)*	*.332*
Relaxation	*4 (3.3)*	*13 (10.8)*	*.431*
Pharmacological interventions			
No documentation	*32 (26.7)*	*19 (15.8)*	*.141*
Quantifiable amount	*88 (73.3)*	*101 (84.2)*	
Non-quantifiable amount	*2 (1.7)*	*31 (25.8)*	
Outcome of interventions			
No documentation	*110 (91.7)*	*41 (34.2)*	*.000*
Side-effects of analgesics/sedatives	*10 (8.3)*	*78 (65)*	*.000*
Non-quantifiable evaluation of analgesics/sedatives	*0 (0)*	*10 (8.3)*	*.732*
Quantifiable evaluation of analgesics/sedatives			
Non-quantifiable evaluation of non-pharmacological interventions	*2 (1.7)*	*22 (18.3)*	*.000*
Quantifiable evaluation of non-pharmacological interventions	*0 (0)*	*2 (1.7)*	*.382*
	0 (0)	*2 (1.7)*	*.382*
Total	***120 (100)***	***120 (100)***	

NS= not significant

Discussion

This study was implemented to assess the improvement of nurses' POP assessment and management practices through educating nurses in the surgical wards. The implemented POPM program demonstrated the feasibility of making substantial changes in improving POPM and thereby the quality of nursing care.

Results showed that the control group's communication with nurses about pain was limited, which was reflected in the patients' level of satisfaction with pain control and the service provided. These findings were congruent with the results of previous similar studies.[5,12,18] On the other hand, more than two thirds (71.1%) of the patients in the intervention group reported that they received information about pain and pain management from nurses, and most of them (85%) rated the quality of the information provided as good or very good. This might be taken as support for the effectiveness of the quality improvement program in stimulating the participating nurses to apply the gained knowledge into their practice. Stevenson et al implemented a project that included seven state pain initiatives and concluded that an educational

program that guides participants to integrate knowledge with quality improvement activities can positively affect organizational processes and patients' outcomes.[8]

Comparison of the researchers' pain ratings on the numeric rating scale with the nurses' rating revealed two important findings. After the implementation of the POPM program, there was a significant agreement (mean score difference less than 1) between the researchers' ratings and the nurses' ratings. This means that nurses became more accurate in assessing patient's pain intensity and improved their abilities in using the scales effectively. The other important finding was that nurses tended to underestimate the patients' pain intensity even after the implementation of the program. This result is in contrast with some studies in this area.[4]

Before implementation of the POPM program, the examined patient's records reflected minimal nursing documentation in the POP assessment and management interventions. This finding is of great concern to hospital administrators and quality assurance personal and should be highlighted when evaluating the current acute pain management practices in the surgical wards. Nursing documentation is important because it provides evidence of the actual nurses' work and evaluates its success as a formal written document.[5] In addition, the accreditation of healthcare organizations emphasize that documentation is a critical indicator of the quality of care since it is the main visible method to evaluate the provided care by health care professionals and suggested to incorporate documentation into nurses' annual performance evaluations.[5]

In the post-intervention phase, there were statically significant improvements in most of the documentation categories. There was more than a 50% increase in the documentation of pain assessment and non-pharmacological intervention. The findings of this study provide strong evidence that the educational program not only motivated nurses to positively change their documentation practices, but also influenced their methods in assessing POP. This was clearly shown in the findings of the pain assessment category, where 85% of the patients' records suggested that nurses started to use pain scales in their assessment of the patients' POP.

Nevertheless, there were some areas in which there is still a need for improvement. Nurses in the pre-intervention phase and the post intervention phase tended to document only the quantifiable amounts of pharmacological interventions. Also, the results showed that other than the description of the side effects of analgesics or sedatives, nurses' neglected documentation of the outcome interventions even after the implementation of the educational program. This finding must be interpreted cautiously as it might be that the prescribed analgesics were seemed to be adequate so that there was no need for other pain relief measures, or nurses still do not perform their role of on going evaluation of patients' responses to interventions. Recent studies on the nurses' attitudes and beliefs about pain management identified a gap between what nurses say and their actions regarding to POPM.[19,20]

In view of the findings of this study, it was encouraging to recognize the evidence in the effect of the quality improvement program on introducing positive changes in the nurses' activities regarding POP. While the focus was on the nurses' education in the pain assessment and the documentation process, it will be of equal importance to improve POP treatment modalities, for example, introduce programs that focus on quality improvement of analgesic therapy and on the decisions of pharmacologic treatment.

To implement such programs, it's necessary to establish an Acute Pain Service (APS) in the hospital services. Most of the literature supports APS because it improves patients' outcomes.[17,21] However, this requires a multidisciplinary team approach that includes all health care professionals involved in the pain control process. It's recommended that the next step is to investigate the effect of introducing an APS on quality improvement of the POP assessment and

management. Also, it is important to conduct studies that investigate the limited use of non-pharmacological modalities in managing POP, and if there are any cultural aspects that influence the implementation of some of these modalities such as massage and relaxation therapies.

Limitations of the Study

The quasi-experimental design limits the extent to which causal inferences can be made. In this study, the intervention program was implemented in one teaching hospital and specifically in two surgical floors. However, while generalizing the results to other surgical settings is limited by the non-random sampling technique, the sample consisted of 240 patients and all the nurses in the two selected floors participated in the study, which provided breadth to the findings.

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تحسين جودة تقييم ألم ما بعد الجراحة ومعالجته بعد تطبيق برنامج معالجة الألم في أقسام الجراحة

انشراح القادري،[1] ميسون عبد الرحيم، [1] سوسن المجالي، [2] مارجريتا وارن ستمبرغ، [3] إنجي جيرد بيرغم [3]

1–كلية التمريض، الجامعة الأردنية، عمان، الأردن؛ 2–كلية الأميرة زين للتمريض؛ 3–اكاديمية سالجرينسكا، معهد الصحة والعلوم، جامعة جوتبرغ، جوتنبرج، السويد

الملخص

هدف البحث: تهدف هذه الدراسة التطبيقية إلى تقييم طرائق التمريض في تقييم ألم ما بعد الجراحة ومعالجته بعد تطبيق برنامج معالجة الألم في أقسام الجراحة.

منهج البحث: تم اتباع نهج شبة التجريبي لتقييم البرنامج؛ حيث تم توظيف عينة تتكون من 240 مريضا في أقسام الجراحة (120 مريضا في المجموعة الضابطة و120 مريضا في المجموعة التجريبية) من قسمين من أقسام الجراحة في مستشفى الجامعة الأردنية. وقد تم جمع البيانات لهذه الدراسة باستخدام ثلاث أدوات هي: أ) استبيان التقرير الذاتي الذي صممهDe Rond (2000)، Van Dam & ، de Wit Muller لتقييم تواصل المرضى مع الفريق الصحي المتعلق بالألم؛ ب) مقياس التصنيف العددي لتقييم شدة ألم المرضى؛ ج) أداة تدقيق سجلات المرضى لتوثيق الألم والقلق.

النتائج: أظهرت النتائج أن رضا المرضى في السيطرة على الألم أصبح أعلى بنسبة 91.7 ٪ بعد تنفيذ برنامج معالجة الألم مقارنة بنسبة 63.3 ٪ قبل تنفيذ البرنامج ($P < 0.05$)، كما أظهرت الدراسة أن هناك توافق كبير بين تصنيف شدة الألم بين الباحثين والممرضين القانونيين في أقسام الجراحة، وهناك تحسن كبير في عملية التوثيق التمريضي لألم المرضى **بعد تطبيق برنامج معالجة الألم.**

الخلاصة: ألقت هذه الدراسة الضوء على فاعلية البرامج التطبيقية التي تهدف إلى تحسين طرائق التمريض في تقييم ألم ما بعد الجراحة ومعالجته في أقسام الجراحة. وسوف تساعد نتائج الدراسة التمريض في أقسام الجراحة إبراز أهمية إدخال برامج تعليمية في خدماتها، وبالتالي تحسين نتائج علاج الألم.

الكلمات الدالة: ألم ما بعد الجراحة، تقييم الألم، معالجة الألم، دراسة تطبيقية.