



EXPECTATIONS THAT PATIENTS HAVE OF NURSES REGARDING PAIN MANAGEMENT DURING THE POST-OPERATIVE PERIOD AND INTERVENTIONS OF NURSES FOR PATIENTS IN PAIN

AMELİYAT SONRASI HASTALARIN AĞRI KONTROLÜNE YÖNELİK HEMŞİRELERDEN BEKLENTİLERİ VE HEMŞİRELERİN AĞRILI HASTAYA YÖNELİK GİRİŞİMLERİ

INTERVENTIONS OF NURSES FOR PAIN MANAGEMENT DURING THE POST-OPERATIVE PERIOD, AND PATIENTS' EXPECTATIONS

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Öz

Amaç: Çalışma, cerrahi kliniklerinde yatan hastaların ağrı kontrolüne yönelik hemşirelerden beklentileri ve hemşirelerin ağrılı hastaya yönelik girişimlerini belirlemek amacıyla yapılmıştır. **Gereç ve Yöntem:** Tanımlayıcı olarak yapılan araştırmanın örneklemini bir üniversite hastanesinin cerrahi kliniklerinde yatan ve cerrahi girişim uygulanan 315 hasta ve bu kliniklerde çalışan 63 hemşire oluşturmuştur. Veriler araştırmacı tarafından literatür bilgilerine dayanarak hazırlanan soru formu aracılığı ile hastalarla yüz yüze görüşülerek toplanmıştır. Verilerin değerlendirilmesinde; sayı, yüzde, ortalama, standart sapma hesaplamaları kullanılmıştır. **Bulgular:** Araştırmadan elde edilen sonuçlara göre; hastaların ağrı kontrolüne yönelik beklentilerinin başında; hemşirelerin ağrıyı dikkate alması, önemsemesi ve ağrının azalma durumunu takip etmesi (%100) gelmektedir. Hemşirelerin ağrı kontrolüne yönelik uyguladıkları girişimler arasında en fazla hekim istemi ile farmakolojik yöntem uygulanması (%96.8), farmakolojik olmayan yöntemlerden hastaya uygun pozisyon verilmesi (%96.8) yer almaktadır. Bu uygulamaları farmakolojik olmayan yöntemlerden gerekli durumlarda sıcak/soğuk uygulanması (%74.6), aktif-pasif egzersiz uygulanması (%71.4), gevşeme egzersizlerinin uygulanması (%60.3), masaj yapılması (%22.2) izlemektedir. Hemşirelerin özellikle farmakolojik olmayan yöntemleri daha az uygulama nedenlerinin arasında hemşire sayısının yeterli olmaması, hastaların ağrı kontrolüne yönelik uygulamalara isteksiz olması, yeterli vakit olmaması, ağrı kontrolüne yönelik bilgi eksikliği yer almaktadır. **Tartışma:** Araştırmadan elde edilen sonuçlar doğrultusunda, cerrahi girişim uygulanan hastaların beklentileri dikkate alınarak ameliyat sonrası ağrı kontrolüne yönelik uygun hemşirelik yaklaşımlarının belirlenmesi, bu konuda klinik hemşirelerine eğitim verilmesi ve hemşirelik bakım uygulamalarındaki yetersizliklerin nedenlerinin iyileştirilmesi yönünde önerilerde bulunulmuştur.

Anahtar Kelimeler

Ameliyat Sonrası Ağrı; Ağrı Kontrolü; Hastalar; Hemşirelik Bakımı

Abstract

Aim: The study was undertaken to determine the expectations that patients staying in surgery clinics have of nurses regarding pain management and interventions of nurses for patients in pain. **Material and Method:** The study was descriptively carried out. The study sample was composed of 63 nurses and 315 patients who were operated on and stayed at the surgery clinics of a university hospital. The data were gathered through a face-to-face interview technique using a questionnaire designed and based on the literature. For the examination of the data, numbers, percentages, and means and standard deviations were used. **Results:** According to the study findings, the main expectation of all of the patients of the nurses regarding pain management was that nurses should care about and pay attention to pain and monitor whether or not the pain decreased (100%). The main interventions by nurses for pain management were pharmacological interventions requested by doctors (96.8%) and positioning the patients correctly (96.8%). Other frequently used interventions were hot/cold compresses (74.6%), active-passive exercises (71.4%), relaxation exercises (60.3%), and massages (22.2%). The reasons non-pharmacological methods were used less frequently by the nurses included insufficient number of nurses, patients' reluctance to participate in pain relief techniques, lack of time, and lack of information about pain control. **Discussion:** Based on these results, the following are recommended: considering the expectations of patients who undergo surgery, establishing proper nursing approaches for post-operative pain control, training clinic nurses in pain management, and detecting and correcting poor nursing care practices.

Keywords

Postoperative Pain; Pain Management; Patients; Nursing Care

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Introduction

Post-operative pain, a main problem for patients following surgery, is an acute pain type accompanied by an inflammatory process that emerges due to the surgical trauma. Today, it is reported that 50-75% of patients may experience moderate to severe pain after an operation despite technological advancements in physiology, pharmacology, surgical techniques, and pre-operative care in pain management [1-3]. Amata et al. reported that 61% of the post-operative patients had severe pain, 30% had moderate pain, and only 9% had mild pain, whereas Sloman et al. indicated that 75% of surgical patients felt severe or moderate pain [4,5]. In the study by Özer et al. conducted in Turkey, it was noted that 93.7% of the patients had severe pain, demonstrating that results in Turkey were similar to those of other countries [6]. Uncontrolled pain after an operation affects the whole body and is the most important reason for post-operative complications [6,7].

After an operation, pulmonary system, cardiovascular system, gastrointestinal, and urinary system dysfunctions, deterioration in muscle metabolism and function, and neuroendocrine and metabolic changes may be seen due to pain [8]. In addition to these changes, patients may experience a difficult post-operative period, their recovery period may be prolonged, and treatment costs and mortality rates may increase because of post-operative pain [9].

Effective post-operative pain management can be achieved with a holistic approach specific to the individual and a multidisciplinary team approach. Nurses, being important members of this multidisciplinary team, spend significant time with patients, so they play key roles in diagnosing and controlling post-operative pain, implementing and teaching coping methods for post-operative pain, determining the expectations of the patients, providing care aligned with these expectations, and managing post-operative pain [6,10,11].

The implementation of pharmacological treatment, the most commonly used method following surgery, may not always result in satisfactory pain relief and also has undesired side effects [12]. In addition to pharmacological treatment, the implementation of non-pharmacological interventions is important in pain management because they take patient expectations into consideration; these implementations are carried out through the active participation of nurses. It is essential for nurses to be knowledgeable about pain, to be sensitive to pain, to have communication skills, to take patient expectations into consideration, and to empathize so that they can fulfill their roles in pain management successfully [8]. When nurses have enough knowledge and experience regarding pain management, they will also be able to develop standard pain management methods [13].

Controlling post-operative pain is an international problem and the need to eliminate pain and to improve pain management is emphasized in the literature [6,14]. In this study, we felt that determining patient expectations about post-operative pain and determining nurses' interventions done for patients in pain would contribute to post-operative pain management strategies and to the development of effective post-operative pain control.

The aim of the study was to determine the expectations that

patients who had undergone surgery had of nurses regarding pain management and interventions.

Material and Method

The research was conducted with the nurses who served at General Surgery Clinics, Cardiovascular Surgery Clinics, Thoracic Surgery Clinics, Urology Clinics, Brain Surgery Clinics and Orthopedics Clinics of Gazi University Health Practices and Center and patients who had been operated on and who had stayed at these clinics. The sample size of the study was calculated using a sampling method based on the patient number of the previous year. The sample was determined to consist of 283 patients. After approval of this study by Gazi University Ethics Commission, the study was carried out with 315 patients who would have moderate and severe surgery (lobectomy, cholecystectomy, thyroidectomy, arthroplasty, etc.) under general anesthesia at these surgical clinics, were aged ≥ 18 years, were able to communicate verbally, and who volunteered to participate in the study between the 17th of January 2011 and the 18th of February 2011. The number of the patients from each clinic was calculated with the help of a weighted sampling method according to the bed count of the clinics. It was decided to select 39.4% of the patients from general surgery clinics, 29.2% from orthopedics clinics, 14.9% from brain surgery clinics, 8.9% from urology clinics, 5.4% from thoracic surgery clinics, and 2.2% from cardiovascular surgery clinics. Of the 66 nurses working in these clinics, three chose not to participate; thus, the study was initiated with 63 nurses.

The data were gathered through the "Patient Information Form" designed by the researchers based on a review of the literature [6,8,14,15] which addressed socio-demographic characteristics and disease characteristics of the patients; the Visual Analogue Scale for Pain (VAS); and the "Form to determine expectations of the patients from nurses for post-operative pain management," which addressed expectations of the patients from nurses about post-operative pain management. For data related to the nurses, the "Nurse Information Form" designed by the researchers based on a literature review [6,16,17] which addressed socio-demographic characteristics of the nurses and the "Form to determine nurses' interventions for pain" which addressed nursing approaches were used. The latter aligned with the main titles for pain management in the NIC (Nursing Interventions Classification) and the NOC (Nursing Outcomes Classification). Main titles were: Assessment of Pain, Nursing Interventions for Pain, and Providing Patients with Training and Continuation of Pain Care [17]. The "Patient Information Form" and the "Form to determine expectations of the patients from nurses for post-operative pain management" were administered to the patients after their surgeries with face-to-face interviews. While assessing pain, attention was paid to be certain that patients had been resting and that the questionnaires were not administered to patients who had medical interventions or who had been involved in activity (dressing, walking, coughing exercise, etc.) in the previous hour. Pain assessment was performed during the post-operative second, third, and fourth days because the literature reports that moderate to severe pain after an operation lasts for 2-7 days in intrathoracic and subabdominal surgeries and for 1-4 days in subabdominal surgeries [6,18]. The "Nurse

Information Form" and the "Form to determine nurses' interventions for pain" were distributed to the nurses after necessary explanations were made and were gathered two days later. The SPSS 16.0 package software was used for data analyses with percentages, numbers, and means and standard deviations. To undertake the study, official permissions were obtained from the management of Gazi University Research and Practice Hospital. The participant patients and nurses were thoroughly instructed in the aims and details of the study and their written and oral informed consents were obtained.

Results

The mean age of the participant patients was = 52.23 ± 1.63 years. 55.6% were male patients. 43.8% had a high school degree or a higher education degree. 69.8% of the patients reported pain on the second post-operative day, 11.1% of the patients on the third post-operative day, and 19.0% of the patients on the fourth post-operative day.

Nearly one-third of the patients (31.8%) had orthopedic surgery, 7.3% of the patients had cardiothoracic surgery, 27.3% of the patients had gastrointestinal system surgery, 9.8% of the patients had urinary system surgery, 7.6% of the patients had brain surgery, 13.0% of the patients had discectomy surgery and laminectomy surgery, and 3.2% of the patients had mastectomy surgery.

When the pain severity of the patients was examined using a five-point pain scale, it was determined that most of the patients had severe pain (53.3%) or moderate pain (34.3%). 29.5% of the patients reported that post-operative pain was lower than expected and 21.9% reported that post-operative pain was higher than expected.

Table 1 demonstrates patient expectations of nurses regarding pain management. The main expectations were that the nurses should care about and pay attention to pain and monitor whether or not the pain decreased (100%).

Mean age of the participant nurses was = 29.38 ± 4.99 years. 30.2% of the nurses worked at general surgery clinics, 20.6% at orthopedics clinics, 15.9% at brain surgery clinics, 12.7% at urology clinics, 11.1% at cardiovascular surgery clinics, and 9.5% at thoracic surgery clinics. 27.0% of the nurses had worked for 1-5 years and most of them had (79.4%) bachelor's degrees.

Table 2 illustrates the distributions of the nurses' interventions for pain management. 98.4% assessed length and period of the pain, 95.2% examined features of the pain, 95.2% studied the factors that increased or decreased pain, 71.4% used pain assessment scales, and 63.5% palpated and examined the sites of pain.

The most used nursing interventions for pain management were the use of pharmacological methods requested by the doctors for pain control and advising the patients of correct positioning for pain relief (96.8%). When necessary, these interventions were followed by other interventions such as hot/cold compresses (74.6%), active-passive exercises,(71.4%), relaxation exercises (60.3%), and giving massages (22.2%).

In regard to Providing Patients with Training and Continuation of Pain Care, most of the nurses provided information about the reasons for the pain, explained that pain might occur while

Table 1. Distribution of patient expectations of nurses regarding pain control (n=315)

Distribution of patient expectations of nurses regarding post-operative pain control	Yes		No	
	Number	%	Number	%
Asking whether or not pain is experienced	311	98.7	4	1.3
Seeking detailed information from patients about the pain experienced	273	86.7	42	13.3
Use of a scale/inventory to assess pain	277	87.9	38	12.1
Opening and examining the painful area	126	40.0	189	60.0
Asking about how pain is dealt with in normal life	272	86.3	43	13.7
Giving information that pain is experienced in some cases after surgery	298	94.6	17	5.4
Giving information about how to terminate pain	302	95.9	13	4.1
Caring when it is told that pain is experienced	313	99.4	2	0.6
Talking about pain	276	87.6	39	12.4
Paying attention to pain, caring about pain	315	100	0	0
Talking about avoiding movements that cause pain	310	98.4	5	1.6
Informing patients of correct positions to decrease pain	260	82.5	55	17.5
Hot/cold compress practices to decrease pain	173	54.9	142	45.1
Giving massages to decrease pain	159	50.5	156	49.5
Doing arm, leg exercises, walking, etc. to decrease pain	218	69.2	97	30.8
Playing music to decrease pain	111	35.2	204	64.8

coughing, breathing, standing up, etc., and advised what to do to manage pain after the surgery.

Discussion

Pain is the most common problem seen during the post-surgery period. One of the most important findings to be used for pain identification is how pain is perceived and what the expectation of pain is. In the study of Carr and Thomas, it was found out that most patients experienced less pain than expected after surgery [2]. In our study, too, it was noted that 21.9% reported that post-operative pain was the level that they expected while 29.5% of the patients experienced less post-operative pain than expected.

Providing information before surgery about pain control is one of the most significant responsibilities of nurses [16,20]. In our study, 95.9% of the patients expected to be informed during the pre-surgery period about how pain management after surgery would be performed and 95.2% of the nurses provided them with information about the issue. These interventions by the nurses met these patient expectations. In other studies on the same issue, it was discovered that providing patients with specific information about pain and pain management during the pre-operative period and preparing the patients for non-pharmacological methods of pain relief reduced post-operative pain and resulted in a positive attitude among the patients [21,22]. Uncontrolled post-operative pain interferes with coughing, effective breathing, and moving and may cause complications among the patients [3,23]. Informing patients of the possibil-

Table 2. Distributions of the Nurses' Interventions for Pain Management (n=63)

Nursing Interventions for Pain Management	Yes		No	
	Number	%	Number	%
Assessment of Pain				
Assessment of the features of the pain	60	95.2	3	4.8
Use of a scale/inventory to assess pain	34	54.0	29	46.0
Examination of the painful site by palpation/looking	40	63.5	23	36.5
Assessment of the length and period of the pain	62	98.4	1	1.6
Assessment of factors that increased or decreased pain	60	95.2	3	4.8
Nursing Interventions for Pain Management				
Implementation of pharmacological treatment as required by the physicians	61	96.8	2	3.2
Observation of the side effects of the pharmacological treatments	57	90.5	6	9.5
Advising the patients of the correct positions to reduce pain	61	96.8	2	3.2
Applying hot/cold compresses when necessary	47	74.6	16	25.4
Giving massage to reduce pain	14	22.2	49	77.8
Implementation of relaxation exercises to reduce pain	38	60.3	25	39.7
Doing arm, leg exercises, walking, etc. to decrease pain	45	71.4	18	28.6
Re-checking of the pain status after making these interventions	57	90.5	6	9.5
Providing the Patients with Training and Continuation of Pain Care				
Explaining the reasons for the pain	60	95.2	3	4.8
Giving information to the patients that pain may occur for some situations after surgery	62	98.4	1	1.6
Giving information to the patients about what to do after the surgery for pain management	62	98.4	1	1.6

ity that they may experience pain while coughing, taking deep breaths, moving, or standing up and giving the patients correct bed positions are the nursing interventions that reduce difficulties related to pain during the post-operative period. Most of the patients in our study reported that they expected that nurses would give information on the possibility that they might experience pain while coughing, standing up, walking, and breathing and that they wanted help to determine the bed positions that would reduce pain. In our study, the nurses met these patient expectations.

Literature studies have reported that pain should be assessed using a scale for effective pain control [24,25]. In our study, 87.9% of the participant patients expected that nurses would assess pain using a pain evaluation scale, while 54.0% of the nurses used these scales to assess the pain. The study of Dihle et al. indicated that nurses rarely used pain evaluation scales and the study of Özer et al. demonstrated that only 18.7% of the nurses used pain evaluation scales [26,27]. It was noted that the rate of the use of pain evaluation scale in our study was higher than these two studies. Yet, it is still not enough because in 1995 the American Pain Society (APS) announced that pain is the fifth sign of life and therefore should be measured

and treated like any of the other signs of life [28]. Nurses may not use pain evaluation scales more frequently because they do not consider these scales necessary or because they have extreme workloads.

Another important nursing intervention is monitoring pain [28]. All of our participant patients expected that nurses would monitor pain and 90.5% of the nurses did. These findings may indicate that nurses who worked at the study clinics were aware of the necessity of checking the efficacy of pharmacological treatment. Although they had a high degree of awareness of the issue, it was detected that the participant nurses used the non-pharmacological treatments for pain less frequently than the pharmacological treatments.

The study of Bauer et al. indicated that patients receiving massage therapy had significantly decreased pain [29]. In our study, 22.2% of the nurses gave massages to reduce pain, while 50.5% of the patients wanted the nurse to give massage to reduce pain. 54.9% of the patients expected that nurses would use cold/hot compresses to reduce pain when necessary, while 74.6% of the nurses used cold/hot compresses to reduce pain. The reasons patients did not expect and nurses did not use non-pharmacological methods to reduce pain may be that they do not know these methods and their effects. However, the efficacy of non-pharmacological methods for pain-decrease, such as nurses giving massages, playing music, therapeutic touch, hot/cold compression, relaxation exercises, and advising on positions, decreased pain level and resulted in patient relaxation, according to studies in the literature [19,29].

Nurses may encounter difficulties while carrying out nursing interventions for pain control. One study reported that 63% of the nurses faced problems while trying to alleviate the pain of the patients. Problems and challenges for the nurses included insufficient time (24.4%), inadequate knowledge level of the nurses (3%), and inadequate knowledge level of the patients (25.6) [19]. Our study found that 42.9% of the nurses experienced problems while providing nursing interventions for pain management. These problems included: insufficient number of nurses (28.6%), patients' reluctance regarding pain control (22.2%), lack of time (19.0%), and lack of information about pain control (11.1%).

Results and Recommendations

It is necessary to learn about patient expectations and to determine the appropriate nursing interventions for post-operative pain management by taking patient expectations into consideration, so that pain control of the patients who are operated on can be achieved. In light of the study data, the main expectations of the patients regarding pain management were that nurses should care about and pay attention to pain and should monitor whether or not pain decreased (100%).

Of the main interventions provided by nurses for pain management, pharmacological interventions requested by the doctors and giving the patients the correct positions were the most frequent interventions. Other frequently used interventions, performed when necessary, were hot/cold compresses, active-passive exercises, relaxation exercises, and massages. The reasons non-pharmacological methods were practiced less frequently by nurses were insufficient number of nurses, patients'

reluctance about pain control, lack of time, and lack of information about pain control. Therefore, the study recommends that appropriate nursing interventions for post-operative pain management should be identified by taking the expectations of the surgical patients into consideration, by providing training for the clinic nurses, by uncovering reasons for poor practices in nursing care, and by correcting these poor practices.

Competing interests

The authors declare that they have no competing interests.

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