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

Tuba Yılmazer¹, Naile Bilgili²

¹Yıldırım Beyazıt University, Faculty of Health Sciences, ²Department of Nursing, Gazi University, Faculty of Nursing, Ankara, Turkey

Öz
Amaç: Çalışma, cerrahi kliniklerinde yatan hastaların ağrı kontrolüne yönelik hemşirelerden beklentileri ve hemşirelerin ağrılı hastalara yönelik girişimlerini belirlemek amacıyla yapılmıştır. Gereç ve Yöntem: Tanımlayıcı olarak yapılan araştırmının örneklemi bir üniversite hastanesi 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 sonuçlar ağırlı hastaların ağrı kontrolüne yönelik beklentilerinin başında; hemşirenin ağrıyı dikkate alması, önemsemesi ve ağrı 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 uygulamaların farmakolojik olmayan yöntemlere 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 yöntemlere daha az uygulama nedenleri arasında hemşire sayısı yeterli, hastaların ağrı kontrolüne yönelik uygulamaları isteksiz, yeterli vakit olmasması, ağrı kontrolüne yönelik bilgi eksikliği yer almaktadır. Tartışma: Araştırmadan elde edilen sonuçlar doğrultusunda, cerrahi girişim uygulanan hastaların beklentilerini dikkate alınarak ameliyat sonrası ağrı kontrolüne yönelik uygun hemşirelik yaklaşımlarının belirlenmesi, bu konuda klinik hemşirelerine eğitim verilmesi ve hemşirelik bakım uygulamalarındaki yetersizliklerin nedenleri ile ilgili bilgilendirme alınması gerekmektedir. Anahtar Kelimeler
Postoperative Pain; Pain Management; Patients; Nursing Care

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

DOI: 10.4328/JCAM.4768
Received: 27.07.2016 Accepted: 01.01.2016

Tuba Yılmazer, Department of Nursing, Yıldırım Beyazıt University, Faculty of Health Sciences, 06800 Ankara, Turkey.

T.: +903123241555 F.: +90 3123241505 E-Mail: tubayldrm_87@hotmail.com

J Clin Anal Med 2017;8(4): 327-31

CORRESPONDING AUTHOR: Tuba Yılmazer, Department of Nursing, Yıldırım Beyazıt University, Faculty of Health Sciences, 06800 Ankara, Turkey.
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 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 allowed 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, 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 $= 52.23 \pm 1.63$ 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 disectomy 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 $= 29.38 \pm 4.99$ 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 reasons for the pain, explained that pain might occur while 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 |
|------------------------------------------|-----|----|
| Assessment of Pain                        |     |    |
| Assessment of the features of the pain    | 60  | 3  |
| Use of a scale/inventory to assess pain   | 34  | 29 |
| Examination of the painful site by palpation/looking | 40  | 23 |
| Assessment of the length and period of the pain | 62  | 1  |
| Assessment of factors that increased or decreased pain | 60  | 3  |
| Nursing Interventions for Pain Management |     |    |
| Implementation of pharmacological treatment as required by the physicians | 61  | 2  |
| Observation of the side effects of the pharmacological treatments | 57  | 6  |
| Advising the patients of the correct positions to reduce pain | 61  | 2  |
| Applying hot/cold compresses when necessary | 47  | 16 |
| Giving massage to reduce pain             | 14  | 49 |
| Implementation of relaxation exercises to reduce pain | 38  | 25 |
| Doing arm, leg exercises, walking, etc. to decrease pain | 45  | 18 |
| Re-checking of the pain status after making these interventions | 57  | 6  |
| Providing the Patients with Training and Continuation of Pain Care |     |    |
| Explaining the reasons for the pain       | 60  | 3  |
| Giving information to the patients that pain may occur for some situations after surgery | 62  | 1  |
| Giving information to the patients about what to do after the surgery for pain management | 62  | 1  |

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.

References
1. Pogatzki-Zahn EM, Zahn PK, Brennan TJ. Postoperative Pain- Clinical Implications Of Basic Research. Best Practice & Research Clinical Anaesthesiology 2007;21(1):3-13.
2. Lellan KM. Postoperative Pain: Strategy For Improving Patients' Experiences. 2007;21(1):3-13.
3. Huang N, Cunningham F, Laurito CE, Chen C. Can We Do Better With Postoperative Pain Management. Journal Of Advanced Nursing 2004;46(2):179-185.
4. Amato AO, Samaroo LN, Monplaisier SN. Pain control after major surgery. East Afr, Med J 1999;76(5):269-271.
5. Sloban R, Rosen G, Rom M, Shir Y. Nurses’ assessment of pain in surgical patients. Journal of Advanced Nursing 2005;52(2):125-132.
6. Özür N, Bölükbaş N. Postoperatif Dönemdeki Hastaların Ağrıya Tammamlamaları Ve Hemşirelerin Afferoı Hasta椋a Yönelik Girişimlerinin İncelenmesi. Atatürk Üniv. Hemişirelik Yüksekokulu Dergisi 2001;4(1):7-17.
7. Sayın S, Öztekin SD. İstanbul İlÜniversite Ve Devlet Hastanelerini Genel Cerrahi Kliniklerinde Çalışan Servis Hemşirelerinin Aşemiyat Sonrası Ağrı Yönetiminine İlişkin Bilgi Ve Uygulamalarının Değerlendirilmesi. Türkiye Klinikerleri: J Surg Nurs-Special Topics 2015;1(3):23-9.
8. Içeren AO, Dal U. Abdominal Cerrahi Girişim Uygulanan Hastalarda Görülen Erken Dönem Sorunları ve Bu Sorunlara Yönelik Hemişirelik Uygulamaları. Sağlık Bilimleri Fakültesi Hemişirelik Dergisi 2011;7(3):46-46.
9. Çevik K, Zaybak A. Aşıkka Aşemiyatı Sonrası Yapılan Postoperatif Egersizlerin Aşını Eğitisi. Anadolu Hemişirelik ve Sağlık Bilimleri Dergisi 2011;4:4-4.
10. Gürler T. Toplu Eğitim Ve Aşıma Etkisi. Anadolu Hemişirelik ve Sağlık Bilimleri Dergisi 2010;13:2.
11. Aş Lawyer SE. Postoperatif Ağrı Ve Hemişirelik Uygulamaları. Ağrı 2010;22(1):21-29.
12. Dündar G. Ofluoğlu S. Ağrı Kontrolünde Temel Yaklaşımlar. Ondokuz Mayıs Üniversitesi Tip Dergisi 1995;10(2):111-118.
13. Bacaksız BD, Çöçelli LP, Ovayolu N, Özgür S. Hastaya Bakım Veren Sağlık Çalışanlarının Ağrı Kontrolünde Uyguladıkları Girişimlerin Değerlendirilmesi. Ağrı 2008;20:3.
14. Yılmaz M, Gözler H. Hastaların Aşemiyatı Sonrası Yaptıkları Ağrıya Yönelik Hemişirelik Yaklaşımlarını İlişki Görüntülerleri Ve Memnuniyet Duruşmaları. Ağrı 2011;23(2):71-79.
15. Işıklı E, Bengk K, Uıssonos M, Brudin L. Differences Between Nurse and Patient Assessments on Postoperative Pain Management In Two Hospitals. Journal of Evaluation in Clinical Practice 2005;11(5):444-451.
16. Demir Dikmen Y, Yıldırım I, Ince Y, Türkmen G, Kaya M. Hemişirelerin Ağrı Yönetimine İlişki Tutum ve Klinik Karar Verme Durumlarını Değerlendirmesi. Çağdaş Tip Dergisi 2012;2(3):162-172.
17. Johnson M. NANDA, NOC, and NIC Linkages: Nursing Diagnoses, Outcomes, & Interventions. Mosby Elsevier, 2006.
18. Killaroglu A. Ağrı Kontrolünde Temel Yaklaşımlar. Ondokuz Mayıs Üniversitesi Tip Dergisi 1995;10(2):111-118.
19. Johnson M. NANDA, NOC, and NIC Linkages: Nursing Diagnoses, Outcomes, & Interventions. Mosby Elsevier, 2006.
20. Killaroglu A. Ağrı Kontrolünde Temel Yaklaşımlar. Ondokuz Mayıs Üniversitesi Tip Dergisi 1995;10(2):111-118.
21. Johnson M. NANDA, NOC, and NIC Linkages: Nursing Diagnoses, Outcomes, & Interventions. Mosby Elsevier, 2006.
22. Killaroglu A. Ağrı Kontrolünde Temel Yaklaşımlar. Ondokuz Mayıs Üniversitesi Tip Dergisi 1995;10(2):111-118.
23. Johnson M. NANDA, NOC, and NIC Linkages: Nursing Diagnoses, Outcomes, & Interventions. Mosby Elsevier, 2006.