

Original Article

Evaluation of the Factors Affecting the Comfort of Patients who Undergo Surgery for Breast Cancer

Havva Bozdemir, PhD

Kocaeli University, Department of Nursing, Health Department, Kocaeli, Turkey

Esra Usta, PhD

Duzce University, Vocational School of Health Services, Duzce, Turkey

Zuleyha Simsek Yaban, PhD

Kocaeli University, Faculty of Health Science, Department of Surgical Nursing, Kocaeli, Turkey

Dilek Aygin, PhD

Sakarya University, Faculty of Health Science, Department of Surgical Nursing, Sakarya, Turkey

Correspondence: Zuleyha Simsek Yaban, PhD Kocaeli University, Faculty of Health Science, Department of Surgical Nursing, Kocaeli, Turkey

e-mail: zuleyha_simsek@hotmail.com

Abstract

Background: Surgical procedures are psychological, physiological and social trauma, although they are life-safe applications. The patient faces many physical and psychosocial problems. All these problems cause the patient's comfort to deteriorate.

Objective: The purpose of this study is to determine the perianesthesia comfort levels of patients diagnosed with breast cancer and undergoing surgery.

Methodology: This study was conducted as a descriptive and cross-sectional. The sample of this study consisted of 101 patients diagnosed with breast cancer and undergoing surgery in a University Research and Training Hospital General Surgery Service. The study data were collected between March 2017-March 2018 using the socio-demographic question form, Perianaesthesia Comfort Scale and Visual Analog Scale (VAS).

Results: The median age of the patients was 52.0 [13.5], 56.4% had an educational level of primary-secondary school, 95% were married. Of the patients, 26.7% have one or two chronic diseases and 57.4% of the patients are overweight-obese. Breast protective surgical intervention (50.5%) and modified radical mastectomy (49.5%), for patients with ASA scores of I (64.4%) and 2 (35.6%). The median postoperative nausea score was 3.0 [2.5] (1-10) and the median pain score was 3.0 [3.0]. The median PCS score of the patients on the postoperative 1st day was 3.92 [0.75]. It was determined that there was a negative correlation between age and PCS score ($r = -0.434$, $p < 0.001$), and PCS score those of the patients who were overweight-obese was lower than the patients who were weak-normal ($z = -2.004$, $p < 0.05$).

Conclusions: In our study, it was determined that postoperative comfort levels of patients with breast cancer surgery were medium-high level and the patient's comfort levels were affected only by age and weight.

Keywords: perioperative comfort; breast cancer; surgery; post anesthesia care; assessment

Introduction

Although surgical interventions defined as controlled trauma are applied for therapeutic purposes, they can cause many problems that may vary depending on the duration, type of surgical intervention and characteristics of the patient (Yilmaz et al., 2018). Surgical procedures are psychological, physiological and social trauma, although they are life-safe applications. The patient faces many physical and

psychosocial problems. All these problems cause the patient's comfort to deteriorate (Seyedfatemi et al., 2014). Nursing is the comfort in the field of care, the need to get rid of problems that arise in stressful situations, to be peaceful and overcome. The aim of nursing care is to meet these needs (Dowd, 2010; Kolcaba, 2001; Kolcaba & Wilson 2002). The North American Nursing Diagnoses Association (NANDA) describes "comfort" as feeling good from a mental, physical, and social

point of view. It deals with the topics of physical, environmental and social comfort, deterioration in comfort, readiness to heighten comfort, vomiting, acute pain, chronic pain, birth pain, loneliness risk, social isolation (Bergström et al., 2018; Herdman & Kamitsuru 2017; Kolcaba, 2001; Kolcaba & Wilson, 2002).

In the care to be maintained in line with the nursing process, the comfort theory developed by Katharine Kolcaba is guided by collecting data on the needs of the individual, increasing comfort for unmet requirements the planning and implementation of the initiatives and the contribution to the quality of life of the individual by ensuring optimum level of comfort should be considered as an approach (Erdemir & Cırlak, 2013; Kolcaba, 2001; Kolcaba & Wilson, 2002). Comfort in the field of care is the elimination of the needs to get rid of problems that arise in stressful situations, to be peaceful and overcome. Comfort is considered an expected positive result in the patient. In order to measure the quality of service offered in patient care and to evaluate the expected results in the patient, a written record through comfort measurement can be created (Kolcaba, 2001; Kolcaba & Wilson, 2002). In our country, one of the four cancers seen in women is located in the breast, breast cancer is the most common cause of death from cancer. After breast surgery; acute pain and discomfort due to trauma caused by surgical procedure, anesthesia induced nausea vomiting, hypothermia, etc. may cause deterioration in the physical comfort of the patient. In addition, anxiety, lack of information or environmental factors can adversely affect comfort. Holistic nursing care, which starts before surgery and continues until after surgery, should be planned and carried out for the elimination of the patient's ailments (Eicher, Marquard & Aebi, 2006; Karayurt & Andic, 2011; Tarcan, 2012; Wilson & Kolcaba, 2004). There are study samples evaluating patient comfort in different patient groups undergoing surgical intervention (Karabulut et al., 2015; Kuguoglu & Karabacak, 2014; Seyedfatemi et al., 2014; Yilmaz et al., 2018). However, there have been no studies evaluating comfort in patients undergoing surgical intervention due to breast cancer. It is thought that the results of this study, which was conducted to determine the comfort level and factors affecting the patients after breast surgery, will guide surgical nurses in planning patient care and setting priorities.

Methodology

Study Desing: This study was conducted as a descriptive and cross-sectional.

Study Sample: The study's universe was created by patients who underwent surgery for breast cancer between March 2017 and March 2018 at A University Research and Practice Hospital General Surgery Clinic. Sampling inclusion criteria;

- Having breast cancer surgery (Lumpectomy or mastectomy),
- No communication barriers, no defined mental disorder (schizophrenia, dementia, etc.),
- ASA (American Society of Anesthesiologists) score II and below,
- No need for postoperative intensive care,
- The patient volunteering to participate in the study.

The patient who complied with the inclusion criteria (n=101) provided a sample of the research.

Data Collection: The Patient Information Form, the Visual Analog Scale (VAS) for the assessment of pain and nausea and the Perianesthesia Comfort Scale were used to collect study data.

The Patient Information Form developed by the researchers obtained socio-demographic information like age, gender, educational status, marital status, smoking/alcohol use, the existence of chronic diseases, surgery individual and surgery-specific questions such as medical diagnosis, type of surgery performed, ASA score, the duration of surgery and recovery. In addition, the use and number of analgesics were be recorded. Pain and nausea were evaluated with VAS.

Perianesthesia Comfort Scale (PCS) was created by Kolcaba by taking a guide to the taxonomic structure of three levels and four dimensions that constitute the theoretical components of comfort. The Turkish validity and reliability of the scale was carried out by Ustundag and Eti Aslan (Ustundag & Eti Aslan, 2010). The Cronbach Alpha coefficient was found to be 0.83 for the entire scale. For this study, the Cronbach Alpha coefficient of the scale was 0.72. The scale consists of 24 substances that question the self-understanding and feelings of the individual reflecting the general thought process before and after surgical intervention. Each item on the scale has a likert type scoring ranging from "absolutely disagree" to "absolutely agree" to 1-6. The response patterns of the scale consisting of positive and negative substances are mixed. 12 of the items

are positive (1, 5, 6, 11, 14, 16, 18, 19, 20, 21, 23, 24), 12 of them are negative (2, 3, 4, 7, 8, 9, 10, 12, 13, 15, 17, 22); negative items are reversed in scoring. In the evaluation of the scale; the negative scores obtained are encoded in reverse and collected with positive substances. The total score of 24-144 can be obtained from the scale. The total score obtained is divided by the number of items of scale, determining the average value and the result is indicated in the 1-6 distribution. Low score shows that comfort is bad, high score comfort is good. The data were collected by the researcher within 20 minutes by the face-to-face interview method, after the patients were taken to their beds in the service and became able to communicate within the first day after the operation. Information on the patient's life findings, medications and diseases were recorded on the patient follow-up form.

Ethical Considerations: The ethical permission for the study was obtained from A University Ethics Committee (Dated: 2016, Consent No: 201). In addition, the patients were informed and their written permission was obtained.

Data Analysis: The SPSS Windows 21.0 (Statistical Package for the Social Sciences, Düzce University) was used in data assessment. Continuous variables were denoted with median [interquartile range], and categorical variables with number and percentage. The normality of data distribution was assessed using the Kolmogorov Smirnov test. Mann Whitney U, Kruskal Wallis H test, Spearman's rho correlations test were used in statistical comparisons. The results were accepted statistically significant at the level of $p < 0.05$.

Results

The median age of the patients was 52.0 [13.5]. Of the sample, 56.4% had an educational level of primary-secondary school, 95% were married, and 77.2% were unemployed. Of the patients, 11.9% have a habit of smoking and 3% have a habit of using alcohol. 57.4% of patients are

overweight-obese (Table 1). When the health history of the patients is examined; 26.7% have one or two chronic diseases and 30.7% have experienced surgery due to any health problems. Breast protective surgical intervention (50.5%) and modified radical mastectomy (49.5%), for patients with ASA scores of I (64.4%) and 2 (35.6%). The median of the surgery time was 1.5 [1.0] hours, and recovery time was 60.0 [65.0] minutes. 59.4% of patients were given Propofol+Rocuronium bromide as an anesthetic agent. The median postoperative nausea score was 3.0 [2.5] (1-10) and vomiting was observed in 15.8%. In terms of postoperative invasive intervention, 82.2% have drains and IV catheters, with a median pain score of 3.0 [3.0] (1-10). Tramadol and NSAIDs (Nonsteroidal anti-inflammatory drugs) were administered as a pain medication in 56.4% of patients. 67.3% of patients received pain medication for once (Table 2). On the first day after the surgery, the median PCS score of the sample group was 3.92 [0.75]. The scores from the scale and the socio-demographic, surgical processes, and health status of the patients were compared and presented in Table 3. The comfort scores of those who had obesity problem (overweight-obese) according to the BMI classification was lower than those with weak-normal weight ($p < 0.05$). It was determined that there was a negative weak correlation between the comfort score and the age of the patients ($p < 0.05$) (Table 3). As a result of the analysis, education status, marital status, status of employment, smoking and alcohol habits, presence of chronic disease did not affect the comfort score ($p > 0.05$). In addition, no statistically significant relationship was determined between comfort score and the patients' history of surgery, type of surgical intervention, surgery and recovery time, invasive intervention, vomiting, nausea and pain score, anesthetic and analgesia drugs, and frequency of analgesia ($p > 0.05$) (Table 3).

Table 1. Socio-demographic characteristics of the patients

| Characteristics | n | % |
|---------------------------|----|-------------|
| Age, years | | 52.0 [13.5] |
| Educational status | | |
| Primary-Secondary School | 57 | 56.4 |
| High School-University | 44 | 43.6 |
| Marital status | | |
| Married | 96 | 95.0 |
| Single | 5 | 5.0 |

| | | |
|-----------------------------|----|------|
| Status of employment | | |
| Employed | 23 | 22.8 |
| Unemployed | 78 | 77.2 |
| Smoking | | |
| Yes | 12 | 11.9 |
| No | 89 | 88.1 |
| Alcohol use | | |
| Yes | 3 | 3.0 |
| No | 98 | 97.0 |
| BMI kg/m² | | |
| < 24.9 (weak-normal weight) | 43 | 42.6 |
| > 25 (overweight-obese) | 58 | 57.4 |

Median [Interquartile Range], BMI: Body Mass Index

Table 2. Features of patients' surgical processes and health status

| Characteristics | n | % |
|--------------------------------------|----|-------------|
| Chronic Disease | | |
| Yes | 27 | 26.7 |
| No | 74 | 73.3 |
| History of surgery | | |
| Yes | 31 | 30.7 |
| No | 70 | 69.3 |
| Type of surgical intervention | | |
| Breast protector (Lumpectomy) | 51 | 50.5 |
| Modified radical mastectomy | 50 | 49.5 |
| ASA score | | |
| I | 65 | 64.4 |
| II | 36 | 35.6 |
| Surgery time, hour | | 1.5 [1.0] |
| Recovery time, minute | | 60.0 [65.0] |
| Anesthetic drug | | |
| Propofol+Rocuronium bromide | 60 | 59.4 |
| Thiopental+ Rocuronium bromide | 41 | 40.6 |
| Invasive intervention | | |
| Intravenous catheter | 18 | 17.8 |
| Intravenous catheter+Drain | 83 | 82.2 |
| Vomiting | | |
| Yes | 16 | 15.8 |
| No | 85 | 84.2 |
| Nausea score | | 3.0 [2.5] |
| Pain score | | 3.0 [3.0] |
| Analgesic drugs | | |
| Tramadol | 32 | 31.7 |
| Tramadol+NSAIDs | 57 | 56.4 |
| Tramadol+Paracetamol | 12 | 11.9 |
| Frequency of analgesia | | |
| Patient-controlled analgesia | 33 | 32.7 |
| 1 times | 68 | 67.3 |

Median [Interquartile Range], NSAIDs: Nonsteroidal anti-inflammatory drugs

Table 3. Review of factors affecting comfort level

| Variables | PCS | Test statistics | p |
|-----------|-----|-----------------|---|
|-----------|-----|-----------------|---|

| | | | |
|--|-------------|--------|------------------|
| Age, years ^β | 3.92 [0.75] | -0.434 | <0.001 |
| Educational status ^{ββ} | | | |
| Primary-Secondary School | 3.88 [0.79] | -0.836 | 0.403 |
| High School-University | 3.96 [0.74] | | |
| Marital status ^{ββ} | | | |
| Married | 3.92 [0.73] | -1.003 | 0.316 |
| Single | 4.25 [0.90] | | |
| Status of employment ^{ββ} | | | |
| Employed | 4.13 [0.79] | -0.993 | 0.321 |
| Unemployed | 3.88 [0.72] | | |
| Smoking ^{ββ} | | | |
| Yes | 3.96 [0.57] | -0.546 | 0.585 |
| No | 3.92 [0.73] | | |
| Alcohol use ^{ββ} | | | |
| Yes | 3.96 [-] | -0.541 | 0.589 |
| No | 3.92 [0.76] | | |
| BMI kg/m² ^{ββ} | | | |
| < 24.9 (weak-normal weight) | 4.00 [0.75] | -2.004 | 0.045 |
| > 25 (overweight-obese) | 3.79 [0.69] | | |
| Chronic Disease ^{ββ} | | | |
| Yes | 3.79 [0.58] | -1.325 | 0.185 |
| No | 3.98 [0.70] | | |
| History of surgery ^{ββ} | | | |
| Yes | 3.96 [0.54] | -1.124 | 0.261 |
| No | 3.85 [0.85] | | |
| Type of surgical intervention ^{ββ} | | | |
| Breast protector | 3.79 [0.71] | -0.863 | 0.388 |
| Modified radical mastectomy | 3.97 [0.75] | | |
| Surgery time, hour ^β | 3.92 [0.75] | 0.138 | 0.170 |
| Recovery time, minute ^β | 3.92 [0.75] | 0.019 | 0.854 |
| Anesthetic drugs ^{ββ} | | | |
| Propofol+Rocuronium bromide | 3.90 [0.80] | -0.765 | 0.444 |
| Thiopental+ Rocuronium bromide | 4.00 [0.63] | | |
| Invasive intervention ^{ββ} | | | |
| Intravenous catheter | 4.10 [0.67] | -1.674 | 0.094 |
| Intravenous catheter+Drain | 3.88 [0.75] | | |
| Vomiting ^{ββ} | | | |
| Yes | 4.25 [1.06] | -1.071 | 0.284 |
| No | 3.92 [0.69] | | |
| Nausea score ^β | 3.92 [0.75] | -0.029 | 0.774 |
| Pain score ^β | 3.92 [0.75] | -0.131 | 0.192 |
| Analgesic drugs ^{βββ} | | | |
| Tramadol | 3.96 [0.67] | 2.052 | 0.359 |
| Tramadol+NSAIDs | 3.88 [0.73] | | |
| Tramadol+Paracetamol | 4.08 [0.80] | | |
| Frequency of analgesia ^{ββ} | | | |
| Patient-controlled analgesia | 3.96 [0.90] | -1.138 | 0.890 |
| 1 times | 3.90 [0.66] | | |

Median [Interquartile Range], BMI: Body Mass Index, PCS: Perianesthesia Comfort Scale,
^βSpearman's rho correlations, ^{ββ}Mann Whitney U, ^{βββ}Kruskall Wallis H,

Discussion

Today, advances in technological fields have made it possible to use surgical options in the

treatment of many health problems. Surgery is a trauma that can affect the individual in all its dimensions, although it is a practice that aims to secure life. In addition to the discomfort caused by the disease, anxiety caused by uncertainty about the consequences of surgery, fear of death, fear of losing control due to anesthesia, fear of disability and suffering, risk of complications, body image and changing the quality of life, such as the fact that the operating room is a foreign and crowded environment for the patient, can adversely affect the comfort levels of the patients. Although the association of operating room nurses with the patient during the care process of surgical patients is in a short period of time, it is very effective in achieving success in health care. In order to plan and offer quality care, the comfort level of the patient in the operating room environment and the factors affecting it must be evaluated well (Bahar & Tasdemir, 2008; Wilson & Kolcaba, 2004; Yilmaz et al., 2018). The results of this study found that comfort levels of patients who had surgery due to breast cancer were medium-high (3.92). Comfort levels were studied in different groups of patients undergoing surgery. According to these results it has been reported as, comfort levels; patients undergoing coronary artery bypass surgery (5.06) (Ustundag & Eti Aslan, 2010), in patients undergoing different surgical procedures (4.82) (Buyukunal-Sahin & Rizalar, 2018), in patients undergoing hip replacement surgery (4.93) (Gurcayir & Karabulut, 2017), in patients undergoing orthopedic surgery (4.26) (Yilmaz et al., 2018), in patients undergoing surgical procedures (4.47) (Seyedfatemi et al., 2014), patients undergoing surgical procedures and drainages (2.75) (Yildiz Findik, Yildizeli Topcu & Vatansever, 2013), patients undergoing CABG (coronary Artery By-Pass Graft) (4.96) (Karabulut et al., 2015). The level of comfort in the literature can be explained by the fact that the level of comfort is not affected by the type of surgical intervention, but by the care given in the operating room, the collection unit and in the areas where postoperative treatment is offered. When the literature is evaluated for factors that may affect the level of comfort; the results were found to be in the majority of the results that the education situation and marital status did not affect the level of comfort in a similar way to this study (Buyukunal-Sahin & Rizalar 2018; Oren, 2018; Yonem Amac & Cam 2019). In this study, it was determined that socio-demographic characteristics are only related between age and

comfort level, and the level of comfort decreases as age increases. In studies where different surgical interventions and comfort levels are measured by different tools, there are consequences in terms of age and comfort level. The age factor is a risk factor in itself for surgical processes and can negatively affect the surgery and postoperative period (Usta & Aygin, 2015). Physical declines associated with aging, psychosocial changes, maintaining body temperature, inability to deal with anxiety felt due to surgical intervention, failure to predict uncertainty can cause many negative conditions. In addition, considering that the sample consists of patients diagnosed with cancer, the risk of the end of cancer-related life may have affected the comfort score of the elderly feeling higher than young people. In light of these findings, it is thought that the care to be given to the elderly in the operating room and compilation unit should be privileged. In terms of the health of patients, those with overweight and obesity problems were found to have lower comfort scores than those with poor and normal weight. Tian and colleagues (2019) did not determine any relationship between BMI and comfort level in their study using a different comfort measurement tool with patients undergoing various surgical procedures. Obesity is a condition that can adversely affect surgical intervention, increasing the likelihood of experiencing complications (Chen et al., 2011; Garland et al., 2018). At the same time, the equipment to be used in the care of obese patients should be in the appropriate measure, extra precautions should be taken for safety and care should be taken (Altun et al., 2017). We believe that standard care practices are not sufficient in providing comfort in the individual who has obesity problems in the institution where the study is carried out. Factors such as pain, nausea, vomiting due to acute and chronic pain, surgical intervention and other invasive interventions can cause adverse effects of comfort (Buyukunal-Sahin & Rizalar, 2018; Tian et al., 2019; Yildiz Findik, Yildizeli Topcu & Vatansever, 2013). There was no association between pain severity and comfort level in the study. While Osborne (2015) did not find a relationship between pain and comfort level in patients undergoing orthopaedic surgery, Sönmez's (2013) study of CABG patients found that those with mild pain intensity had higher comfort levels than those with moderate levels. In this study, postoperative pain levels were mild (3.0) and more than half

opioids and NSAIDs were combined in pain management. The low level of pain in the sample indicates that effective pain management was applied in the early post-operative period and is a satisfactory result.

Conclusions: As a result of the research, it was determined that the comfort levels of patients undergoing breast surgery were medium-high and were related to the age, and BMI of the patients. In order to generalize the research results, similar studies should be conducted with larger and different sample groups. In addition, it may be recommended to examine external factors that are thought to affect comfort. Recommendations for implementation; considering that one of the main objectives of nursing care is to increase the comfort of the patient, it is suggested that factors affecting comfort are taken into consideration in planned care initiatives with a holistic approach. In patients who experience surgical intervention, an effective training program (Gurcayir & Karabulut, 2017) and non-pharmacological methods such as aromatherapy (Jaruzel et al., 2019), acupressure (Unulu & Kaya, 2018), music therapy (Soltani et al., 2018), hand massage (Cavdar, Yilmaz & Baydur, 2020) have positive effects on comfort and anxiety levels. Non-evidence-based pharmacological methods may be included in nursing care that aim to increase comfort level. In addition, it is suggested that institutional policies should be planned to increase the comfort level of the patients and that in this context, the information, experiences and experiences of the nurses should be presented in the environments they can increase, the development of the nurses in terms of quality and quantity should be made and investments should be made in this direction.

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