

Original Article

## Pre-operative Comfort Levels of Patients Undergoing Surgical Intervention

**Temiz Zeynep, PhD, RN**

Surgical Nursing Department, Artvin Coruh University Health Sciences Faculty, Artvin, Turkey

**Tutuncu Serife Gozde, MSc, RN**

Nursing Department, Sinop University School of Health, Sinop, Turkey

**Cavdar Ikbal, PhD, RN**

Surgical Nursing Department, Istanbul University-Cerrahpasa Florence Nightingale Nursing Faculty, Istanbul, Turkey

**Sengul Emel, RN**

General Surgery Department, Istanbul University-Cerrahpasa Cerrahpasa Faculty of Medicine, Istanbul, Turkey

**Correspondence:** Artvin Coruh University, Faculty of Health Sciences, Nursing Department, Turkey, City Campüs, Cayagzi district. Center/ Artvin, Turkey E-mail address: erzeynep\_@artvin.edu.tr

### Abstract

**Background:** Evaluation of the patient comfort at preoperative period is highly important in order to increase the quality of patient care. The review of the relevant literature shows that a scale that specifically measures the patient comfort at preoperative period is absent.

**Objectives:** To determine the comfort levels of patients regarding the pre-operative period in operating room.

**Design:** The descriptive cross-sectional survey

**Methodology:** This study was conducted in a general surgery clinic of a university hospital between July and October 2016. The research sample consisted of 130 patients who met the research inclusion criteria. "Perianesthesia Comfort Scale(PCS)" and "Descriptive Characteristics Information Form" were used to collect the related data.

**Results:** Score average of the PCS is  $4.85 \pm 0.65$ . Patients who had experience of surgery, and who were calm while waiting in the operating room in the preoperative period had a higher mean of total scale score ( $p < 0.05$ ).

**Conclusion:** It was observed that the comfort levels of the patients who were male, single and those with previous experience of surgery were high, however, that these characteristics did not affect the scale score.

**Key Words:** Preoperative period; comfort level; operating room

### Introduction

Surgical intervention is a stressful situation for patients. The preoperative period is experienced as depression and threat by many patients. Patients are worried in this period due to their diseases, the success of the operation or fear of anesthesia.

The fear and anxiety experienced by the patient cause psychological and physiological problems and adversely affects patient comfort (Sadati et al., 2013; Aust et al., 2018). Comfort is the basic human need. When people have health problems,

they expect help from health professionals for ensuring their comfort (Apóstolo et al., 2013). That maximize the comfort of the patient before, during and after surgery is a matter that is given importance by health professionals. However, the objective measurement of patient comfort in the preoperative period is reported to be inadequate (Myles et al., 2018). Comfort is an important criterion in the admission of patient to hospital, during hospitalization, and in the evaluation and management of discharge from hospital. It is expressed that comfort are in a strong relationship with quality of care and

patient satisfaction (Kolcaba and Wilson, 2002; Sayedfatemi et al., 2014; Karabacak and Acaroglu, 2011; Cinar Yücel, 2011). Kolcaba states the concept of comfort as "instant experience of meeting basic human needs in order to freshen up, rest easy and overcome problems" in the "Comfort Theory" expressed in a holistic view and based on the comfort function which is one of the nursing discipline functions (Kolcaba and Wilson, 2002). The four contexts in which comfort is experienced are (1) physical, (2) psychospiritual, (3) environmental, and (4) socio-cultural.

The physical concerns bodily sensations and homeostatic mechanisms, the psychospiritual pertains to the internal awareness of self, the environmental is the external surroundings and conditions, and sociocultural refers to interpersonal and societal relationships (Krinsky et al, 2014). Except from the traumatic effect of surgical intervention, it is known that many factors affect patient comfort. Noise, floodlighting, temperature (Sungur Ergenoglu and Tanrıtanır, 2013; Annika Bergstrom et al., 2018), preoperative anxiety, deterioration of functional status, postoperative pain control (Glowacki, 2015; Rosen et al., 2008; Sylva et al. 2016), the anesthesia method that is used and the drugs that are applied (Woldegerima et al., 2018; Hu et al., 2007) and the undesirable preoperative hypothermia (Karen et al., 2017; Leeth et al., 2010; Turkish Anesthesiology and Reanimation Association, 2013) affect the comfort and quality of care.

Therefore, it is very important to pay attention to the comfort of the patient in the preoperative period (Wilson and Kolcaba, 2004). In other words, enhanced comfort may reduce complications associated with high-level patient anxiety (Sadati et al., 2013; Potter et al., 2014). Although, there are large number of studies in the literature which have been conducted to determine the comfort level of patients in different health care fields (Acar and Aygin, 2016; Farmer et al., 2017; Pinar et al., 2009; Brown and Whitlow, 2017), it has been encountered to the few studies examining the comfort level of patients before surgery.

**Objective:** Considering this information, the aim of this study was to determine the comfort levels of the patients in the operating room before surgery. This study is a test of the second part of the Comfort Theory.

## Methodology

**Design:** This study was conducted as a descriptive cross-sectional survey.

**Sample/participants and setting:** This study was conducted between July and October 2016 with the participation of 130 voluntary patients that underwent elective surgery at general surgery clinics of a university hospital at Istanbul.

**Inclusion Criteria :** The study included adult patients who were to undergo elective surgery, were to be hospitalized in the general surgery clinic at postoperative day 0 and day 1, were between 18 - 60 years of age, could read, write, and communicate in Turkish, and had no mental problems.

**Data Collection:** Before beginning the study, the required permissions were taken from Istanbul Health Directorate and the Ethics Committees of Istanbul University Cerrahpas, a School of Medicine (59491012-604.01.02). Written and verbal consent of the participants was obtained. Data collection form did not include any questions that may reveal the identities of the participants. We placed special attention to avoid directing the participants about the answers to the question on the scale. Data was collected by using face-to-face interviews at postoperative period.

**Data were collected from the Patient Information Form and the "Perianesthesia Comfort Scale (PCS)":** Patient Information Form: There are 15 questions about the patients' age, gender, marital status, education status, occupation, operation experience, surgery type, time of hospitalization, and questioning of the informing about surgical intervention, anesthesia method and operating room. Perianesthesia Comfort Scale (PCS): The reliability and validity studies of the scale which was developed by Kolcaba (2003), were done by Üstündag and Eti Aslan (2010) for being used in Turkish society (Cronbach's Alpha: 0.83). The scale which is used to determine comfort requirements and assess the level of reaching expected increase in comfort is composed of 24 statements that question feelings and self-perception reflecting the general process of thinking of the individual before entering the surgical intervention. The highest total score gotten in the scale is 144, and the lowest total score is 24. The mean value is determined by dividing obtained total score into the number of scales, and the result is indicated with the distribution in the range of 1-6. While low score indicates poor comfort, high score

indicates the good comfort (Wilson and Kolcaba, 2004; Kolcaba, 2003). The Cronbach's Alpha was found as 0.77 in this study.

**Data Analysis:** Statistical analysis was conducted using SPSS version 18 (PASW Statistics 18, SPSS Inc, Chicago,IL). Collected data were coded and analyzed using descriptive statistics and statistical tests including analysis of variance, Kruskal Wallis, independent sample t test, and Mann Whitney-U test.

## Results

The total sample size was 130 surgical patients. More than half of the participants were female (66.9%). The age range of the sample was between 18 and 86 years (mean  $48.66 \pm 12.46$ ); 79.2% of the patients were married and more than half of the participants had primary education (55.4%). The most commonly performed surgery was thyroid surgery (56.9%), and the least performed surgery was Lower GIS surgery (5.4%). 66.9% of patients had previous

surgical intervention and 43.1% of these patients had "good" experience (Table 1). The total score average of the patients on the Perianesthesia Comfort Scale was  $4.85 \pm 0.65$  (Table 2). The total scale score of the patients who received information regarding surgical intervention in the preoperative period, operating room and the anesthesia method to be applied, was found to be higher, but it was not found any statistically significance between the averages of total scale scores ( $p > 0.05$ ) (Table 3). Patients who had experience of surgery, and who were calm while waiting in the operating room in the preoperative period had a higher mean of total scale score, and the difference between these variables and the mean of total scale score was significant ( $p < 0.05$ , Table 3). The 67.8% of the 87 patients who had been undergone surgery previously stated that they were calm in the surgery room before surgery, and 51.2% of the 43 patients who had not been undergone any surgery stated that they were anxious (Table 4).

**Table 1. Descriptive Characteristics of Patients (N=130)**

Characteristics	n	%	Mean±SD
<b>Age</b>			48.66±12.46
<b>Gender</b>			
Male	43	33.1	
Female	87	66.9	
<b>Marrital status</b>			
Single	19	14.6	
Married	103	79.2	
Widow	8	6.2	
<b>Education</b>			
Illiterate	8	6.2	
Primary school	72	55.4	
High school	18	13.8	
University	32	24.6	
<b>Type of Surgery</b>			
Thyroid surgery	74	56.9	
Upper GIS surgery	18	13.8	
Lower GIS surgery	7	5.4	
Breast surgery	20	15.4	
Hernia	11	8.5	

<b>Have you ever undergone surgery?</b>		
Yes	87	66.9
No	43	33.1
<b>How was your experience regarding previous surgery? (n=87)</b>		
Good	56	43.1
Moderate	26	20.0
Bad	5	3.9
<b>General Total</b>	<b>130</b>	<b>100</b>

**Table 2. Perianesthesia Comfort Scale (PCS) Mean Scores**

Scale	Number of items	Minimum	Maximum	Mean±SD
Perianesthesia Comfort Scale Mean Scores	24	3.25	6.00	4.85±0.65

SD=Standart Deviation

**Table 3. Comparison of Mean PCS Score by Some Variables of Patients (N=130)**

Some Variables of Patients	n	%	PCS
<b>Have you ever undergone surgery?</b>			
Yes	87	66.9	5.04±0.52
No	43	33.1	4.43±0.72
			t:4.924 <b>p:0.000</b>
<b>How was your experience regarding previous surgery? *</b>			
Good	56	64.4	5.01±0.51
Moderate	26	29.9	5.13±0.55
Bad	5	5.7	4.89±0.48
			KW: 1.902 p:0.386
<b>Did you get any information about the surgical procedure to be performed in the preoperative period? *</b>			
Yes	128	98.5	4.84±0.66
No	2	1.5	4.81±0.88
			MW-U:113.00 p:0.777
<b>Did you get any information about the operating room in the preoperative period?</b>			
Yes	77	59.2	4.86±0.64
No	53	40.8	4.83±0.67
			t:.306

				p:0.760
<b>Did you get any information about the the anesthesia method to be applied in the preoperative period?</b>				
Yes	106	81.5	4.85±0.68	
No	24	18.5	4.82±0.52	
				MW-U:118.500
				p:0.643
<b>How did you feel while you were waiting in the surgery room?</b>				
I was calm				
I was anxious	80	61.5	5.05±0.61	
	50	38.5	4.50±0.57	
				t:5.192
				<b>p:0.000</b>

\* Analysis was performed on the number of patients who had previously undergone surgery.  
MW-U: Mann Whitney U test, t:Student's t test, KW:Kruskal Wallis test

**Table 4: Comparing the state of having been undergone surgery and the emotions felt while waiting in the surgery room (N=130)**

State of having been undergone surgery previously	How did you feel while you were waiting in the surgery room?					
	I was calm		I was anxious		Total	
	n	%	n	%	n	%
Yes	59	67.8	28	32.2	87	100
No	21	48.8	22	51.2	43	100

## Discussion

Without evaluating the comfort levels of patients, it is not possible to ensure quality nursing care and obtain successful patient outcomes (Ramelet and Aitken, 2018). Seyedfatemi et al. (2014), in their study conducted with patients who had undergone elective surgery, found the total score of pre-operative comfort level as  $107.37 \pm 11.53$ ; and Ustündag and Aslan (2010), in their study conducted with patients who had undergone Coronary Artery Bypass Surgery (CABG), found the mean PCS total score as  $5.06 \pm 0.50$ . The mean perianesthesia comfort scale score was found to be  $4.85 \pm 0.65$  in this study. The findings are similar with the results of the studies that have been done.

It is known that informing patients reduces stress and improves general outcomes as well as patient satisfaction (Sadati et al., 2013; Glowacki, 2015; Bailey, 2010). Unless the information that patients need in pre-operation is met, negative feelings such as despair, alienation and tenderness may be experienced in the surgery room (Annika Bergstrom et al., 2018). Gürsoy et al. (2016) found in his study that the surgery room nurses visit the patient and meet his/her need for information lead to decrease in anxiety in pre-operative period and increase in post-operative satisfaction. Before the operation, the comfort level of the patients who were informed about the surgical procedure, the surgery room environment and the anesthesia method to be

used was found to be higher in this study, although not statistically significant. That the results comply with the literature can be explained by followings: the hospital in which the study was conducted had a certificate of quality, the patients were informed about the illness in verbal and written and the nurses who worked in the hospital had undergraduate education at least.

The fact that patients who had surgery previously and were calm in the pre-operative period have significantly higher level of comfort ( $p < 0.05$ ) and there are significant difference between them and the patients who experience surgery for the first time ( $p < 0.05$ ), show that patients having surgical intervention experience had better knowledge of what they will experience in the operating room. Nigussie et al.(2014) found that the pre-operative anxiety levels of the patients who had no surgical experience were high. Additionally, it was found in the study that patients who had surgical experience are calm in the pre-operative period of their current surgical operations (Table 4). This result also indicates that the patients who are calm in the pre-operative period have high comfort level.

**Limitations:** This study has some limitations. Since the approaches of the health professionals to the patients of different hospitals in the pre-operative period were not the same, the data were collected from one hospital. For this reason, the results cannot be generalized. The study results are based on self-reported patients' presence.

**Conclusion:** The comfort levels of the patients regarding the pre-operative period in operating room was found high in this study. It was observed that the comfort levels of the patients who were male, single and those with previous experience of surgery were high, however, that these characteristics did not affect the scale score.

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