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The Effect of Self-Care Agency and Patient Features on Comfort After Abdominal Surgery: A Cross-Sectional Study

Abdominal Cerrahi Sonrası Hastaların Öz Bakım Gücü ve Tanıtıcı Özelliklerinin Konfora Etkisi: Kesitsel Bir Çalışma

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Bu çalışma, Buket Özkan'ın "Abdominal Cerrahi Geçiren Hastaların Öz Bakım Güçleri ve Konfor Düzeyleri Arasındaki İlişkinin Belirlenmesi" başlıklı yüksek lisans tezinden üretilmiştir (Samsun: Ondokuz Mayıs Üniversitesi; 2022).

ABSTRACT Objective: To reveal the effects of self-care agency and patient features on comfort. **Material and Methods:** The study was conducted with 221 patients who had undergone abdominal surgery in the general surgery clinic and intensive care unit between August 23 and November 23, 2021. Data were collected with The Descriptive Characteristics Form, The Exercise of Self Care Agency Scale and the Perianesthesia Comfort Scale. Institutional permission, ethics committee approval, and written consent from the participants were obtained. **Results:** The average age of the participants were 46.73±16.95. The participants comprised 51.1% were women, 70.6% were married, 75.6% had children, 37.1% were high school graduates and 58.8% were unemployed. It was found that 54.8% of the participants didn't have a chronic disease and 54.8% didn't have a surgery before. 57.9% of the patients had laparoscopic surgery and 78.7% took less than four hours to operate. Age, having a child, place of residence, level of education, working status, presence of a chronic disease, previous surgery, the type and duration of the surgery affect the comfort level. A moderate and positive relationship was found between self-care agency and comfort. It was revealed that a one-unit increase in the self-care agency of the participants increased their comfort by 0.013. **Conclusion:** It has been determined that as participants' self-care agency increases, their comfort level increases. Therefore, it is important for nurses to identify the self-care agency and comfort of abdominal surgery patients.

Keywords: Abdominal surgery; self-care agency; comfort; nursing

ÖZET Amaç: Hastaların öz bakım gücü ve tanıtıcı özelliklerinin konfora etkisini incelemektir. **Gereç ve Yöntemler:** Bu çalışma, 23 Ağustos-23 Kasım 2021 tarihleri arasında genel cerrahi kliniği ve yoğun bakım ünitesinde 221 abdominal cerrahi geçirmiş hastayla yapılmıştır. Veriler Tanımlayıcı Özellikler Formu, Öz Bakım Gücü ve Perianestezi Konfor Ölçeği kullanılarak toplanmış ve araştırma öncesinde kurum izni, etik kurul onayı ve katılımcılardan yazılı onam alınmıştır. **Bulgular:** Katılımcıların yaş ortalaması 46,73±16,95'ti. Katılımcıların %51,1'i kadın, %70,6'sı evli, %75,6'sı çocuk sahibi, %37,1'i lise mezunu, %58,8'i çalışmamaktaydı. Katılımcıların %54,8'inin kronik hastalığının olmadığı, %54,8'inin ise daha önce herhangi bir ameliyat geçirmediği belirlendi. Hastaların %57,9'una laparoskopik cerrahi uygulandı ve %78,7'sinin ameliyatı 4 saatten kısa sürdü. Yaş, çocuk sahibi olma, yaşanılan yer, eğitim düzeyi, çalışma durumu, kronik hastalık varlığı, daha önce geçirilmiş ameliyat varlığı, ameliyatın türü ve süresi konfor düzeyini etkiledi. Öz-bakım gücü ile konfor arasında orta düzeyde ve pozitif bir ilişki bulundu. Katılımcıların öz-bakım gücündeki bir birimlik artışın konfor düzeyini 0,013 oranında artırdığı saptandı. **Sonuç:** Bireylerin öz bakım gücü arttıkça konfor düzeylerinin de arttığı belirlendi. Bu yüzden hemşirelerin abdominal cerrahi hastalarının öz bakım güçlerini ve konfor düzeyini incelemeleri önemlidir.

Anahtar Kelimeler: Abdominal cerrahi; öz bakım gücü; konfor; hemşirelik

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Abdominal surgery is the common name for surgical procedures performed in the perforation, obstruction and malignancy of gastrointestinal system organs such as liver, stomach, pancreas and gall bladder.[1] Whether abdominal surgeries are laparoscopic or open, following surgical procedures complaints such as severe postoperative pain, reluctance in mobilization, difficulty in active breathing, and inability to cough can lead individuals to struggle.[2-5] Akortiakuma et al. reported that physical problems such as surgical site infection, postoperative pain, social and psychological problems such as separation from family and social environment, feeling of abandonment negatively affect the well-being of the patients after abdominal surgery.[6] These problems affect patients' self-care agency and comfort by causing them to be completely or partially dependent in terms of meeting their self-care needs.[7]

Self-care agency means that the individual has sufficient agency to determine his own and others' self-care needs and to meet these needs, and this agency differs from person to person. Self-care agency refers to the actions that a person can perform by himself in order to maintain his life, well-being, health and is affected by many factors that emerge after surgery.[8] Literature review has shown that physical, psychological and social problems and complications that occur after various abdominal surgeries affect the self-care abilities.[7,9,10]

Comfort is a holistic, multidimensional, and variable concept associated with concepts such as dignity, empathy and compassion.[11] Accordingly, studies conducted with sick individuals revealed that they consider not only physical aspects but also emotions such as positivity, a sense of agency, and feeling valued to define comfort.[12] In support of these definitions, Kubat Bakır and Yurt argue that meeting the psychospiritual and sociocultural needs of patients increases their comfort level more than meeting their physical needs.[4] It has been stated in the literature that physical problems such as pain, fatigue, nausea and vomiting experienced in the postoperative session as well as descriptive characteristics of patients such as age, gender, education level affect the comfort level.[12-14] Therefore, the descriptive characteristics of individuals should also be considered when evaluating comfort.[12]

In literature review, patients who underwent in different types of abdominal surgery was evaluated self-care agency and the level of comfort.[4,10,15,16] A limited number of studies investigated the relationship between the self-care agency and comfort.[17] However, no studies have yet investigated the effect of self-care agency on comfort in patients who underwent abdominal surgery and the influential factors. The study aimed to reveal the effects of self-care agency and patient features on comfort.

Research Questions

1. Does the patient's features effect the comfort?

2. Does the patient's self care agency effect the comfort?

3. Is there a relationship between self-care agency and comfort?

MATERIAL AND METHODS

DESIGN AND PARTICIPANTS

This descriptive and cross-sectional study was conducted in the general surgery intensive care unit and two general surgery wards between August-November 2021. Patients with major surgical procedures such as whipple, hepatectomy, pancreatectomy and high-risk patients with comorbidities are followed up in the intensive care unit for close monitoring for the first 24 hours. Therefore, only the patients who were ready to go to the surgical ward and in stable condition were included in the study. In addition patients aged 18 and over who had no psychiatric illnesses, who were able to communicate verbally, who were within the first 8-24 hours after surgery, were included in the study. Individuals with cognitive-mental disabilities were not included.

The sample size of the study was found using the sample calculation formula for known target population by obtaining the data six months before the study from the IT (Information Technology) department of the hospital. Prior to the study, it was found that there were 478 individuals who had undergone abdominal surgical procedures in the last six months. Therefore, according to the known population sampling method,

it was determined that a minimum of 213 patients needed to be reached. The study was completed with 221 people. Then, the post hoc agency analysis was performed using the G Power V 3.1 program (Heinrich Heine University, Dusseldorf, Germany) and the power of the study was determined as 99.5% (1-β) at α=0.05 significance level.

DATA COLLECTION AND MEASUREMENT TOOL

The interviews with the patients were conducted face-to-face by the researcher within the first 8-24 hours postoperatively. Informed consent was obtained from the patients. Subsequently, "Sociodemographic Features Form" consisting of 13 questions was implemented. To assess patients' self-care agency, the "Self-Care Agency Scale" was applied. For determining the level of comfort, the "Peri-Anesthesia Comfort Scale" was used. The interviews was lasted approximately 20-30 minutes.

Descriptive Characteristics Form: The form was developed by the researchers based on the literature.[10,15] It includes nine questions on the socio-demographic characteristics and four questions on clinical status.

Exercise of Self-Care Agency Scale (ESCA): It is a 43-item scale developed by Kearney and Fleischer in 1979.[18] The scale was adapted to Turkish by Nahcivan in 1993 and the number of items was decreased to 35 following the validity and reliability study.[19] Each item in the one-factor scale is rated on a five-point (0=very uncharacteristic of me-4=very characteristics of me) Likert-type scale. 8 items in the scale (3, 6, 9, 13, 19, 22, 26 and 31) are reverse-coded in scoring. The lowest score that can be obtained from the ESCA is 0, and the highest score is 140. Higher scores indicate higher levels of self-care agency. While the Cronbach's alpha of the Turkish version of the scale was found to be 0.89, it was found as 0.77 in this study.[19]

Perianesthesia Comfort Scale (PCS): The scale was developed by Kolcaba and Wilson, and it was adapted to Turkish by Üstündağ and Eti Aslan.[20,21] This scale is a one-dimensional scale consisting of 24 items reflecting the general pre and post-surgery opinions of an individual. Each item in the scale is rated on a six-point Likert type scale (1=strongly disagree, 6=strongly agree). The scale consists of 12 positive (1, 5, 6, 11, 14, 16, 18, 19, 20, 21, 23, 24) and 12 negative (2, 3, 4, 7, 8, 9, 10, 12, 13, 15, 17, 22) items. The negative items are reverse coded in scoring. The highest total score that can be obtained from the scale is 144 and the lowest total score is 24. The mean score is calculated by dividing the total score by the number of scale items, and the result is indicated between 1-6. High scores indicate good comfort level, while low scores indicate poor comfort level.[21] This scale is used to evaluate patient comfort in the postoperative period in surgical patients.[22,23] While the Cronbach's alpha of the Turkish version of the scale was found to be 0.83, the Cronbach's alpha in this study is 0.82.[21]

STATISTICAL ANALYSIS OF DATA

The SPSS 21.0 (IBM, Armonk, NY, USA) package program was used to analyze the data. Data for continuous variables were presented as mean±standard deviation or median. Parametric variables were examined with the Kolmogorov-Smirnov Test. One-way analysis of variance or independent sample t-test was performed to reveal the differences between groups in parametric cases. For non-parametric cases, Kruskal-Wallis analysis of variance was used. The level of significance was set at $p<0.05$. The Cronbach's alpha was calculated to test the reliability of the scales. The relationship between the sociodemographic characteristics and the level of comfort as the dependent variable was evaluated with the multiple regression analysis. In addition, both regression analysis and correlation analysis were conducted to reveal the relationship and effect between self-care agency and comfort.

ETHICS OF RESEARCH

Ethics committee approval was obtained from the Ondokuz Mayıs University Clinical Research Ethics Committee (date: May 26, 2021, no: 178), and institutional permission was obtained from the center where the research was conducted (date: July 26, 2021, no; E-72975315-044-87367). Participation was on a voluntary basis and the participants were asked to sign the Informed Consent Form prior to the study. All the requirements of the Declaration of Helsinki were fulfilled.

RESULTS

The mean age of patients was 46.73±16.95 and 20.81% were in the 35-44 age range. The analysis revealed that 51.13% of the participants are women, 70.58% are married, 75.56% have children, 94.57% have a nuclear family. The 67.88% of the participants live in the city center, 37.11% are high school graduates, 58.82% did not work, and 70.13% perceived their monthly income as less than their expenses. It was found that 54.75% of the patients didn't have chronic disease, 54.75% had not been operated before, 57.47% had a laparoscopic surgery, and 78.73% had an operation less than four hours (Table 1).

The mean ESCA score of the patients was 96.18±18.6, and the mean PCS score was 4.61±0.43 (Table 2). When the relationship between the PCS mean score of the participants and their descriptive characteristics was examined, gender, income level, marital status and family type did not play a significant role in the level of comfort (p>0.05) (Table 1). When other descriptive and clinical factors were examined, it was revealed that the mean PCS scores of the participants decreased as age increased and that the statistical difference between the age groups was caused by the participants aged 65 and over (p=0.001). When the relationship between the mean PCS score and the status of having children, it was observed that the mean PCS scores of the participants who did not have children was higher than those who had children (p=0.038). When the PCS mean scores of the participants were compared according to where they lived, the difference between the groups was significant (p<0.001). It was found that the mean PCS score of the patients living in the city center was higher (p<0.001). When the mean PCS scores of the participants were examined according to their education level, the difference between the groups was significant (p=0.002), and the mean PCS score of the participants who were high school or university graduates was found to be significantly higher. In addition, the mean PCS score of the unemployed participants was found to be higher (p=0.001). It was revealed that the PCS mean score of the participants without a chronic disease was higher (p=0.001). It was further revealed that the mean PCS score of the participants who did not have a surgery before was significantly higher than those who had a surgery experience (p=0.004). The comfort level of the participants who underwent laparoscopic surgery was higher (p<0.001), and the mean PCS scores of the participants whose surgery took less than four hours were found to be significantly higher (p<0.001) (Table 1).

When the relationship between the ESCA and PCS scores of the participants was examined, a moderately positive relationship was found (r: 0.554; p<0.001) (Table 3). Among the clinical characteristics, all variables that had a significant effect on the PCS score of the participants were included in the regression analysis. The regression analysis revealed that compared to the reference groups, the laparoscopic surgery group (β=0.518, p<0.05) and the group whose operation lasted less than four hours (β=0.182, p<0.05) predicted the mean PCS scores significantly (Table 4). Also, it was found that a one-unit increase in the ESCA total score of the participants increased the PCS score by 0.013 units (Table 5).

DISCUSSION

Surgical procedures are performed for the recovery of patients, they cause many physical, psychological and social problems after surgery.[23,24] Problems such as pain, nausea, vomiting, fluid-electrolyte imbalances and infection that may occur after surgery adversely affect the comfort levels of patients who desire recovery.[24,25] Therefore, it is of great importance to assess the concept of comfort, which is the basis of nursing care, and to reveal the factors affecting the comfort level after surgery. According to the mean PCS score (4.61±0.43), it can be stated that the comfort level of the patients who underwent abdominal surgery was good. When the studies evaluating the comfort level using the PCS were examined, it was seen that Yılmaz et al. found the mean PCS score of surgical patients as 4.26±0.58; Gurcayir and Karabulut found the mean PCS score of orthopedic patients as 3.31±0.32 and Ören found the mean PCS score of thoracic surgery patients as 4.96±0.56.[13,26,27] This study revealed that the mean PCS score changed in different types of surgery. The reason for this may

TABLE 1: Distribution of descriptive and clinical characteristics of the participants according to their mean Perianesthesia Comfort Scale score (n=221).

Variable	n	%	X̄±SD	t/F	p value**
Gender					
Female	113	51.1	4.58±0.40	t: 1.047	0.296
Male	108	48.9	4.64±0.44		
Age					
18-24	23	10.2	4.77±0.41[a]		
25-34	37	16.7	4.74±0.40[a]		
35-44	46	20.8	4.68±0.31[a]	F: 4.207	**0.001**
45-54	34	15.4	4.60±0.50[ab]		
55-64	44	19.9	4.53±0.46[ab]		
65+	37	16.7	4.39±0.39[c]		
Marital status					
Married	156	70.6	4.60±0.42	t: 0.649	0.517
Single	65	29.4	4.64±0.45		
Has a child					
Yes	167	75.6	4.57±0.43	t: 2.086	**0.038**
No	54	29.	4.71±0.42		
Family type					
Nuclear	209	94.6	4.62±0.43	t: 1.398	0.164
Extended	12	5.4	4.44±0.34		
Place of residence					
Village	10	4.5	4.36±0.49[a]		
Town	61	27.6	4.44±0.45[a]	F: 10.213	**<0.001**
City center	150	67.9	4.69±0.39[b]		
Level of education					
Illiterate	26	11.8	4.44±0.28[a]		
Primary school	49	22.2	4.44±0.48[a]	F: 6.351	**<0.001**
High school	82	37.1	4.69±0.41[b]		
University	64	28.8	4.70±0.40[b]		
Employment status					
Working	91	41.2	4.69±0.37	t: 2.026	**0.044**
Not working	130	58.8	4.71±0.42		
Perceived income level					
Income lower than expenses	155	70.1	4.68±0.43	t: 1.815	0.071
Income equal to/higher than expenses*	66	29.9	4.56±0.42		
Presence of a chronic disease					
Yes	100	45.25	4.5±0.44	t: 3.433	**0.001**
No	121	54.75	4.7±0.40		
Previous surgery					
Yes	100	45.25	4.52±0.45	t: 2.887	**0.004**
No	121	54.75	4.68±0.40		
Type of surgery					
Open surgery	94	42.53	4.38±0.42	t: 7.586	**0.001**
Laparoscopic surgery	127	57.47	4.78±0.35		
Duration of surgery					
0-4 hours	174	78.73	4.65±0.44	t: 3.074	**0.002**
4+ hours	47	21.27	4.44±0.32		

SD: Standard deviation; t: Independent sample t-test; F: One-way analysis of variance.

*There are three people with an income more than expenses.

**p value is significant at the 0.05 level.

The same superscript indicates statistical insignificance.

TABLE 2: Mean ESCA and PCS scores of the participants (n=221).

	Minimum-Maximum	Minimum-Maximum	X̄±SD	Median
ESCA	0-140	60-137	96.18±18.67	95.00
PCS	1-6	3.08-5.58	4.61±0.43	4.67

ESCA: Exercise of Self-Care Agency Scale; PCS: Perianesthesia Comfort Scale; SD: Standard deviation.

TABLE 3: Evaluation of the relationship between the ESCA and PCS mean scores of the participants with the correlation analysis (n=221).

		PCS total score
ESCA total score	r	0.554
	p value	**<0.001***

*p value is significant at the 0.05 level; r: Pearson correlation coefficient; ESCA: Exercise of Self-Care Agency Scale; PCS: Perianesthesia Comfort Scale.

be attributed to the differences in post-operative problems, the adaptation period to daily life, the effect of surgery on self-care agency, and the duration of the surgery.

Comfort is a multidimensional concept affected by many factors such as gender, age, socioeconomic and health status.[12] This study revealed that descriptive and clinical features such as age, having a child, place of residence, education level, employment status, presence of a chronic disease, previous surgery experience, type of surgery, and duration of surgery affected the comfort level ($p<0.05$), while it was found that characteristics such as gender, marital status, family type and income level did not affect comfort ($p>0.05$). When the effect of gender on the level of comfort was examined, it was seen that there are studies supporting the findings of our study as well as

TABLE 4: Evaluation of the impact of clinical characteristics of individuals undergoing abdominal surgical procedures on the total average score of the Perianesthesia Comfort Scale through regression analysis (n=221).

	Nonstandardised coefficients		Standardised coefficients			Confidence internal for B (95%)		
Modal	B	Standard error	Beta	t value	p value	Lower limit	Upper limit	VIF
Fixed	4.243	0.206		20.7645	<0.001*	3.838	4.648	
Presence of a chronic disease (Reference group: No)								
Yes	-0.094	0.066	-0.110	-1.428	0.155	-0.224	0.036	1.644
Previous surgery (Reference group: Yes)								
No	0.011	0.064	0.013	0.171	0.864	-0.115	0.137	1.537
Type of surgery (Reference group: Open surgery)								
Laparoscopic surgery	0.448	0.075	0.518	5.939	**<0.001***	0.299	0.596	1.644
Duration of surgery (Reference group: 4+ hours)								
0-4 hours	0.190	0.087	0.182	2.178	**0.031***	0.018	0.596	2.122

Dependent Variable: Self-Care Power Scale Average Score; F=4.713; *p value is significant at 0.05 level; R^2=0.270; Adjusted R^2=0.213; Durbin-Watson=1.702; β_0: Nonstandardized beta coefficient; β_1: Standardized beta coefficient; VIF: Variance inflation factor.

TABLE 5: Evaluation of the effect of the mean ESCA score of the participants on their mean Perianesthesia Comfort Scale score using the regression analysis (n=221).

	Non-standardized coefficients					Confidence interval for B (95%)		
Model	B	Standard error	Standardized beta	t value	p value	Lower limit	Upper limit	VIF
Constant	3.385	0.126		26.759	<0.001*	3.135	3.634	
ESCA	0.013	0.001	0.554	9.859	**<0.001***	0.010	0.015	1

F=97.193; *p value is significant at the 0.05 level; R2=0.307; Corrected R^2=0.304; β_0: Non-standardized Beta coefficient; β_1: Standardized beta coefficient; ESCA: Exercise of Self-Care Agency Scale; VIF: Variance inflation factor.

studies presenting different results.[26] Robleda et al. stated that the comfort level of male patients was higher.[16] However, this study revealed no significant difference between genders in terms of comfort level. The finding may be due to the fact that the need for comfort is a universal and gender-neutral need. There are many different findings on the effect of age on comfort level. In their study with day case surgery patients, Yönem Amaç and Çam revealed that age did not affect comfort.[28] Johnson et al. stated that patient the perception of comfort care increases as age increases.[29] Similar to the finding of this study, Bakır and Yurt reported that the level of comfort decreases as age increases.[4] As age increases, it is thought that the level of comfort decreases due to the increase in chronic diseases and the decrease in physical capacity while performing daily life activities. The analysis revealed that it was found that the comfort levels of the participants without a chronic disease were higher than those with chronic diseases. It is thought that physical problems brought about by chronic diseases and changes in lifestyle and self-care agency negatively affect the comfort level. However, there are many research in the literature reporting that chronic disease does not affect the comfort level.[22,23] This difference in the literature may be attributed to the difference between the sample groups. The study showed that marital status didn't affect the comfort level (p=0.517). While there are studies with similar results in the literature.[23,28] Seyedfatemi et al. found that the comfort levels of patients living alone were lower than married patients.[30] It is thought that this difference in the literature is due to the difference in the perception and source of social support in the sample.

Yönem Amaç and Çam reported that the comfort level of those who have children is higher, but this difference is not significant.[28] In this study, the comfort level of those who did not have children was found to be significantly. This finding may be attributed to the responsibilities of having a child and the role of being a parent in Turkish society, leading parents to put their own needs and wishes in the background. Ören, on the other hand, found that the comfort level of individuals living in the city center is higher than towns and villages.[27] Similarly, in this study, the mean PCS score of those living in the city center to be significantly higher. This finding may be due to the fact that individuals living in the city center can easily access various basic needs and health facilities.

When the studies evaluating the effect of the education status of individuals on the comfort level were examined, different results were encountered. There are studies reporting that there is no significant relationship between the education level of the patients and their mean PCS score.[27] However, there are also studies reporting that the comfort level of individuals increases as their education level increases.[30] Similarly, our study found that there was a significant difference between the mean PCS scores of the patients according to their education level. This finding may be attributed to the ability of obtaining more information about what the individual can do for his/her health, the positive effect of the increase in education level on health awareness, and the higher self-care agency of individuals with higher education levels. Many research conducted with surgical patients concluded that the working status of the individual does not affect the comfort level.[26,28] However, this study revealed that the comfort level of non-working participants was higher. The reason for this may be the differences in the sample and the fact that working individuals feel more anxiety and stress over their post-operative work life responsibilities, since abdominal surgeries are major interventions.

Ören found that the experience of having a surgery before positively affects comfort.[27] Yönem Amaç and Çam also found that the comfort scores of patients who had been hospitalized before were higher.[28] Karacabay et al. reported no relationship between the experience of surgery and the level of comfort.[23] Our study revealed that those who did not have surgery before had a higher level of comfort. This finding may be because individuals who have not had previous surgery and no hospitalization experience are mostly in the young age and the self-care agency of the individuals in this group is mostly high. Studies have emphasized that laparoscopic surgeries increase patient comfort due to the shorter hospital stay and lower complication rate in the postoperative period.[2] Tosun et al. reported that individuals who un-

derwent laparoscopic cholecystectomy had a higher level of comfort.[14] Similarly, our study revealed that the comfort level was higher after laparoscopic surgery. These results due to the fact that the surgeries requiring laparoscopic surgical intervention are more minimal and can be performed in a shorter time; less pain is felt due to smaller incisions; and the recovery process is faster. Ören revealed that the comfort level of patients increases as the duration of the surgical intervention decreases.[27] Similarly, this study found that the mean PCS scores of the participants who had operations lasting less than four hours were significantly higher. This finding may be due to the fact that surgeries lasting longer than four hours cause more complications and a decrease in self-care agency.

Self-care agency and comfort level of patients are two very important concepts in surgical nursing. A limited number of studies have been found in the literature investigating the relationship between these two concepts. Bozkurt and Nazik investigated the relationship between the Urinary Incontinence and Frequency Comfort Scale and the mean ESCA scores and concluded that there was a positive and moderate significant relationship.[17] This study found that there was a moderate positive relationship between the self-care agency and comfort level of individuals who had undergone abdominal surgery. In addition, the regression analysis between the two scales showed that the increase in self-care agency affects the comfort level of individuals positively, and a one-unit increase in the ESCA total score causes an increase of 0.013 points in the PCS total score. Therefore, it can be stated that self-care agency is an important predictor of comfort. It has been revealed that there is a relationship between these two concepts, which are affected by similar practices and similar descriptive factors in the same direction.

LIMITATIONS OF THE STUDY

The results can't be generalized as the study was conducted only in patients who had undergone abdominal surgery and in a single centre.

CONCLUSION

It was observed that the increase in the self-care agency of individuals who underwent abdominal surgery had a positive effect on their comfort level. It can be stated that it is important for individuals to be able to perform their daily life activities independently in the postoperative period and to increase their self-care agency, as this also increases their level of comfort. For this reason, while providing care, nurses should perform interventions considering the descriptive and clinical factors affecting the comfort level. It is also important to create guidelines to increase self-care agency and comfort level specific to surgical clinics and to evaluate these constructs regularly. In addition, it is recommended to re-assess the relationship between self-care agency and comfort level with different and larger samples, and to conduct experimental studies to increase self-care agency and comfort level in surgical clinics.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Özge İşeri, Buket Özkan;* ***Design:*** *Özge İşeri, Buket Özkan;* ***Control/Supervision:*** *Özge İşeri, Buket Özkan;* ***Data Collection and/or Processing:*** *Buket Özkan;* ***Analysis and/or Interpretation:*** *Buket Özkan, Özge İşeri;* ***Literature Review:*** *Buket Özkan, Özge İşeri;* ***Writing the Article:*** *Buket Özkan, Özge İşeri;* ***Critical Review:*** *Özge İşeri;* ***References and Fundings:*** *Buket Özkan, Özge İşeri;* ***Materials:*** *Buket Özkan.*

REFERENCES

1. Kodera Y. The current state of stomach cancer surgery in the world. Jpn J Clin Oncol. 2016;46(11):1062-71. [Crossref] [PubMed]
2. Zhu T, Lu W, Wang W, Zhou L, Yan W. Effect of patient-controlled epidural analgesia (PCEA) based on ERAS on postoperative recovery of patients undergoing gynecological laparoscopic surgery. Evid Based Complement Alternat Med. 2022;2022:6458525. [Crossref] [PubMed] [PMC]
3. Miskovic A, Lumb AB. Postoperative pulmonary complications. Br J Anaesth. 2017;118(3):317-34. [Crossref] [PubMed]
4. Kubat Bakır G, Yurt S. Evaluation of the comfort level of the post-surgical patients. Journal of Health and Society. 2020;20(3):158-65. [Link]
5. Loor MM, Shah P, Olavarria OA, Dhanani N, Franz MG, Trautner BW, et al. postoperative work and activity restrictions after abdominal surgery: a systematic review. Ann Surg. 2021;274(2):290-7. [Crossref] [PubMed]
6. Akortiakuma, SJ, Dzansi G, Aziato L. Psychological well-being of patients recovering from abdominal surgery: a qualitative study. Perioperative Care and Operating Room Management. 2022;26(5):228-31. [Crossref]
7. Matarese M, Lommi M, De Marinis MG, Riegel B. A systematic review and integration of concept analyses of self-care and related concepts. J Nurs Scholarsh. 2018;50(3):296-305. [Crossref] [PubMed]
8. Linton M, Koonmen J. Self-care as an ethical obligation for nurses. Nurs Ethics. 2020:969733020940371. [Crossref] [PubMed]
9. Torres-Soto NY, Corral-Verdugo V, Corral-Frías NS. The relationship between self-care, positive family environment, and human wellbeing. Wellbeing, Space and Society. Rep. 2022;3:100076. [Crossref]
10. Phamornpon S, Nooyam B, Kanjanasilp P. Effects of self-efficacy-promoting programme on self-care ability of persons with stoma. TJNC. 2021;36(1):52-70. [Link]
11. Merkler AE, Ch'ang J, Parker WE, Murthy SB, Kamel H. The rate of complications after ventriculoperitoneal shunt surgery. World Neurosurg. 2017;98:654-8. [Crossref] [PubMed] [PMC]
12. Wensley C, Botti M, McKillop A, Merry AF. Maximising comfort: how do patients describe the care that matters? A two-stage qualitative descriptive study to develop a quality improvement framework for comfort-related care in inpatient settings. BMJ Open. 2020;10(5):e033336. [Crossref] [PubMed] [PMC]
13. Yılmaz E, Çeçen D, Kızıl Toğaç H, Mutlu S, Kara H, Aslan A, et al. Ameliyat sürecindeki hastaların konfor düzeyleri ve hemşirelik bakımları [Life comfort and nursing care during the operation]. CBU-SBED. 2018;5(1):3-9. [Link]
14. Tosun H, Ödül Özkaya B, Uz F, Gül A. Cerrahi girişim uygulanan hastalarda ağrı ve konfor ilişkisi [The relationship between pain and comfort in patients with surgical interference]. Online Turkish Journal of Health Sciences. 2022;7(1):47-52. [Crossref]
15. Elshatarat RA, Ebeid IA, Elhenawy KA, Saleh ZT, Raddaha AHA, Aljohani MS. Jordanian ostomates' health problems and self-care ability to manage their intestinal ostomy: a cross-sectional study. J Res Nurs. 2020;25(8):679-96. [Crossref] [PubMed] [PMC]
16. Robleda G, Roche-Campo F, Sánchez V, Gich I, Baños JE. Postoperative discomfort after abdominal surgery: an observational study. J Perianesth Nurs. 2015;30(4):272-9. [Crossref] [PubMed]
17. Bozkurt M, Nazik E. Determination of the comfort level and self-care agency of the women with urinary incontinence. J Contemp Med. 2021;11(2):185-90. [Crossref]
18. Kearney BY, Fleischer BJ. Development of an instrument to measure Exercise of Self-Care Agency. Res Nurs Health. 1979;2(1):25-34. [Crossref] [PubMed]
19. Nahcivan NO. A Turkish language equivalence of the Exercise of Self-Care Agency Scale. West J Nurs Res. 2004;26(7):813-24. [Crossref] [PubMed]
20. Kolcaba K, Wilson L. Comfort care: a framework for perianesthesia nursing. J Perianesth Nurs. 2002;17(2):102-11; quiz 111-3. [Crossref] [PubMed]
21. Üstündağ H, Eti Aslan F. Perianestezi Konfor Ölçeğinin Türkçeye uyarlaması [The Turkish adaptation of Perianesthesia Comfort Questionnaire]. Turkiye Klinikleri J Nurs. 2010;2(2):94-9. [Link]
22. Aydıngülü N, Arslan S. Cerrahi geçiren hastaların erken dönem konfor düzeyleri [Comfort levels of patients at early postoperative period]. KSU Medical Journal. 2021;16(3):401-6. [Crossref]
23. Karacabay K, Savcı A, Kabu Hergül F. Investigating relationships between pain, comfort, anxiety and depression in surgical patients. Cyprus J Med Sci. 2022;7(1):40-7. [Crossref]
24. Zhang XF, Chen J, Wang PG, Luo SM, Liu NX, Li XM, et al. [Surgical site infection after abdominal surgery in China: a multicenter cross-sectional study]. Zhonghua Wei Chang Wai Ke Za Zhi. 2020;23(11):1036-42. Chinese. [PubMed]
25. Qian H, Zhou J, Huang T, Cao X, Zhou C, Yang M, et al. Comfort nursing can alleviate pain and negative emotion of patients after surgery for LVCFs and improve their living ability. Am J Transl Res. 2021;13(4):2939-46. [PubMed] [PMC]
26. Gurcayir D, Karabulut N. The effects of the training provided to patients who are scheduled for hip prosthesis surgery on the level of postoperative comfort and daily activities. Int J Caring Sci. 2017;10(1):403-12. [Link]
27. Ören B. Göğüs cerrahisi uygulanan hastaların konfor ve anksiyete düzeyini etkileyen faktörler [Factors affecting the comfort and anxiety level of patients who underwent thoracic surgery]. Arch Health Sci Res. 2018;5:324-32. [Crossref]
28. Yönem Amaç H, Çam R. Günübirlik cerrahide hasta konforu ve hasta konforunu etkileyen etmenler [The patient comfort in day surgery patients and factors affecting the patient comfort]. ADYU Journal of Health Sciences. 2019;5(1):1222-37. [Crossref]
29. Johnson MF, Lin M, Mangalik S, Murphy DJ, Kramer AM. Patients' perceptions of physicians' recommendations for comfort care differ by patient age and gender. J Gen Intern Med. 2000;15(4):248-55. [Crossref] [PubMed] [PMC]
30. Seyedfatemi N, Rafii F, Rezaei M, Kolcaba K. Comfort and hope in the preanesthesia stage in patients undergoing surgery. J Perianesth Nurs. 2014;29(3):213-20. [Crossref] [PubMed]