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The Effect of Pain on Self-Esteem and Self-Care Agency in Hysterectomy: A Cross-Sectional Study

Burcu KÜÇÜKKAYA[1], Hatice Merve ALPTEKİN[2]

[1] Bartın University, Faculty of Health Sciences, Department of Nursing, Department of Obstetrics and Gynecologic Nursing
[2] Kocaeli University, Faculty of Health Sciences, Department of Nursing, Department of Surgical Nursing

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ABSTRACT

Objective: The study aimed to determine the effect of pain on self-esteem and self-care agency in patients with hysterectomy. **Materials and Methods:** A total of 486 female patients who underwent hysterectomy were included in this cross-sectional study. Patient Identification Form, Rosenberg's Self-Esteem Scale (RSES), Self-Care Agency Scale (SCAS) and VAS were used to collect data. The data were collected face-to-face with the researcher in the patient's room on the 2nd postoperative day in order to be objective and healthy, since the patients experienced severe pain on the 1st postoperative day and their communication could not be maintained in a healthy manner due to the effect of anaesthesia. **Results:** The mean scores of the patients the pain, SCAS, and RSES levels were 3.58 ± 1.42, 117.40 ± 26.67, and 11.74 ± 2.99, respectively. A negative correlation was found between postoperative pain and SCAS, RSES scores, while a positive correlation between SCAS and RSES scores. **Conclusion:** High postoperative pain is negatively correlated with SCAS and RSES in patients with hysterectomy. RSES increase when SCAS increase in patients with hysterectomy. In this context, it is recommended that nurses who are specialists in the field of women's health and diseases nursing provide holistic care by evaluating women's self-care agency, self-esteem and pain levels after hysterectomy.

Keywords: Hysterectomy, Pain, Patient, Self-care, Self-esteem.

Histerektomili Hastaların Yaşadığı Ağrının Belik Saygısı ve Özbakım Gücüne Etkisi

ÖZ

Amaç: Bu çalışma, histerektomili hastaların yaşadığı ağrının benlik saygısı ve öz bakım gücüne etkisini incelemeyi amaçlamaktadır. **Gereç ve Yöntem:** Bu kesitsel çalışmaya histerektomi yapılan toplam 486 kadın hasta dahil edildi. Verilerin toplanmasında; Veri Toplama Formu, Rosenberg Benlik Saygısı Ölçeği (RBSÖ), Özbakım Gücü Ölçeği (ÖBGÖ) ve VAS kullanıldı. Hastaların ameliyat sonrası 1. gün şiddetli ağrı yaşamaları ve iletişimlerinin sağlıklı bir şekilde sürdürülememesi nedeniyle veriler ameliyat sonrası 2. gün hasta odasında yüz yüze toplanmıştır. Veriler SPSS 23.0 programında, tanımlayıcı istatistikler ve korelasyon analizi kullanılarak analiz edilmiştir. **Bulgular:** Hastaların ağrı, kendine bakım gücü ve benlik saygısı puan ortalamaları sırasıyla 3.58±1.42, 117.40±26.67 ve 11.74±2.99 olarak bulundu. Postoperatif ağrı ile ÖBGÖ ve RBSÖ puanları arasında negatif, ÖBGÖ ve RBSÖ puanları arasında pozitif korelasyon saptandı. **Sonuç:** Yüksek postoperatif ağrı, histerektomili hastalarda ÖBGÖ ve RBSÖ ile negatif ilişkilidir. Histerektomili hastalarda ÖBGÖ artarken RBSÖ da arttığını göstermektedir. Bu bağlamda kadın sağlığı ve hastalıkları hemşireliği alanında uzman hemşirelerin histerektomi sonrası kadınların özbakım gücü, benlik saygısı ve ağrı düzeylerini değerlendirerek bütüncül bakım sağlaması önerilmektedir.

Anahtar Kelimeler: Histerektomi, Ağrı, Hasta, Özbakım, Özsaygı.

Sorumlu Yazar / Corresponding Author: Burcu KÜÇÜKKAYA. Bartin University, Faculty of Health Science, Department of Nursing, Department of Obstetrics and Gynecologic Nursing, Bartin/Turkiye.
E-mail: bkucukkaya@bartin.edu.tr

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INTRODUCTION

Cancer is a serious condition that has both psychological and psychosocial components, as well as being a medically recognized disease (Cibula et al., 2023). When the Global Cancer Observatory data is analyzed, it is seen that as of 2018, 18.1 million new cancer diagnoses were received worldwide and 9.5 million of the currently diagnosed patients died due to cancer (Global Cancer Observatory, 2018). When cancer data are examined in detail, gynecological cancers are detected as the second most common cancer type in women after breast cancer (Teskereci et al., 2022). This is the case In Türkiye, in line with the Turkish Cancer Statistics (2018) data, it is seen that gynecological cancers are the third most common cancer type. The incidence of uterine cancer is 9.8 per 100,000, 6.1 per 100,000 for ovarian cancer and 4.0 per 100,000 for cervical cancer (Türkiye Cancer Statistics, 2018). While gynecological cancers constitute cervical, uterine, ovarian, tubal, vaginal and vulvar cancers, these cancers are serious and potentially life-threatening diseases (Chen et al., 2021). It has been reported that the incidence of gynecologic cancers is increasing every year the world over, and the resultant mortality is increasing at a corresponding rate (Kocarnik et al., 2022). In parallel with this increase, hysterectomies have increased and are the second most common gynecological surgical procedure after cesarean sections (Abadi and Husain, 2022). Indications for hysterectomy include abnormal uterine bleeding, invasive and preinvasive diseases of the cervix, chronic pelvic pain, adenomyosis, leiomyoma, endometriosis atypical endometrial hyperplasia, pelvic organ prolapse, endometrial cancer, adnexal malignancies, obstetric causes, and gestational trophoblastic diseases (Cibula et al., 2023).

Pain is a common side effect of hysterectomy surgery (Abadi and Husain, 2022). Postoperative pain (PoP) is an acute pain that begins with surgical trauma, gradually decreases, and ends with tissue healing (García-Monasterio et al., 2019). Studies have reported the incidence of acute PoP on the second postoperative day to be from 10% to 82.3% (Scheel et. al., 2017; Sharma and Sitaula, 2021). In hysterectomy patients, approximately two-thirds of the patients reported moderate or even severe acute PoP 48 h after surgery (Langford et al., 2022; Scheel et al., 2017). Many factors affect acute PoP, such as the use of general anaesthesia, physiological and psychological structure of the patient, care of the patient in the preoperative period, psychological and pharmacological preparation of the patient in the postoperative period, and the type, location and duration of surgery (Abadi and Husain, 2022; Janggo et al., 2018). Moreover, the pain which patients experience has an effect on both self-esteem (SE) and self-care agency (SCA) (Darvishi et al., 2020).

Self-esteem (SE) is the power of internal motivational resources, and it focuses on the need for self-assessment or self-assessment itself. This does not mean that one feels superior, perfect, or adequate, but rather that one accepts oneself, establishes an identity, and feels accepted by others (Kanmaz and Osman, 2019). Although any external physical indications of the female reproductive organs having been taken as a result of a hysterectomy are not readily visible, the woman experiences a sense of the loss of integrity, cannot prevent the distortion of her body image, and cannot overcome the feeling of deformity she feels (Goudarzi et al., 2021).

Self-care (SC) is what individuals do to protect their quality and activity of life, health, and well-being. An adult must make continuous personal efforts on behalf of his or her health and well-being (Ong-Artborirak and Seangpraw, 2019; Kanmaz and Osman, 2019). SC levels are important for patients with hysterectomy to control the healing process. SC behaviors include appropriate dietary intake, regular medication use, compliance with fluid restriction, and coping with stress (Ong-Artborirak and Seangpraw, 2019).

Studies have shown that the pain experienced by patients affects depression and low self-esteem (Gunduz et al., 2019; Sharma et al., 2020). Cancer patients, in particular, state that they have difficulty coping with pain and that the level of pain continues to increase as the stages progress (Caraceni and Shkodra, 2019). The literature shows consistent results, and the pain experienced by cancer patients negatively affects the quality of life, preventing patients from moving freely and avoiding activities they enjoy, thus resulting in a decrease in self-esteem and self-care ability (Harorani et al., 2020; Ozdemiroglu et al., 2017) This study aimed to investigate the effect of pain on SE and SCA in patients with hysterectomy. Our examination of the relevant literature revealed that no studies have investigated the effect of pain on SE and SCA in these patients. We believe that our study will support the literature and raise awareness about the effect of pain on self-esteem and self-care ability in hysterectomy patients.

MATERIALS AND METHODS

Study type

This cross-sectional study was conducted using a questionnaire through face-to-face interactions with patients in the Gynaecology Services of İstanbul University Health Practice and Research Hospitals in Türkiye in January and June 2019.

Study group

For calculation of the sample size, G Power 3.0.10 that was a statistical power analysis program designed to analyse different types of power and compute size with graphics options for windows was used. Sample size was calculated based on a previous study by Keskin and Gumus (2011), and participation by 486 patients in the study was determined as sufficient to test the two-way hypothesis with an effect size of .75,

an alpha level of .05, and a power of 80%. The study sample consisted of 486 patients who were hospitalized at the University Health Application and Research Center Gynaecology Service in (Figure 1). The sample of the research was determined using the random haphazard method. Inclusion criteria were as follows: (1) patients 18 or more years of age, (2) patients at postoperative day two after hysterectomy, (2) patients were able to understand, read, write, and speak Turkish, (3) patients did not have any psychiatric problems, and (4) patients agreed to participate in the study.

The data collection tools

Data were collected with the Patient Identification Form, Rosenberg's Self-Esteem Scale (RSES), Self-Care Agency Scale (SCAS), and the Visual Analog Scale (VAS). Before starting the study, the aim of the study was explained and information about the study was given to the patients. Verbal consent was obtained from the patients after the information was given, and the Patient Identification Form, RSES, SCAS, and VAS for pain were recorded by face-to-face interviews in each patient room on the 2nd day after hysterectomy. Since the patients experienced severe pain on the 1st postoperative day and their communication could not be maintained in a healthy manner, the data were collected face-to-face in the patient's room on the 2nd postoperative day. Data collection for each hysterectomy patient took approximately 20 min.

The first part of the survey evaluation of patient identification (sociodemographic, obstetric features, and health status characteristics): This form was created by the researchers after a search and study of the literature; it consisted of 16 questions that included personal characteristics, obstetric features, and health status of the women who had had a hysterectomy (Abadi and Husain, 2022; Logan and Anazodo, 2019).

The second part of the survey (evaluation of the self-esteem): The RSES developed by Rosenberg in 1965 was adapted into Turkish by Cuhadaroglu in 1986. The 63-item scale focuses on the self-esteem of individuals. Scale scores range from 0 to 30. A score of 30 shows maximum self-esteem, scores of 15-25 indicate normal self-esteem, and a score of less than 15 is considered low self-esteem (Cuhadaroglu, 1986). The Cronbach's alpha value, which is the reliability coefficient of the scale, varies between .77 and .88. In this study, the Cronbach alpha value for the RSES was found to be 0.93.

The third part of the survey (evaluation of self-care agency):

The SCAS developed by Kearney and Fleischer in 1979, the scale was adapted into Turkish by Nahcivan in 1993. The scale investigates the individuals' self-evaluation regarding SC and behaviors. The scale consists of 35 items and a maximum of 140 points is obtained from the scale. As the scale score increases, the SCA of individuals increases (Nahcivan, 1993). The Cronbach's alpha value of the reliability coefficient of the scale was found as 0.89. In this study, the Cronbach alpha value for the SCAS was found to be 0.96.

The fourth part of the survey: evaluation of pain: This VAS was used to assess the severity of pain experienced by the patients. It is usually a 10-cm long horizontal line with ''painless'' at one end and ''the worst imaginable pain'' at the other end. A score of "0" on the scale indicates that the person does not feel or does not experience pain, and a score of "10" indicates the most severe level of pain felt or experienced (Price, 1983).

Statistical analysis

Descriptive statistics such as mean and standard deviation, number and percentage were used in the statistical evaluation of the data. The suitability of the study data to the normal distribution was tested with the Kolmogorov-Smirnov test. Cronbach's alpha coefficients were used to evaluate the validity and reliability of SE and SCA power scales in a sample of women who had a hysterectomy. Pearson correlation analysis was used to examine the relationship among the mean scores for RSES, SCAS, and VAS for pain. The statistical significance level was accepted as $p < .05$. IBM SPSS Statistics ver. 23.0 (IBM, Armonk, NY, USA) software which statistical analysis program was used for data analysis.

Ethical considerations

Written permission was obtained from the researchers who conducted the validity and reliability of the scales to be used via e-mail in the planning phase of the study. In order to carry out this study, ethical permission was obtained from Trakya University Faculty of Medicine Scientific Research Evaluation Board (TÜTF-BAEK 2018/455), and written permission was obtained from the institution where the study would be conducted. Before starting the study, patients with hysterectomy were informed about the study and their voluntary participation was ensured by obtaining verbal consent from the patients who agreed to participate.

RESULTS

Patient Identification (sociodemographic, obstetric features, and health status characteristics)

The distribution of patients with hysterectomy according to personal characteristics, obstetric features, and health status in the study is shown Table 1. Although the patients ranged from 33 to 73 years of age, the average age of patients with hysterectomy was 51.22±9.36 years. The majority (56%) of patients with hysterectomy had a secondary education or higher. It was found that 42.4% were employed, 85.9% did not use cigarettes, and 95.7% did not consume alcohol. The majority (88.0%) of patients with hysterectomy were satisfied with their lives, and 35.9% felt unhappy. The majority (78.3%) of patients with hysterectomy did not have a chronic condition, 50.0% were diagnosed with uterine myoma, 45.8% had stage 2nd cancer, 57.6% had total abdominal hysterectomy-bilateral salpingo-oophorectomy surgery, and an average of 2.25±0.26 days had passed

after the hysterectomy surgery. The average gravida and parity of patients with hysterectomy was 2.24±1.30 and 1.80±1.06, respectively (Table 1).

Self-esteem, self-care agency, and pain in women with hysterectomy

The mean RSES score of women with hysterectomy who participated in the study was 11.74±2.99, mean SCAS score was 117.40±26.67, and mean VAS was 3.58±1.42 (Table 2).

Correlation between SE, SCA, and pain in women with hysterectomy

There was a strong and negative correlation between VAS pain score and RSES ($p<0.001$; $r=–0.761$). There was a strong and negative correlation between VAS pain score and SCAS ($p<0.001$; $r=–0.750$). However, it was observed that there was a very strong and positive correlation between RSES and SCAS ($p<0.001$; $r=0.979$) (Table 3).

Table 1. Sociodemographic characteristics of the study group (n=486).

Variables		**n, or mean ± SD**	**%***
Age		51.22 ± 9.36	
Educational status	Primary education and lower	211	43.5
	Secondary education and higher	275	56.5
Occupation	Unemployed	153	31.5
	Employed	206	42.4
	Retired	127	26.1
Income status	Income does not meet expenses	32	6.5
	Income meets expenses	449	92.4
	Income more than expenses	5	1.1
Marital status	Single	169	34.8
	Married	317	65.2
Family type	Nucleus	370	76.1
	Expended	116	23.9
Smoking status	Use	69	14.1
	Not Use	417	85.9
Alcohol consumption status	Consume	21	4.3
	Not consume	465	95.7
Life satisfaction status	Satisfaction	428	88.0
	Not Satisfaction	58	12.0
Felt a sense of self now	Happy	21	4.3
	Unhappy	174	35.9
	Depressive	69	14.1
	Stressful	69	14.1
	Nervous	116	23.9
	Excited	5	1.1
	Other	32	6.5
Chronic condition**	Hypertension	63	13.0
	Diabetes	110	22.8
	None	381	78.3
Indication of hysterectomy	Uterina myoma	243	50.0
	Endometrial Hyperplasia	101	20.7
	Cervical Cancer	32	6.5
	Endometrial Cancer	74	15.2
	Ovarial Cancer	36	7.6
Gynecological cancer stage	2	65	45.8
	3	38	26.8
	4	39	27.4
Type of hysterectomy	Total abdominal hysterectomy-bilateral salpingooferactomy (TAH-BSO)	206	42.4
	Total abdominal hysterectomy (TAH)	280	57.6
Day after hysterectomy		2.25±0.26	
Gravida		2.24±1.30	
Parity		1.80±1.06	
Total		**486**	**100.0**

Table 2. The mean scores of Rosenberg's Self Esteem Scale, The Self-Care Agency Scale and VAS (n=486).

Scales	mean±SD	min.	max.
RSES	11.74 ±2 .99	2	18
SCAS	117.40±26.67	35	140
VAS	3.58±1.42	1	7

Table 3. Examination of the relationship between Rosenberg's Self Esteem Scale, The Self-Care Agency Scale, and VAS (n=486).

Scales	RSES	SCAS	VAS
RSES	-	p<0.001 r=0.979	p<0.001 r=-0.761
SCAS	-	-	p<0.001 r=-0.750
VAS	-	-	-

DISCUSSION

Among the nursing care goals aimed at increasing the SE level and SCA of women with hysterectomy, one primary goal is to ensure that women resume their independent SC activities as soon as possible in the shortest time during the postoperative period. The results of the literature are similar to each other, and it is seen that the pain experienced by cancer patients negatively affects the quality of life, prevents patients from moving freely and avoiding activities they enjoy, thus causing a decrease in self-confidence and self-care ability. Therefore, patients with hysterectomy may be less adversely affected by the physiological and psychological effects experienced at the end of the surgery, and they can participate in SC at the highest level possible by ensuring their well-being. In the study, it was found that self-perception was low, SC was moderate, and pain was moderate (Table 2). Chacko et al. (2016) determined that the most common problem in the first weeks after hysterectomy surgery was pain, and incision pain was present in 45% of the patients. Turkay et al. (2020) they found the mean VAS pain level of the patients in the control group to be 3 points 24 hours after hysterectomy surgery. On the other hand, the patients in the experimental group who chewed gum had an average of 1 point VAS pain level (Turkay et al., 2020). Burma and Kavlak (2021) found the pain levels of the patients who had hysterectomy surgery to be 5.52 ± 1.20. Can et al. (2022) found the mean SE score of women who had hysterectomy surgery to be 1.42 ± 1.31. Kucukkaya and Ercel (2019) found that SCA score of gynecological cancer patients was 111.6±33.0 and was at an intermediate level. Eken et al. (2016) found that the mean SE score was 1.1 ± 0.8 in the total abdominal hysterectomy group and 1.0 ± 0.6 in the total laparoscopic hysterectomy group, and that the SE level was low in both groups. Gun and Komurcu (2013) studied the relationship between SE and SCA in hysterectomy patients. They stated that the mean SE score of the women was found to be 59.93 ± 7.03 and that it was 80.31 ± 8.78 for SCA. The findings of this study and those in the literature support each other: it was found that the perception of SE was low and that SCA and PoP were moderate. Postoperative pain in patients with hysterectomy very possibly has a negative effect on SE. While the reduced sense of feminine traits can lead to a decrease in SE, it may also lead to a sense of emptiness. In this study, it was found that when PoP of hysterectomy patients increased, SE decreased (Table 3). Ozdemiroglu et al. (2017) found that reduced SE was particularly related more often to severe pain, and as the pain of patients increased, SE decreased. Our study findings and the literature showed that, as the PoP level experienced by patients increased, there was a decrease in individual perceived self-esteem. It is seen that the postoperative pain level of the patients negatively affects self-perception and acceptance. It has been proven by studies that if patients' pain cannot be controlled, their SE will decrease. If SE does not increase in the long term, it may cause depression in patients. Hysterectomy surgery causes injury to tissues resulting in PoP in those affected. Since these symptoms eventually lead to reduced SCA, it is important to control PoP. This study found that, as the PoP of patients with hysterectomy increased, SC decreased (Table 3). In their study, Burma and Kavlak (2021) found that the increase in the pain of the patients after hysterectomy surgery affected the recovery negatively. Delayed post-operative recovery of patients will also delay their ability to perform SC. Lynch and LeFort (2016) studied the standardized discharge information after a short-stay hysterectomy and its relationship to SC confidence, perceived recovery, and satisfaction. They stated that, as PoP increased, SC decreased. Overall, it was observed that patients' SCA levels increased with the decrease in their pain, and these results are widely supported by the literature. The fact that patients have pain delays their recovery and prevents them from doing self-care. It is seen that patients with high pain levels have difficulty in accepting their own situation after

surgery and have low SE. This shows that pain affects individuals both physiologically and psychologically. Self-esteem is a central factor in every period of human life, and SE affects SC. This study found that there was a significant relationship between SE and SC in hysterectomy patients. Hysterectomy surgery causes a decrease in SE as it causes feelings such as loss of femininity, reduction, and decrease by the patients. This causes women with hysterectomy to feel worthless. The patients' feeling of worthlessness also affects their physical care. The condition of these patients also causes a decrease in their SC power. Therefore, as the SC level increases, SE increases (Kanmaz and Osman, 2019). Gun et al. (2013) showed that a positive significant relationship was found between SE and SCA levels. The literature and findings of this study are similar—as the SC level increases, SE also increases. The findings of this study support those in the literature that, as the SC level increases in patients with hysterectomy, SE also increases and vice versa.

Limitations of study

This study has some limitations. The first relates to the study being conducted in only two university hospitals. However, the large number of hysterectomy patients assessed gives weight to our study. The second limitation is the lack of assessment of pain, pain management, self-esteem, and self-care power agency after hysterectomy.

CONCLUSION

Studies that focused on psychosocial predictors of pain after hysterectomy showed preoperative and postoperative psychological distress and negative emotional states as risk factors (Giusti et al., 2021; Darvishi et al., 2020). In addition to In addition to variables related to pain, self-esteem, and self-care agency, other relevant factors have been reported such as the patients' personal characteristics and features, the type of indication in hysterectomy, the type of hysterectomy, lower pain threshold, lower levels of health care provided by nurses, and limitation in the nurses' ability to connect with patients and patients' families (Lunde et al., 2020; Scheel et al., 2017). The variables examined in the literature are similar to each other, and this study aims to focus on the pain experienced by women with hysterectomy and examine the effect of post-hysterectomy pain on self-esteem and self-care ability. In this study, as the pain level increased after hysterectomy, self-esteem and self-care agency decreased. Also, as self-esteem decreased after hysterectomy, self-esteem also decreased.

According to these findings, to reduce the level of pain patients have after hysterectomy surgery and to increase self-esteem and self-care, it is recommended that nurses receive training in methods of coping with the pain before the hysterectomy surgery and to provide more effective postoperative care, better aid patients in the evaluation of their pain levels and promote patient self-esteem and self-care power. Reduction of patients' pain using coping methods is generally considered as an effective way to mitigate the preceding list of negative effects that can impact patients from pain by increasing self-esteem and self-care agency. It is important for healthcare personnel providing care to know that self-care power increases in parallel with the increase in self-esteem in hysterectomy cases, in terms of planning the care and education they will provide, considering the relationship between these two concepts.

It is recommended that nurses who specialize in obstetrics and gynaecology take an active role in the implementation and evaluation of the effectiveness of the accepted methods, manage the nursing processes by evaluating the self-esteem and self-care of the patients, and take an active role in evidence-based practices in this field.

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Conflict of interest

The authors have no conflict of interest to declare.

Authors contributions

Plan, design: BK, HMA **Material, methods and data collection:** BK, HMA. **Data analysis and comments:** BK, HMA. Drafting of the article: BK, HMA. **Writing and corrections:** BK, HMA.

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Ethical approval

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