



Changes in Body Perception, Self-Respect, Life Quality, and Sexuality in Hysterectomy Patients

Filiz ÖZSOY¹, Kaan Eray UZUN², Orhan ULUSOY², Seda UYSAL², Şüheda KAYA³, Nülüfer KILIÇ³, Asker Zeki ÖZSOY², Hatice YILMAZ DOĞRU², İlhan Bahri DELİBAŞ²

¹ Department of Psychiatry, Gaziosmanpaşa University Faculty of Medicine, Tokat, Türkiye

² Department of Gynecology and Obstetric, Gaziosmanpaşa University Faculty of Medicine, Tokat, Türkiye

³ Clinic of Psychiatry, Elazığ Mental and Nervous Diseases Hospital, Elazığ, Türkiye

Cite this article as: Özsoy F, Uzun KE, Ulusoy O, Uysal S, Kaya Ş, Kılıç N, et al. Changes in body perception, self-respect, life quality, and sexuality in hysterectomy patients. JEURMEDS 2023;4(3):71-78.

ABSTRACT

Objective: We aimed to evaluate body perception, self-respect, sexual function, and life quality levels in women who had hysterectomies for benign reasons and whose treatment was completed.

Material and Methods: The present study included 60 women who had hysterectomies and 45 women with matching demographic characteristics as the control. Hospital anxiety depression scale (HADS), Penn State worry questionnaire (PSWQ), short form health survey (SF-36), the body perception questionnaire (BPQ), the Rosenberg self-esteem scale (RSES), and the Arizona sexual experience scale (ASEX)-female version was applied to all participants.

Results: The depression subscale and total anxiety depression score were significantly higher in the hysterectomy group ($p= 0.017$ and 0.037 , respectively). Similarly, the hysterectomy group's PSDQ, RSES, and ASEX scores were higher ($p< 0.001$). All subscales of SF-36 were worse in the patient group ($p< 0.05$).

Conclusion: It was revealed that after the hysterectomy, anxiety-depression levels of the patients increased, self-esteem decreased, and life quality and sexual functioning deteriorated. The hysterectomy operation method did not affect depression, anxiety, or sexuality. Additional studies are needed to better illuminate postoperative psychiatric symptoms and diseases. In addition, psychiatric support is suggested for patients to ease their adaptation to postoperative treatment to shorten recovery times.

Keywords: Hysterectomy, sexuality, anxiety, depression, psychiatry

ÖZ

Histerektomi Olan Hastaların Beden Algısı, Benlik Saygısı, Yaşam Kalitesi Düzeyi ve Cinselliklerinin Değerlendirilmesi

Giriş: Bu çalışmada iyi huylu hastalıklar nedeniyle histerektomi ameliyatı olan ve operasyon sonrası tedavisi tamamlanan kadınların beden algıları, benlik saygıları, yaşam kaliteleri ve cinsel işlevlerinin değerlendirilmesidir.

Gereç ve Yöntemler: Çalışmamıza hasta grubu olarak iyi huylu hastalıklar nedeniyle histerektomi yapılmış 60 kadın ve hasta grubu ile eşleşebilecek 45 kadın kontrol olarak alınmıştır. Hastane anksiyete depresyon ölçeği (HADÖ), Penn State anksiyete ölçeği (PSAÖ), yaşam kalitesi ölçeği (SF-36), vücut algısı ölçeği (VAÖ), Rosenberg benlik saygısı ölçeği (RBSÖ) ve Arizona cinsel yaşantılar ölçeği-kadın versiyonu (ACYÖ) tüm katılımcılara uygulandı.

Bulgular: Hasta grubunun HADÖ depresyon alt boyutu ve ölçeğin toplam puanı yüksek olarak bulundu (Sırası ile p değeri; $0,017$; $0,037$ idi). Hasta grubunun PSAÖ'den yüksek puan aldığı görüldü ($p< 0,001$). RBSÖ ve ACYÖ için operasyon geçiren grubun sonuçları düşük idi (p değeri $<0,001$ idi). Yaşam kalitesi tüm alt boyutları operasyon geçiren grupta daha kötü olarak hesaplanmıştır ($p< 0,05$).

Sonuç: Histerektomi sonrası hastaların anksiyete-depresyon düzeylerinin arttığı, kendi benliklerine duydukları saygının azaldığı ve kaliteli yaşamın ve cinsel işlevlerinin bozulduğu tespit edilmiştir. Operasyon yöntemine göre bulgularımızda farklılık olmadığı görülmüştür. Histerektomi sonrası ortaya çıkan psikiyatrik semptomlar ve hastalıkların ortaya konulabilmesi için daha detaylı, ileri araştırmalar yapılması gerekmektedir. Ek olarak hastaların operasyon sonrası tedaviye uyumlarını kolaylaştırabilmek, iyileşme sürelerini kısaltabilmek amacıyla psikiyatrik olarak da desteklenmesi önerilmektedir.

Anahtar Kelimeler: Histerektomi, cinsellik, depresyon, anksiyete, psikiyatri

Corresponding Address

Filiz ÖZSOY

Department of Psychiatry, Gaziosmanpaşa
University Faculty of Medicine
TOKAT-TÜRKİYE
e-mail: flzkoseoglu82@gmail.com

This is an open-access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes (<http://creativecommons.org/licenses/by-nc/4.0/>).

Received: 30.11.2022

Accepted: 11.09.2023

Available Online Date: 23.12.2023

INTRODUCTION

Body perception, just like life quality, is a way of defining a person's own physical image shaped by social interactions. Self-esteem is all the feelings and behaviors expressing self-respect, self-belief, and self-reliance (1). Body perception and self-esteem are multidimensional constructs. Chronic diseases and medical operations that result in the physical appearance of the body could lead to changes in the way of life, thereby impairing body perception and self-esteem (2). In turn, impaired body perception and self-esteem could result in psychiatric symptoms and diseases, eventually deteriorating quality of life (3).

Sexuality, which has a major influence on the quality of life, is privacy experienced within the harmony between two people with biological and social connotations (4). Deterioration in sexual functions, such as decreased sexual desire, inability to orgasm, and inability to become aroused increases the person's sexual dissatisfaction, which compromises the individual's quality of life (5). Life quality is descriptive of living their lives in accordance with their cultures, goals, and expectations (6). This quality-of-life definition assumes the evaluation of various quality-of-life parameters by the patient. It can be affected by interpersonal relationships, personal beliefs, working environment, general health level, sleep patterns, and sexual functions (7).

Gynecological surgical procedures could involve postoperative psychiatric symptoms or diseases (8-10). It has been revealed that patients undergoing gynecologic surgery may have deterioration in their sexuality and life quality (11). Decreases in body perceptions and self-esteem of these patients have also been reported (12). Anxiety, depression levels, quality of life, sexual functions, body perceptions and self-esteem levels of the patients after gynecological operations have been examined separately in various manuscripts. But our study is the first dealing with all of them in a combined manner. The first hypothesis was that anxiety-depression levels would be high in patients with hysterectomy, albeit with benign causes. Second, we proposed that sexual functions would be impaired secondary to surgery and increased depression levels. Third, we assumed that body perception and self-esteem could deteriorate due to uterus removal, impaired body integrity, and loss of fertility and femininity. The final was that the quality of life could be compromised in these patients due to all these assumptions. To test these assumptions, anxiety-depression levels, body perceptions, self-respect, life quality, and sexual functions of the women who underwent hysterectomy due to benign reasons were evaluated in the present study. Irrespective of the indications for

hysterectomy, it would be good to recommend psychiatric support for women before and after the operation to facilitate patients' adaptation to postoperative treatment and to shorten recovery times.

MATERIALS and METHODS

Inclusion and Exclusion Criteria

Female patients who underwent hysterectomy for benign reasons in the obstetrics and gynecology clinic of Gaziosmanpaşa University were evaluated by the same psychiatry physician. The individuals in the age interval of 30-50 years who had hysterectomy, whose treatment procedures were completed, who were not having oncology therapy, who were literate and who had enough intellectual capacity to provide written consent and to fill the forms were included in the present study. Individuals with poor general condition, chronic liver/renal or heart disease, mental retardation and psychiatric disease requiring treatment, alcohol-substance abuse and those unwilling to participate were excluded. Individuals with matching demographic characteristics and who did not have diagnosis for psychiatric disease were also included as healthy control group. All participants were made to sign a written consent form. Then, all subjects completed hospital anxiety-depression scale (HADS), Penn State worry questionnaire (PSWQ), short form health survey (SF-36), the body perception questionnaire (BPQ), the Rosenberg self-esteem scale (RSES) and the Arizona sexual experience scale (ASEX)-female version.

Measurement Tools

Demographic data form: It contained demographic data. In addition, the form also included questions regarding clinical evaluation such as whether the subject was on psychiatric treatment at the moment or before, whether she had operation before and had an additional medical condition requiring treatment, and whether there was a psychiatric disease in the family requiring treatment.

Hospital anxiety-depression scale (HADS): HADS is a 14-item self-reporting scale applied to evaluate the severity of the symptoms of depression and anxiety experienced by the patient. The cutoff scores for the depression subscale were calculated to be eight and for the anxiety subscale to be 11 (13).

Penn State worry questionnaire (PSWQ): PSWQ is used to measure the level of constant, extreme and uncontrollable anxiety. It is a 16-point Likert type scale rated from 1-5. The questionnaire was developed by Meyer et al. (14).

The body perception questionnaire (BPQ): BPQ assesses the satisfaction of individuals with different parts of their

body and its different functions. All items are rated 1-5, the lowest point is 40 and the highest 200. Higher scores mean poor body perception. The questionnaire was developed by Secord and Jourard (15).

The Rosenberg self-esteem scale (RSES): RSES is a self-reporting scale used to evaluate a person's self-esteem. It consists of 63 questions. In the present study, only the first 10 questions assessing the self-esteem were used. The calculated scores of 0-1 means high self-esteem, while scores of 2-4 shows medium and scores of 5-6 indicates low self-esteem. The scale was developed by Rosenberg (16).

Short form health survey (SF-36): SF-36 is used to evaluate a person's quality of life. SF is a self-reporting scale that consists of 36 items evaluated in eight sub-scales. The scale has total points from 0 to 100, and higher points represent better quality of life. The survey was developed by Ware (17).

The Arizona sexual experience scale (ASEX): This Likert-type self-assessment scale consists of five questions. It has male and female versions. This scale evaluates sexual functions by excluding relationships with partner and issues regarding sexual orientations. In the female version used in the present study, sex drive, physiological and psychological arousal, ability to reach orgasm, and satisfaction from orgasm are questioned. Lower scores represent strong sexual response while higher ones indicate impairment in sexual functioning (18).

Ethics Approval

This prospective and cross-sectional designed study was carried out in accordance with the Helsinki Declaration with the approval of Gaziosmanpaşa University Clinical Research Ethics Committee (Grant number: 18-KAEK-271. 83116987-657).

Statistical Analyses

SPSS v19 for Windows software were used for statistical analyses. Descriptive analyses were performed to provide information about the general characteristics of the participants. Data from continuous variables were given as mean \pm standard deviation while those from categorical ones were given as n (%).

Qualitative variables in the study were demographic data such as age, marital status, education level, working status and socioeconomic level, and having psychiatric conditions or other additional treatment-requiring conditions of the person or in the family. Cross-table and chi-square tests were used to assess whether there were relationships between qualitative variables. Quantitative variables, on the other hand, were HADS, PSWQ, SF-36, BPQ, RSES, and ASEX scores.

Group means for quantitative variables were compared using the significance test for the difference between two means, while relationships between quantitative variables were determined using the Pearson correlation coefficient. $p < 0.05$ was considered statistically significant.

RESULTS

There were 105 people (60 patients with hysterectomy surgery and 45 as healthy controls). Initially, 100 patients with hysterectomy surgery were interviewed for the study. Thirty-four people were excluded since they had the operation for malignant reasons, and their treatments continued. Sixty people that met the study criteria were included. Twenty of them (33%) had abdominal hysterectomy, while another 20 (33%) had vaginal hysterectomy, and the remaining 20 (33%) had laparoscopic hysterectomy. All participants were women. Patient group was 41.53 ± 9.51 years; healthy control group was 39.69 ± 6.81 years. No subject in the patient and control groups was single, divorced or widow. There was no difference between demographic data of the participants ($p > 0.05$). No participant or her family members had psychiatric illness which required treatment. None of the participants had any additional disease. Thirty-three people in the patient group (55%) underwent surgeries other than hysterectomy while eight people in the control group (17.77%) had operations (Table 1).

Thirteen people in the group (21.66%) of patients who underwent hysterectomy exceeded the cutoff point for anxiety subscale of HADS, while 14 patients (23.33%) had scores over cutoff for depression subscale. In the healthy control group, on the other hand, two people (4.44%) had scores over the cutoff points for either anxiety or depression subscale. Depression subscale score and total score of HADS were significantly different ($p = 0.017$ and 0.037 , respectively). Average PSDQ score was significantly higher in hysterectomy patient ($p < 0.001$). Hysterectomy patient group had significantly higher BPQ scores, i.e. worse body perception than the healthy control group ($p = 0.049$). Hysterectomy group was worse for RSES and ASEX scores compared to healthy controls ($p < 0.001$). All quality-of-life parameters in SF-36 were worse in the patient group (Table 2). Anxiety, depression, body perception and self-respect levels did not vary by type of hysterectomy (Table 3). Age of the patient was associated with only sexual function; that is, sexual functions appeared to be impaired in older age ($r = 0.339$, $p = 0.008$). ASEX had positive correlations with anxiety and depression scores and total scores of HADS ($r = 0.489$, 0.540 and 0.537 , respectively). Similarly, self-esteem had strong positive correlations with anxiety and depression subscale scores and total scores of HADS ($r = 0.496$, 0.586 , and 0.566 , respectively) (Table 4).

Table 1. Demographic characteristics of the study groups

	Healthy control group (n= 45)	Hysterectomy patient group (n= 60)	p
Marital status (married/single)	45/0	60/0	-
Education level			
Literate	7 (15.60%)	9 (15.00%)	
Primary school graduate	29 (64.44%)	38 (63.33%)	
High school graduate	8 (17.80%)	12 (20.00%)	0.124
College graduate	1 (2.22%)	1 (1.70%)	
Employment status			
Part time employment	2 (4.40%)	5 (8.30%)	
Full time employment	3 (6.66%)	4 (56.70%)	0.257
Homemaker	40 (88.88%)	51 (85.00%)	
Socioeconomic status			
Low	9 (45.00%)	11 (18.30%)	
Moderate	32 (71.11%)	42 (70.00%)	0.157
High	4 (8.90%)	7 (11.70%)	
Operation history (yes/no)	8/37 (17.8/82.2%)	33/27 (55.00/45.00%)	<0.001
Hysterectomy method			
Abdominal	-	20 (33.33%)	
Vaginal	-	20 (33.33%)	-
Laparoscopic	-	20 (33.33%)	

No participant or her family member had psychiatric treatment or additional medical conditions.
Chi-square test was used.

Table 2. Scores of different scales across patient and control groups

Data tool used	Healthy control group (n= 45) (Mean ± SD)	Hysterectomy patient group (n= 60) (Mean ± SD)	p
HADS			
Anxiety subscale	5.64 ± 4.24	7.17 ± 5.31	0.117
Depression subscale	4.62 ± 2.92	6.85 ± 5.61*	0.017
Total score	10.27 ± 6.48	14.02 ± 10.47*	0.037
PSDQ	34.82 ± 11.25	44.58 ± 11.56*	<0.001
ASEX	9.93 ± 4.96	18.98 ± 6.17*	<0.001
RSES	0.64 ± 0.71	1.60 ± 1.44*	<0.001
BPQ	88.36 ± 14.18	99.75 ± 36.54	0.049
Quality of life (SF-36)			
Physical functioning	79.67 ± 20.29	59.33 ± 24.52*	<0.001
Physical role functioning	63.33 ± 41.83	45.75 ± 39.15*	0.029
Emotional role functioning	66.65 ± 40.20	42.76 ± 38.85*	0.003
Vitality	70.44 ± 17.15	53.34 ± 21.34*	<0.001
Mental health	67.38 ± 15.84	60.43 ± 18.30*	0.044
Social role functioning	70.28 ± 23.58	52.04 ± 24.94*	<0.001
Bodily pain	72.11 ± 24.90	53.20 ± 25.99*	<0.001
General health perceptions	66.22 ± 17.19	52.58 ± 18.49*	

HADS: Hospital anxiety-depression scale, PSWQ: Penn State worry questionnaire, ASEX: The Arizona sexual experience scale, RSES: The Rosenberg self-esteem scale, SF-36: Short form health survey, BPQ: The body perception questionnaire, Mean ± SD: Mean ± Standard deviation.
Independent samples t test; *p< 0.05.

Table 3. Scores of different scales across different hysterectomy operation methods

	Vaginal hysterectomy	Laparoscopic hysterectomy	Abdominal hysterectomy	P
HADS-1	7.30 ± 4.07	6.90 ± 4.64	7.30 ± 7.03	0.964
HADS-2	7.25 ± 5.39	6.35 ± 4.53	6.95 ± 6.90	0.879
HADS-3	14.55 ± 9.14	13.25 ± 8.69	14.25 ± 13.44	0.922
PSDQ	44.00 ± 11.81	41.60 ± 12.13	48.15 ± 10.24	0.195
ASEX	21.35 ± 5.98	17.65 ± 6.38	17.95 ± 7.34	0.153
RSES	1.65 ± 1.27	1.85 ± 1.35	1.30 ± 1.69	0.481
SF-36				
PF	55.00 ± 23.00	61.25 ± 27.28	61.75 ± 23.75	0.632
PRF	53.50 ± 39.34	42.50 ± 36.36	41.25 ± 42.36	0.561
ERF	41.65 ± 40.28	44.97 ± 36.3	41.65 ± 41.74	0.954
V	55.58 ± 24.24	52.50 ± 14.46	51.95 ± 24.68	0.850
MH	57.00 ± 20.15	60.60 ± 8.34	63.70 ± 23.25	0.519
SRF	55.00 ± 27.63	47.50 ± 23.51	53.63 ± 24.12	0.607
BP	70.85 ± 20.24 ^a *	46.13 ± 26.16 ^b	42.62 ± 22.49 ^b	<0.001
GHP	55.25 ± 15.26	51.00 ± 20.94	51.50 ± 19.47	0.736
BPQ	98.80 ± 35.87	105.05 ± 38.97	95.40 ± 35.92	0.706

HADS: Hospital anxiety-depression scale, 1: Anxiety subscale, 2: Depression subscale; 3: Total point of the scale, PSDQ: Penn State worry questionnaire, ASEX: The Arizona sexual experience scale, RSES: The Rosenberg self-esteem scale, SF-36-PF: Short form health survey physical functioning, SF-36-PRF: Short form health survey physical role functioning, SF-36-ERF: Short form health survey emotional role functioning, SF-36-V: Short form health survey vitality, SF-36-MH: Short form health survey mental health, SF-36-SRF: Short form health survey social role functioning, SF-36-BP: Short form health survey bodily pain, SF-36-GHP: Short form health survey general health perceptions, BPQ: The body perception questionnaire.

Values are mean ± standard deviation. ANOVA: One-way analysis of variance was used to compare group means (Means with the same letter in the same line are not statistically different).

*p < 0.05.

Table 4. Pearson correlation analyses between various data tools

	HADS-Anxiety	HADS-Depression	HADS-Total	PSDQ	ASEX	RSES	BPQ
SF-36							
PF	-.177	-.109	-.148	-.159	-.044	-.099	-.216
PRF	-.400*	-.432*	-.434*	-.310*	-.151	-.158	-.435*
ERF	-.445*	-.369*	-.424*	-.326*	-.245	-.214	-.381*
V	-.220	-.317*	-.281*	-.223	-.033	-.160	-.371*
MH	-.399*	-.404*	-.419*	-.253	-.105	-.196	-.368*
SRF	-.420*	-.411*	-.433*	-.446*	-.317*	-.190	-.412*
BP	-.336*	-.226	-.291*	-.244	.084	-.021	-.322*
GHP	.370*	-.373*	-.388*	-.223	.096	-.215	-.457*
BPQ	.636*	.655*	.674*	-.269	.520*	.559*	-

HADS: Hospital anxiety-depression scale, PSDQ: Penn State worry questionnaire, ASEX: The Arizona sexual experience scale, RSES: The Rosenberg self-esteem scale, BPQ: The body perception questionnaire, SF-36-PF: Short form health survey physical functioning, SF-36-PRF: Short form health survey physical role functioning, SF-36-ERF: Short form health survey emotional role functioning, SF-36-V: Short form health survey vitality, SF-36-MH: Short form health survey mental health, SF-36-SRF: Short form health survey social role functioning, SF-36-BP: Short form health survey bodily pain, SF-36-GHP: Short form health survey general health perceptions.

Data given are r coefficients. Pearson correlation analysis was performed.

*p < 0.05.

DISCUSSION

Depression and anxiety levels of the patients with hysterectomy history were higher. Self-respect levels of these people were lower, their sexual life was compromised and almost all sub-dimensions of their quality of life were impaired.

Depression levels of people one year after they had hysterectomy were higher than healthy controls. Many studies in the literature report elevated depression levels after hysterectomy (14-23). In a long-term study, higher depression levels were found in these patients compared to controls 12 years after the operation (19). In another study, depression levels of people who underwent hysterectomy were higher even after 21.9 years (20). It was found that the depression risk increased irrespective of the indications for the operation (21). In order to assess the anxiety levels of patients, two different scales, HADS and PSDQ, were employed to evaluate the anxiety levels of patients in our study, but no difference was found between the patient and control groups for HADS score, and 21.66% of the patients exceeded the cutoff point. When it comes to Penn State worry questionnaire used to evaluate continuous, excess, and uncontrollable anxiety, the patient group had higher scores. Studies in the literature have used different scales to evaluate the depression level. A study in which self-evaluating anxiety scale was carried out a week after the hysterectomy operation revealed higher anxiety levels in patients (22). In another study using Hamilton anxiety scale, the patients were evaluated one week after the operation, and they had higher anxiety levels (23). Öztürk et al. used the state-trait anxiety inventory (STAI) and reported higher anxiety levels in patients after hysterectomy (24). In this study, only the patients who had hysterectomy for benign reasons were examined. Depression levels of the patients were higher regardless of the method of surgery employed. Besides, it was also found that patients' constant, excessive and uncontrollable anxiety feelings were also elevated.

For woman, uterus is an incubator used to carry baby and is a symbol for fertility. Loss of the uterus in hysterectomy operation could be perceived as loss of body integrity, fertility and femininity (25). Thus, body perceptions and self-esteem can be expected to deteriorate in these patients. Self-respect and body perception were impaired in patients who had hysterectomy compared to the controls. In a study evaluating body perception and sexual functions after mastoidectomy and hysterectomy carried out in a Turkish oncology clinic, sexual functions, but not body perception, was deteriorated after mastoidectomy (14). In another study, patients were grouped into abdominal and vaginal hysterectomies as in the present study, and the two groups were compared for sexual

functions and body perceptions (26). No difference was found between the groups for sexual functions. However, it was observed that impairment was more intense for body perception in the abdominal hysterectomy group, which was attributed to the stitches in the abdominal region of the patients (26). In our results, surgical technique did not have any impact on self-esteem or body perception. However, both body perception and self-esteem were found to be impaired in patients after hysterectomy (27). That study included the patients who had hysterectomy due to gynecological cancer in which the treatment of the patients was continuing. The present study included patients who had hysterectomy for benign reasons and whose postoperative treatments had already been completed.

Sexuality and life quality were also evaluated in the present study. Both the sexual functions and all subscales of quality of life were impaired in the patients. A mild impairment was reported in the sexual functions of patients two years after hysterectomy due to cervical cancer (28). Similar to our findings, a study carried out in Türkiye showed increased depression levels and impaired sexual functions in patients who had hysterectomy due to benign causes (29). Quality of life of the patients who had hysterectomy were evaluated using SF-36 scale, and impairments were observed in all subscales. The surgery method used had significant effect only on bodily pain subscale of SF-36. Higher bodily pain scores were obtained in patients who had vaginal hysterectomy compared to the ones who had abdominal or laparoscopic hysterectomy. A study using SF-36 showed significant deteriorations in "physical functioning" and "physical role functioning" subscales and pointed to the chronic fatigue felt by the patients (13). A study evaluated the quality of life of the patients after abdominal and vaginal hysterectomy using SF-36, and similar to our findings, deterioration was observed in abdominal hysterectomy group for bodily pain subscale (30). In addition, it was revealed that the quality of life was better in vaginal operation group. Follow up evaluations revealed that impairments in quality of life and sexual functions continued even one year after the operation.

The present study showed elevated depression and anxiety levels among women who had hysterectomy due to benign causes. Although their body perceptions remained undisturbed, self-esteem levels of these women deteriorated. Besides, their sexual functions and life qualities were compromised. Considering the findings of the present study, irrespective of the indications for hysterectomy, psychiatric support is suggested for women before and after the operation in order to facilitate patients' adaptation to postoperative treatment and to shorten recovery times.

Our results should be evaluated considering some limitations of the study. First of all, our study population was relatively small. Among other limitations were that the study population was picked in a random fashion, that the participants were not subjected to SCID-5-CV (Structured Clinic Interview for DSM-5) and that no evaluation was made in any patient before the hysterectomy operation. These limitations prevent drawing generalized conclusions from our study. More studies with more participants from much larger sampling populations are needed.

Ethics Committee Approval: This study was approved by the Tokat Gaziosmanpaşa University Clinical Research Ethics Committee (Decision no: 83116987-657, Date: 19.12.2018).

Author Contributions: Concept/Design: FÖ, AZÖ, EKU; Analysis/ Interpretation: AZÖ, HYD, BD; Data Acquisition: EKU, AZÖ; Writing: FÖ; Critical Revision: AZM, NK, EKU, BD, HYD; Final Approval: All of authors.

Conflict of Interest: All authors declare that they have no conflict of interest.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

- Erdanoğlu Y, Solak BN, Şimşek M, Erdil ME. Investigation of relationship between pain severity and body image, self-esteem, depression, and functional level in patients with early and late stage osteoarthritis: a pilot study. *J Exercise Ther Rehabil* 2019;6(3):188-94.
- Nazik H, Nazik S, Gül FC. Body image, self-esteem, and quality of life in patients with psoriasis. *I Dermatol J* 2017;8(5):343. https://doi.org/10.4103/idoj.IDOJ_503_15
- Kim JS, Kang S. A study on body image, sexual quality of life, depression, and quality of life in middle-aged adults. *Asian Nursing Res* 2015;9(2):96-103. <https://doi.org/10.1016/j.anr.2014.12.001>
- Küçük N, Kaydırak MM, Bilge ÇA, Şahin NH. Evaluation of the effect of obesity on self-respect and sexuality in women. *Anatolian J Psychiatr* 2018;19(2):126-34. <https://doi.org/10.5455/apd.266148>
- Ostbuy T, Kolotkin RL, He H, Overcash F, Brouwer R, Binks M, et al. Sexual functioning in obese adults enrolling in a weight loss study. *J Sex Marital Ther* 2011;37(3):224-35. <https://doi.org/10.1080/0092623X.2011.564530>
- The WHOQOL Group. What quality of life. *World Health Forum* 1996;17:354-56.
- Žarković Palijan T, Kovačević D, Vlastelica M, Hero ED, Sarilar M. Quality of life of persons suffering from Schizophrenia, psoriasis and physical disabilities. *Psychiatri Danub* 2017;29(1):60-5. <https://doi.org/10.24869/psyd.2017.60>
- Peles Bortz A, Bluvstein I, Bergman L, Barnoy S. Anxiety and support resources for Israeli women before gynecological surgery. *Women Health* 2017;57(3):329-41. <https://doi.org/10.1080/03630242.2016.1160964>
- Yen JY, Chen YH, Long CY, Chang Y, Cheng-Fang Y, Cheng-Chung C, et al. Risk factors for major depressive disorder and the psychological impact of hysterectomy: A prospective investigation. *Psychosom* 2008;49(2):137-42. <https://doi.org/10.1176/appi.psy.49.2.137>
- Vandyk AD, Brenner I, Tranmer J, Van Den Kerkhof E. Depressive symptoms before and after elective hysterectomy. *J Obstet Gynecol Neonatal Nurs* 2011;40(5):566-76. <https://doi.org/10.1111/j.1552-6909.2011.01278.x>
- Kinjo M, Yoshimura Y, Kitagawa Y, Okegawa T, Nutahara K. Sexual activity and quality of life in Japanese pelvic organ prolapse patients after transvaginal mesh surgery. *J Obstet Gynaecol Res* 2018;44(7):1302-7. <https://doi.org/10.1111/jog.13654>
- Keskin G, Gümüş AB. Turkish hysterectomy and mastectomy patients-depression, body image, sexual problems and spouse relationships. *Asian Pac J Cancer Prev* 2011;12(2):425-32.
- Zigmond AS, Snaith PR. The hospital anxiety and depression scale. *Acta Psychiatr Scand* 1983;67:361-70. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>
- Meyer TJ, Miller ML, Metzger RL, Borkovec TD. Development and validation of the Penn State worry questionnaire. *Behav Res Ther* 1990;28:487-95. [https://doi.org/10.1016/0005-7967\(90\)90135-6](https://doi.org/10.1016/0005-7967(90)90135-6)
- Secord PF, Jourard SM. The appraisal of body cathexis: Body cathexis and the self. *J Consult Psychol* 1953;17:343-7. <https://doi.org/10.1037/h0060689>
- Rosenberg M. *Society and the adolescent self image*. New Jersey: Princeton University Press, 1963.
- Ware Jr JE, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Med Care* 1992;473-83. <https://doi.org/10.1097/00005650-199206000-00002>
- McGahuey CA, Gelenberg AJ, Laukes CA, Francisco A, Pedro LD, Kathy M, et al. The Arizona sexual experience scale (ASEX): Reliability and validity. *J Sex Marital Ther* 2000;26(1):25-40. <https://doi.org/10.1080/009262300278623>
- Wilson L, Pandeya N, Byles J, Mishra G. Hysterectomy and incidence of depressive symptoms in midlife women: The Australian Longitudinal Study on women's health. *Epidemiol Psychiatr Sci* 2018;27(4):381-92. <https://doi.org/10.1017/S2045796016001220>
- Laughlin-Tommaso SK, Satish A, Khan Z, Smith C, Rocca WA, Steward EA. Long-term risk of de novo mental health conditions after hysterectomy with ovarian conservation: A cohort study. *Menopause* 2020;27(1):33-42. <https://doi.org/10.1097/GME.0000000000001415>
- Chou PH, Lin CH, Cheng C, Chang LC, Tsai CJ, Tsai CJ, et al. Risk of depressive disorders in women undergoing hysterectomy: A population-based follow-up study. *J Psychiatr Res* 2015; 68: 186-91. <https://doi.org/10.1016/j.jpsychires.2015.06.017>
- Wang XQ, Lambert CE, Lambert VA. Anxiety, depression and coping strategies in post-hysterectomy Chinese women prior to discharge. *Int Nurs Rev* 2007;54(3):271-9. <https://doi.org/10.1111/j.1466-7657.2007.00562.x>
- Đoković DD, Jović JJ, Đoković JD, Knežević MZ, Dejanović D, Ristić-Ignjatović D. Effects of hormone replacement therapy on depressive and anxiety symptoms after oophorectomy. *Med Glas (Zenica)* 2015;12(1):79-85.
- Öztürk R, Sevil Ü, Sargin A, Yücebilgin MS. The effects of reflexology on anxiety and pain in patients after abdominal hysterectomy: A randomised controlled trial. *Complement Ther Med* 2018;36:107-12. <https://doi.org/10.1016/j.ctim.2017.12.005>

25. Yaman Ş, Ayaz S. The effect of education given before surgery on self-esteem and body image in women undergoing hysterectomy. *Turk J Obstet Gynecol* 2015;12(4):211. <https://doi.org/10.4274/tjod.95770>
26. Gütl P, Greimel ER, Roth R, Winter R. Women's sexual behavior, body image and satisfaction with surgical outcomes after hysterectomy: A comparison of vaginal and abdominal surgery. *J Psychosom Obstet Gynecol* 2002;23(1):51-9. <https://doi.org/10.3109/01674820209093415>
27. Pınar G, Ökdem S, Doğan N, Büyükgönenç L, Ayhan A. The effects of hysterectomy on body image, self-esteem, and marital adjustment in Turkish women with gynecologic cancer. *Clin J Oncol Nurs* 2012;16(3):99-104. <https://doi.org/10.1188/12.CJON.E99-E104>
28. Plotti F, Terranova C, Capriglione S, Crispino S, Pomi AL, Montera R, et al. Assessment of quality of life and urinary and sexual function after radical hysterectomy in long-term cervical cancer survivors. *Int J Gynecol Cancer* 2018;28(4):818-23. <https://doi.org/10.1097/IGC.0000000000001239>
29. Göktaş SB, Gün I, Yıldız T, Sakar MN, Çağlayan S. The effect of total hysterectomy on sexual function and depression. *Pakistan J Med Sci* 2015;31(3):700.
30. Birsen O, Özban AS, Özban M, Kuzu MA. Effects of abdominal and vaginal hysterectomy on anorectal functions along with quality of life of the patient. *African Health Sci* 2018;18(3):612-22. <https://doi.org/10.4314/ahs.v18i3.19>