

Analysis of the Relationship Between Body Perception and Self-Esteem of Women with Total Abdominal Hysterectomy Bilateral Salpingo-Oophorectomy Surgery – A Secondary Publication

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Abstract: *Objective:* To determine the relationship between body image and self-esteem of women who underwent total abdominal hysterectomy bilateral salpingo-oophorectomy (TAH-BSO). *Method:* The sample of the descriptive study consisted of 118 women who underwent TAH-BSO in the obstetrics and gynecology service of a university hospital in Mersin. Data was collected using a self-made questionnaire, the Body Perception Scale (BAS), and the Rosenberg Self-Esteem Scale (RBSS). Descriptive statistics included median, mean, standard deviation, number, and percentage values. Data evaluation methods included Mann-Whitney U Test and *t*-test to compare the means of two groups; Kruskal Wallis test and one-way ANOVA were used to compare the means of more than two groups; and Spearman correlation coefficient was used to determine the relationship between two continuous variables. *Results:* The mean age of the women was 50.13 ± 9.57 , and the mean duration of marriage was 26.53 ± 11.97 years. It was found that 86.4% of the women were married, 40.7% were primary school graduates, and 55.1% had at least three children. Besides, 47.5% of the women applied to the hospital with the complaint of bleeding and according to 39% of them, the uterus meant nothing to them. Furthermore, the mean score of the women in BAI was 151.05 ± 26.64 , and the mean score from RBSS was 5.02 ± 1.08 . In the study, it was found that there was no statistically significant relationship between BAI and RBRS ($r = -0.113$; $P = 0.224$). *Conclusion:* In this study, it was determined that TAH-BSO surgery did not have a negative effect on women's body perceptions and self-esteem. This result shows that women's perspectives on common gynecological surgeries such as TAH-BSO have changed.

Keywords: Body image; Self-esteem; Hysterectomy; Nursing

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1. Introduction

Hysterectomy is one of the most common major interventions after tonsillectomy in developed countries such as

the United Kingdom and the United States, as well as in our country ^[1]. It is also the most common gynecologic surgical intervention after cesarean section worldwide. Generally, the decision to perform hysterectomy in women between the ages of 40 and 55 depends on the woman's age, her desire for children, the effects of alternative treatments, and the degree of dysfunction ^[2].

Surgical intervention is an important stress factor that threatens the body integrity, body perception, life, and psychosocial status of the individual. In gynecologic surgeries such as hysterectomy, in addition to this stress, reproductive and sexual functions of the individual are also threatened ^[2-4]. Fear of surgery, pain, aging, infertility, concern about spousal commitment, change in body image, and thoughts of decreased femininity may cause women to perceive hysterectomy negatively. While the feeling of decreased femininity leads to a decrease in self-worth, loss of fertility may lead to a feeling of emptiness ^[5]. Studies also support this information, and it is reported that women see the uterus as a sexual organ, childbearing organ, secretory organ, source of youth, attractiveness, and power, and cultural beliefs about the importance of genital organs affect the way women perceive hysterectomy ^[6-10]. In the literature, it is emphasized that body perception and self-esteem are in a cyclical relationship.

It has been reported that women's body perception and self-esteem are affected especially after total abdominal hysterectomy-bilateral salpingo-oophorectomy (TAH-BSO), which causes surgical menopause, and that women experience this process more severely than natural menopause ^[9,10]. This is associated with the psychodynamic view of menopause as a loss of productivity and femininity ^[11].

A review of the literature revealed no studies evaluating the relationship between women's body perception and self-esteem after hysterectomy or TAH-BSO. Therefore, this study aimed to determine the relationship between body perceptions and self-esteem of women who underwent TAH-BSO surgery.

2. Materials and methods

2.1. Type, population, and sample of the study

The population of the descriptive study consisted of women who were admitted to the gynecology and obstetrics service of a university hospital in Mersin between July 21, 2017 and September 22, 2017 for TAH-BSO surgery and who came to the outpatient clinic on the 10th postoperative day. The sample of the study consisted of women who were hospitalized in this service between the same dates, whose mother tongue was Turkish, who had no communication problems, and who agreed to participate in the study. The study initially aimed for a sample size of 82 to achieve 80% statistical power with a 0.05 margin of error, based on an anticipated correlation of 0.3 between the Body Perception Scale and Rosenberg Self-Esteem Scale scores, calculated using the G*Power 3.1.9.4 program. However, the final sample size in our study comprised 118 women. Upon completion of the study, the test's statistical power was recalculated and found to be 92%.

2.2. Data collection

The data of the study were collected through a self-made questionnaire, the Body Perception Scale, and the Rosenberg Self-Esteem Scale.

2.2.1. Personal information

The questionnaire form included 13 questions related to the patient's personal information (medical diagnosis, age, educational status, employment status, longest living place, income status, social security status, marital status, marriage duration, number of children, and family type) and gynecologic characteristics (preoperative complaint that brought the individual to the doctor, meaning of uterus for the individual) ^[2,4,9,12-18].

2.2.2. Body perception scale

In the study, the Body Perception Scale (BPS), which was developed by Secord and Jourand in 1953 to determine the body perception of individuals and whose Turkish validity and reliability study was conducted by Hovardaoğlu in 1993, was used. This five-point Likert-type scale consists of 40 items. The total score of the scale, which has response options for each item as “I don’t like it at all,” “I don’t like it,” “I am undecided,” “I like it,” and “I like it a lot,” varies between 40 and 200. The cut-off score of the scale is 135, and those with a score below 135 are defined as the group with low body perception. In the Turkish validity and reliability study of the scale, Cronbach’s alpha value was found to be 0.91 ^[19]. In our study, Cronbach’s alpha value was found to be 0.95.

2.2.3. Rosenberg Self-Esteem Scale (RBSS)

The Rosenberg Self-Esteem Scale (RBSS) was developed by Morris Rosenberg in 1963, and its validity and reliability were verified by Çuhadaroğlu in 1986. This scale was used to collect data on individuals’ self-esteem. RBSS has 11 subscales. In this study, the “self-esteem subscale” consisting of 10 items was used. In the scale organized according to the Guttman measurement method, items with positive and negative loadings were ordered consecutively. According to the evaluation system within the scale, the participants receive a score between 0 and 6. In comparisons made with numerical measurements, self-esteem is evaluated as high (0–1 point), medium (2–4 points), and low (5–6 points). A high score indicates low self-esteem and a low score indicates high self-esteem.

The validity coefficient of the scale was found to be 0.71 and the reliability coefficient was found to be 0.75 ^[20]. In our study, the Cronbach alpha value of the scale was found to be 0.73.

2.3. Statistical analysis

The data were evaluated after the prerequisites of normality (Shapiro Wilk Test) and homogeneity of variances were checked. Descriptive statistics: Mann-Whitney U Test and Student’s *t*-test for the comparison of two group averages, Kruskal Wallis test and One Way ANOVA test for comparison of more than two group averages, and Tukey HSD test as a post-hoc test for multiple comparisons; Spearman correlation coefficient was used to determine the relationship between two continuous variables; percentage, median, mean, standard deviation, minimum, and maximum values. $P < 0.05$ was used to indicate statistical significance.

2.4. Ethical aspects of the study

Before collecting the research data, the necessary permission (Date: 23/06/2017 Decision no: 36) was obtained from the Social and Human Sciences Ethics Committee of a university in Mersin province. In addition, written and verbal permissions were obtained from the women who agreed to participate in the study.

3. Findings

In our study, the mean age of the women was 50.13 ± 9.57 years and the mean duration of marriage was 26.53 ± 11.97 years. Among them, 86.4% of the women were married, 72.9% lived in nuclear families, 40.7% were primary school graduates, 84.7% were not working, 63.6% had incomes equal to their expenses, almost all of them (93.2%) had social security, and 78% lived in a city or metropolitan area. It was found that 55.1% of the women participating in the study had at least three children, about half (45.8%) had a medical diagnosis of benign tumor, about half (47.5%) applied to the hospital with the complaint of bleeding, and 39% stated that the uterus had no meaning for them.

When the distribution of the mean scores of the women who participated in our study was examined, it was seen that the mean score of the women on the BLS was 151.05 ± 26.64 and the mean score on the RBSS was 1.42 ± 1.31 (**Table 1**).

Table 1. Women’s BAI and RBSS mean scores ($n = 118$)

Item	Mean \pm SS	Min.–Max.	Cronbach α
BPS	151.05 ± 26.64	51–200	0.95
RBSS	0–6	0–6	0.73

Abbreviations: Body Perception Scale, BPS; Rosenberg Self-Esteem Scale, RBSS

Table 2 shows the distribution of women’s BPS and RBSS scores according to their sociodemographic characteristics. It was found that the scores of women with three or more children were statistically lower ($P < 0.05$). A post-hoc analysis discovered that the difference was largely attributed to the variation between women who had two children and three children.

Table 2. BPS and RBSS score averages according to women’s sociodemographic characteristics ($n = 118$)

Sociodemographic characteristics	BPS score averages			RBSS score averages	
	<i>n</i>	Mean \pm SS	test/ <i>P</i>	Mean \pm SS	test/ <i>P</i>
Marital status					
Married	102	150.99 ± 27.08	-0.071	1.37 ± 1.31	-1.325
Single	16	151.500 ± 24.49	0.944***	1.75 ± 1.29	0.185*
Family type					
Nuclear	86	152.47 ± 26.42	0.947/	1.41 ± 1.25	-0.242 /
Extended	32	147.25 ± 27.29	0.346***	1.43 ± 1.25	0.808*
Education level					
Illiterate	26	149.53 ± 22.64		1.65 ± 1.32	
Literate	23	151.34 ± 26.54	0.094/	1.56 ± 1.37	2.216/
Primary school graduate	48	152.43 ± 28.12	0.936***	1.31 ± 1.22	0.547***
High school graduate and above	21	149.47 ± 29.47		1.23 ± 1.22	
Working status					
Working	18	159.44 ± 18.90	1.457/	1.22 ± 1.16	-0.568/
Not working	100	149.55 ± 27.61	0.148***	1.46 ± 1.33	0.570*
Income status					
Income < expenses	38	152.31 ± 25.94		1.55 ± 1.20	
Income = expenses	75	150.94 ± 27.62	0.257/	1.29 ± 1.31	3.807/
Income > expenses	5	143.20 ± 26.49	0.774***	2.40 ± 1.81	0.149*
Social security status					
Yes	110	150.20 ± 26.66	-1.303/	1.42 ± 1.33	-0.262
No	8	162.87 ± 25.05	0.195***	1.37 ± 0.91	0.794*

Table 2 (Continued)

Sociodemographic characteristics	BPS score averages			RBSS score averages	
	<i>n</i>	Mean ± SS	test/ <i>P</i>	Mean ± SS	test/ <i>P</i>
Primary residence					
Village-town	26	155.46 ± 26.66	-1.303	1.38 ± 1.35	-0.262/
City-metropolitan	92	149.81 ± 26.78	0.342***	1.43 ± 1.30	0.795*
Number of children					
No ^a	12	150.50 ± 28.28		1.25 ± 1.21	
1 ^b	13	164.15 ± 18.80	4.203/	1.22 ± 1.16	0.483/
2 ^c	28	161.28 ± 22.93	0.007***	1.35 ± 0.98	0.923*
≥ 3 ^d	65	144.13 ± 26.26		1.52 ± 1.48	
Significant difference				(c-d)	

The distribution of BPS and RBSS scores of women according to their gynecologic characteristics is shown in **Table 3**. There was no significant difference between the mean BPS and RBSS and medical diagnosis, preoperative complaint, and the significance of the uterus ($P > 0.05$).

Table 3. RBSS and BPS score averages according to women's gynecological characteristics ($n = 118$)

Gynecological characteristics	<i>n</i>	BPS score averages		RBSS score averages	
		Mean ± SS	Test/ <i>P</i>	Mean ± SS	Test/ <i>P</i>
Medical diagnosis					
Benign tumor	54	149.12 ± 25.73		1.44 ± 1.29	
Malignant tumor	10	145.50 ± 34.08	0.687/	1.70 ± 1.88	0.337/
Endometrial hyperplasia	39	152.53 ± 27.47	0.602***	1.33 ± 1.26	0.947*
Abnormal uterine bleeding	10	153.10 ± 23.51		1.50 ± 1.26	
Prolapse	5	167.40 ± 21.83		1.20 ± 1.30	
Preoperative complaint					
Bleeding	56	151.28 ± 29.29		1.33 ± 1.37	
Pelvic pain	14	153.14 ± 16.88	0.282/	1.35 ± 1.21	1.488/
Stomach ache	27	151.14 ± 22.98	0.889***	1.59 ± 1.27	0.829***
prolapse	9	158.42 ± 30.47		1.33 ± 1.11	
Routine control	12	144.08 ± 32.59		1.58 ± 1.44	
Meaning of uterus					
Fertility-childhood	33	154.39 ± 26.48		1.21 ± 1.40	
Femininity-sexuality	15	145.60 ± 39.09	0.519/	1.46 ± 1.24	2.615/
Just an organ	24	153.50 ± 24.19	0.670***	1.37 ± 1.05	0.455*
Meaningless	46	149.17 ± 23.40		1.58 ± 1.39	

*Mann-Whitney U Test, **Kruskal Wallis Test, ***Student's t test, ****One-Way ANOVA Test

In our study, it was determined that 83.9% of the women had high body perception (**Table 4**). In addition, women with high body perception had statistically lower scores on the RBSS ($P < 0.001$). Furthermore, it was found that there was no relationship between BPS and RBSS ($r = -0.113$; $P = 0.224$) (**Table 5**).

Table 4. RBSS and BAI score averages according to women’s body perception level ($n = 118$)

Body perception level	n	BPS score averages		RBSS score averages	
		Mean ± SS	Test/P	Mean ± SS	Test/P
Low body perception	54	108.00 ± 23.25	-10.887/	2.42 ± 1.92	-2.521/
High body perception	10	159.32 ± 17.88	0.001***	1.23 ± 1.06	< 0.012**

* Student’s *t*-test, ** Mann-Whitney U Test

Table 5. The relationship between RBSS and BPS score

BPS	Statistical values	RBSS
		r^*
	P	0.224

*Spearman correlation coefficient

4. Discussion

In this study, the relationship between body perception and self-esteem of women who underwent TAH-BSO surgery was examined. The uterus is a reproductive organ with a strong and important cultural value associated with femininity, although its presence or absence cannot be easily felt. In this context, hysterectomy may cause women to feel incomplete or reduce their self-esteem [21].

A review of the literature reveals that hysterectomy causes a decrease in women’s body perception. El-Hadid and Zayed and Alshawish *et al.* found that women who had hysterectomy had low levels of body perception and self-esteem in societies where Islam is widespread [22,23]. Studies conducted by Pinar *et al.* and Erdoğan *et al.* in Turkey reported that women’s body perception decreased significantly after hysterectomy [9,10]. In another study conducted in our country, it was found that women’s self-confidence decreased after hysterectomy surgery in addition to their body perception [24]. In a three-center study involving Australia, New Zealand, and Hong Kong, similar to other studies, women who underwent abdominal hysterectomy were found to have lower body perception [8]. However, the women in our study all had a more positive body perception. This finding obtained in our study can be explained by the fact that more than half of the women perceive the uterus as just an organ, and for some, it does not mean anything.

Alshawish *et al.* found that women who underwent hysterectomy surgery had significantly lower self-esteem than healthy women [23]. Similarly, another study found that women after hysterectomy surgery had lower self-esteem than before surgery [9]. Contrary to these studies, it is noteworthy that women who underwent hysterectomy surgery in our study had higher self-esteem. Although gynecologic surgeries such as hysterectomy are included in the literature as a factor affecting women’s self-esteem, the results of our study show that women’s opinions about this surgery may change. This may be due to the fact that hysterectomy surgery is performed very frequently and is now considered a common surgery for women.

Furthermore, we found that women who had three or more children had lower body perceptions after hysterectomy. This finding is consistent with another study on women who had hysterectomy or oophorectomy, which showed that women’s body perception decreased as the number of children they had increased [12]. On

the contrary, in the studies conducted by Yaman and Ayaz and Erbil, it was found that women's childbearing status did not have any effect on their perception in the post-hysterectomy period ^[18,25]. In the study conducted by Pinar *et al.*, 2012, it was determined that women who had children had a more positive body perception in the post-hysterectomy period ^[9]. When examining the relationship between childbirth and body perception, it is natural to consider that the process of giving birth can be physically demanding for women, potentially heightening their aesthetic concerns. Moreover, as the number of children increases, so do the maternal roles and responsibilities, particularly within the family, which may lead women to prioritize their children's needs over their own self-care. These factors collectively contribute to the findings obtained from the research.

In the study, although there was no relationship between women's body perception and their scores on the scales related to self-esteem, women with higher body perception had higher self-esteem. Therefore, there is a cyclical relationship between body perception and self-esteem ^[13].

This finding in our study may have been due to the fact that more than half of the women presented to the hospital with pre-operative complaints such as "bleeding," "prolapse," or "pelvic pain." A separate study highlighted that the psychological readiness for a hysterectomy could be influenced by the circumstance that women undergo surgery after hospital admission for gynecological issues. Consequently, it could be inferred that hysterectomy, as a treatment for complaints impacting women's physical and psychosocial well-being, may not significantly alter their body perception and self-esteem.

One of the limitations of our study is that the results obtained from this study are that the subjects are only limited patients who were admitted to the gynecology and obstetrics department of a university hospital in Mersin between 21 July 2017 and 22 September 2017 due to TAH-BSO.

5. Conclusion

Hysterectomy surgery does not have a negative impact on women's body image and self-esteem. Another important finding from our research is that women who have three or more children have lower body image than other women. The last finding of our research is that women with high body image also have higher self-esteem. The first result shows us that women's perspectives on hysterectomy have changed. However, nurses play a role in the decrease in body perception with the increasing number of children. Nonetheless, nurses can potentially influence the decline in body perception among women with multiple children. To address this, nurses should intervene during women's reproductive years, raising awareness about available social support systems and offering counseling services. Furthermore, nurses must involve not only the women but also their families, who constitute an integral part of the social support system, in the counseling process. Counseling efforts should aim to increase the time women allocate for self-care by enhancing awareness of their roles and responsibilities within the family. Considering that body perception is influenced not only by individuals' own perceptions but also by the attitudes and behaviors of those around them, the importance of robust social support systems is underscored once again. Additionally, the study recommends conducting further quantitative and qualitative research to explore the relationship between women's body perception and self-esteem post-hysterectomy.

Disclosure statement

The authors declare no conflict of interest

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