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Determination of Sexual Functioning and Factors Affecting Sexual Functions of Women Following Abdominal and Vaginal Hysterectomy

Sibel PEKSOY KAYA[1], Füsun TERZİOĞLU[2]

[1] Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Department of Nursing
[2] Avrasya University, Rector, Faculty of Health Sciences, Department of Midwifery

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ABSTRACT

Objective: The study was designed as an analytic and descriptive study to determine sexual functioning and the factors affecting sexual functions in women undergoing abdominal and vaginal hysterectomy. **Materials and Methods:** Based on the power calculation, 120 women (Abdominal hysterectomy=60; Vaginal hysterectomy=60) were included in the study. The study data were collected using "Demographic and Individual Information Form", "Female Sexual Function Index (FSFI)", and "Beck Depression Inventory (BDI)". **Results:** The mean FSFI scores were similar in women who underwent abdominal hysterectomy (22.73±6.94) and vaginal hysterectomy (20.84±8.22) ($p>0.05$). There was a significant relationship between the mean FSFI score and age, menopausal status, and changes in sexual life after hysterectomy in women in both groups ($p<0.05$). In women undergoing hysterectomy, there was a negative correlation between FSFI and BDI scores ($p<0.05$). **Conclusion:** The mean FSFI score of women who had abdominal and vaginal hysterectomy were similar. In both types of hysterectomy, depression, advanced age and being in menopause affected sexual function negatively. For this reason, it is thought that it is significant increase of the variables that may affect women's sexuality (i.e. age, menopause, depression, etc.) and to inform women about their sexual lives in this process, in the training and counseling services that health care professionals will provide for both hysterectomy groups.
Keywords: Abdominal Hysterectomy, Vaginal Hysterectomy, Sexuality, Depression.

Abdominal and Vajinal Histerektomi Sonrası Kadınların Cinsel İşlev Durumlarının ve Etkileyen Faktörlerin Belirlenmesi

ÖZ

Amaç: Bu çalışma, abdominal ve vajinal histerektomi sonrası kadınların cinsel işlev durumlarını ve etkileyen faktörleri belirlemek amacıyla analitik ve tanımlayıcı olarak yapıldı. **Gereç ve Yöntem:** Güç hesaplamasına göre 120 kadın (Abdominal histerektomi=60; Vajinal histerektomi=60) çalışmaya dahil edildi. Araştırma verileri "Sosyo-demografik ve Bireysel Bilgi Formu", "Kadın Cinsel İşlev Ölçeği (KCİÖ)" ve "Beck Depresyon Ölçeği (BDÖ)" kullanılarak toplandı. **Bulgular:** Abdominal histerektomi (22,73±6,94) ve vajinal histerektomi (20,84±8,22) geçiren kadınlarda FSFI puan ortalamaları benzerdi ($p>0,05$). Her iki gruptaki kadınlarda histerektomi sonrası KCİÖ puan ortalaması ile yaş, menopoz durumu ve cinsel yaşamdaki değişiklikler arasındaki ilişki anlamlıydı ($p<0,05$). Histerektomi sonrası kadınlarda, KCİÖ ve BDÖ puanları arasında negatif bir korelasyon vardı ($p<0,05$). **Sonuç:** Abdominal ve vajinal histerektomi geçiren kadınların KCİÖ puan ortalaması benzerdir. Her iki histerektomi tipinde de depresyon, ileri yaş ve menopozda olma cinsel işlevi olumsuz etkilemekteydi. Bu nedenle sağlık profesyonellerinin her iki histerektomi grubuna vereceği eğitim ve danışmanlık hizmetlerinde, kadınların cinselliklerini etkileyebilecek değişkenlere (yaş, menopoz ve depresyon gibi) ilişkin farkındalıklarının artırılması ve kadınların bu süreçte cinsel yaşamlarına yönelik bilgilendirilmesinin önemli olduğu düşünülmektedir.
Anahtar kelimeler: Abdominal Histerektomi, Vajinal Histerektomi, Cinsellik, Depresyon.

Sorumlu Yazar / Corresponding Author: Sibel PEKSOY KAYA, Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Department of Nursing, Ankara, TURKEY
E-mail: sibelpeksoy@gmail.com, sibelpeksoykaya@aybu.edu.tr

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INTRODUCTION

Hysterectomy is one of the most commonly performed surgeries in women (Harvey et al., 2022; Lycke et al., 2021) after cesarean section (Jones & Rock, 2015). Various techniques are used in the surgical procedure (abdominal, vaginal, and laparoscopic); however, abdominal hysterectomy (AH) and vaginal hysterectomy (VH) are the two most commonly used approaches (Jones & Rock, 2015; Lycke et al., 2021).

The prevalence of hysterectomies ranges from 5.6 to 21% in developed countries (Harvey et al., 2022; Lycke et al., 2021), while it ranges 11.3 to 14.5% in developing countries (Egbe et al., 2018; Rout et al., 2023). Although the prevalence of peripartum hysterectomy performed for obstetric reasons has been reached in Turkey (Yildirim et al., 2021; Tahaoğlu et al., 2016), there are no studies estimating the prevalence of hysterectomy for gynecological reasons. It is estimated that the prevalence of hysterectomy performed for gynecological reasons is high in Turkey (Güven et al., 2010). It is emphasized in the literature that there has been an increase in the trend of laparoscopic hysterectomy in our country in recent years (Orhan et al., 2019; Seçkin et al., 2015).

The frequency of performing hysterectomy surgery increases with age in women (Desai et al., 2015; Harvey et al., 2022). The literature indicates that the most common age range for hysterectomy is 40-60 years of age (Lycke et al., 2021; Rout et al., 2023), and it is estimated that one in every three women will have their uterus surgically removed by the age of 65 (Jones & Rock, 2015; Rout et al., 2023). As one of the developed countries in terms of benign causes, abdominal hysterectomies account for nearly half of the hysterectomy procedures (44.9%) performed in Denmark, and vaginal hysterectomies rank second (28.2%) (Lycke et al., 2021). Desai et al. (2017) emphasize that the average age of performing the hysterectomy procedure in India is 36 and at younger ages than other countries. The rate of abdominal hysterectomies has been reported to be approximately four or five-fold higher compared to the rate of vaginal hysterectomies in the studies that were conducted in developing countries (Butt et al., 2012; Egbe at al., 2018).

The hysterectomy procedure is usually performed at the end of reproductive age or during menopause due to various health problems. Abnormal uterine bleeding, pelvic prolapse, uterine fibroids, and urinary incontinence, which are common indications for hysterectomy, can affect the quality of life of the women (Alshawish, 2021; Jones & Rock, 2015; Körpe et al., 2022; Radosa et al., 2014; Sözeri-Varma et al., 2011). Even if improving the quality of life has been a primary objective after this surgery, hysterectomies can cause certain biopsychosocial (Alshawish, 2021; Körpe et al., 2022) and sexual (Alshawish, 2021; Dedden et al., 2020; Lonnée-Hoffmann & Pinas, 2014; Radosa et al., 2014) problems.

Hysterectomies can cause severed from the feminine essence and a loss of fertility and sexual functioning in these women. The elimination of problems arising in one's sexual life after a hysterectomy is essential for improving the quality of life. Besides all these, the effects of hysterectomies on sexual life can vary depending on many factors (Onat-Bayram & Kizilkaya-Beji, 2010). Approximately 20% of women reported impaired sexual function after hysterectomy (Lonnée-Hoffmann & Pinas, 2014). These factors mainly include age (Rodríguez et al., 2012), menopause (Durukan-Duran & Sinan, 2020; Rodríguez et al., 2012), chronic disease status (Meston & Bradford; 2007), mental health status (Onat-Bayram & Kizilkaya-Beji, 2010) and the technique of hysterectomy (Radosa et al., 2014).

Mental health status is also an essential factor affecting the quality of life and sexuality of women after this surgery (Onat-Bayram & Kizilkaya-Beji, 2010; Körpe et al., 2022). The studies in the literature have reported depression as the common mental health problem occurring after hysterectomy (Alshawish, 2021; Jones & Rock, 2015; Onat-Bayram & Kizilkaya-Beji, 2010; Radosa et al., 2014). High levels of depression can negatively affect sexual function (Onat-Bayram & Kizilkaya-Beji, 2010). There is no difference between depression levels of the patients depending on the type of hysterectomy (Onat-Bayram & Hotun-Şahin, 2008); however, hysterectomy itself can be a reason for depression. Healthcare professionals, especially nurses, have important roles and responsibilities in identifying sexual problems related to hysterectomy and dealing with these problems (Yılmaz, 2019). Nurses should discuss the operation with women or couples before and after a hysterectomy (Alshawish et al., 2020; Yılmaz, 2019; Gerçek et al., 2016). Women often do not know how to express sexual function and are hesitant to communicate with health professionals (Alshawish et al., 2020). It is thought that the results obtained from this study will guide nurses in counseling services regarding hysterectomy.

This study was designed as a descriptive and analytic study to aim at the effects of AH and VH techniques on sexual functioning and the factors affecting sexual functions in women undergoing AH and VH. The research questions (RQ) for the study were as follows;

RQ1: Is there a difference in sexual functions in women after AH and VH?

RQ2: Is there a difference in the factors affecting sexual functions in women who have undergone AH and VH?

MATERIALS AND METHODS

Study type

This study was a descriptive and analytic study. The study was conducted from January 2009 to December 2009 at Etlik-Zübeyde Hanım Women's Diseases Training and Research Hospital and at the Gynaecology Clinic of Hacettepe University Adult's Hospital in Ankara, Turkey.

Participants

The research population was 783 women (AH: 563, VH: 220) who underwent hysterectomy in the hospitals where the research was conducted. The sample size calculation of the study was made based on the percentage of women

who had sexual problems after hysterectomy (AH=49%; VH=74%) (Onat-Bayram, 2005). The study sample was comprised of 120 women (AH=60, VH=60) as calculated based on the formula for "the sample size for the testing difference between the rates of two independent groups". The power calculation for the study sample was conducted using the NCSS 2007/PASS software. The power of the study was found to be 85%.

Sample selection criteria

The study sample included women for whom: i) at least six months and maximum one year have elapsed since hysterectomy, ii) were sexually active, iii) did not have hearing or speech disorder that would complicate communication, iv) did not have mental problems, and v) underwent hysterectomy for benign reasons.

Data collection

The data were obtained using "Demographic and Individual Information Form", "Female Sexual Function Index", and "Beck Depression Inventory".

"Demographic and Individual Information Form": Data collection developed in accordance with the literature review (Onat-Bayram & Hotun-Şahin, 2008; Yang et al., 2006; Yeoum & Park, 2005), conducted by the researchers comprises two sections. The first section contains age, educational status, occupation, menopausal status, reason of hysterectomy, other gynecological procedures conducted together with hysterectomy, and questions related to mental health. The second section contains questions about "the sexual life of women".

"Female Sexual Function Index (FSFI)": This scale composed of 19 items (Min: 2; Max: 36) and six subscales: "desire", "aurosal", "lubrication", "orgasm", "satisfaction" and "pain" (Rosen et al., 2000; Aygin and Aslan, 2005). The cut-off value of the FSFI is 22.7, and the scale score of 22.7 and above indicates sexual dysfunction (Çayan et al., 2004). In the adaptation study (Aygin & Aslan, 2005) and in the study, the reliability values of the FSFI were found to be 0.98 and 0.96, respectively.

"Beck Depression Inventory (BDI)": This scale composed of 21 items (Min: 0; Max: 63) (Beck et al.1961; Hisli, 1989). The cut-off value for the inventory was 10 for bodily diseased patients. A high score is associated with the level of depression (Hisli, 1988; Hisli, 1989). In the adaptation study (Hisli, 1989) and in the study, the reliability values of the BDI were found to be 0.80 and 0.87, respectively.

Implementation of the study

The research was carried out in the gynecological outpatient clinics of two hospitals (Hacettepe University Adult Hospital, Department of Obstetrics and Gynecology; Etlik Zübeyde Hanım Women's Health Training and Research Hospital). Interviews with women in both hospitals were held in a suitable room. The data collection form and scales were applied by the researcher for the interview in the gynecology clinics. Data collection by face-to-face interview was approximately 20-25 minutes for each participant.

Data analysis

"SPSS 17.0 for Windows software package" was used for statistical analysis. "Yates correction", "Fisher's exact chi-square test", and "the marginal homogeneity tests" were used to evaluate categorical variables. "The student's t test" and "the one-way ANOVA" were used to compare changes in age, menopause status, and sexual life with scale scores in the AH and VH groups. "The Bonferroni test", which was used in the analysis examining the change in sexual life (positive, negative, no change) after hysterectomy, was used to determine the group that caused the difference. "Pearson's correlation analysis" was used to determine the relationship between BDI and FSFI scores.

Ethical considerations

In order to conduct the research, necessary legal permissions were obtained from the Hacettepe University Faculty of Medicine Medical Research Local Ethics Committee (January 30, 2009; No. 08/48-46), Etlik Zübeyde Hanım Women's Health Training and Research Hospital Ethics Committee (January 13, 2009; No. 30/06) and hospital administrations. All necessary explanations were given to the women in the study group in line with the Helsinki Principles. Written consent of the women for the study was obtained after giving information about the study.

RESULTS

In the study, it was determined that four out of every five women (79.2%) were literate or primary school graduates. 87.5% of the women were housewives. The average age of women was 48.07±5.45, with nearly half of them aged 47 and over. 37.5% of women were in the menopausal period. The mean age of women at menopause was 47.81±4.63. Menopausal period was 3 years or more in 57.8% of the women (Table 1).

The mean FSFI scores were similar in women who underwent AH (M±SD=22.73±6.94) and VH (M±SD=20.84±8.22) ($p>0.05$). In terms of FSFI subscales, the orgasm score was higher in the AH group than in the other group ($p<0.05$). When the women that underwent hysterectomy were evaluated according to age group and menopausal status, in FSFI scores of patients above 47 years and above who entered the menopause were significantly lower when compared to women aged 40-46 years who did not enter menopause ($p<0.05$). In terms of changes in sexual life after VH, the FSFI score of women who reported positive changes in their sexual life was higher than women who reported negative changes and no changes ($p<0.05$). In the AH group, the FSFI score of women who reported positive changes and no changes in their sexual life was higher than women who reported negative changes ($p<0.05$). Besides, the FSFI score of the AH group, which reported no change in sexual life, was higher than the VH group ($p<0.05$) (Table 2).

Table 1. Some Socio-demographic and Menopausal Characteristics of Women by Groups (n= 120)

Characteristics	Type of Hysterectomy		Total (n=120)
	Abdominal Hysterectomy (n=60)	Vaginal Hysterectomy (n=60)	
	n(%) or Mean±SD	n(%) or Mean±SD	n(%) or Mean±SD
Age (avegare)	45.92±3.87	50.23±5.95	48.07±5.45
Age (years)			
40-46	37(61.7)	19(31.7)	56(46.7)
47 and above	23(38.3)	41(68.3)	64(53.3)
Education			
Primary school and lower	50(83.3)	45(75.0)	95(79.2)
Secondary school	5(8.3)	7(11.7)	12(10.0)
High school and above	5(8.3)	8(13.3)	13(10.8)
Occupation			
Employed/Retired[#]	7(11.7)	8(13.3)	15(12.5)
Housewife	53(88.3)	52(86.7)	105(87.5)
Menopausal status			
Menopausal	14(23.3)	31(51.7)	45(37.5)
Not-menopausal	46(76.7)	29(48.3)	75(62.5)
Age of menopause (avegare)	47.27±4.53	48.19±4.74	47.81±4.63
Duration of menopause (years)			
2 years or less	11(78.6)	8(25.8)	19(42.2)
3 years or more	3(21.4)	23(74.2)	26(57.8)

n: Frequency, %: Percentage, SD: Standart Deviation. [#]Number of employed women was eight, number of retired women was seven.

Table 2. Comparison of Some Characteristics and Female Sexual Function Index Scores by Groups (n= 120)

Scale Scores and Characteristics	Type of Hysterectomy				Analysis[#]
	Abdominal Hysterectomy		Vaginal Hysterectomy		
	Female Sexual Function Index				
	n	Mean±SD	n	Mean±SD	
FSFI Total Score	60	22.73±6.94	60	20.84±8.22	t=1.357, p=0.177
Subscales					
Desire	60	2.96±1.37	60	2.82±1.45	t=0.540, p=0.590
Arousal	60	3.40±1.40	60	2.95±1.55	t=1.667, p=0.098
Lubrication	60	3.81±1.66	60	3.66±1.86	t=0.465, p=0.643
Orgasm	60	3.84±1.43	60	3.25±1.62	**t=2.095, p=0.038**
Satisfaction	60	3.94±1.39	60	3.53±1.66	t=1.472, p=0.144
Pain	60	4.78±1.56	60	4.63±1.45	t=0.532, p=0.595
Age					
40-46	37	24.33±7.15	19	24.87±8.19	t=-0.250, p=0.801
47 and above	23	20.17±5.87	41	18.99±7.64	t=0.640, p=0.524
Analysis[#]	**t=2.344, p<0.05**		**t=2.711, p<0.01**		
Menopausal Status					
Yes	14	18.69±7.11	31	17.66±7.26	t=0.439, p=0.663
No	46	23.97±6.47	29	24.25±7.92	t=-0.170, p=0.118
Analysis[#]	**t=2.611, p<0.05**		**t=-3.358, p<0.01**		
Changes in Sexual Life After Hysterectomy					
Positive	17	26.02±5.94[a]	22	27.44±6.06[a]	t=-0.732, p=0.469
Negative	27	19.32±6.65[b]	22	16.13±6.47[b]	t=1.689, p=0.469
No Change	16	24.99±6.05[a]	16	18.25±7.24[b]	**t=2.855, p<0.01**
Analysis[¥]	**F=7.283, p<0.01**		**F=18.138, p<0.001**		

n: Frequency, SD: Standart Deviation. [#]The significance of difference between two mean values was used, [¥]Analysis of variance was used.
[a,b] FSFI scores differed between mean±standard deviations with the same letter. [*]p<0.05, [**]p<0.01.

In terms of sexual satisfaction, there was no significant difference between good, moderate or bad satisfaction categories among women who underwent VH (p>0.05). When the women that underwent AH were evaluated according to sexual satisfaction, 63.3% reported "good" satisfaction before hysterectomy, and 41.7% reported "good" satisfaction after hysterectomy. There was an increase in the rate of women reporting "moderate" (26.7%) and "poor" (31.7%) satisfaction after AH when compared to women reporting "moderate" (21.7%) and "poor" (15%) satisfaction before hysterectomy. There was a significant difference between women who underwent AH that reported good, moderate, or poor satisfaction (p<0.05) (Table 3).

In the study, when the depression symptoms were evaluated as to whether they affected the sexual life of these women, a moderate and negative correlation was found between in BDI and FSFI scores (r=-0.424, p<0.001) (Figure 1). Accordingly, depressive symptoms affected sexual life in 18% of women who underwent hysterectomy. The BDI score was 10.63±8.92 in the VH group and 8.57±7.19 in the AH group. This score was not

significant according to the type of the hysterectomy technique (p>0.05) (Figure 2).

Table 3. Sexual Satisfaction in Women Before and After Hysterectomy by Groups (n= 120)

Sexual Satisfaction		After Hysterectomy							
		Abdominal Hysterectomy				Vaginal Hysterectomy			
		Good n(%)	Moderate n(%)	Poor n(%)	Total n(%)	Good n(%)	Moderate n(%)	Poor n(%)	Total n(%)
Before Hysterectomy	Good	21(84)	9(56.3)	8(42.1)	38(63.3)	10(47.6)	7(43.8)	4(17.4)	21(35)
	Moderate	2(8)	6(37.5)	5(26.3)	13(21.7)	9(42.9)	6(37.5)	10(43.5)	25(41.7)
	Poor	2(8)	1(6.3)	6(31.6)	9(15.0)	2(9.5)	3(18.8)	9(39.1)	14(23.3)
	Total	25(41.7)	16(26.7)	19(31.7)	60(100.0)	21(35)	16(26.7)	23(38.3)	60(100)
Analysis¥					***p*<0.05**				*p*=0.216

n: Frequency, %: Percentage, ¥Marginal homogeneity test, *p<0.05.

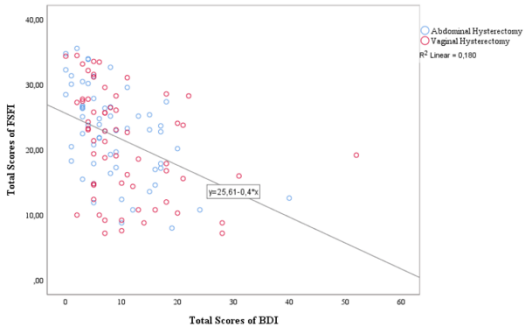

Figure 1. Correlation Plot of Scale Scores

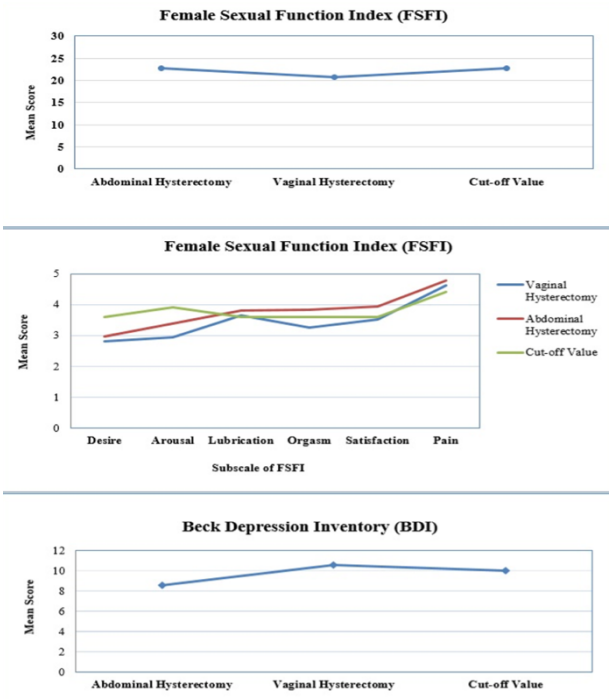

Figure 2. Scores and Cut-off Values of the Scales

DISCUSSION

The FSFI total scores and FSFI subscales scores of patients who underwent VH were lower than the scores of patients who underwent AH. However, the difference was not statistically significant. In addition, before and after hysterectomy sexual satisfaction in the VH group was similar (p>0.05), but the AH group reported negative changes in post-hysterectomy sexual satisfaction (p<0.05). In a study conducted by Onat-Bayram and Hotun-Şahin (2008), women that underwent VH achieved lower scores in FSFI subscales and total scores in FSFI compared to patients that underwent AH. Danish et al. (2015) emphasized that most sexual disorders improved after hysterectomy for benign reasons, and that most women had similar or better sexual functions after surgery. However, when women who underwent VH and AH were compared in terms of sexual functions in the literature, it was reported that they were similar in terms of frequency of sexual intercourse, dyspareunia and sexual response cycles (Ayoubi et al., 2003). Similarly, literature reported no difference between the surgical techniques (VH, supracervical laparoscopic hysterectomy and laparoscopic hysterectomy) used regarding quality of life and sexuality (Radosa et al., 2014; Skorupska et al., 2021). Thakar (2015) report that studies on the effect of hysterectomy on sexual life have different methodologies and that, regardless of the type of hysterectomy, hysterectomy does not cause any change or improvement in sexual function in the majority of women in the short term. However, deterioration in sexual function may be observed in long-term follow-up after hysterectomy. It is emphasized that this problem can be explained by aging and surgical menopause (Thakar, 2015). Possible changes in sexual function after hysterectomy can be concerning for women and healthcare professionals (Onat-Bayram & Kizilkaya-Beji, 2010). Healthcare professionals should take into consideration that adverse effects may occur in a small number of women after hysterectomy surgery (Thakar, 2015). Nurses' sexual health consultancy roles have a place in this surgery (Kamal Ali et al., 2022). Nurses should provide preoperative education and counseling to women about possible negative changes in sexual life after hysterectomy. In this context, nurses should consider aging and surgical menopause in sexual health counseling during hysterectomy.

FSFI score of the participants aged 47 years or above was lower than the patients aged 40-46 years in the study. Age is an important determinant in hysterectomy performed

for gynecological indications, and it is noteworthy that its frequency increases, especially over the age of 40 (Harvey et al., 2022; Lycke et al., 2021). Durukan-Duran and Sinan (2020) emphasized that women may face postmenopausal sexual life problems. Rodriguez et al. (2012) emphasized that FSFI scores decrease with advanced age and menopause in women and that 53% of women may experience sexual dysfunction. The studies in the literature also report negative effects on sexual life with aging (Durukan-Duran & Sinan, 2020; Rodriguez et al., 2012; Onat-Bayram & Kizilkaya-Beji, 2010). In the study, low mean scores in FSFI as a result of the changes caused by advancing age and postmenopausal changes suggest that sexual life is affected independently from the type of hysterectomy. Therefore, nurses should integrate possible age-related sexual health problems in hysterectomy surgery into nursing care.

During the menopausal period, various changes occur in the hormones, as well as changes in the sense of femininity, sexual identity, and psychosomatic changes as a result of decrease in hormone levels. The decrease in the estrogen level results in vaginal atrophy and decreased lubrication. The common complaints reported in the postmenopausal period include dyspareunia, loss of libido, sexual dysfunction in the partner, decrease in sexual drive and in the frequency of sexual intercourse (Onat-Bayram & Hotun-Şahin, 2008; Onat-Bayram & Kizilkaya-Beji, 2010). The effects of hysterectomy and the negative effects due to the characteristic conditions of the climacteric period may cause confusion (Onat-Bayram & Kizilkaya-Beji, 2010). In the study, FSFI scores in menopausal women were lower compared to pre-menopausal women in both hysterectomy groups. This finding indicated that menopausal women might have experienced sexual problems, regardless of the type of surgery. In this regard, the negative impact of menopausal symptoms on sexual life should not be ignored in nursing care performed during surgical menopause and postmenopausal hysterectomy.

The women having a higher total score in BDI had a lower total score in FSFI. There was also a negative correlation between total scale scores ($p<0.001$).Thus, the women are more likely to suffer from sexual problems as the level of depression increases. In the study by Onat-Bayram and Hotun-Şahin (2008), a negative relationship was reported between sexual functioning and the level of depression. In the study by Aziz et al. (2005) an improvement was reported in the level of depression after hysterectomy and overall improvement in general health perception. In addition, Hoffman and Pinas (2014) emphasized that the presence of depression and sexual problems before hysterectomy are predictive factor in the decrease of sexual desire after hysterectomy. Depression can cause diminished libido, decrease in sexual desire, fatigue, and a self-perception of being unattractive, and thereby affects sexual functioning and sexual life (Onat-Bayram & Hotun-Şahin, 2008; Onat-Bayram & Kizilkaya-Beji, 2010). Erdogan et al. (2019) reported that psychological care had positive results on anxiety, body image, and depressive symptoms in women who had undergone hysterectomy. In this regard, it is most significant to provide sexual education and counseling for women who have undergone hysterectomy so that they can cope with post-operative problems and improve their sexual functions (Danesh et al., 2015). Therefore, psychosocial care is an important component in routine nursing care for hysterectomy surgery (Rehan et al., 2023; Erdoğan et al., 2019). Nurses should have sufficient knowledge about care and psychosocial support in hysterectomy surgery (Gerçek et al., 2016). There is a need for holistic evaluation of women planned for hysterectomy after hospitalization.

Limitations of the study

The sexual functions and depression status of the women were evaluated after hysterectomy. This may have resulted in the inclusion of women who experienced sexual or mental health problems that remained unrecognized before hysterectomy. Future studies are advised to employ the same measurement tools before and after hysterectomy to prospectively evaluate the sexual and mental health status.

CONCLUSION

In the study, it was determined that FSFI scores of participants who had VH and AH were similar. However, the sexual satisfaction of the women that underwent AH was found to be negatively affected. In addition, age, menopausal status, and depression level appeared to be important factors affecting sexual life in both hysterectomy groups. As a result, factors affecting sexual life must be taken into account after hysterectomy while providing sexual health and counseling services. Additionally, it may be recommended to provide sexual counseling services in sexual life, taking into account life periods, and to provide these services in cooperation with the healthcare team. The concept of sexual health is an important determinant of general health. In this context, it may be recommended to integrate nursing care into women's sexual health counseling services before and after surgeries that may directly affect sexual life, such as hysterectomy.

Acknowledgement

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Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Plan, design: SPK, FT; **Material, methods and data collection:** SPK, FT; **Data analysis and comments:** SPK, FT; **Writing and corrections:** SPK, FT.

Additional Information

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