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The influence on women's sexual functions of education given according to the PLISSIT model after hysterectomy

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Abstract

Aim: The purpose of this study was to determine the influence on the sexuality of women of education is given to women according to the PLISSIT model after the total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH+BSO) surgery. **Metod:** The study was planned and carried out as a prospective, randomize controlled study. The sample of the study was formed on the total 70 women who had been operated TAH+BSO. The participated women were randomized as a working group (n=35) and control group (n=35). Data were collected with the questionnaire form, Female Sexual Function Index (FSFI) and the evaluation form of the PLISSIT model education program. The FSFI was applied four times to the women (two times before surgery and two times in the 3rd and 6th months after surgery). The PLISSIT model education program was applied only for working group. **Results:** Analysation of results has showed the participant women's sexual function in both groups are same before not occurred the indications for the hysterectomy operation. But in the symptomatic period, it was determined that women's sexual functions were negatively affected in both groups. The postoperative 3rd and 6th months' results were showed sexual functions of women who had given education according to the PLISSIT model had better than the control group. And the control group experienced higher rates of sexual dysfunction. In addition the women in the working group were more successful in dealing with sexual problems after surgery. As a **conclusion**, the education of women according to the PLISSIT model after hysterectomy had positive effect on sexual functions and problem solving skills about sexuality

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Key words: Education, PLISSIT model, sexual function, hysterectomy

1. Introduction

The effects of hysterectomy, which is being applied for centuries and is one of the most common gynecological operations, on the general quality of life and on sexual functions varies[3,5]. Loss of sexual desire, decrease in the frequency of sexual activity, in sexual response, and in sexual saturation, difficulty in orgasm, decrease in genital sensation, painful sexual intercourse, shortening of the length of the vagina, loss of penetration of the penis, and decrease in vaginal elasticity and in vaginal lubrication are among the complaints experienced after hysterectomy[4,7-10,14].

Although conditions related to sexual health are important for women's life, research results indicate that sexualities of the women who have experienced hysterectomy are not clearly evaluated and that women are provided with very little education or consultancy on this issue. After operations such as hysterectomy, which is argued to affect the body image and self-esteem of women, the subject of sexual function can generally be ignored for the

women that are in an effort to regain female identity, values, and priorities and sexual partner responsibility[1,6,7,9,10].

This study was performed in line with one of the methods used in sexual evaluation, education, and consultancy, PLISSIT model, so as to determine the effects of education given to women after hysterectomy on their sexual functions.

2. Methods

This research was conducted at the Department of Obstetrics and Gynecology of an education and research hospital in Istanbul, as a prospective, randomized controlled study. Sample consisted of 70 women who had Total Abdominal Hysterectomy and Bilateral Salpingo Oophorectomy (TAH+BSO) surgery, whose active sexual life continued, who did not have sexual dysfunction/treatment history prior to the operation, who did not have any chronic disease/use of drugs that can affect sexual health, who have voluntarily accepted to participate in the study and given their written informed consent. The participated women were randomized as a working group(WG) (n=35) and control group(CG) (n=35).

Written permission and ethical committee approval was obtained prior to the application of the study from the institution where the study was implemented. As well as the clinical care, the PLISSIT model education program was applied only for working group. The women within the working group were given individual educations ranging from 30-60 minutes, after the operation and before being discharged. Visual materials were also used for the education. During the first stage of the education provided in accordance with the PLISSIT Model, the opinions, concerns, anxiety, knowledge, and care necessities of women regarding the effects of the operation on their sexual lives were evaluated. After that, education was given depending on their necessities, (the effects of the operation on their sexuality, sexual problems that may be experienced in post-operative sexual encounter in their lives, coping methods, and so on). Women in the control group benefited only from the clinical care, they were not given any additional education.

Data were collected via a questionnaire form, the Female Sexual Function Index (FSFI) and PLISSIT model education evaluation form. Questionnaire form consisted of 19 questions regarding the descriptive features of women. FSFI is measure for female sexual function. It has 19 items, which assess the six domains of sexual function including desire, arousal, lubrication, orgasm, satisfaction and pain. Forms were applied to the women in both groups in a separate room, one-to-one and with face to face interview method. Questionnaire form was applied to both groups during the post-operative period, prior to discharge. Their sexuality was evaluated with FSFI in 4 stages. First and second evaluations were made during the pre-operative period. (Their sexuality before the complaints/symptoms had arisen was assessed at the first evaluation, whereas their sexuality during the process when symptoms were present was assessed at the second evaluation.) Third evaluation was made on the 3rd post-operative month; fourth evaluation was made on the 6th post-operative month by appointments.

Data were analyzed by SPSS 16.0 packaged software. Frequency distributions were used for descriptive features; mean values were taken for measurable features. Data were analyzed by Chi-Square, t-test, One-way Anova, Repeated measures for ANOVA tests.

3. Results

The mean age of women was 48.46 ± 6.88 at the working group(WG) and 52.03 ± 5.41 at the control group(CG). There was not statistically significant difference between the groups in terms of education, working status, obstetrical features, gynecological history and pre-operative symptoms ($p>0.05$).

There was not statistically significant difference between the groups in terms of the women's perception of sexuality, approach to sexuality, comments related to their sexual lives, and state of being satisfied with sexual intercourse($p>0.05$). The scores of their about the importance of sexuality were significantly higher for women in the WG (Table 1).

Table 1. Definitions of women related to sexuality perception, approach, importance and, comments

Women's definitions	Working Group n=35		Control Group n=35		Total n=70		Significance	
	n	%	n	%	n	%	x ² / t	p
Sexuality perceptions*								
Reproductive	26	74.3	23	65.7	49	70.0	0.61	0.603
Womanhood duty	17	48.6	17	48.6	34	48.6	0.00	1.000
Physiological need	31	88.6	32	91.4	63	90.0	0.15	1.000
Approach to sexuality								
Necessary	23	65.7	21	60.0	5	7.1	5.48	0.140
Unnecessary	3	8.6	2	5.7	44	62.9		
It makes no difference	1	2.9	7	20.0	8	11.4		
Bond between the spouses	8	22.8	5	14.3	13	18.6		
Comments related to their sexual lives								
Very good/good	9	25.7	3	8.6	12	17.1	3.82	0.148
Moderate	23	65.7	27	77.1	50	71.4		
Worse	3	8.6	5	14.3	8	11.4		
Sexual satisfaction								
In general, satisfied	22	62.9	15	42.9	37	52.9	5.38	0.068
Rarely satisfied	9	25.7	8	22.9	17	24.3		
Not satisfied	4	11.4	12	34.2	16	22.9		
The importance of sexuality**								
	5.71±1.20 min 3 max 7		4.91±1.56 min1 max 7		5.31±1.44 min1 max 7		2.40	0.019

*: "n" has folded, because women defined more than one feature to the sexuality perceptions

** : For the importance given to sexuality, between 1-10 scoring scale was used (1: not at all important, 10: very important)

It was seen in the first and second evaluations that FSFI total mean scores of the women in both groups were similar. It was found that FSFI total mean scores decreased significantly in both groups especially during the process when symptoms with hysterectomy indication were present. On the other hand, evaluations made on the post-operative 3rd and 6th months indicated that FSFI total mean scores of the women in the WG were significantly higher than the women in the CG and that women within the WG were more successful in undertaking an attempt for the solution of their post-operative sexual problems.

According to FSFI cut-off value (*The cut-off value of this scale is ≤26.55*), there was not a significant difference between the women in both groups during the first and second evaluations in terms of experiencing sexual dysfunction. Rate of sexual dysfunction was high in both groups especially at the second evaluation during which symptoms were present. However, it was determined in the third and fourth evaluations that women in the CG experienced significantly higher sexual dysfunction compared to the women in the WG (Table 2).

Table 2. In four evaluations, distribution according to the cut- off value of FSFI in working and control group

Evaluations	FSFI cut-off value								p
	WG. (n=35)				CG. (n=35)				
	≤26,55		>26,55		≤26,55		>26,55		
	n	%	n	%	n	%	n	%	
1 st. Evaluation	15	42,9	20	57,1	23	65,7	12	34,3	0.092
2nd. Evaluation	31	88,6	4	11,4	33	94,3	2	5,7	0.673
3th. Evaluation	15	42,9	20	57,1	32	91,4	3	8,6	0.000
4th. Evaluation	12	34,3	23	65,7	29	82,9	6	17,1	0.000

Note, ≤26,55: sexual dysfunction, >26,55: non sexual dysfunction

Sexual functions of women during the second evaluation process were bad in both groups; therefore, their sexual functions during the first, third, and fourth evaluation processes were compared. It was found that, there was not a significant difference between the pre-operation period (when symptoms were not experienced) sexual functions of women in the WG and the scores related to their sexual functions from the post-operative 3rd and 6th months. However, it was determined that the post-operative 3rd and 6th month FSFI sub-scales and total mean scores of the women in the CG decreased significantly (Table 3).

Table 3. FSFI total and sub scales score averages according to 1st, 3th and 4th evaluations

FSFI sub scales and total	Groups	Evaluations			Intra-group analysis	
		1st. Average±SD	3th. Average±SD	4th. Average±SD	f	p
Desire	WG.	3,59±0,94	3,42±0,81	3,46±0,81	0,77	0,446
	CG.	3,63±0,89	2,50±1,16	2,88±1,29	20,80	0,000
Arousal	WG.	4,16±1,26	3,78±1,04	3,95±1,22	2,15	0,124
	CG.	3,94±0,95	1,97±1,37	2,30±1,73	60,03	0,000
Lubrication	WG.	4,43±1,63	3,93±0,97	4,03±1,26	2,73	0,072
	CG.	3,93±1,14	1,82±1,24	2,22±1,72	57,49	0,000
Orgasm	WG.	4,06±1,11	4,14±1,16	3,39±1,21	0,71	0,495
	CG.	3,71±0,97	2,00±1,49	2,27±1,67	43,04	0,000
Satisfaction	WG.	4,72±0,94	4,89±0,89	5,06±1,15	2,30	0,108
	CG.	4,17±1,04	2,86±1,60	3,32±1,77	21,79	0,000
Pain	WG.	4,51±1,54	4,37±0,91	4,85±1,33	2,08	0,132
	CG.	4,11±1,23	1,95±1,40	2,48±2,03	42,296	0,000
FSFI total	WG.	25,11±6,38	24,99±4,98	25,32±6,25	0,07	0,931
	CG.	23,26±5,56	13,29±7,63	15,69±10,00	46,05	0,000

4. Discussion and Conclusion

One of the most important points to be emphasized while evaluating post-hysterectomy sexual functions of women is their sexual harmony before the operation [11]. However, most studies do not include evaluations regarding the pre-operation, especially pre symptomatic process sexuality of women. To this respect, our results are important with regards to the fact that they contribute to the lack of data about pre-operation non-symptomatic and symptomatic sexual functions because studies, generally, include data only related to post-hysterectomy sexuality.

There are studies indicating that women's sexual functions are affected at different levels after hysterectomy[3,7,8,12,14] as well as studies indicating that hysterectomy does not have any influence on women's sexual functions[2,13]. Our results show that TAH+BSO operation significantly affects the sexual functions of women, when evaluated in terms of the control group.

Although being the most common gynecological surgical operation, hysterectomy, affects women's sexual life, the sexual results of the operation in the sense of hysterectomy-related education is not focused enough. Some studies showed that pre and post operation education given to the patient can lead to a decrease in the number of sexual problems experienced during the post-operative period [2,6,7]. The results of our study are important also with regards to their contribution to the lack of data in this direction and according to the PLISSIT model, it was seen that post operation education given to the women with TAH+BSO has positive impacts on their post-operative sexual problems and sexually-related problem solving skills.

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