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Sexual function in women with genital tract cancers referred to selected centers in Tehran

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SUMMARY

Background: Considering the importance of sexual performance of women with cancer, this study was conducted with the aim of investigating the sexual performance of women with gynecological cancers referred to selected medical centers in Tehran in 2018.

Method: The research population included all women with genital tract cancer referred to selected medical centers in Tehran. A total of 125 infected women were studied. A demographic information questionnaire and the women's sexual function index (FSFI; Rosen et al., 2000) were used to collect data. Then it was analyzed using descriptive statistics and SPSS-22 software.

Findings: The results of the Analysis of Covariance (ANCOVA) also showed that the changes in the average score of sexual function in women with genital cancer are statistically insignificant ($p>0.05$).

The results of variance analysis showed that the differences in all six dimensions of the sexual function questionnaire in women with all three types of genital cancer in this study, which include ovarian, uterine, and cervical cancer, are not different.

Also, the analysis showed that the overall score of the performance questionnaire for these three groups was not significantly different ($p>0.05$).

Results: The results of this study showed that there is no difference between the overall sexual function and its components in women with genital tract cancer. The type of genital tract cancer has an effect on women's sexual performance.
Key words: Uterine cancer, cervical cancer, ovarian cancer, sexual function

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INTRODUCTION

Malignancies in the female reproductive system, such as uterine, ovarian, and cervical cancers, make up one-third of all female cancers. Female genital tract cancers are one of the most serious issues in oncology and social medicine [1,2]. Reproductive cancers are among the stressful medical events that impact women's mental and physical health. The prevalence rate of malignant tumors in the female reproductive system differs [3,4]. Every year, approximately 80,000 new instances of gynecological cancer are detected in the USA [5,6]. Quality of life is among the issues of concern with the treatment progress of cancer patients [7-9]. It is a multidimensional construct, including functional, social, psychological, and emotional dimensions. The psychological impacts of cancer diagnosis, as well as the physical impacts of its treatments, are linked to some side effects that have a severe effect on a person's quality of life [10]. The occurrence of sexual function problems and marital conflicts in the general female population is approximately 40%, with an increase in women with underlying and life-threatening diseases [11-14]. The prevalence of these problems in women with gynecological cancer is about 80% [15].

An important issue related to reproductive health for women with life-threatening illnesses is reduced sexual relations. Furthermore, their sexual desires change, and in some circumstances, their sexual preferences entirely vanish [16]. Nowadays, advanced cancer therapies involve a combination of chemotherapy, surgery, and radiotherapy [17].

Healthy sexual function and marital relations are essential elements of a healthy and intimate relationship, and play a vital role in the physical and mental health of couples, contributing to family solidarity [18-20]. Sexual relations are complicated after physical disability and are associated with several consequences, including distress, anxiety, loss of self-confidence, and sexual inadequacy, that deteriorate intimate sexual relationships. Despite such changes, studies have shown that sexual desire and its expression are not completely beyond the imagination of patients [21]. Some studies have looked at many facets of sexual life quality, such as marital satisfaction among cancer patients in Iran. Furthermore, since sexual health and marital satisfaction are particularly successful in enhancing the quality of life of women with cancer, more research in this area is necessary [22-24]

Given the role of the midwifery profession in critical periods of women's lives and the need for multidimensional knowledge about the factors affecting mental health, extensive studies are needed to improve their quality of life. Many studies in Iran have addressed gynecological and breast cancers in the field of midwifery and gynecology. However, there is no adequate research on other cancers and their psychological and social aspects. To this end, the present study aimed to explore sexual function in women with genital cancers. Its results may contribute to investigating their problems and improving their quality of life.

MATERIALS AND METHODS

The present study was carried out after obtaining the necessary permissions from the vice president of research and the ethics committee of the university and obtaining a letter of introduction to access the research samples. A project in the Ethics Committee of the Iran University of Medical Sciences with number IR.IUMS.REC.1398.766 was approved.

The purpose of this cross-sectional descriptive study was to look at the sexual function of 125 women who matched the inclusion criteria. The study subjects were chosen through continuous

sampling among these women with genital cancer referred to various medical clinics in Tehran. The sampling procedure was completed from early November 2018 to late February 2019. The criteria for inclusion were women aged 15 to 49 years old, having Iranian nationality, living with their husband at least in the last six months, not having a history of mental diseases in couples, not receiving treatment or counseling for reproductive and sexual issues, not using psychotropic drugs or medicines affecting sexual activity in couples, not being addicted to or abusing a substance in couples, and having non-metastatic cancers.

The demographic information questionnaire

The questionnaire measured the participants' demographic data, including the husband's age, education, and occupation, as well as the place of residence, ethnicity, number of children, age at marriage, marriage duration, disease stage type, surgery type, and duration of chemotherapy.

Female Sexual Function Index (FSFI)

The Female Sexual Function Index (FSFI) is a self-reported inventory of 19 items developed to evaluate female sexual function. Sexual desire, lubrication, arousal, orgasm, satisfaction, and dyspareunia are its six domains. SPSS software was used to refine and analyze the acquired data using descriptive statistics, such as percentage, frequency, mean, and standard deviation, as well as inferential statistics, such as pearson correlation and analysis of variance. All statistical procedures were carried out at the 0.05 significance level (P=0.05).

RESULTS

The age of the participants was between 30 and 41 years. The results of the analysis of variance test showed that the difference in the average age of women with genital tract cancer is statistically significant at the 95% confidence level. In the group of women with ovarian cancer, they had the highest average age among patients, with an average age of 39.13 and a standard deviation of 5.92. The results showed that the difference in the average age at the time of marriage in women with genital tract cancer is not statistically significant at the 95% confidence level. That is, the three groups of women with genital tract cancer do not differ from each other in terms of age at the time of marriage. Also, the difference in the average length of marriage among women with genital cancer is statistically significant at the 95% confidence level. This means that the three groups of women with genital tract cancer differ from each other in terms of the average length of marriage, and the ovary group had the longest average length of marriage among the three groups. And finally, it was found that the difference in the average duration of the disease in women with genital cancer is statistically significant at the 95% confidence level. This means that the three groups of women with genital tract cancer do not differ in terms of the average duration of the disease ($p<0.05$) (Table 1).

The results of the analysis of variance showed that the differences in all six dimensions of the sexual function questionnaire in women with all three types of genital cancer in this study, which include ovarian, uterine, and cervical cancer, are not different from each other ($p>0.05$). Also, the analysis showed that the overall score of the sexual performance questionnaire for these three groups was not significantly different from each other ($p>0.05$).

DISCUSSION

Based on Sandy, cancer diagnosis and treatment frequently disrupted sexual function, and treating this critical component enhanced health-related quality of life [25]. The analysis of variance results in the current study showed the differences in sexual function components and total sexual function in females with genital cancer to be statistically insignificant ($p>0.05$), suggesting that the groups with genital cancer were not different concerning sexual function components and total sexual function. In other words, sexual function components, including sexual desire, lubrication, arousal, satisfaction, orgasm, and dyspareunia, were not substantially different in patients with uterus, ovarian, or cervix cancer ($p>0.05$). The adjusted means in ANCOVA showed no statistically significant differences in sexual function components or total sexual function in females with genital cancer ($p>0.05$). The results indicated no significant difference among the sexual components. However, dyspareunia was found to have a greater effect on sexual function than other components (P=0.09).

The present study indicated that the components with the greatest impact on sexual dysfunction in patients with one of the types of uterine, ovarian and cervical cancers were dyspareunia (P=0.094), lubrication (P = 0.248), and orgasm (P=0.279); however, there were no substantial differences in their impacts on sexual function between these categories.

The Pearson correlation test in the present study indicated that total sexual function and total marital satisfaction in females with uterine cancer had an insignificant relationship ($p>0.05$) with their demographic variables. The data also revealed a significant positive association between sexual function and age at marriage in women with ovarian cancer ($p<0.05$). Furthermore, there was a significant negative association between sexual function and marriage duration in females with ovarian cancer ($p<0.05$) (Table 2). The Pearson correlation coefficient test results indicated a statistically inverse and significant ($p<0.05$) association between total marital satisfaction and marriage age in females with cervical cancer. The findings also revealed a significant positive association between age at marriage and sexual function in females with cervical cancer ($p<0.05$). It is found that association between sexual function and age in females with vulvar cancer, which decreased with age. The significant association between sexual satisfaction in women and nationality, age, treatment duration, and treatment type. Further, reported an insignificant association between sexual function and age. Sexual dysfunction in females is associated with age and marriage duration. They also stated that age at marriage did not relate to sexual dysfunction. Following these findings, it can be concluded that other factors, such as physiological conditions, genetic factors, and even the tissue of the cancer site, are effective in causing sexual dysfunction in females [26-30].

Tab. 1. Demographic characteristics

Variable	Type of cancer		
(Mean ± standard deviation)	Uterus cancer	Ovarian cancer	Cervix cancer
Age	35.32 ± 6.83	39.13 ± 5.92	33.78 ± 4.65
Age at marriage	23.87 ± 3.25	23.26 ± 4.59	25.02 ± 3.34
Marriage duration	11.87 ± 7.30	14.81 ± 7.42	9.32 ± 5.85
Duration of the current illness	8.04 ± 5	9.84 ± 7	8.37 ± 4

Tab. 2. A Comparison of the sexual function domains in genital cancers

Domain	Type of cancer	Min	Max	Mean	Std. deviation	Results
Sexual desire	Uterus	0	6	3.8264	1.2521	F=0.305
	Ovarian	1.8	6	3.9677	1.10284	P-value=0.738
	Cervix	1.2	6	3.7463	1.19082	
Arousal	Uterus	0	6	3.4132	1.41231	F=0.443
	Ovarian	0	6	3.6871	1.2374	P-value=0.643
	Cervix	0	6	3.5488	1.19418	
Lubrication	Uterus	0	6	3.2717	1.52093	F=1.40
	Ovarian	0	6	3.7452	1.28422	P-value=0.248
	Cervix	0	5.4	3.5854	1.03696	
Orgasm	Uterus	0	6	3.5396	1.84874	F=1.29
	Ovarian	0	6	4.1032	1.50011	P-value=0.279
	Cervix	0	6	3.8244	1.18676	
Satisfaction	Uterus	0	6	3.6528	1.75594	F=0.559
	Ovarian	0.4	6	4.0387	1.38316	P-value=0.551
	Cervix	0.8	6	3.6878	1.66976	
Dyspareunia	Uterus	0	6	2.0302	1.91327	F=2.40
	Ovarian	0	6	1.3548	1.56862	P-value=0.094
	Cervix	0	6	1.3951	1.28412	
Total satisfaction	Uterus	8.4	26.3	19.734	4.82063	F=0.660
	Ovarian	9	28.2	20.8968	4.71292	P-value=0.519
	Cervix	8.6	27.6	19.7878	4.82069	

CONCLUSION

The participants in this study ranged in age from 30 to 41 years old, and they all had uterus, ovarian, or cervix cancer. The Analysis of Variance (ANOVA) results revealed that women with ovarian cancer had the highest mean age of 39.13 ± 5.92 as compared to those in the other two categories. The chi-square test results revealed that the groups with genital cancer were not homogeneous in terms of disease stage (X=15.20, df=6, P=0.003). Besides, the groups with genital cancer were not homogeneous concerning the type of treatment ($p<0.05$) (X=34.24, df=8, P=0.002). The analysis of variance results in the current study showed the differences in sexual function components and total sexual function in females with genital cancer to be statistically insignificant ($p>0.05$), suggesting that the groups with genital cancer were not different concerning sexual function components and total sexual function. In other words, sexual function components, including sexual desire, lubrication, arousal, satisfaction, orgasm, and dyspareunia, were not substantially different in patients with uterus, ovarian, or cervix cancer ($p>0.05$).

LIMITATIONS

The present study has some limitations that should be considered. Due to a lack of easy access to the appropriate number of samples, our findings must be confirmed in the future with a larger number of patients.

CONFLICT OF INTEREST

The authors state that they do not have any competing interests.

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AUTHOR CONTRIBUTIONS

The research was designed by SM and LSN, and the data was analyzed by JA. SM collected the samples and wrote the paper. Finally, MK conducted research and had primary responsibility for the final content.

DATA AVAILABILITY STATEMENT

Data may be obtained upon request by contacting the corresponding author

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The Human Ethics Committee of the Iran University of Medical Sciences approved the study. Individuals were given detailed descriptions of the study's goal and method throughout the sampling, and they were assured of the confidentiality of all information. Finally, the subjects provided written informed consent.

CONSENT FOR PUBLICATION

Not applicable.

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