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Relation between female sexual function disorders and Gynecological cancer type & its treatment modalities: A cross sectional study

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Gynecological cancer is still recognized as a crucial cause of maternal morbidity around the world, and the majority of women suffering from gynecological cancers experience a variety of sexual dysfunction disorders. The aim of this study was assess the relation of sexual dysfunction, with the gynecological cancer type and its treatment A descriptive study design was adapted. This study was conducted at the oncological gynecology outpatient clinic at Al-Fayoum University Hospital. A convenient sample of 100 women diagnosed with any gynecological cancer types .Three tools were used in this study: Astructured interviewing questionnaire , II: Female Sexual Function Index(FSFI), III: The Revised Dyadic Adjustment Scale (RDAS), and Results: Poor couple satisfaction reported by a majority of studied participants (90%) while the minority of participants(10%) were satisfied with a mean score of 66.23±10.74. and there were statistical significant relation between female sexual function and the cancer treatment modalities ($p<0.001$), as the means core of female sexual index were significantly higher with women performing surgery than those who receiving chemotherapy, while there were no statistically significant differences according to type of tumor. (p.0.212). There was a statistically significant relation between female sexual function index(FSFI)and the cancer treatment meanwhile the cancer type didn't revealed any significant relation .More emphasis should be placed on sexual education of patients and their spouses in daily healthcare practice. The issue of educating healthcare personnel should also be considered.

Keywords: Female sexual function disorders, Gynecological cancer, Treatment modalities

INTRODUCTION

One of the most common types of cancer is gynaecological cancer that begins in a woman's reproductive organs or in various locations within a woman's pelvis; it includes a broad collection of tumours with varying epidemiological characteristics. These disorders had a prominent worry for female cancer patients, and many of these issues affect sexual function. Sexual health issues affecting women during or after cancer treatment may be classified in the same categories as female sexual dysfunction in the general population (Abd El-Aziz et al. 2014).

Every year, more than 80,000 women in the United States are notified they have gynecologic cancer, and more than 25,000 women die from it. The burden of gynecological cancer in developing nations is enormous, owing especially to the high incidence and death of cervical cancer (Arlington , 2013).

Female sexual dysfunction (FSD) is a common disorder in communities today, but it is also a complex multifactor phenomenon that encompasses emotional intimacy and relationship satisfaction, as well as other psychosocial factors across all cultures, all sexual orientations, and various socioeconomic statuses, with a high potential to negatively affect relationships and impair quality of life. Sexual dysfunction is multifactorial, with physical, social, and psychological elements. Female sexual dysfunction is defined as a disruption or pain during the sexual response, and it can be further characterized as hypoactive sexual disorder, orgasmic disorder, sexual pain disorder, or sexual arousal disorder. It should be emphasized that women who have been treated for gynecologic cancers may have a history of sexual dysfunction(Arora et al. 2010).

One of the most important predictors of sexual dysfunction is cancer treatment modalities, which differs depending on the kind of malignancy. Treatment-related changes in patients may include the development of body image issues, a deterioration in quality of life, as well as depressed and anxiety disorders (Bergmark et al. 2013). Furthermore, there is a detrimental impact on the relationship between the affected women and their

partners, as well as a negative impact on social participation. Cancer is not a personal experience. It also has an impact on the spouses of the sick women's psychological and sexual functioning. Treatment for gynaecological cancer is frequently accompanied with the development of poor sexual functioning or even sexual dysfunctions (SD). Changes in hormone production levels or loss of reproductive organs can create these issues (Crane et al.2010).

According to the National Health and Social Life Survey, 43 percent of all women suffer from some sort of female sexual dysfunction (FSD). This figure is significantly greater in women with gynecologic malignancies. In the United Kingdom, 5.8 percent of women report recent sexual dysfunction and 15.5 percent claim lifelong sexual dysfunction, however in Latin America, the rate of FSD for middle-aged women is around 58 percent (Frumovitzet al.2015).

The assessment of sexual functions must begin concurrently with the cancer diagnosis. The diagnosis phase typically coincides with the first meeting between the patient and the nurse (Ganz,2012).

. A nurse gives information to patients and aids them in making and carrying out decisions; the nurse also guides the survivor in regaining self-confidence and adapting to physical and psychological changes in order to maximize survivor autonomy. Nurse-led psychosexual counseling can considerably improve sexual function in gynecological cancer patients. After cancer treatment, education and therapy for women may lessen sexual issues and improve marital relationships. Evaluating a woman's worries is a crucial nursing responsibility (Assad et al.2014).

Gynecological cancers accounted for 44.9 percent of all female cancers in Egypt (Abd El-Aziz, et al. 2014). Every year, roughly 6% of all cancer cases are diagnosed in Al-Fayoum, Egypt. Survivors of gynecologic cancers frequently experience a loss of desire and pain with sexual engagement. [(Hashemi et al.2013), (Ishak et al.2014)].

Despite the fact that gynecologic cancer and treatment can have a significant impact, healthcare practitioners frequently fail to address their patients' sexual concerns. Nonetheless, the majority of women have expressed a desire for these issues to be addressed. In our professional career, we have been eager to establish studies and practices linked to gynecological cancer and its treatment methods in order to analyze its influence on women's lives.However, there is a need for a thorough and systematic study based on a consistent and consolidated instrument for evaluating those groups of people in order to respond to their needs ever more effectively and efficiently, taking into account the integral aspect of the individual and aiming for a holistic therapeutic proposal.

MATERIALS AND METHODS

Aim of the Study

The study aimed to assess the relation of sexual dysfunction, with the gynecological cancer type and its treatment modalities.

Research Questions

1. To what extent female sexual function affected among women with gynecological cancer?
2. Is there a relation between female SF and gynecological cancer type among women with gynecological cancer?
3. Is there a relation between female SF and treatment modalities among women with gynecological cancer?

Research design

A descriptive cross sectional design was utilized for this study.

Study Setting

This study was conducted at the gynecological oncology outpatient clinic in Al-Fayoum University Hospital. That is a teaching hospital covering a variety of secondary and tertiary health care services for all residence either rural or urban areas in Al-Fayoum governorate.

Sample

A convenience sample of 100 women with various types of gynecological cancer were attended in the oncology outpatient clinic during the period of study, while the women were coming to carry out investigations more than once and were treated.

Inclusion criteria

All married women who were diagnosed with various forms of female gynecological malignant tumors (vulvar, cervix, uterus, vagina, and ovary), those were undergoing various types of treatment, were under the age of 40, before menopause, and had a sexual partner during the study period.

Tools of Data Collection

Data of This Study Were Collected by Using the Following Tools

Tool 1: A structured interviewing questionnaire developed by the researchers after reviewing related literature, it included two parts:

A. Socio-demographic data of studied women including age, & education

B. Medical profile data of studied women including, type of tumors, (affected location), type of treatment according to patient medical record

Tool 2: Female Sexual function index (FSFI) questionnaire:

It adapted from (Wiegel et al.2005), and translated into

Arabic language,The Female Sexual Function Index (FSFI) is a 19-item self-report inventory designed to assess female sexual function. It comprises six domains: desire [two items], arousal [four items], lubrication [four items], orgasm, satisfaction, pain [three items each].

Scoring system:

Each domain is scored on a scale of 0 or 1 to 5 (range for items 1, 2, 15 and16=1-5), the maximum score for each domain is 6; the maximum total score is 36 and the minimum 2. While higher scores indicate better sexual function, a domain score of zero indicates nonsexual activity during the past month. A score less than 26.55 denote sexual dysfunction. Orgasm; and orgasmic pleasure, usually for domains in which the score is zero, this is indicative of the subject having reported there was no sexual activity during the past 4 weeks.

Tool 3 : The Revised Dyadic Adjustment Scale (RDAS), developed by (Knapstein,2013).

It is a self-reported questionnaire about the woman and her husband's adjustment and contentment. It consists of 14 items that provide a total score (RDAS-T) and four sub-scores of dyadic cohesion, affection, satisfaction, and closeness.

Scoring system

The RDAS scores range from 0 to 69, with "distressed relation" receiving the lowest. The instrument has a high level of internal consistency (alpha coefficient = 0.90) as well as construct validity. Previously, the RDAS was widely employed in Iranian topics (Shiahna, 2012),(Statistical report of hospital(2016). Alfayoum University Hospital). Coronach alpha in this study ranged between 0.7 and 0.8 in various RDAS sub-scores.

Validity and reliability

The validity of the tools was ascertained by a group of 5 subject area experts, 2 gynecology and 3 community nursing staff, who reviewed the instruments for content accuracy. Also, they were asked to judge the items for completeness and clarity. Suggestions and modifications were considered. Test–retest reliability was applied by their searchers for test in the internal consistency of the tools. It refers to the administration of the same tools to the same subjects under similar condition sontwoor more occasions. Scores from repeated testing were compared.

Pilot Study

Before beginning data collecting, a pilot research was done on 10% of women with gynecological cancer.

It was done to ensure the clarity, application, and relevancy of the questions, as well as to estimate the time required to complete the sheets. The necessary changes were made based on the findings of the pilot research. The women who participated in the pilot study were not included in the main study sample.

Ethical consideration

All permissions were obtained from all authorities. After each woman was properly described the goal of the investigation, she gave her informed consent to participate in the current study, Confidentiality of data, privacy, voluntary participation and right to refuse to participate in the study emphasized to all participants.

Field Work

This study conducted on three consequent phases, as well as the researchers attended the study sitting 2 days / week during the study period from April 2017 to September 2017

Preparatory phase:

in which the study tools was developed based on a review of relevant literature, and it was then tested for validity, reliability before being included in the main study.

all study permissions were obtained either from dean of faculty of nursing or head of the fayoum university hospital.

Interviewing phase:

In which researchers interviewed the participants and informed with the study nature, aim and obtained their informed consent. Also explain the study questionnaires and focusing in the tool 3 that filled up with the participant

Assessment phase:

In which frequent visits were made via pre-arranged appointments with the subjects. Then the researchers started to collect the required study data starting with the tool 1, to collect women's socio-demographic data, and reviewing the patient medical record to obtain her medical diagnosis ant its treatment type then assess the patient sexual function disorders by using the study tool 2, meanwhile the study tool 3.(the Revised Dyadic Adjustment Scale (RDAS**)** were filled up with the study participant except for illiterate patients were filled by the researchers this phase took about 45minutes

StatisticalAnalysis

Data analysis was performed using the Statistical Package for Social Sciences (SPSS version 20.0). The descriptive statistics were used (e.g., mean, standard deviation, frequency and percentages). To assess the homogeneity of the outcome variables, chi-square and independent r tests were utilized. A statistically significant difference was considered at value $p \leq 0.05$, and a highly statistically significant difference was considered at p-value $p \leq 0.001$.

RESULTS

Figure 1 showed that, the great majority of studied

women were in age grouping 30-< 40 years ago (90%). And the minority was less than 20 years (10%).

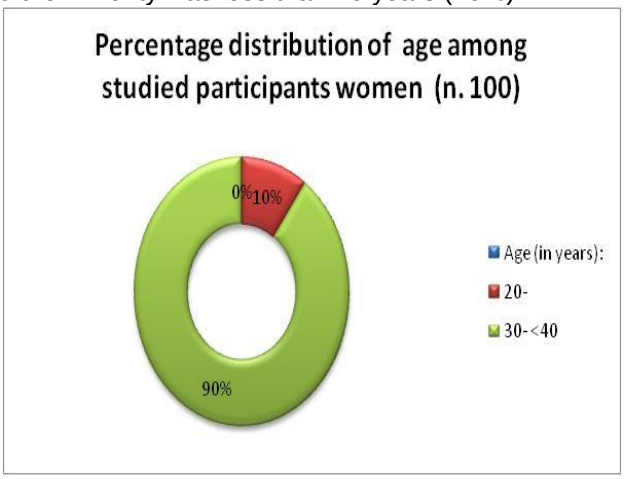

Figure 1: Percentage distribution age among studied women (n.100)

Figure 2: Regarding education figure 2 illustrated that, one third of participants 30% were can read and write, and nearly more than one third 20%werehad secondary education. While the minority were classified as illiterate& had university education (10% & 4%).

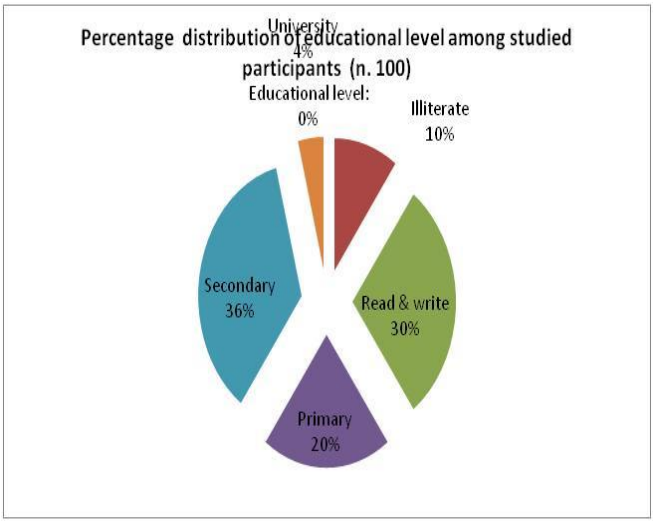

Figure 2: Percentage distribution of educational level among studied women (n.100)

Table1: Regarding participant medical profile, table 1 revealed that the most common type of cancer encountered among participants were uterine cancer represent 50 % followed by 30 % cervical cancer, and 20% vaginal. As regards to cancer stage, more than two thirds 66% of participants were Stage II of cancer and nearly one thirds were stage III. Moreover; the majority of participants were received surgery and chemotherapy, and 20% were received chemotherapy as a line of treatment

Table1: Medical profile of Studied Women (n=100)

Menstrual history		No	%
Type of tumor	Cervix	30	30.0
	Uterus	50	50.0
	Vagina	20	20.0
Stages of cancer	Stage I	10	10.0
	Stage II	66	66.0
	Stage III	24	24.0
Treatment regimen	Surgery& chemotherapy	80	80.0
	Chemotherapy	20	20.0

Table 2: revealed that lowest mean± SD score was noted in the domain of desire (1.45 ± 1.55), and satisfaction (1.96 ± 2.05). Meanwhile; the highest achieved score were reported in lubrication domain (3.31 ± 1.78) followed by orgasm domain (3.11 ± 1.73) then y pain and arousal with equal mean score (3.10 ± 1.55), orgasm (3.11 ± 1.73) respectively.

Table 2: Distribution of Sexual Dysfunction According to Female Sexual Function Index Scores(FSFI)among studied women (n=100)

FSFI items	Sexual dysfunction	Mean ±SD
Desire	86.3	**1.45±1.55**
Arousal	98.1	**3.10±1.55**
Lubrication	88.6	**3.31±1.78**
Orgasm	76.2	**3.11±1.73**
Satisfaction	72.2	**1.96±2.05**
Pain	89.1	**3.10±1.55**
Total score	80.7	**19.31±8.50**

Table 3:Distribution of total score of the Revised Dyadic Adjustment Scale (Couple Satisfaction Level) among studied women(n=100)

Couple satisfaction level	No.	%
Poor satisfaction(0-<48)(Less adjusted)	90	86.0
Satisfied(≥48)(More adjusted)	1	14.0
Couple satisfaction scores		
Mean ±SD	66.23±10.74	
Median(Range)	70(32-85)	

Table 3: cleared up that poor couple satisfaction reported by a majority of studied participants (90%) while the minority of participants (10%) was satisfied with a mean score of 66.23±10.74.

Table 4:Reported that there were statistical significant relation between female sexual function and the cancer treatment modalities (p<0.001), as the mean score of female sexual index were significantly higher with women performing surgery than those who receiving chemotherapy, while there were no statistically significant differences according to type of tumor. (p.0.212)

Table 4: relation between FSFI Score and gynecological cancer type and its treatment modality among studied women

		Female sexual function index(FSFI)				
		Mean	±SD	Minimum	Maximum	P.value
Treatment modalities	Surgery	71.75	4.538	64	85	<0.001
	Chemotherapy	53.24	9.894	32	69	
Cancer type	Cervix	67.89	12.433	39	80	0.212
	Uterus	66.50	9.432	50	85	

DISCUSSION

Gynaecological cancers are a complex collection of tumors that account for 13% of all cancers in women and have varying epidemiological and clinical aspects. Gynaecological cancer is still a major cause of maternal morbidity and mortality worldwide. Sexual health issues are upsetting problems for women with gynaecological cancer and their husbands during their treatment (Krebs,2013).

Sexual health is an important step toward regaining a sense of normalcy and well-being. In women with gynaecological cancer, sexual dysfunction is a prevalent and underdiagnosed condition. It could be due to a variety of circumstances, including physical deterioration as a result of treatment, psychological discomfort as a result of the diagnosis, hormonal changes, and/or negative body image (Michael,2010).

The current study was descriptive cross sectional research aimed to assess the relation of sexual dysfunction, with the gynecological cancer type and its treatment modalities. As regards the first research question, to what extent female sexual function affected among women with gynecological cancer

The current study findings revealed that lowest mean± SD score was noted in the domain of desire , and satisfaction . Meanwhile; the highest achieved score were reported in lubrication domain) followed by orgasm domain then pain and arousal with equal mean score, orgasm among women suffering from gynecological cancerwich answer the first research question

These findings were consistent with those of(Abd El-Aziz et al. 2014 ,(Ramezani et al. 2014) , and Nazarpour et al. 2015) who discovered that less than two-thirds of Egyptian women with gynecological cancer complained of loss of libido, while more than half complained of vaginal dryness. Shiahna, (2012) found that the majority of Egyptian women suffered dysparunia during intercourse and that more than half had no sexual desire. This could be linked to vaginal dryness, which causes a decrease of libido. Furthermore, our findings agreed with those of Knapstein et al. (2013) who discovered that mastectomy reduced sexual desire. Those are the most common dysfunctions. while the lowest dysfunctions were of physical nature (lubrication & pain).

Also In terms of women undergoing treatment and their couples' satisfaction as measured by the Revised Dyadic Adjustment Scale (RDAS), the current study found that the majority of studied women with cancer had poor couples' satisfaction, which was statistically significantly higher in women who underwent surgery than in those who did not. However, there was no statistically significant difference based on tumor type. These findings provided answers to the second and third research questions.

This finding was consistent with the findings of (Speer et al. 2014) who investigated the factors of sexual functioning in gynecological cancer survivors and concluded that the dynamics of relationships can be stretched and altered as a result of a cancer diagnosis and treatment. Rather than hormone levels, the survivors' level of relationship difficulty, depression, and age may be viewed as the most relevant variables affecting arousal, orgasm, lubrication, satisfaction, and sexual discomfort. The findings of this study were consistent with those of (Michael, 2010l) and (Ganz, 2012), who indicated that cancer therapy may have direct consequences on sexuality, sexual response, sexual roles, and relationships.

Cancer treatments have the ability to impact sexuality both directly and indirectly through hormonal effects, as well as by inducing exhaustion, apathy, nausea, vomiting, and malaise. Sleep and hunger problems might have an impact on libido Chemotherapy is a key predictor of sexual dysfunction on a global scale, affecting all aspects of the sexual response cycle. This impact is especially harsh and disastrous for young women (Speer et al.2014).

The current study found that chemotherapy has an effect on women's sexuality, as the majority of patients got both surgery and chemotherapy as a kind of treatment. This finding was consistent with the findings of (Arora et al. 2010). who investigated the influence of chemotherapy on QOL in women with gynecological cancer and discovered that the chemotherapy had a detrimental impact on women's sexual function and physical well-being. Likewise

(Hashemi et al.2013).demonstrated that all types of gynecological cancer treatment have a considerable impact on body image and menopausal status, resulting in sexual issues. (Shiahna.2012) on the other hand, reported that treatment such as chemotherapy and surgical surgery did not interfere with sexual functioning. In terms of cancer site, the current study found that less than half of women

had cancer uterine, whereas one-third had cancer cervix.

CONCLUSION

According to the findings and research questions of the current study, It is concluded that there were statistical significant relation between female sexual function and the cancer treatment modalities ($p<0.001$), as the mean score of female sexual index were significantly higher with women performing surgery than those who receiving chemotherapy, while there were no statistically significant differences according to type of tumor. (p.0.212)

RECOMMENDATIONS

Given the existence of a relationship between sexual dysfunction and gynecological cancer, more emphasis should be placed on sexual education of patients and their spouses in daily healthcare practice. The issue of educating healthcare personnel should also be considered

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

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AUTHOR CONTRIBUTIONS

AM designed and wrote the manuscript. MA performed data collection& analysis, SA and IA reviewed and edited the manuscript. All authors read and approved the final version.

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