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The Relation between Marital Satisfaction, Depressive Symptoms and Posttraumatic Stress Disorder among Women with Hysterectomy

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Abstract: Background: Hysterectomy is one of the most common surgeries for treating several uterine diseases. It is associated with physical, social, sexual, and psychological consequencies. **Purpose:** To assess the relationship between marital satisfaction, depressive symptoms and posttraumatic stress disorder among women with hysterectomy. **Design:** A descriptive correlational design. Setting: This study was carried out at the Obstetrics& gynecology outpatient clinic and surgical outpatient clinic of Menoufia University Hospital at Shebin El-kom, Menoufia Governorate, Egypt. **Sample:** A purposive sample of 100 women who had hysterectomy was selected. **Instruments:** Four instruments were used; (1): A structured interviewing questionnaire: to assess socio- demographic and clinical characteristics (2): The PTSD Checklist for DSM-5 (3): Marital satisfaction scale. (4): Patient Health Questionnaire Depression Scale. **Results:** It was revealed that 63% of studied women had moderate level of marital satisfaction, 66%of them had severe depressive symptoms. The mean of PTSD among the studied women was 51.69±16.36. There was a statistically significant negative correlation between total mean score of PTSD and marital satisfaction. There was a statistically significant positive correlation between total mean score of PTSD and depressive symptoms. Also, there was a statistically significant negative correlation between total mean score of marital satisfaction and depressive symptoms among the studied women. Conclusion: There was a statistically significant negative correlation between total mean score of PTSD and marital satisfaction among the studied women. There was a statistically significant positive correlation between total mean score of PTSD and depressive symptoms among the studied women. Also, there was a statistically significant negative correlation between total mean score of marital satisfaction and depressive symptoms. **Recommendations:** Educational and psychological counseling programs should be designed for women with hysterectomy to help them cope effectively and prevent the associated psychosocial problems.

Keywords: *Depressive Symptoms, Hysterectomy, Marital Satisfaction, Posttraumatic Stress Disorder,*

Introduction

Hysterectomy is a gynecological surgery in which the uterus, ovaries, fallopian tubes, cervix, and other adjacent tissues are removed (Ezzat, 2019). The loss of the uterus is considered as the loss of womanhood as it signifies femininity, sexuality, fertility, and childbearing. After surgery, women may experience depression and hopelessness, which may have an influence on their mental health. The fundamental types of hysterectomy are total, subtotal, and radical. During a total hysterectomy, the uterus and cervix are completely removed. A subtotal hysterectomy, on the other hand, just removes the uterus while leaving the cervix in situ. The uterus, uterine cervix, upper section of the vagina, ovaries, fallopian tubes, lymph nodes, and lymph channels are all removed during a radical hysterectomy. The type of hysterectomy performed is determined on the reason for the procedure (Hassan, et al., 2022).

Hysterectomy is an option to treat a range of conditions, including benign and malignant uterine illness. Among the benign conditions that require hysterectomy are uterine adenomyosis, uterine fibroids, menstrual disorders, septic abortions, dysfunctional uterine bleeding, endometriosis, uterine leiomyoma, chronic pelvic pain, pelvic inflammatory disease, ectopic pregnancy, and precancerous lesions of the cervix and endometrium. On the other hand, malignant disorders such as endometrial carcinoma, malignant ovarian tumors, cervical cancer, and malignancies of other neighboring organs are reasons to have a hysterectomy (Michael et al., 2020).

Hysterectomy complications are widespread, both in the short term as well as and long term. Long-term sexual dysfunction (lasting or repetitive loss of sexual excitement, orgasm, and desire, the existence of pain, together with decreased secretion and vaginal shortening, disrupted vascularization and innervation, which may contribute to dyspareunia) is possible and, while not life-threatening, can vastly worsen the women's marital satisfaction and quality of life, as sex plays an important role in relationships and how a woman perceives herself as a human being. Damage to the branch of the pelvic plexus in deferent anatomical places is one of the reasons of sexual dysfunction following hysterectomy (Dundar, et al., 2019).

Body image satisfaction, self-confidence, and marital satisfaction were worse in hysterectomy patients compared to healthy ones. Marital satisfaction refers to the happiness and satisfaction that couples feel together in their life as well as their ability to jointly agree on family affairs and manage current conflicts more constructively. Partners' communication skills, adaptability, agreement on marital and family issues, capacity to solve their problems constructively, positive sentiments and thoughts about each other, and dedication to each other can make their relationships harmonious. Couples that are incompatible find it difficult to

preserve their relationship and deal with a crisis (Gumuşsoy, et al., 2022).

Depressive symptoms are prevalent psychological and emotional problems linked with hysterectomy women especially if the ovaries were removed during the operation because removing the ovaries – the essential source of estrogen– causes immediate "surgical menopause," with hot flashes and other typical symptoms, including emotional changes. Ovaries are removed in 55 to 80 percent of women with hysterectomy (Weils, 2019). Low mood which can disturb a person's thoughts, behavior, feelings and sense of well-being, sadness, anxious, empty, hopeless, helpless, worthless, guilty, irritable, ashamed or restless are all examples of depressive symptoms in women who have had hysterectomy. Also they may lose interest in activities that were once pleasing, experience loss of appetite or overeating, have difficulty concentrating and recalling details or making choices or judgments (American Psychiatric Association, 2019).

Post-traumatic stress disorders (PTSD) is a psychological condition among women with hysterectomy. It is defined as a severe anxiety disorder that develops after exposure to an event that involves actual threatened or perceived death or serious injury, or a threat to the physical integrity of oneself or others that results in significant psychological trauma (Wimalawansa, 2019). There is remarkably high prevalence of PTSD as well as particularly significant correlations between PTSD and relationship issues. Furthermore, PTSD is linked to a slew of negative outcomes for PTSD patients' romantic partners, including lower levels of relationship satisfaction and greater assessments of relationship conflict; increased psychological distress; and higher levels of depression, anxiety, and somatic symptoms (Crenshaw, et al., 2022).

Therefore, nurses must be cognizant of complications of hysterectomy and employ effective nursing interventions in order to appropriately address these issues. They must extensively examine the psychosocial needs of women with hysterectomy then properly inform patients and provide them with the required emotional and social support. In addition, nurses can conduct assessments to detect and treat the psychological conditions specific to high-risk groups and provide the necessary nursing interventions or referrals (Alshawish, et al., 2020).

Significance of the study

The uterus has historically been seen as an organ that regulates and controls key physiological processes such as childbirth, the sex organ, a source of energy, and an organ that maintains women's attractiveness and beauty. Hysterectomy operations deeply influence the women physically, psychologically, and socially (Briedite, et al., 2014). 40% of women get hysterectomy surgery before the age of 64, (Doganay, et al., 2019). In European Union, more than 400,000 women had hysterectomies each year and around 33% of women in United States had hysterectomies before age of 60 (Xie, et al., 2022). The incidence

of depressive symptoms in the hysterectomy group was 6.59 per 1,000 person-years (Choi, et al., 2020). PTSD was diagnosed in 16.4% of women between two and three months following hysterectomy. There was a significant association between depressive symptoms and PTSD symptoms (Casarin et al., 2022). According to Health Grades (2019), around 165,107 hysterectomy procedures are conducted annually in Egypt each year, which are divided between Upper and Lower Egypt. This implies that the issue has affected a significant number of Egyptian women. Therefore, it is the intent of this study to highlight the relationship between marital satisfaction, depressive symptoms and post-traumatic stress disorders among women with hysterectomy.

Purpose of the Study:

The purpose of this study was to assess the relationship between marital satisfaction, depressive symptoms, and posttraumatic stress disorder among women with hysterectomy.

Research Questions

1) What is the level of marital satisfaction among women with hysterectomy?
2) What is the level of depression among women with hysterectomy?
3) What is the level of posttraumatic stress among women with hysterectomy?
4) Is there a relation between marital satisfaction, depression and posttraumatic stress among women with hysterectomy?

Methods

Research Design:

Descriptive co-relational design was utilized to achieve the purpose of the current study.

Setting:

This study was conducted at the Obstetrics & Gynecology Outpatient Clinic and Surgical outpatient clinic of Menoufia University Hospital, Shebin Elkom.

Sampling:

A purposive sample of 100 women undergoing hysterectomy and attending Obstetrics & Gynecology or Surgical outpatient clinic of Menoufia University Hospital. The inclusion criteria were married women of age ranged from 18- 45 who had any type of hysterectomy 3 months later, had posttraumatic stress disorder and the absence of a history of psychiatric disease and other life-threatening illness or medical conditions associated with an increased risk of PTSD as mastectomy, heart attack, intensive-care unit hospitalization and stroke or have loved ones of those who experience life-threatening illnesses because also is risk for developing PTSD.

Sample Size:

Number of women with hysterectomy attending Obstetrics& gynecology outpatient clinic and surgical outpatient clinic of Menoufia University Hospital were about 240 women per year. Based on review of past literature "casarin et al., (2020)" who found that 16.4% of patients had post-traumatic stress

disorder after 3 months of hysterectomy sample was calculated by the following equation: "[(Zα/2 + Zβ)2 × {(p1 (1-p1) + (p2 (1-p2))}]/(p1 - p2)2" . "At power 80% and confidence level 95%, where n = sample size required in each group, p1 = proportion of subject in group 1, p2 = proportion of subject in control group, p1-p2 = clinically significant difference Zα/2: This depends on level of significance, for 5% this is 1.96, Zβ: This depends on power for 80% this is 0.84 (Kasiulevicius, et al., 2006)."

Instruments

Data were collected using the following instruments:

Instrument one: A structured interviewing questionnaire:

This questionnaire was developed by the researcher to assess social characteristics of studied women such as age, residence, level of education of woman, occupation, income, level of education of husband, occupation of husband, age difference between husband and wife, duration of marriage, number of children and gender of children. Clinical characteristics of studied women as reason for hysterectomy, type of hysterectomy and duration after hysterectomy.

Instrument two: Marital satisfaction scale:

It was an Arabic scale developed by Al-Talaa & Al-Sharif, (2011) self-report questionnaire. It consisted of 47 items that measure marital satisfaction. It contained six domains; economic satisfaction (8 items), sexual satisfaction (8 items), family problems (7 items), time spent (8 items), affective communication (8 items), Tasks and roles (8 items). The women respond to each item according to a likert scale consisting of two alternatives: (No, Yes), (0, 1) and modified by the researcher to (No, Sometimes, Yes), with the scores (0, 1, and 2) respectively, and all items were positive. The scale was tested for validity and reliability by the researcher. It was valid and reliable; the overall reliability was (0.72). The scoring system of all items of the scale; Low marital satisfaction 1 – 23, Moderate marital satisfaction24 – 47, High marital satisfaction 48 – 94.

Instrument three: Patient Health Questionnaire Depression Scale (PHQ-9):

It was developed by Kroenke, et al., (2001) and translated into Arabic by Abdel Aleem et al., (2020). It was valid and reliable, the reliability was (0, 82). It consists of nine items. The women respond to each item according to a likert scale consisting of four alternatives(0,1,2,3) and modified by the researcher to three alternatives .Score ranging from 0 (not at all),1 (several days), 2 (nearly every day).Total score from 0 to 18. Scored as the following; Mild depressive symptoms (1-4), Moderate depressive symptoms (5-9), Severe depressive symptoms (10-18).

Instrument four: The PTSD Checklist for DSM-5 (PCL-5):

This scale was originally developed by Weathers, et al (2013). It was translated into Arabic by (Ibrahim et al., 2018). The PCL-5 was a self-report questionnaire, consisting of 20 items that measure the presence and severity of PTSD symptoms. Items are rated on a 5-point Likert scale ranging from 0-4(0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, & 4 = extremely). Severity can be determined adding scores of each item together to determine a total score. The range was 0-80. A PCL-5 cut-point score between 31- 33 appears to be a reasonable value to use for provisional PTSD diagnosis. The internal consistency of the PCL-5 was high (alpha = .85) and the instrument showed an adequate convergent validity (Ibrahim et al., 2018).

Reliability of the study instruments:

The internal consistency of the questionnaire was calculated using Cronbach's alpha coefficients. The reliability of the instruments was done using test - retest reliability and proved to be strongly reliable at 0.72 for tool two, at 0, 82 for tool three and at .85 for tool four .

Validity of the study instruments:

The study instruments were tested for validity by a jury of five experts in the field specialty of psychiatric mental health nursing, psychiatric medicine, community nursing, and psychologist to ascertain relevance, coverage and clarity of the content. The tools were approved to be valid following the judgment of the experts.

Ethical considerations:

An approval of the ethical and research committee of the faculty of Nursing, Menoufia University was obtained. Informed consent for participation was taken from the participants after explaining the purpose of the study and assures maintaining anonymity and confidentiality of the women' data. The patients were informed that participation in this study was voluntary. They have the right to participate in the study and they have the right to withdraw from the study at any time.

Pilot study:

A pilot study was carried out with 10% of the total sample (10 women) to test the applicability, feasibility, and clarity of the tools and to estimate the needed time to fill the tool. Minimal modifications were done. Women in the pilot study were excluded from the main study sample.

Procedure

An official letter was submitted from the dean of Faculty of Nursing Menoufia University to the head of outpatient clinic of Menoufia University Hospital, Shebin Elkom after explanation of the purpose of the study to get the permission. Informed consent from participants was obtained after complete description about the purpose, nature and confidentiality of the study.

The data were collected from the Obstetrics& gynecology outpatient clinic and Surgical outpatient clinic of

Menoufia University Hospital at Shebin El-kom District, Menoufia Governorate, Egypt. The study was carried out in the period from the beginning of April 2022 to the end of June 2022. The entire women who meet the inclusion criteria were included in the study. The researcher collected the data during the morning shift two days/week. Each interview lasted for 30-40 minutes, depending on the response of the studied women.

Results

Table1:-Illustrates socio- demographic characteristics of the studied women. This table reveals that the mean age of the studied women with hysterectomy is 38.42±5.53 and nearly three quarters of them (73%, 71%) are from urban residence and have sufficient income respectively. As regards to level of education more than half of the studied women (52%) have bachelor's degree and more than two thirds (62%) are employed. While nearly half of the studied women' husbands (45%) have bachelor's degree and the majority (93%) are employed. As regards to mean of duration of marriage and age difference between husbands and wives are 15.08±6.79, 6.90±6.1 respectively. The mean of number of children among studied women are 2.52±1.60 and half of them have males and females children.

Table2:-Illustrates clinical characteristics of the studied women. This table reveals that the mean of duration after hysterectomy is 12.34±12.39 months. More than two thirds of studied women (63%) undergone total hysterectomy and the reason of hysterectomy in nearly one quarter of studied women (24%) are the fibroids.

Fig1:- Illustrates levels of marital satisfaction among the studied women. This figure reveals that nearly two thirds of the studied women (63%) have moderate level of marital satisfaction.

Fig 2:-Illustrates levels of depressive symptoms among the studied women. This figure reveals that two thirds of the studied women (66%) have severe depressive symptoms.

Table3:-Illustrates mean ± SD of PTSD among the studied women. This table reveals that the mean of PTSD among the studied women is 51.69±16.36.

Table4:-Illustrates correlation between total mean score of PTSD, marital satisfaction and depressive symptoms among the studied women. This table reveals that in the studied women, there is a statistically significant negative correlation between PTSD and marital satisfaction. On the other hand, there is a statistically significant positive correlation between PTSD and depressive symptoms. Also, there is a significant negative correlation between marital satisfaction and depressive symptoms at P value <0.001.

Table 1: Socio- Demographic Characteristics of the Studied Women.

Variables		The studied sample (n=100)	
		No	%
Residence:	Rural	27	27.0
	Urban	73	73.0
Income:	Sufficient	71	71.0
	Not sufficient	29	29.0
Level of education:	High school graduate or diploma	38	38.0
	Bachelor's degree	52	52.0
	Master or doctorate degree	10	10.0
Occupation:	Employed	62	62.0
	Unemployed	38	38.0
Age of wife (years)	**[** Mean±SD**]**	38.42±5.53	38.26±6.71
The husband's occupation:	Employed	93	93.0
	Unemployed	7	7.0
The husband's educational level:	Illiterate	1	1.0
	Read and write	9	9.0
	High school graduate, diploma	40	40.0
	Bachelor's degree	45	45.0
	Master or doctorate degree	5	5.0
Duration of marriage (years)	[Mean±SD]	15.08±6.79	14.86±7.84
Age difference between husband and wife (years)	**[**Mean±SD**]**	6.90±6.1	5.53±4.79
Number of children	**[**Mean±SD**]**	2.52±1.60	2.46±1.74
Gender of children	No	14	14.0
	Males only	16	16.0
	Females only	20	20.0
	Males and females	50	50.0

Table 2: Clinical Characteristics of the Studied Women.

Variables		The studied sample (n=100)	
		No	%
Duration after hysterectomy (months)	**[**Mean±SD**]**	12.34±12.39	
Type of hysterectomy	▪ Total hysterectomy	63	63.0
	▪ Resection of part of the uterus	6	6.0
	▪ Hysterectomy with removal of the ovaries and fallopian tubes	23	23.0
	▪ Hysterectomy with removal of the ovaries, fallopian tubes and lymph nodes	8	8.0
Reasons for hysterectomy	• Fibroids	24	24.0
	• Uterine prolapse	1	1.0
	• Continuous bleeding	16	16.0
	• Chronic endometriosis	3	3.0
	• Polyps in the uterus	2	2.0
	• Uterine rupture during labor	2	2.0
	• Bleeding during or after labor	23	23.0
	• Cancer of the uterus, cervix or ovaries	14	14.0
	• Endometriosis	15	15.0

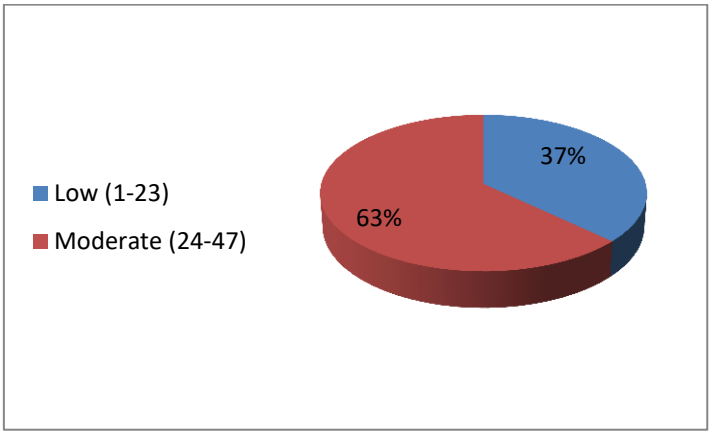

Fig 1: Levels of Marital Satisfaction among the Studied Women.

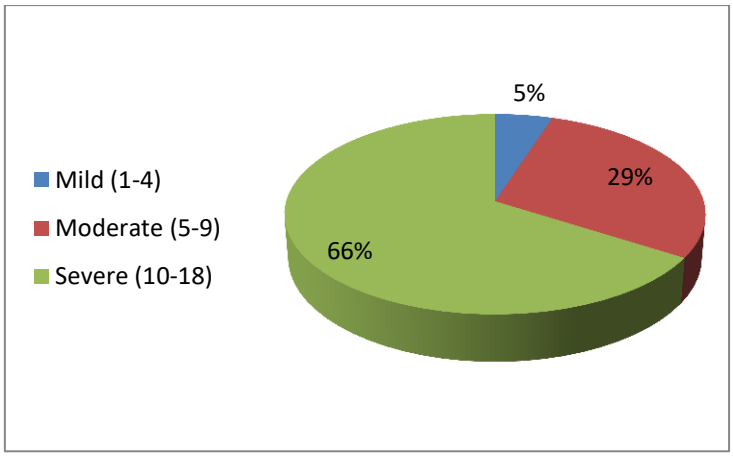

Fig 2: Levels of Depressive Symptoms among the Studied Women.

Table 3: Mean ± SD of PTSD among the Studied Women.

Variables	The studied women (n=100).
	Mean ± SD
PTSD Mean ± SD	51.69±16.36

Table 4: Correlation between Total Mean Score of PTSD, Marital Satisfaction and Depressive Symptoms among the Studied Women.

Variables	The studied Women (n=100)			
		Total PTSD	Total marital satisfaction	Total depressive symptoms
Total PTSD	rho	1.000	-0.871	0.680
	p-value	.	**<0.001**	**<0.001**
Total marital satisfaction	rho	-0.718	1.000	-0.634
	p-value	**<0.001**	.	**<0.001**
Total depressive symptoms	rho	0.680	-0.634	1.000
	p-value	**<0.001**	**<0.001**	.

rho: Spearman's correlation coefficient

Discussion

The process of having uterus removed can be challenging for women because, in addition to serving a biological purpose, the uterus also represents values associated with femininity. As a result, after surgery, women often experience psychosocial changes as depressive symptoms, post-traumatic stress and marital dissatisfaction and physical changes that are related to how they perceive their bodies, including feeling self-conscious, having a different body image, experiencing sexual dysfunction, and feeling different from other women (Hassan, et al., 2022). The current study emerged aimed to assess the relationship between marital satisfaction, depressive symptoms, and posttraumatic stress disorder among women with hysterectomy.

For levels of marital satisfaction and depressive symptoms, and the mean score of PTSD among the studied women. The current study revealed that nearly two thirds of the studied women had moderate level of marital satisfaction. This might be due to physical disabilities and chronic diseases could have an effect on sexual functioning. They could also influence marital relationship and satisfaction especially hysterectomy as the uterus has been considered as a sexual organ regulating and controlling important physiological functions, and as a source of power, conserving youth and attractiveness. This result was supported by Zarghan, and Ahmadi, (2021) and Pinar, et al., (2012) who revealed that marital adjustment in women with hysterectomy is lower than those without hysterectomy. This result was in the same context with Gümüşsoy, 2022 who reflected that the women in the surgical menopause group had significantly lower mean scores for dyadic adjustment than the women in the natural menopause and perimenopause groups. Also Pilli, et al., (2020) showed that the main experiences of these women in this study were loss of womanhood and loss of marital safety. This result was contradicted with Mathur, et al., (2018) who revealed that both the study groups had good marital adjustment and majority reported no depression and anxiety. There was no major psychiatric morbidity, decline in marital adjustment and quality of life after hysterectomy for benign conditions. Also , the current study was inconsistent with Ketabchi, et al., (2019) who illustrated that there was not any significant difference for total marital satisfaction scores and marital satisfaction sub-scales scores between healthy and patient groups however there was significant difference for life expectancy between healthy and patient groups.

The current study displayed that two thirds of the studied women had severe depressive symptoms this might be due to hysterectomy was seen as to be “loosing of fertility function” and development of infertility following the procedure, therefore, it was one of the major causes of depressive symptoms . Change of body image, the decrease in sexual interest, fear of

losing sexual attractiveness, loss of sexual identity, fear of negative attitude of husband and/or his family, wish to bear a child, were the problems which usually lead to depressive symptoms after hysterectomy. This result was congruent with Syed, et al., (2021) who revealed that mild and even moderate-to-severe levels of depression after hysterectomy in previously psychologically healthy women. Also Choi,et al., (2020) showed that the incidence of depression was higher in women who underwent hysterectomy than in the matched control group. In the same line Laughlin-Tommaso,et al., (2020) who exposed that women who underwent hysterectomy experienced increased risks of depression and anxiety. Moreover Ghotbizadeh,et al.,(2021) revealed that mild to moderate depression was detected more half of whom with hysterectomy. Khan,et al., (2020) found that the majority of the women suffered from mild to moderate level of depression. In contrast, some studies had shown that hysterectomy was not associated with depression and psychological complications as Li, et al., (2017); Mathur, et al., (2018) and Gupte & Nagabhirava, (2019).

The present study revealed that that the mean score of PTSD among the studied women was 51.69±16.36. This result was congruent with Mahmoud, et al., (2022) who revealed that nearly half of the studied women had high level of PTSD ≥ 64 score. Also Casarin, et al., (2022) presented that the median PTSD score was 12, 8, and nearly one fifth of patients had PTSD symptoms > 33. Besides Radmehr & Akbarzadeh, (2023) who publicized that hysterectomy increased the mean score of post-traumatic stress in women after the hysterectomy.

Concerning correlation between marital Satisfaction, depressive symptoms and PTSD among the studied women.The current study displayed that in the studied women, there was a significant negative correlation between PTSD and marital satisfaction. On the other hand, there was a significant positive correlation between PTSD and depressive symptoms. Also, there was a significant negative correlation between marital satisfaction and depressive symptoms. This might be due to PTSD weakened positive relationship processes and/or worsened negative relationship processes between partners, including harmful communication in the family and fear of intimacy, which in turn lowered the perception of the relationship between spouses. Symptoms of PTSD such as intrusion and hyper arousal which might lead to increased depressive symptoms in women. Such symptoms, including lack of energy, indifference in social life, and irritability might in turn reduce couple relationship satisfaction. This result was identical with the outcomes of a study done who Garthus-Niegel,et., al, (2018) who found that postpartum PTSD symptoms and depression symptoms were negatively related to subsequent couple relationship satisfaction. The findings of the study done by Pereira, et al., (2020) indicated that depression symptoms, sexual and marital

dissatisfaction were positively related to probable PTSD. Moreover Kenny, et al., (2022) illustrated that depressive symptoms were significantly and negatively related marital satisfaction. Also Casarin, et al., (2022) found a significant association between depression and PTSD symptoms.

Conclusion

The current study findings succeeded in answering the research questions. Nearly two thirds (63%) of the studied women had moderate level of marital satisfaction. Two thirds (66%) of the studied women had severe depressive symptoms. The mean score of PTSD among the studied women was 51.69±16.36. There was a statistically significant negative correlation between PTSD and marital satisfaction. On the other hand, there was a statistically significant positive correlation between PTSD and depressive symptoms. Also, there is a significant negative correlation between marital satisfaction and depressive symptoms.

Recommendation

- Replication of the study should be done using a larger sample in different correctional settings for further confirmation and generalizability of the results.
- Educational programs and psychological counseling should be established for women with hysterectomy to help them cope effectively to prevent developing of psychosocial problems.

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