

Assessment of prevalence, Risk factors and barriers of discussing female sexual dysfunction among women working in Assuit University

Warda Abdel Hafez Ismail¹, Entisar Mohamed Youness² & Tarek Abdel Radi Abdel Slam³

¹ Nursing Specialist in El Maragh School, Egypt.

² Professor of Obstetrics and Gynecological Nursing, Faculty of Nursing, Assuit University, Egypt.

³ Assistant Professor of Obstetrics & Gynecological Medicine, Faculty of Medicine, Assuit University, Egypt.

Abstract

Background: Female sexual dysfunction is a fairly prevalent and generally disregarded problem in the general population. It is a multi-factorial phenomenon. Different personal, medical, obstetrical and environmental factors affect sexual function. **Aims:** Assess the prevalence and risk factors of Female sexual dysfunction and to identify the barriers perceived by women to initiate discussion of sexual dysfunction issues. **Design:** cross-sectional study design. **Subjects:** A stratified random sample consisted of (600) women at different work places in the Assuit university faculties such as (faculty of nursing, Arts, Medicine, Pharmacy, science, etc.,...), the whole number of women in these faculties are very large so, we was chose a stratified random sample about 5 % of each faculty. **Tools:** A structured questionnaire consist of two tools (female history, FSFI) **Results:** Over two thirds of the women in the study had female sexual dysfunction (69.0%). The most risk factors are age, hypertension, DM, FGM, vaginal delivery and operative vaginal delivery. Majority of women (87.83%) felt shame in discussing their sexual problem **Conclusion:** Female sexual dysfunction is extremely common in Assuit university faculties. And there are some risk factors for it as age, DM, hypertension, vaginal delivery. Shame was the first barrier perceived by women in discussing this problem with Health Care providers. **Recommendations:** Special attention is needed by the health care providers for pre-marital counseling about sexual health.

Keyword: Female sexual dysfunction, Prevalence & Risk factors.

Introduction

Sexual functioning, sexual pleasure and intimacy can have a positive impact on relationships and an individual's physical and mental well-being (Schnitzler et al., 2023)

Sexual health is a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity (Mohammed et al., 2020)

Female sexual dysfunction (FSD) is a continuum of psychological and organic disorders focused on sexual desire with interrelated problems of arousal, orgasm, and sexual pain that impairs quality of life for many women (Franjić, 2019)

FSD can manifest as an arousal, orgasmic or pain disorder that can impact on body image, self-esteem and intimate relationships and therefore has an impact on quality of life for both the patient and her partner. (Martin et al., 2022)

FSD is classified as having disturbances of desire, such as hypoactive sexual desire disorders, sexual aversion disorders, sexual arousal disorders, orgasmic disorders, and disorders of sexual pain, such as dyspareunia and vaginismus (Kandil et al., 2023)

The worldwide prevalence of FSD is estimated to be 41% in reproductive women. In the USA, 43% of women had sexual concerns, (Alselaiti et al., 2022)

Epidemiological data have estimated that prevalence of FSD is 30–63 %.(Madbouly et. al., 2021)

According to reports, prevalence rates for FSD ranging from 43 to 69% in Egyptian women. (Mamdouh et al., 2017)

Sexual dysfunction in women is caused by anatomical, physiological, Medical, and psychological variables and may have a detrimental impact on one's quality of life and interpersonal interactions. (Zong et al, 2022). Age, general stress, urinary tract issues, including incontinence, depression, polypharmacy, poor diet, excessive levels of stress, health issues, and relationship issues and diminishing income have all been identified as specific risk factors for female sex dysfunction. (Dabian et al., 2023)

Physical, psychological, and sexual difficulties associated with FSD are largely caused by gynaecological factors. Due to changes in or the loss of Psychological markers of femininity, women who have had one gynecological surgery may feel less sexually attracted to men. Reduced sexual activity, desire, and satisfaction may result from hormonal changes during pregnancy or the postpartum period, which may be prolonged by lactation. (Ouyaba & Kesim, 2023)

Female had a chronic ailment (heart disease, diabetes, neurologic disease, hypertension, renal failure)

that affected her sexual function. (Abou Khodair et al, 2019)

FSD is a common, under investigated health problem. Furthermore, many women are hesitant to discuss their sexuality and sexual health issues with their health-care providers. The situation is even more difficult in Eastern countries where it is considered as a taboo. (Madbouly et. al, 2021)

Women have difficulty discussing sexual health with their health providers due to certain barriers, as, shame, embarrassment, and fear of possible negative judgment by the provider may be major patient barriers for discussions about sexual health. Women are not supposed to comment on their sexual desire or dissatisfaction because Islam forbids sexual disclosure unless for medical purposes. Patients may also feel that sexuality is not an issue to be brought up during a medical consultation because their provider may not have time, interest, or competence to discuss issues related to sexual health. Patients may also mistakenly believe that there are no solutions for their sexual dysfunction and hence see no point in bringing it up during a medical consultation (Ying et. al, 2023)

Management of female sexual dysfunction is complicated by the absence of a clear causative element, a shortage of effective medications, a lack of knowledge among physicians regarding the treatments that are available, the overlap between different types of dysfunction, and the lack of specialists in the field. (Kandil et al, 2023).

Nursing role is in an appropriate position to address women's sexual concerns and help them fulfill their sexual needs. 42% of women with sexual difficulties seek help from their gynecologists. All gynecologists should be able to take a sexual history; recognize, counsel and plan initial management for sexual difficulties; and know when to refer a case with any sexual problem (Sue, 2017).

Educating female about normal physiological response and anatomy may be necessary. Physiological changes related to ageing and implicated medical conditions should be explained. Lifestyle modifications, non-pharmacological therapies and psychosexual counseling may be considered first-line intervention in cases where an etiology is not physical. Review medications and, in conjunction with the GP/prescriber, consider alternatives or reduced doses of medications implicated in FSD. Treatment of underlying gynecological and medical condition. (Kershaw & Jha, 2021)

Significance of the study

Sexual health is a fundamental human right according to the World Health Organization. However, female sexual dysfunction (FSD) has not received adequate

attention as a public health problem. (Maya et al, 2023)

FSD was a significant health problem in our nation that requires further investigation and an evaluation of risk factors. And ranging from (52% to 62%) (Abou Khodair et al, 2019)

Aims of the study

This Study aimed to

- Assess the prevalence and risk factors of Female sexual dysfunction among women working in Assuit University.
- Identify the barriers perceived by women to initiate discussion of sexual dysfunction issues with their health care.

Research questions.

- To what extent are women having sexual dysfunction?
- What are risk factors that cause female sexual dysfunction?
- What are barriers that face women to initiate discussion of their sexual dysfunction?

Subjects & Method

Research design:

Descriptive-Cross sectional design was used in the current study.

Setting

This study was conducted at different work places in the Assuit university faculties according writing consent from manger of each faculty such as (faculty of Nursing, faculty of Education, faculty of Low, Medicine, Pharmacy, science, etc.,-)

Sample:

The type of sample was a stratified random sample included any married women (From 18 year to 55 year) who working in the determined places. Assuit University consists of 18 Faculties that have a large number of female working in it. So the sample was representing the figure in Assuit city. According to the sample size equation, the sample size for the study was calculated using the following formula:

$$(1 + x)^n N = \{Z^2(1 - P)P\}/D^2$$

Where: N: minimum sample size required, Z: standard normal variance=1.96 at 95% confidence interval, D: Absolute standard error that can be tolerated =0.05 and P: prevalence= 50% (based on previous studies in Iran, Saudi Arabia, Turkey and Egypt) sample of this study was 586 and raised to 600 for accuracy. They was chosen by selecting the women from each faculty .the whole number of women in these faculties are very large so, about 5 % of each faculty to be representing of the female in the University

Inclusion criteria:

Married women aged from (18 to 55 year).

Exclusion criteria:

1. Single women
2. Women refuse participation.

Tools of data collection

Interview questionnaire form which developed by the researcher after reviewing the relevant literature it included two tools

Tool 1: Included three parts, **Part 1:** Consist of three sections

Section(1): Included socio demographic characteristics of women such as name, age, education level, occupation, duration of marriage, condition of housing such as separated bed room, presence of special bath room

Section (2): Past medical history such as previous hospitalization, history of any operation as chest, abdominal, vaginal operation, and presence of any diseases such as diabetes mellitus, hypertension, heart diseases, urinary tract disease, anemia, cancer and psychiatric diseases. Any drugs were taking.

Section (3): Past gynecological and obstetrical history such as circumcision procedure, menstrual irregularity, obstetric trauma, infertility, previous labor and mod of delivery.

Part 2: Data related to husband such as name, age, education level, occupation, male dysfunction such as erectile dysfunction, early ejaculation, delayed ejaculation, retrospective ejaculation.

Part (3): Question about women`s barriers about sexual problems, shame, fear from negative view Social barriers.

Tool (2) Female Sexual Function index (FSFI; Rosen et al., 2000)

It is self-report test with 19 items. The investigator translated it in to Arabic the FSFI is a valid and accurate measure of the female sexual function during the previous 4 weeks. This questionnaire comprises of 19 questions that evaluate six different domains of sexual function including desire, arousal, lubrication, orgasm, satisfaction and pain. The answer is rated on a 5-point Likert scale between 0 and 5. Each domain score was obtained by adding individual items of the domain and multiplying this result by the domain factor (i.e. desire, 0.6; arousal and lubrication, 0.3; orgasm, satisfaction and pain, 0.4).

The FSFI total score is determined by the sum of the six domains. The score varies from 2 to 36, where higher scores are associated with the lower degree of SD. Since a total score of 26.5 is the cutoff point for women with SD, the present study considered patients that were scored 26.5 and under as presenting FSD.

Procedure:**Phase 1: preparatory phase:**

It was concerned with construction and preparation of data collection tools. Prepared formal requests to the directors of the study settings. The purpose and

the nature of the study were explained to gain their acceptance and support. This stage took about 2 months duration.

Phase 2: Implementation phase:

Data was collected by using a structured self-administrative questionnaire. All questionnaire items were explained by the investigator sufficiently. Data of the current study was collected over a period of 6 months from the beginning of October/2015; till the ending of March/2016, the tool was filled completed by women in one session through three days per week from the beginning of the study. And each interview with women took about 15- 20 minutes to make understanding of the tool items.

- In which the investigator interviewed the woman, introduced herself, briefly and explain the nature and purpose of the study and assured that there were no risks or cost in participation, voluntary participation was be a allowed and confidentiality of each woman who agreed to participate to fill the questionnaire.
- The investigator was took the woman's personal history by asking about age, marital status, housing condition, and past history as medical, menstrual, obstetrical and surgical history.
- After had taking full history from the woman, the investigator was recognize if the case included in the study or not.
- Oral consent was taken before being involved in the study.
- The FSFI was translated into Arabic language and distributed to approval of five experts in field of obstetric and Gynecological Medical or Nursing related staff and in addition the questionnaire was revised by a professor of psychology at the faculty of Education department of psychology then, their opinion was taken into considerate and the appropriate modification was done to the tool.
- The Arabic version of the FSFI questionnaire and a cover letter explaining the objectives of the study were distributed to each woman.
- Participants were asked to complete the anonymous questionnaire privately with a full explanation of any question from them about the questionnaire and many interpretations were done according to their question.
- After filling the questionnaire, all participants' women were given brochure that contains knowledge about how to improve their sexual life in an Arabic simple language, the brochure contained items like, definition of female sexual dysfunction, prevalence, risk factors, and how to improve sexual function and some foods can enhance sexual function.

Pilot study

A pilot study was conducted on first (60) women of the sample to identify any specific issues with the tools applicability, feasibility, and clarity of the assertions. Because the assessment form was left unchanged, participants in the pilot study were included in the study.

Ethical consideration:

The research proposal was approved from Ethics Review Committee at the Assuit University; Faculty of Nursing. Women were not at risk when the research was applied. The study followed to accepted standards of ethics for clinical research. Oral consent was obtained from each participant after explain the nature and purpose of the study. Confidentiality and anonymity was assured. Every participant was free to

leave the study whenever they wanted, without having to give a reason. Women's privacy was taken in to account when data was collected.

Statistical Design:

Using the SPSS statistical analysis software, data was gathered, coded, tabulated, and analyzed. Calculating percentages, frequencies, mean and standard deviations, Chi Square (X²) and T. test were done using descriptive statistics to determine whether there were statistical significant differences. Multiple regression (univariate & multivariate) tests were used to assess the most predictable risk factor of FSD. When the P-value was less than 0.05, it was regarded significant, and when it was less than or equal to 0.01 it become highly significant.

Results**Table (1): Distribution of the studied women according to their personal characteristics**

Item	No.(600)	%
Women`s age, Mean \pmSD	36.5 \pm 8.3	
19<30 years	136	22.7
30<40 years	247	41.2
40 -55years	217	36.2
Education level		
Secondary	149	24.8
Institute	97	16.2
University and post graduate	354	59.0
Duration of marriage, Mean \pm SD	13.5 \pm 9.2	
<5 years	93	15.5
5<10 years	215	35.8
10<15 years	83	13.8
15-20 years	57	9.5
More than 20 years	152	25.3
Separated bedroom		
Yes	552	92.0
No	48	8.0
Presence of private bathroom		
Yes	592	98.7
No	8	1.3
Husband Age, Mean \pm SD	41.0 \pm 8.8	
24<35 years	159	26.5
35<45 years	222	37.0
45<55 years	166	27.7
55 and more years	53	8.8
Husband education level		
Secondary	167	27.8
Institute	357	59.5
University and post graduate	76	12.7

Table (2): Distribution of the studied women according to their medical and surgical history

Item	No. (600)	%
Hypertension	183	30.5
Abdominal operations	176	29.33
Diagnosed anemia	137	22.83
Renal disease	105	17.50
Diabetes militates	66	11.00
Vaginal operations	39	6.50
Heart diseases	16	2.67
Cancer	11	1.83
Psychiatric diseases	11	1.83
Receive Anti depressant drug	5	0.83
Receive Anti hypertension drug	87	14.50

* More than one medical disorder was checked

Table (3): Distribution of the studied women according to their Obstetrical Profile

Item	No.(600)	%
Presence of pregnancy during conducting this study		
Yes	81	13.50
No	519	86.50
Menstrual irregularity		
Regular	389	74.95
Irregular	130	25.05
History of obstetric trauma		
Yes	192	32.00
No	408	68.00
Repaired		
Yes	125	65.10
No	67	34.90
Mode of delivery		
Vaginal delivery	225	41.13
Cesarean section	216	39.49
Instrumental vaginal delivery	20	3.66
Vaginal delivery & Cesarean section	50	9.14
Vaginal delivery & Instrumental vaginal delivery	29	5.30
Cesarean section & Instrumental vaginal delivery	3	0.55
Vaginal delivery & Cesarean section & Instrumental vaginal delivery	4	0.73
Infertility		
Yes	15	2.50
No	585	97.50
Reason of infertility		
Female factor	9	60.00
Male factor	3	20.00
Both	3	20.00

Table (4): Distribution of the studied women according to their male partner status

Item	No.(600)	%
Male dysfunction		
Yes	90	15.0
No	510	85.0
Erectile dysfunction	25	27.8
Early ejaculation	55	61.1
Delayed ejaculation	21	23.3
Retrospective ejaculation	2	2.2

* More than one male sexual dysfunction was present

Table (5): Distribution of the studied women according to their barriers in discussing the sexual problems with health care provider

Item	No.(600)	%
Barriers in discussing the sexual problems with nurses or doctors		
Shame	527	87.83
Fear from negative view	281	46.83
Fear from husband	199	33.17
Customs and traditional	186	31.00
Religious causes	130	21.67

* More than one barrier allowed

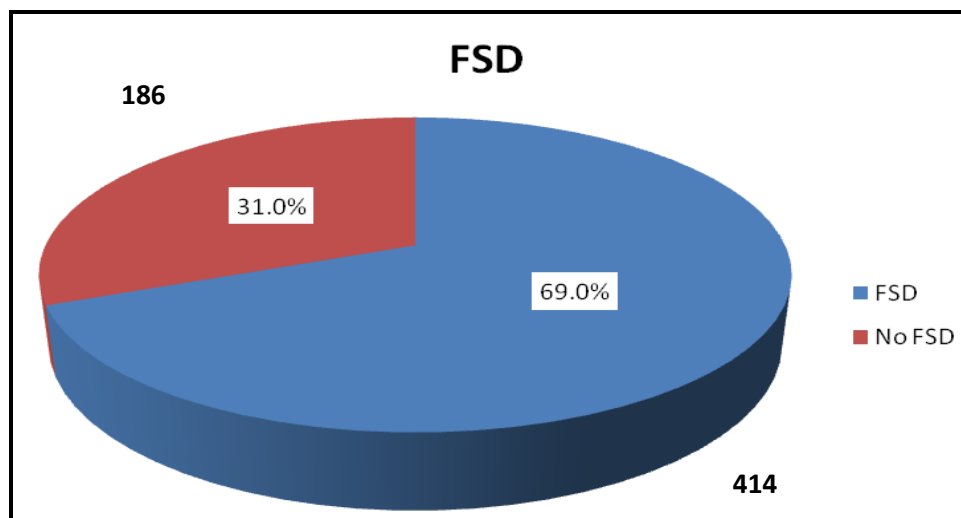


Figure (1): Distribution of the studied women according to prevalence of FSD

Table (6): Distribution of the studied women according to the prevalence of FSFI sub scales

	Total		No FSD		FSD		P. value
	No.	%	No.	%	No.	%	
Desire	478	79.7	99	20.7	379	79.3	<0.001**
Arousal	540	90.0	133	24.6	407	75.4	<0.001**
Lubrication	532	88.7	131	24.6	401	75.4	<0.001**
Orgasm	518	86.3	109	21.0	409	79.0	<0.001**
Satisfaction	368	61.3	11	3.0	357	97.0	<0.001**
Pain	527	87.8	127	24.1	400	75.9	<0.001**

* Chi Square Test.

**Statistically significant differences with all sub scales items

Table (7): Distribution of the studied women according to the presence of FSD and their socio-personal characteristics

Item	FSD (n=414)		No FSD (n=186)		P. value
	No.	%	No.	%	
Age					
19<30 years	65	15.7	71	38.2	<0.001**
30<40 years	159	38.4	88	47.3	
40-55 years	190	45.9	27	14.5	
Education level					
Secondary	123	29.7	26	14.0	<0.001**
Institute	90	21.7	7	3.8	
University and post graduate	201	48.6	153	82.3	
Duration of marriage					
<5 years	41	9.9	52	28.0	<0.001**
5<10 years	135	32.6	80	43.0	
10<15 years	59	14.3	24	12.9	
15-20 years	44	10.6	13	7.0	
More than 20 years	135	32.6	17	9.1	

Item	FSD (n=414)		No FSD (n=186)		P. value
	No.	%	No.	%	
Separated bedroom					
Yes	374	90.3	178	95.7	0.025*
No	40	9.7	8	4.3	
Presence of private bathroom					
Yes	406	98.1	186	100.0	0.045*
No	8	1.9	0	0.0	
Husband age					
24<35 years	77	18.6	82	44.1	<0.001**
35< 45 years	148	35.7	74	39.8	
45<55 years	142	34.3	24	12.9	
55 and more years	47	11.4	6	3.2	
Husband education level					
Secondary	131	31.6	36	19.4	<0.001**
Institute	215	51.9	142	76.3	
University and post graduate	68	16.4	8	4.3	

Used Chi Square Test

*statistically significant differences

Table (8): Univariate and multivariate analysis to determine the most personal risk factors of FSD

Item	Univariate analysis		Multivariate analysis	
	Odds ratio (95%CI)	P. value	Odds ratio (95%CI)	P. value
Age				
19<30 years	1(reference)		1(reference)	
30<40 years	1.97(1.29-1.29)	0.002**	1.33(0.73-2.41)	0.353
40 -55years	7.69(4.54-4.54)	<0.001**	3.2(1.02-10.49)	0.049*
Education level				
Secondary	1(reference)		1(reference)	
Institute	2.72(1.13-1.13)	0.026*	2.82(1.13-7.07)	0.027*
University and post graduate	0.28(0.17-0.17)	<0.001**	0.55(0.3-0.99)	0.049*
Duration of marriage				
<5 years	1(reference)		1(reference)	
5<10 years	2.14(1.31-1.31)	0.003**	1.6(0.88-2.91)	0.126
10<15 years	3.12(1.67-1.67)	<0.001**	1.35(0.59-3.12)	0.481
15-20 years	4.29(2.04-2.04)	0.001**	0.81(0.26-2.57)	0.726
More than 20 years	10.07(5.26-5.26)	<0.001**	0.96(0.26-3.57)	0.952
Separated bedroom				
Yes	1(reference)		1(reference)	
No	2.38(1.09-1.09)	0.029*	2.49(1.07-5.79)	0.034*
Presence of private bathroom				
Yes	1(reference)		1(reference)	
No	7.79(0.45-0.45)	0.159	-	-
Husband age				
24<35 years	1(reference)		1(reference)	
35< 45 years	2.13(1.41-1.41)	0.001**	1.37(0.76-2.47)	0.289
45<55 years	6.3(3.69-3.69)	<0.001**	1.94(0.71-5.32)	0.198
55 and more years	8.34(3.37-3.37)	<0.001**	2.41(0.57-10.15)	0.230
Husband education level				
Secondary	1(reference)		1(reference)	
Institute	0.42(0.27-0.27)	<0.001**	0.78(0.45-1.34)	0.366
University and post graduate	2.34(1.03-1.03)	0.043*	1.57(0.65-3.83)	0.317

*Statistically significant differences

Table (9): Univariate and multivariate analysis to determine the most medical risk factors of FSD

	Univariate analysis		Multivariate analysis	
	Odds ratio (95%CI)	P. value	Odds ratio (95%CI)	P. value
Abdominal operation				
No	1(reference)		1(reference)	
Yes	2.23(1.46-3.39)	<0.001**	2.17(1.38-3.41)	0.001**
Vaginal operation				
No	1(reference)		1(reference)	
Yes	4.2(1.47-12)	0.007**	2.36(0.78-7.11)	0.127
Diabetes militates				
No	1(reference)		1(reference)	
Yes	8.01(2.87-22.38)	<0.001**	5.39(1.87-15.55)	0.002**
Hypertension				
No	1(reference)		1(reference)	
Yes	7.2(3.27-15.88)	<0.001**	5.81(2.55-13.23)	<0.001**
Heart diseases				
No	1(reference)		1(reference)	
Yes	6.95(0.91-53.05)	0.061	2.31(0.27-19.79)	0.446
Urinary tract disease				
No	1(reference)		1(reference)	
Yes	3.17(1.78-5.64)	<0.001**	3.07(1.68-5.6)	<0.001**
Anemia				
No	1(reference)		1(reference)	
Yes	1.17(0.77-1.78)	0.466	1.06(0.67-1.68)	0.790
Cancer				
No	1(reference)		1(reference)	
Yes	2.04(0.44-9.56)	0.363	1.6(0.31-8.27)	0.576
Psychiatric diseases				
No	1(reference)		1(reference)	
Yes	1.81(0.38-8.62)	0.455	1.27(0.22-7.51)	0.789

*Statistically significant differences

Table (10): The most risk factors of female sexual dysfunction

Item	Univariate analysis		Multivariate analysis	
	Odds ratio (95%CI)	P. value	Odds ratio (95%CI)	P. value
Age group from 40-55 years	7.69(4.54-4.54)	<0.001**	3.2(1.02-10.49)	0.049*
Hypertension	7.2(3.27-15.88)	<0.001**	5.81(2.55-13.23)	<0.001**
Diabetes militates	8.01(2.87-22.38)	<0.001**	5.39(1.87-15.55)	0.002**
Women with circumcision	6.17(3.27-11.61)	<0.001**	4.22(2.11-8.77)	<0.001**
Severe grade of circumcision	4.22(2.78-6.41)	<0.001**	4.68(2.83-7.73)	<0.001**
Presence of pregnancy	3.73(2.17-6.43)	<0.001**	3.22(1.8-5.73)	<0.001**
Vaginal delivery	2.39(1.68-3.42)	<0.001**	2.75(1.6-4.72)	<0.001**
Instrumental vaginal delivery	2.52(1.21-5.25)	0.014*	2.9(1.13-7.43)	0.026*

*Statistically significant differences

Table (1): Shows that age of women ranged between 19-55 years old with mean age 36.5±8.3 years, more than one third of their ages range from 30 <40 years (41.2%). As regard to women's education more than half of them had university education (59%). Regarding to duration of marriage greater than a third of women had duration of marriage range from 5<10 years (35.8%). Table also shows husbands' mean age (41.0±8.8 years), more than half of them had institute education (59.5%)

Table (2): Demonstrates distribution of women according to their medical history. More than one

third of them had hypertension (30.5%), less than one third had previous abdominal operation (29.33%) for a lot of medical indications, (11%) of them was diabetic, (17.50%) had renal diseases and anemia was present in (22%) of the studied women.

Table (3): Clarifies the distribution of the studied women according to their obstetrical history. It is obvious that nearly one third (32%) of studied women have obstetric trauma, nearly two thirds from them (65.10%) repaired this trauma; more than one third of them (34.90%) not repair this trauma. Also this table shows that less than half of them (41.13%) had

vaginal delivery, more than one third of them had (39.49%) cesarean section.

Table (4): Presents distribution of the studied women according to their male partner status, (15%) of their husbands had male dysfunction and more than half of them suffered from early ejaculation (61.1%).

Table (5): Shows the distribution of the studied women according to their barriers in discussing sexual problems with nurse or doctors. Majority of women (87.83%) felt shame in discussing their sexual problem, nearly half of them (46.83%) had fear from negative view, nearly one third of them (33.17%) had fear from husband in discussing their sexual problems, and less than one third of them (31%) did not discuss their sexual problems because of customs and traditional beliefs.

Figure (1): Illustrates that **69%** of the studied women have sexual dysfunction.

Table (6): Clarifies that vast majority of women had dissatisfaction (97%), majority of women had low desire (79.3%), about three quarters of women had orgasm disorder (79%), more than two third of women had pain during sex (75.9%), arousal disorder and lubrication disorder (75.4%). Also this table shows there is significant difference with all sub scales items.

Table (7): Shows the comparison between women had FSD and non-FSD women reflected highly statistically significant difference between two groups regarding age, educational level, duration of marriage, husband age, and husband education level, Separated bedroom and Presence of private bathroom $P < 0.001^{**}$

Table (8): Presents that FSD increased as age increased and the most age group which had FSD was (40-55) and there is statistically significant predictor ($p < 0.01$) after multivariate analysis, age group (40-55) still emerged $P = 0.049^*$. FSD increase with husband age increase and the most women had FSD their husband age 55 year and more and there is statistically significant predictor ($p < 0.001$). FSD decrease with increase educational level and the prevalence of FSD in university and post graduate women less than in institute women. FSD increased with increased duration of marriage and the FSD present in duration more than 20 years and there is statistically significant predictor ($p < 0.001$). Also this table shows statistically significant predictor with separated bed room $p = 0.029^*$.

Then, the most predictor socio-demographic risk factor for FSD is the maternal age group of 40-55 years ($p = 0.049^*$)

Table (9): This table illustrates that woman who has DM high risk for FSD more than woman not has DM by **8.01** times and still emerged after multivariate

analysis. And there are statistically significant predictor $P = 0.002^{**}$

Woman who has hypertension high risk for FSD more than woman not has hypertension by **7.2** times and still emerged after multivariate analysis. And there is statistically significant predictor $P < 0.001^{**}$. Also this table shows that woman who has heart disease high risk for FSD more than woman not has heart disease by **6.95** times. Shows that woman who has urinary tract disease high risk for FSD more than woman not has urinary tract diseases by **3.17** times and still emerged after multivariate analysis. And there is a statistically significant predictor $P < 0.001^{**}$. Table shows that woman who has cancer high risk for FSD more than woman not has cancer by **2.04**. Table shows that woman who has psychiatric disease high risk for FSD more than woman not has psychiatric disease by **1.81** times. Then the most predictor medical risk factor for FSD is the presence of hypertension ($P < 0.001^{**}$.)

Table (10): Shows that the most risk factors of female sexual dysfunction are age, hypertension disease, diabetes mellitus, and female genital mutilation, severe grade of circumcision, pregnancy and vaginal delivery especially

Discussion

Expressions of sexuality and intimacy are some of the most complex aspects of human behavior, and sexual function is an important component of quality of life. Sexual dysfunction is more common in women than men, yet it is less frequently investigated. Left untreated, sexual problems are associated with decreased quality of life, depression and interpersonal conflicts. (Kershaw & Jha, 2022)

In the present study more than two thirds (69.0%) of studied women had sexual dysfunction, this result agree with (Ismail et al, 2021) who had a cross sectional hospital-based study carried out at the outpatient clinics of Dermatology and Gynecology departments at Assiut University Hospital, which included 583 women aged between 18 and 55 years who had visited the hospital for routine check-up who report that the prevalence of FSD 67.8% in Assiut women and agree with (Madbouly et al., 2021) who has a cross sectional clinical based survey involved Saudi women attending primary care and gynecology clinics in a teaching hospital in Riyadh. Who show that (60%) of Saudi women had FSD.

The present study, revealed a highly statistically significant differences between the two groups regarding age ($P < 0.001$). Meaning that there is positive correlation between women' age and FSD. The most age group which had FSD was (40-55) and still emerged ($P = 0.049^*$) after multivariate analysis. These result were agreed with (Madbouly et al.,

2021) who reported that age greater than 40 years increased FSD risk by about 5 times and there was a statistically Significant positive relationship between female sexual issues and women age ($P=0.04$) and that disagree with (Saotome et al., 2018) who show that age was not a risk factor in the sexual function of women ($P = 0.13$) who study a cross-sectional descriptive study of 127 couples who delivered at a hospital in Japan. Show no significant relationship between female sexual issues and women age.

The current study revealed significant variations according to husband's age as reported by their wives, meaning that while husband's age increases their husband's sexual function decrease and that effect on her sexual satisfaction and that agrees with (Ying, et al., 2023), who conducted a cross sectional study on 429 women at six months postpartum in four primary care clinics with family medicine specialists in Kota Bharu, Kelantan, Malaysia. There show significant relationship between female sexual issues and husband's age.

The present study showed also a highly significant difference $p<0.001^{**}$ between diabetes mellitus and the prevalence of FSD. Meaning that woman who has DM is being at higher risk for FSD more than women didn't have DM by (8.01 times) and still emerged after multivariate analysis. That agree with (Alshehri et al., 2022) who find that there are statistically significant between the diabetes and frequency of sexual dysfunction ($P = 0.002^{**}$), who had a cross sectional study on 253 female Prince Mansour Diabetes Center or AlHada Armed Forces Hospital, in Taif, Saudi Arabia. In contrast to that the present study finding was not agree with (Copeland et al., 2012) who do research on 486 middle aged and older California women with diabetes mellitus regarding sexual function. That shows there is no statistically significant association between the diabetes and FSD.

In present study greater than a third of the women that were studied had hypertension that nearly similar to (Elhuda et al., 2016) who study prevalence of hypertension among women with sexual dysfunction In, Rural Sudan.

The present study showed that woman who has hypertension were at higher risk for FSD more than woman doesn't has hypertension by 7.2 times and still emerged after multivariate analysis. And there is statistically significant predictor $P<0.001^{**}$ and hypertension decrease sexual dysfunction that agreed with. (Lunelli et al., 2018) Who show that hypertensive women had 1.67 more chances of showing the dysfunction than women with normal blood pressure that mean the sexual dysfunction prevalence is higher in hypertensive than in normotensive women. And that not agree with

(Spatz, et al., 2013) one study showed that the prevalence of FSD in hypertensive women was similar to those in the normotensive group and hypertension not causes FSD.

The current study found a significant relationship between FGM and female sexual function. Meaning that woman who has history of circumcision is at high risk for FSD more than uncircumcised women by 6.17 times and still emerged after multivariate analysis and there are a statistically significant predictor $P < 0.001^{**}$. And that agree with (Abdel Fadel, 2015) in Egypt was adopted to assess factors associated with female sexual problems on 361 women aged from 18-42 years old who attended gynecological and family planning outpatient clinic at Cairo University hospital, Egypt., Most of his sample was circumcised moreover, these result were agreed with (El Sherbini & Abdou, 2019) who found that women sexual dysfunction was higher among women who had female genital mutilation. According to multivariate analysis FSD increase when performed by dayas than nurse and doctors and woman who has sever grade of circumcision is at high risk factor than mild degree by 4, 22 times and still emerged after multivariate analysis and there are a statistically significant predictor $P < 0.001^{**}$. That not agree with ((Ismail et al., 2021) who show that circumcision had no significant effect on sexual function of women.

In the present study there was statistically significant difference between women who had sexual dysfunction and normal women regarding to presence of pregnancy. Meaning that pregnant woman is at high risk for FSD more than unpregnant woman by 3.73 times and still emerged after multivariate analysis. And there is a statistically significant predictor

$P < 0.001^{**}$ that agree with (Ouyaba & Kesim, 2023) who showed that sexual functions are negatively affected during pregnancy nearly 70% of pregnant women were at risk for FSD.

There was statistically significant difference according to mode of delivery and sexual dysfunction. Meaning, that mode of delivery affect on female sexual dysfunction and according to multivariate analysis operative vaginal delivery the most mode delivery that leads to by 2.52 times from vaginal and section delivery. Cesarean section is the fewer modes of delivery leads to FSD, 0.64. Instrumental vaginal delivery, vaginal delivery still emerged after multivariate analysis and there is a statistically significant predictor with vaginal and section delivery. That agreed with the study by (El Sherbini & Abdou, 2019) who carried out cross sectional descriptive study to assess Prevalence and Risk Factors of Sexual Dysfunction among Married Women Attending Family Health Centers in

Alexandria, who show that the mode of delivery is significantly associated with FSD. And that disagree with (Ying et. al, 2023) who had across-sectional study was conducted among 429 women in Malaysia; they showed that the mode of delivery was not significantly associated with FSD.

Male sexual dysfunction, including early ejaculation, delayed ejaculation, and erectile dysfunction, were significant risk factors for female sexual dysfunction, which is consistent with (Starowicz & Czajkowska 2022) who conduct a cross section study on 384 via computer-assisted web interviewing. That report male sexual dysfunction is a significant risk factor for female sexual dysfunction.

At the present study there are many barriers prevent women from discuss their sexual problem with health care providers as Shame and embarrassment, Fear from negative view, Fear from husband, Customers and traditional and religious causes but little previous studies discuss that such as (Ismail et al., 2017) they show 86.2% of studied women had sexual dysfunction not seek medical help. Their main reason was that "It is an embarrassing topic". In a conservative community such as Lower Egypt, and that agree with (Mamdouh et al., 2017) who study 693 women (17-54 years old) in Alexandria. They found in their studied women the most barriers were shame and embarrassment,

Conclusion

The current study concluded that female sexual dysfunction is highly prevalent in our community; more than two thirds of studied women had sexual dysfunction and the most risk factors are women age, hypertension, DM, FGM, vaginal delivery and instrumental vaginal delivery, Majority of studied women felt shame in discussing their sexual problem.

Recommendations

Based on the results of this study it was recommended that:

- Awareness programs should be arranged to improve women' knowledge and information about sexual health in Assuit.
- Special attention is needed by the health care providers for pre marital counseling about sexual health.
- More researchers are needed in improve and management female sexual dysfunction.

Acknowledgement: Especial thank for all women who participated in the study

References

- **AbdEl Fadeel, N., (2015):** Factors Associated with Female Sexual Problems among Women attending

Cairo University Hospital, Journal of Biology, Agriculture and Healthcare, 14 (5),35-41.

- **Abou Khodair, H., Abo Al-Wafa, H. & Mostafa, S (2018):** Prevalence of female sexual dysfunction in Damietta governorate, The Egyptian Journal of Hospital Medicine,74(1),55-62.
- **Alselaity, M., Saleh, M., Muhammed, H., Attallah, E., & Dayoub, N., (2022):** Prevalence of Female Sexual Dysfunction and Barriers to Seeking Primary Health Care Treatment in an Arab Male-Centered Regime, Journal of Medical Sciences, 10 (5), 493-497.
- **Alshehri, K., Althobaiti, R., Alqurashi, A., Algethami, N. & Alswat, K., (2022):** Prevalence of Sexual Dysfunction in Women with Type 1, 2 Diabetes and Thyroid Disorder: A Cross-Sectional Study in Taif City, Saudi Arabia. Int J Womens Health, (17)14, 385-394.
- **Copeland, K., Brown, J., Creasman, J., Van, S., Subak, L., Thom, D., Ferrara, A. & Huang, A.(2012):** Diabetes mellitus and sexual function in middle-aged and older women. J Obstet Gynecol. 120(2):331-340
- **Dabian, B., Abdelgalil, M. & Hamza,M.(2023):** Sexual Dysfunction in Infertile Women With PCOS Undergoing Fertility Treatment, Evidence Based Women's Health Journal (13)1.
- **El Sherbini, H., & Abdou, R., (2019):** Prevalence and Risk Factors of Sexual Dysfunction among Married Women Attending Family Health Centers in Alexandria, Alexandria Scientific Nursing Journal (21)1, 1-24.
- **Elhuda, D., Mohammed, R. & Ahmed, M., (2016):** Hypertension among Women In Tiarira Madain, Rural Sudan: Prevalence, International Journal of Medicine & Health Research, 2(2).1-10.
- **Franjić. S., (2019):** Female Sexual Dysfunction. Int J Reprod Med Sex Health, (1) 24-29.
- **Ismail, A., Abdel-Azim, E., Saleh, A., Mohamed, A., Yosef, H. & Abbas, M. (2021):** A new grading system for female sexual dysfunction based on the female sexual function index in Egyptian women: a cross-sectional study. Afr Health Sci, 21(2):835-841.
- **Kandil, A., Nasar, A. & Mohamed, D., (2023):** Management of Female Sexual Dysfunction: Review Article, The Egyptian Journal of Hospital Medicine, 91(1), 4712-4717.
- **Kershaw V, & Jha S. (2022):** Female sexual dysfunction, Royal College of Obstetricians and Gynecologists, (24)12, 1-22.
- **Lunelli, R., Irigoyen, M. & Goldmeier, S., (2018):** Hypertension as a risk factor for female sexual dysfunction, Rev Bras Enferm, 71(5):2477-2482.

- **Madbouly, K., Al-Anazi, M., Aljarbou, A., Almannie, R., Habous, M., & Binsaleh, S., (2021):** Prevalence and Predictive Factors of Female Sexual Dysfunction in a Sample of Saudi Women, *Sexual Medicine journal* (9)1, 100277.
- **Mamdouh, H., Abdou, A., Kharboush, I. & Shama, M., (2017):** Prevalence and characteristics of female sexual dysfunction among a sample of Egyptian women ,*American Journal of Research Communication*,(5)5,62-74.
- **Martin, R., Renouf, T., Rigby, J., Hafeez, S., Kumar, P., Cruickshank, S. & He melri jck, M., (2022):**Female sexual function in bladder cancer :A review of the evidence, *National Library of Medicine*,4(1), 5-23.
- **Maya, T., Boamah, O., Agyabeng, K., Srofenyoh, E., Mumuni, K. & Samba, A., (2023)** Determinants of sexual dysfunction in pregnancy in a large tertiary hospital in Ghana. *PLoS journal*, 18 (7).
- **Mohammed, M., El Gelany, S., Goma, K.& Hassan, H., (2020):** Perceived barriers to accessing sexual and reproductive health services among educated young women in Egypt, *Original Article Journal*, (1)10, 324-332.
- **Ouyaba, A. & Kesim, S., (2023):**The prevalence of sexual dysfunctions in pregnant women and the correlated factors: a systematic review and meta-analysis, *The Journal of Sexual Medicine*, (20)4,475 487,
- **Rosen, R., Brown, C., Helman, J., Leblum, S., Meston, C., Shabsigh, R., Ferguson, D., & Agostion, R., (2000):** The Female Sexual Function Index (FSFI): A Multidimensional Self-Report Instrument for the Assessment of Female Sexual Function, *Journal of Sex & Marital Therapy*, (26),2,191–208.
- **Saotome, T., Yonezawa, K. & Suganuma, N., (2018):** Sexual dysfunction and satisfaction in Japanese couples during pregnancy and postpartum. *Sex Med*, 6(4): 348–355.
- **Schnitzler, L., Paulus, A., Roberts, T., Evers, S. & Jackson, L., (2023):** Exploring the wider societal impacts of sexual health issues and interventions to build a framework for research and policy: a qualitative study based on in-depth semi-structured interviews with experts in OECD member countries, *National Library of Medicine*, 13(1).
- **Spatz, S., Canavan, E., Desai, M., Krumholz, M. & Lindau, T., (2013):** Sexual activity and function among middle-aged and older men and women with hypertension. *J. Hypertens*, 31(1), 1096–1105.
- **Starowicz, Z., & Czajkowska, K. (2022):** Prevalence of sexual dysfunctions and associated risk factors in Poland. *Archives of Medical Science*, 18(4), 1031-1040.
- **Sue, S., (2017):** Female Sexual Dysfunction: Managing Female Sexual Dysfunction, *J Gynaecol Obstet Midwifery*; 17(1):56-61.
- **Ying, Y., Muhamad, R. &Ahmad, I., (2023):** Sexual dysfunction among six months postpartum women in north-eastern Malaysia, *PLOS Digital Health*, (18)4.
- **Zong, Q. & Anderson, Y., (2022):** Mangment of hypertension with sexual dysfunction, *National Library of Medicine*,58(5),637