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Research Article

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Prevalence and risk factors of female sexual dysfunction in low-risk women attending gynecology clinic at Kasr Alainy hospital: a cross-sectional study

Abstract

Background: In Egypt, research on female sexual dysfunction, a prevalent health issue, is insufficient. Sexual dysfunction can develop later in life following a period of normal sexual functioning, or it can be an issue from the beginning of sexual activity.

Objective: The purpose of this research is to determine the prevalence of female sexual dysfunction and to look into potential risk factors that could lead to it in Egyptian women.

Methodology: This cross-sectional clinic-based survey trial was carried out at the Kasr Alainy gynecology outpatient clinic. 400 women were enrolled in the research after giving their consent, and data was gathered using a structured questionnaire, in which each participant was asked the same questions in the same sequence and manner throughout the interview. The validated Arabic version of the World Health Organization Quality of Life Questionnaire-Brief, which was provided by female investigators, was given to the participants to complete.

Results: Prevalence of female sexual dysfunction was 63% (252 females). Sexual dysfunction was statistically significantly higher among women aged between 35-45 years, with low educational level, no occupation, cases with low family income, residents of rural areas and duration of marriage >10 years. We noted highly statistically significant association between sexual dysfunction and nullipara, previous episiotomy, repeated CS, circumcision and no contraception and vaginitis or cervicitis.

Conclusion: Two thirds of women who visited the Kasr Alainy Hospital's gynecological outpatient clinic had female sexual dysfunction, a serious health issue that affected their quality of life.

Keywords: sexual dysfunction, women, Egyptian

Volume 15 Issue 3 - 2024

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Received: May 12, 2024 | **Published:** May 24, 2024

Introduction

The individual's quality of life can be impacted by the dysfunction of their sexual function, which is a fundamental aspect of existence. FSD, or female sexual dysfunction is a prevalent although often overlooked health concern.[1]

The interruption in the sexual response cycle or the discomfort experienced during sexual activity are the two main characteristics of sexual dysfunction, as per the Diagnostic and Statistical Manual of Mental Disorders. It is described as a disorder of arousal, orgasm, and/or sexual pain that results in personal suffering and negatively impacts relationships with others and one's own quality of life. Sexual dysfunction can develop later in life following a period of normal sexual functioning, or it can be an issue from the beginning of sexual activity.[2]

Many factors, such as age, social class, education, work, mental health, sexual relationships, partner's sexual function, personality features, duration of relationship, fertility issues, medications, chronic diseases, pelvic surgery, cancers, and changes after delivery, can have an impact on a woman's sexual function.[3]

Menstruation, lactation, menopause, hormonal fluctuations, and repeated pregnancies are some additional factors that may have a major impact on women's sexual function. Additionally, research supports the link between SD and mental health issues such anxiety and sadness. They may perform worse overall, have a harder time finding a committed relationship, and be less socially integrated.[1]

There are regional and national differences in the prevalence of FSD and its contributing factors. About 40% of women globally report having sexual issues.[4]

In addition to its significant impact on women's reproductive and general health, female sexual dysfunction also has psychological, social, and financial repercussions for women, their partners, families, and society at large. One of the main reasons for divorce can be sexual issues.[5]

Despite being a prevalent health issue, FSD is still being researched, especially in Eastern communities where discussing it openly is frowned upon. Furthermore, sex and female sexuality are often seen conservatively in Arabic culture.[6]

Egyptian women rarely discuss sexual concerns with doctors because they are embarrassed, they have religious sensitivities, and they are raised in Eastern ideals. FSD is therefore underdiagnosed, undertreated, and understudied in Egypt. Common inquiries concern the prevalence of FSD in Egypt and its precise size. Our goal is to assess the frequency of FSD and its predictors in a group of women who visit gynecological and primary care clinics.

Methodology

Study design and setting

The study is a Cross sectional descriptive study, that was conducted in the outpatient clinics, in Kasr Alainy Hospital, Cairo, Egypt. The catchment areas served by these clinics are urban areas; however primary care patients visiting these clinics come from both rural and urban areas.

Population of study: The target population was non-pregnant married females attending gynecology outpatient clinic in Kasr Alainy hospital. From this target population four hundred (400) married females 18-45 years old, who attended the gynecology outpatient clinics throughout a period of six months and consented to participate during the study period (September 2022 to February 2023), constituted the study population. These 400 women successfully completed the interview.

Sample size estimation: Using PASS program, setting alpha error at 5% and power at 80%, the result from previous study that showed the Prevalence of females with sexual dysfunction among Egyptian society was estimated by Ibrahim et al. 2013 was 52.8% **(7)**, and the sensitivity ranges from 70 to 90%. The minimum needed sample size was estimated as N =382.

Sampling procedure: Every married female aged 18-45 years old and meeting the inclusion criteria of the study attending outpatient clinics was invited to participate.

Inclusion criteria:

a) Non-pregnant, non-lactating married females, aging from 18 to 45 years old.

b) Sexually active within the previous six months

Exclusion criteria:

i. Significant mental illnesses, significant hearing and vision problems, and severe cognitive impairment.

ii. Women who have serious illnesses affecting their daily activities, such as those related to the heart, kidneys, liver, or lungs.

iii. Individuals experiencing vaginal bleeding.

iv. Female patients who have had significant pelvic surgery (cystectomy, hysterectomy).

v. Women who haven't engaged in any sexual activity in the previous six months.

vi. Patients who decline to participate in the study, give a poor reaction, or ask to be removed from it.

Data collection tools: Three tools were used

1) The Arabic version of Female Sexual Function Index

The validated Arabic version[6] of the Female Sexual Function Index (FSFI),[7,8] developed by female investigators, was given to the participants to complete. The FSFI was created as an assessment tool for clinical studies that takes into account the multifaceted aspects of female sexual function throughout the previous 30 days. This 19-item survey gauges women's self-reported sexual function over the previous four weeks.

Desire (2 questions), arousal (4 questions), lubrication (4 questions), orgasm (3 questions), satisfaction (3 questions), and pain (3 questions) make up the six domain framework of the ArFSFI. A score of 0 or 1–5 is assigned to each domain; higher scores correspond to improved sexual function. With a 36-point maximum score, In the English version,[8] the global score that distinguishes between females with and without sexual dysfunction is 26.55, whereas in the Arabic version,[9] it is 28.1. Poorer sexual function is indicated by lower scores on any subscale or the overall FSFI. The female observer would offer assistance to those participants who were unable to read or comprehend the questions.

2) World Health Organization Quality of Life Questionnaire-Brief (WHOQOL- Brief) in Arabic[10]

This questionnaire is a self-assessment scale, consisted of 26 items: (2 items) asking about elder's satisfaction about his quality of life and general health, (7, 6 and 8 items) for domains of physical, psychological health and environmental health respectively and 3 items for social relationships domain. It was adopted by Ohaeri JU et al.,[10] who has translated it into Arabic. The whole group of questions has been related to the past two weeks.

For WHOQOL-BREF, questionnaire uses a Likert scale form five points starting from never (1) to always (5). Domain scores were scaled in a positive direction. For each domain, the mean score was calculated by dividing the sum of item scores by their number. Theses scores were transformed to a percent score. Higher scores signify higher quality of life. The elder' quality of life was considered low if percent scores were <60%, moderate if percent scores were ≥ 60, and relatively high if percent scores were ≥80 %.[11]

Data collection questionnaire

A systematic interview questionnaire will be used to gather data, with each participant answering the same items in the same sequence and manner throughout the interview. Other demographic information included in our assessment questionnaire was the participant's level of education, age, occupation, family income as reported by the International Labor Organization, and living situation (urban or rural). The body mass index (BMI), weight, and height of the participants were noted. The BMI was then computed and divided into four categories: underweight (less than 18.5 kg/m^2), normal weight (18.5 to 24.9), overweight (25 to 29.9), and obese (30 or more).[12]

Marriage duration, menstruation status, and delivery method were among the other factors related to reproductive function that were covered. The evaluation also included gynecological problems such pelvic organ prolapse, urine incontinence, and genitourinary syndrome of menopause, as well as psychiatric diseases and drugs like depression, anxiety, psychosis, history of sexual abuse and domestic violence.

According to the female participant's subjective personal impression, the assessment also took into account how satisfied the partner was with their sexual abilities. Chronic medical diseases, such as diabetes, hypertension, asthma, hypothyroidism, chronic kidney disease, rheumatoid arthritis, and so on, were also considered to be risk factors. Age at recruitment, mode and number of prior births, number of children, previous episiotomy, previous perineal tear, and history of circumcision were among the details gathered using a standardized form.

Preparatory phase

Preparatory phase involved preparation of study questionnaire, legalizations, pilot study and several visits to Gynecology clinics. This phase extended from August 2022 to October 2022. Description of the work and determination of the working days were planned.

Pilot study

A Pilot study was conducted over 1 month, from September 2022 to October 2022. Twenty female subjects attended the Gynecology clinics agreed to participate in the study .The aim was to test the response of the females, beyond the sample size estimated who participated voluntarily and attended Gynaecology outpatient clinics, in order to check the clarity of the questions, estimate the time needed to complete the questionnaire and detecting difficulties that may arise and how to deal with Feedback from the pilot study:

a. No need for addition or modification of questions in the used questionnaires

b. Most of the females were cooperative.

c. The time needed to complete the questionnaire form ranged from 20 to 30 minutes.

Data collection phase

Data were collected during 3 days per week for a period of 4 months, (November 2022 - March 2023), during the working hours of the outpatient clinic from 8 AM -2 PM, with an average of 10 females per day. After taking an oral consent of the females, orientation to the objectives, steps, potential outcome of the study, content of the questionnaires and the confidentially of data collected was done. Since discussing sexual problems can occasionally be humiliating in our conservative community, we have set up a private, comfortable space in the clinic where patients can fill out the questionnaires independently. They were urged to supply data as precisely as clearly as they could because confidentiality was also rigorously adhered to. The interview took twenty to thirty minutes to complete the surveys.

Statistical analysis

The recorded data was analyzed using SPSS Inc.'s statistical program for social sciences, version 20.0 (Chicago, Illinois, USA). Quantitative data was expressed as mean ± SD. The qualitative data were expressed using percentages and frequencies. The independent-samples t-test of significance was used to compare two means. When comparing groups with qualitative data, the Chi-square test was applied. Analysis of multivariate logistic regression: Odds ratios (OR) with 95% confidence intervals were computed to assess the overall relationship between each putative risk factor and the incidence of sexual dysfunction. The confidence interval was set at 95% and the acceptable margin of error at 5%. P-values below 0.05 were considered statistically significant. P-values were considered highly significant if they were less than 0.001. P-values were considered insignificant if they were higher than 0.05.

Results

In this study, 822 married females attending gynaecology outpatient clinic were assessed for eligibility.95 females did not meet inclusion criteria, 244 females refused to participate and 83 missing response. The remaining 400 females were included in the final analysis (Figure 1).

Table 1 shows that the most prevalent educational level was postgraduate (37.3%; 149 female) and the majority of participants were housewives (60.3%; 241 female). The majority of the participants were fairly satisfied with their spouses (53%; 212 female). The majority of participants had regular menses (94%; 376 female). 20.8% of participants had 3 or more vaginal deliveries (83 female) while 21.3% of participants had 3 or more cesarean sections (85 female). The most prevalent method of contraception was IUD (57.8%; 231 female). The majority of participants were circumcised (94.8%; 379 female).

Table 1 Socio-demographic & obstetric data for females distribution among study group (n=400)

Socio-demographic for females	No.	%
Age (years)		
18-25	42	10.50%
25-35	229	57.30%
35-45	129	32.30%
Educational level		
Illiterate	21	5.30%
1ry school	41	10.30%
Intermediate school	62	15.50%
High school	105	26.30%
University	22	5.50%
Postgraduate	149	37.30%
Occupation		
Housewife	241	60.30%
Professional	70	17.50%
Skilled manual worker	89	22.30%
Special habits of medical importance		
No	400	100.00%
Sexual abuse		
Yes	0	0.00%
No	400	100.00%
Satisfaction with spouse		
Satisfied	105	26.30%
Fairly satisfied	212	53.00%
Dissatisfied	41	10.30%
Severely dissatisfied	42	10.50%
Duration of marriage		
<5 years	106	26.50%
5-10 years	111	27.80%
>10 years	183	45.80%
Menstrual irregularity		
Regular	376	94.00%
Irregular	24	6.00%
Parity		
Nullipara	42	10.50%
1	63	15.70%
2	85	21.30%
≥3	210	52.50%
Mode of delivery		
Cesarean section	169	42.30%
Vaginal delivery	147	36.80%
Vaginal delivery & cesarean section	42	10.50%
No	42	10.50%
Number of vaginal deliveries		
0	211	52.80%
1	21	5.30%
2	85	21.30%
≥3	83	20.80%
Number of cesarean sections		
0	189	47.30%
1	105	26.30%
2	21	5.30%
≥3	85	21.30%
Contraception		
IUD	231	57.80%
OCP	64	16.00%

Table 1 Continued...

Socio-demographic for females	No.	%
Circumcision		
Yes	379	94.80%
No	21	5.30%
Previous episiotomy		
Yes	168	42.00%
No	232	58.00%
3rd or 4th degree perineal tears		
No	400	100.00%
Yes	0	0.00%
Pelvic operations		
Yes	0	0.00%
No	400	100.00%
Chronic pelvic pain		
Yes	0	0.00%
No	400	100.00%
Vaginitis or cervicitis		
Yes	63	15.80%
No	337	84.30%
Gynecological conditions		
Yes	0	0.00%
No	400	100.00%

Table 2 In FSFI scores, the mean of Desire (3.51±1.25); mean of Arousal (4.29±1.21); mean of Lubrication (4.28±0.93); mean of Orgasm (3.81±1.27); mean of Satisfaction (4.14±1.28); mean of Pain (3.45±0.69); mean of Total FSFI score (23.47±4.94) and mean of Full QOL score (51.78±12.40).

Table 2 FSFI and QOL scores descriptive among study group (n=400)

	Mean±SD	Range
Desire	3.51±1.25	1.20-5.40
Arousal	4.29±1.21	1.20-5.70
Lubrication	4.28±0.93	2.40-5.70
Orgasm	3.81±1.27	1.20-5.60
Satisfaction	4.14±1.28	1.20-5.60
Pain	3.45±0.69	2.00-4.40
Total FSFI score	23.47±4.94	12.80-30.10
Full QOL score	51.78±12.40	15.70-70.30

Table 3 shows a statistically significant association between sexual dysfunction and age group 35-45 years, with p-value 0.009; also, a highly statistically significant association between sexual dysfunction and low educational level ($p<0.001$). There is also a statistically significant association between sexual dysfunction and no occupation ($p<0.001$), age >40 years, with p-value 0.002 and low educational level ($p<0.001$). Also there was a highly statistically significant association between sexual dysfunction and dissatisfaction and severe dissatisfaction with the spouse ($p<0.001$) and duration of marriage >10 years ($p<0.001$). There was a highly statistically significant association between sexual dysfunction and nullipara, previous episiotomy, circumcision and no contraception, ($p<0.001$). There was a highly statistically significant association between sexual dysfunction and higher vaginal deliveries, higher Cesarean section and vaginitis or cervicitis ($p<0.001$).

Table 3 Association between sexual dysfunction and socio-demographic & obstetric data for females **Supplementary tables**

Socio-demographic for wife	Sexual dysfunction				P value
	Yes		No		
	No.	%	No.	%	
Age (years)					
18-25 years	26	61.90%	16	38.10%	
25-35 years	159	69.40%	70	30.60%	0.009*
35-45	110	85.30%	19	14.70%	
Educational level					
Illiterate	21	100.00%	0	0.00%	
1ry school	41	100.00%	0	0.00%	
Intermediate school	41	66.10%	21	33.90%	<0.001**
High school	84	80.00%	21	20.00%	
University	22	100.00%	0	0.00%	
Postgraduate	86	57.70%	63	42.30%	
Occupation					
Housewife	206	85.50%	35	14.50%	
Professional	41	58.60%	29	41.40%	<0.001**
Skilled manual worker	48	53.90%	41	46.10%	
Satisfaction with spouse					
Satisfied	42	40.00%	63	60.00%	
Fairly satisfied	170	80.20%	42	19.80%	<0.001**
Dissatisfied	41	100.00%	0	0.00%	
Severely dissatisfied	42	100.00%	0	0.00%	
Duration of marriage					
<5	64	60.40%	42	39.60%	
10-May	69	62.20%	42	37.80%	<0.001**
>10	162	88.50%	21	11.50%	

Table 3 Continued...

Socio-demographic for wife	Sexual dysfunction				P value
	Yes		No		
	No.	%	No.	%	
Menstrual irregularity					
Regular	278	73.90%	98	26.10%	0.73
Irregular	17	70.80%	7	29.20%	
Parity					
Nullipara	42	100.00%	0	0.00%	
1_2	64	43.20%	84	56.80%	<0.001**
>3	189	90.00%	21	10.00%	
Mode of delivery					
CS	127	75.10%	42	24.90%	
VD	126	85.70%	21	14.30%	<0.001**
VD+CS	0	0.00%	42	100.00%	
Previous episiotomy					
Yes	105	62.50%	63	37.50%	<0.001**
No	190	81.90%	42	18.10%	
Circumcision					
Yes	274	72.30%	105	27.70%	0.005*
No	21	100.00%	0	0.00%	
Contraception					
IUD	168	72.70%	63	27.30%	
OCP	22	34.40%	42	65.60%	<0.001**
No	105	100.00%	0	0.00%	
Number of vaginal deliveries					
0	169	80.10%	42	19.90%	
1	0	0.00%	21	100.00%	<0.001**
2	43	50.60%	42	49.40%	
≥3	83	100.00%	0	0.00%	
Number of cesarean sections					
0	168	88.90%	21	11.10%	
1	42	40.00%	63	60.00%	<0.001**
2	0	0.00%	21	100.00%	
≥3	85	100.00%	0	0.00%	
Vaginitis or cervicitis					
Yes	63	100.00%	0	0.00%	<0.001**
No	232	68.80%	105	31.20%	

Using: x^2: Chi-square test for Number (%) or Fisher's exact test, when appropriate

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant

Table S1 Socio-demographic data for husband's distribution among study group (n=400)

Socio-demographic for husbands	No.	%
Age (years)		
24-30 years	98	24.50%
30-40 years	212	53.00%
>40 years	90	22.50%
Educational level		
Illiterate	83	20.80%
1ry school	20	5.00%
Intermediate school	21	5.30%
High school	42	10.50%
University	63	15.80%
Postgraduate	171	42.80%
Occupation		
Jobless	44	11.00%
Skilled manual worker	292	73.00%
Professional	64	16.00%
Special habits		
Smoking	315	78.80%
No	85	21.30%

Table S2 Medical disorders distribution among study group (n=400)

Medical disorder	No.	%
Obesity BMI	Mean	SD
	27.74	± 3.44
Normal weight	87	21.80%
Overweight	208	52.00%
Obese	105	26.30%
Chronic medical diseases		
Yes	4	1.00%
No	396	99.00%
Psychiatric disorders		
Yes	0	0.00%
No	400	100.00%
Drug intake		
Yes	2	0.50%
No	398	99.50%
Family income		
Low	42	10.50%
Moderate	358	89.50%
Residence		
Rural	20	5.00%
Urban	380	95.00%

Table S3 Association between sexual dysfunction and socio-demographic data for husbands

Socio-demographic for husband's	Sexual dysfunction				P value
	Yes		No		
	No.	%	No.	%	
Age (years)					
24-30 years	57	58.20%	41	41.80%	
>30-40 years	165	77.80%	47	22.20%	0.002*
>40 years	73	81.10%	17	18.90%	
Educational level					
Illiterate	83	100.00%	0	0.00%	
1ry school	20	100.00%	0	0.00%	
Intermediate school	0	0.00%	21	100.00%	<0.001**
High school	42	100.00%	0	0.00%	
University	63	100.00%	0	0.00%	
Postgraduate	87	50.90%	84	49.10%	
Occupation					
Jobless	28	63.60%	16	36.40%	
Skilled manual worker	225	77.10%	67	22.90%	0.046*
Professional	42	65.60%	22	34.40%	
Special habits					
Smoking	210	66.70%	105	33.30%	<0.001**
No	85	100.00%	0	0.00%	

Using: x^2: Chi-square test for Number (%) or Fisher's exact test, when appropriate

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant

Table S4 Association between sexual dysfunction and medical history

Medical	Sexual Dysfunction				P value
	Yes		No		
	No.	%	No.	%	
Obesity					
Normal weight	67	77.00%	20	23.00%	
Overweight	150	72.10%	58	27.90%	0.67
Obese	78	74.30%	27	25.70%	
Chronic medical diseases					
Yes	4	100.00%	0	0.00%	0.57
No	291	73.50%	105	26.50%	
Drug intake					
Steroids	2	100.00%	0	0.00%	1
No	293	73.60%	105	26.40%	
Family income					
Low	42	100.00%	0	0.00%	<0.001**
Moderate	253	70.70%	105	29.30%	
Residence					
Rural	20	100.00%	0	0.00%	0.006*
Urban	275	72.40%	105	27.60%	

Using: x^2: Chi-square test for Number (%) or Fisher's exact test, when appropriate

p-value >0.05 is insignificant; *p-value <0.05 is significant; **p-value <0.001 is highly significant

Table 4 This table shows a highly statistically significant lower mean value of QoL score in sexual dysfunction was 50.29±12.17 comparing to 55.95±12.16 for good sexual function, with p-value (p<0.001).

Table 4 Association between sexual dysfunction and Quality of life

	Sexual dysfunction				p-value
	Yes		No		
	Mean	±SD	Mean	±SD	
QOL score	50.29	12.17	55.95	12.16	<0.001**

Using: t-Independent Sample t-test for Mean±SD

**p-value <0.001 is highly significant

Discussion

About 40 percent of women worldwide report having a sexual problem; of these, 12 percent (or one in every eight) report having a problem related to interpersonal or personal distress and female sexual dysfunction is the term for a problem related to personal distress (Figure 2).[13]

Sexual dysfunction can manifest in various ways, such as diminished arousal, pain during sexual activity, lack of desire for sex, or inability to achieve an orgasm.[14] Sexual dysfunction can also develop later in life following a period of normal sexual functioning.[15]

Thus, this study set out to assess the prevalence and risk factors of female sexual dysfunction. From September 2022 to April 2023, a cross-sectional clinic-based survey experiment was carried out at Cairo University Maternity Hospitals' Obstetrics and Gynecology Department under the Faculty of Medicine.

After providing their consent, 400 women were added to the study. Data was collected using a structured interview questionnaire, where participants were asked the same questions in the same order and style over the whole interview. The participants were given the validated Arabic version of the World Health Organization Quality of Life Questionnaire-Brief, which was provided by female investigators (Figure 3).

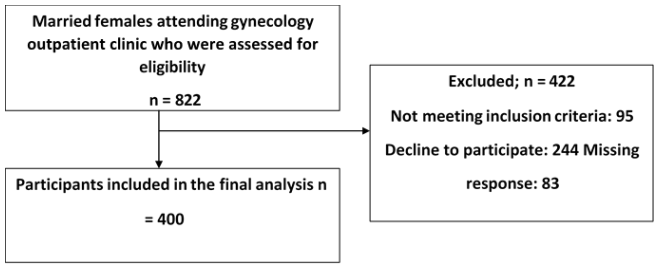

Figure 1 Flowchart of participant eligibility.

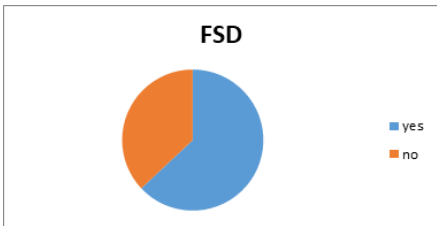

Figure 2 Pie chart shows prevalence of female sexual dysfunction.

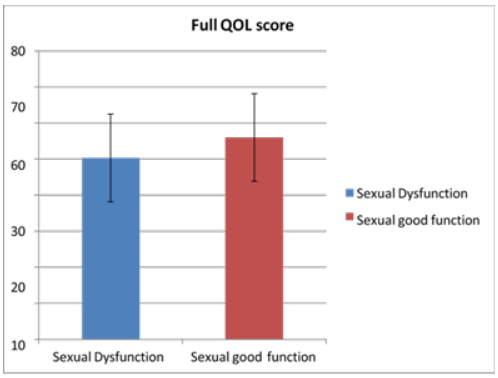

Figure 3 Bar chart shows Association between sexual dysfunction and Quality of life.

Citation: El-Mahy M, Tarek N, Almohamady M, et al. Prevalence and risk factors of female sexual dysfunction in low-risk women attending gynecology clinic at Kasr Alainy hospital: a cross-sectional study. *Obstet Gynecol Int J.* 2024;15(3):111–120. DOI: 10.15406/ogij.2024.15.00745

As far as we are aware, there aren't many researches evaluating the findings of our study in the literature, and the majority of studies that disapproved of our findings did so for a variety of reasons, including variations in the study design, results, sample size, and the medical conditions of the cases under investigation at the time of enrollment.

Regarding our 1ry outcome, we revealed that the prevalence of female sexual dysfunction was 63% while 37% had good sexual function as regard FSFI >26.5. Also, there was a highly statistically significant lower mean value of QoL score among sexual dysfunction that was 50.29±12.17 comparing to 55.95±12.16 for good sexual function cases.

Alselaiti et al.[16] analyzed Bahrain's prevalence of FSD, which is centered on men and influenced by Islamic religious and cultural values. They also looked at associated factors, such as obstacles to obtaining medical attention from medical professionals. Of the 360 women who were enrolled, 43% said they had experienced sexual difficulties during sex. The majority of sexual issues were associated with either painful sexual relations (42%) or decreased sexual desire (37%). Moreover, there was a statistically significant difference in the mean age between females with and without FSD ($p < 0.05$). Lower rates of FSD were linked to females with low or no parity. Additionally, over 96% of female participants claimed that their doctor had not questioned them about their sexual problems, while 87% of women felt uncomfortable addressing them with their doctor.[16]

FSD is a serious public health issue that affects 41% of premenopausal women worldwide, according to McCool et al. Individual sexual illnesses have prevalence rates ranging from 20.6% (difficulties with lubrication) to 28.2% (hypoactive sexual drive disorder).[17]

Regarding our 2ry outcome (risk factors), we reported that sexual dysfunction was statistically significantly higher among women aged between 35-45 years, with low educational level and no occupation. Also, sexual dysfunction was statistically significantly higher among husbands of those women aged >40 years, low educational level, skilled manual workers and smokers.

We also reported that sexual dysfunction was statistically significant higher among cases with low family income, residents of rural areas and duration of marriage >10 years.

In an intriguing US study by Shifren et al.,[4] education was revealed to be a useful safeguard against sexually unpleasant conditions.[4]

Research conducted in Iran and Jordan have demonstrated that young women who have an educated background and a successful career are less likely to experience symptoms of sexual dysfunction. However, some studies conducted in China have indicated that young women who have received more education have a higher likelihood of reporting sexual dysfunction.[13,19]

According to Choi et al.,[20] these women's higher education makes them more aware of their sexual rights and demands. It also makes them more likely to be dissatisfied with their marriages and sexual relationships, which can lead to dysfunctional sexual behavior.[20]

Similar to how more frequent sex was proven to have a protective impact in the majority of cultures, some research conducted in traditional cultures revealed that frequent sex may be requested by the partner and, as a result, puts these women at risk for developing sexual dysfunction.[1]

Variation was seen in several predictors within the domains. For instance, it has typically been demonstrated that aging plays a role in female sexual dysfunction. Age is generally associated with risk in all categories, with the exception of pain disorders, where research indicates a protective impact. Cagnacci et al.[22] discovered that the prevalence of sexual dysfunction was U-shaped, with younger and older women suffering from it the most.

According to Villeda Sandoval et al.,[23] as women in their 30s gain greater self-awareness and ease embracing and expressing their sexuality, they may exhibit fewer dysfunctional symptoms. Similar differences in the impact were discovered for parity, family income, employment, and partnership status.[23]

In our study, we noted highly statistically significant association between sexual dysfunction and nulliparity, previous episiotomy, higher CS, circumcision and no contraception and vaginitis or cervicitis.

Finally, no statistically significant relations were reported between sexual dysfunction and menstrual irregularity, maternal obesity, associated chronic medical diseases and drug intake as steroids.

Religiosity, inadequate mental and physical health, anxiety, abortion, genitourinary problems, female genital mutilation, unhappy relationships, and intimate partner violence are all persistently significant risk factors for female sexual dysfunction, as demonstrated by studies by McCool-Myers et al. Being older while getting married, exercising, expressing affection daily, speaking intimately, having a positive body image, and receiving sex education were protective factors that were consistently significant. Among the variables with questionable impacts were age, education, work status, parity, relationship status, frequency of intercourse, race, alcohol consumption, smoking, and masturbation.[23]

Specific to Asian population research were risk variables such masturbation, a widespread acceptance of pornography, liberal sex norms, and understanding of clitoris. These women are seen as non-traditional in these civilizations, as Lou et al. clarify. In these communities, women who don't fit into the stereotypical roles of women may find it harder to get along with their male partners.[1]

According to Avellanet et al.,[24] smoking and alcohol use were two additional factors that were found to have a conflicting impact on women's sexual functioning. These factors had no effect on sexual functioning in most of the investigations. Nonetheless, certain research indicates that these elements might function as a moderator for increased libido. According to a Puerto Rican investigation, smoking significantly reduces the risk of developing desire disorder.[24]

Since it is traditionally taboo for single women to engage in sexual activity, sex education and reproductive medical services in many countries tend to concentrate primarily on married women. However, Najafabady et al.[25] found that sex education has a substantial protective effect.[25]

In a comparable manner exercise may seem like an adjustable contributory factor for female sexual dysfunction, even if mobility that is, moving around in public places, traveling, and engaging in physical activity can be challenging for women who reside in countries with high levels of gender inequality. According to a global survey conducted across 70 nations, women's lack of freedom and resources to roam freely can lead to mobility problems. This implies that women may not be able to lead healthy lives in nations with more gender inequality, such as engaging in adequate physical activity or visiting the doctor for treatment.[26]

In addition, cultures controlled by men, where sexual behavior is primarily focused on reproduction, have a tendency to minimize the

relational significance of sex as well as women's sexual demands and enjoyment.[25]

Women who participate in these countries' current customs which include female genital mutilation, polygamy, young marriages, and planned marriages have much higher rates of sexual dysfunction.[27]

Lastly, women in conservative societies could also believe that talking to their partner about sexual issues is socially inappropriate or that they are too shy to voice their desires.[20] According to Mitchell et al.,[21] women who communicate intimately with their partners experience decreased rates of sexual dysfunction; nevertheless, certain cultures may find it more difficult to achieve this than others.[21]

The strength points of our study

This study's strengths are its cross-sectional clinic-based survey approach and the fact that no patients were lost during the research period, meaning there are no missing data. This was among the initial investigations conducted at Cairo University Hospital to evaluate the frequency and contributing variables of female sexual dysfunction. Every attempt was made to ensure that all follow-up data were recorded and that the data analysis contained only complete information. The same team conducted all clinical assessments and evaluated trial results.

The limitations of the study

Some ladies were difficult to communicate with because of their Eastern beliefs, religious sensitivity, and embarrassment. For some of them, having an open discussion is forbidden. Confronting obstinate women who were pressed for time during their turn. Because this was a hospital-based study, there were fewer cases and a lower sample size compared to the study's outcomes. Because it was not multi-centric, there is a considerable risk of publication bias, and the study did not represent a particular community. The current study can add to the body of knowledge and provide some insight into potential future research projects with greater sample sizes that may reevaluate our conclusions.

Conclusion and recommendations

Female sexual dysfunction affects 2/3 of women attended gynecology outpatient clinic in Kasr Alainy Hospital, a major health problem that greatly affected their quality of life. The most frequent risk factors of female sexual dysfunction were advanced maternal and paternal age, low educational level, smoking, low family income, residents of rural areas, duration of marriage >10 years, nulliparous women, previous episiotomy, repeated CS, circumcision, vaginitis and cervicitis.

For women visiting outpatient clinics, it is recommended that female sexual dysfunction be assessed using short and straightforward questionnaires. Future preventive strategies should focus on factors that can be changed, such as physical activity, women's education, employment, family income, family planning, and access to sex education. International efforts to empower women should also persist.

Acknowledgments

None.

Funding

None.

Conflicts of interest

Authors declare that they have no conflicts of interest.

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Citation: El-Mahy M, Tarek N, Almohamady M, et al. Prevalence and risk factors of female sexual dysfunction in low-risk women attending gynecology clinic at Kasr Alainy hospital: a cross-sectional study. *Obstet Gynecol Int J.* 2024;15(3):111–120. DOI: 10.15406/ogij.2024.15.00745