Prevalence And Correlates of Female Sexual Dysfunction at a Gynecology Clinic in Bahrain

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Abstract

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Introduction: Epidemiological research in the field of female sexual dysfunction (FSD) is mainly limited by the diagnostic dilemma because of the intricacy of the female sexual response. The problem might start since the beginning of the sexual life, or it might be acquired later after having a normal sexual life. Around 40% of women worldwide affected by FSD. The aim of this study is to determine the prevalence and sociomedical correlates of FSD in Bahrain and assess the consequences of the condition to investigate the public health burden of this condition and increase awareness amongst health care providers.

Materials and methods: A hospital based two centers (Salmaniya medical complex and king Hamad university Hospital); cross sectional study was conducted in Bahrain on a consecutive sample of 255 women visiting 2 gynecology clinics. The main inclusion criteria were: married women and sexually active, aged 18-55 years who presented to the ambulatory clinic with general gynecologic complaints not related to sexual dysfunction. Pregnant, unmarried, and women aged less than 18 or more than 55 years were excluded from the study population. A validated female sexual function index questionnaire (English version) was self-completed by the women. Demographic, obstetric, medical, and socioeconomic data were collected. A cut off FSFI score <26.55 was used to define the presence of FSD.

Results: The total number of patients encountered in the study was 255, 84% were Bahraini, 11.4% were Arabs and 4.5% were from other nationalities. The differences in population characteristics between the 3 subgroups was not significant. The majority of women had a university education (58.4%), worked as professionals (32.9%), had >2 deliveries (39.9%) and were non-smokers (97.6%). It was found that 60% of the participants were complaining of chronic pelvic pain, dysmenorrhea and / or sever premenstrual symptoms, while 11.3% and 2.9% of the study cohort answered having at least one episode of urinary and fecal incontinence over the last 12 months. The overall prevalence of FSD was 55.7%. Four general variables were studied among which age more than 50 years old was found significantly associated with FSD (P=0.01). There was

a significant association between FSD and abnormal uterine bleeding (11.8%) and vaginitis (22%). The most significant effects on low FSFI score were pain, satisfaction, lubrication, orgasm, desire and arousal.

Conclusion: FSD is a highly prevalent condition in married women attending a gynecology clinic in Bahrain with a significant adverse impact on their quality of life. FSD deserves more attention in the national agenda and should be a priority in women health care.

Keywords: Bahrain, Female sexual dysfunction [FSD], Female Sexual Function Index [FSFI], Women health.

Introduction

Epidemiological research in the field of female sexual dysfunction [FSD] is mainly limited by the diagnostic dilemma because of the intricacy of the female sexual response. FSD is defined as a syndrome emphasizing several elements as a result of which people may have difficulties in experiencing satisfaction with sexual activities which are initiated without pressure or violence, which causes personal distress to the affected woman. It includes female sexual interest/arousal disorder [arousal, desire], female orgasmic disorder and genito-pelvic pain/penetration disorder [dyspareunia and vaginismus] (1,2).

This problem might start since the beginning of the sexual life or it might be acquired later after having a normal sexual life, hence; it could lead to significant personal or interpersonal distress (3) and affect the quality of life (4).

Around 40% of women worldwide affected by FSD (5,6). The etiology of FSD is considered as multifactorial in the form of social, physical, medical, and psychological factors (5). In a study done in Bahrain regarding sexual dysfunction among Bahraini women in 2017, they found that Diabetes mellitus and hypertension are statistically significant among females with sexual dysfunction (P value 0.006, 0.008 respectively) (7).

The aim of this study is to determine the prevalence and socio-medical correlates of FSD in Bahrain and assess the consequences of the condition to investigate the public health burden of FSD and increase awareness amongst health care providers.

Materials & Methods

A hospital-based, two-centre (Salmaniya Medical Complex and King Hamad University Hospital), cross-sectional study was conducted in Bahrain on a consecutive sample of 255 women visiting gynaecology clinics (a priori assumption: background prevalence = 20%, confidence level = 95%, margin of error = 0.05), Assuming that the lowest reported community prevalence was 29.7% (8).

The main inclusion criteria: married women and sexually active, aged 18-55 years who presented to the ambulatory clinic with general gynaecologic complaints not related to FSD. Pregnant women, unmarried, aged less than 18 or more than 55 years were excluded from the study population.

A validated Female Sexual Function Index [FSFI] questionnaire (English version) was self- completed by the women with further assistance by the gynecologist if there

were any difficulties or clarifications regarding the different questionnaire's items, after obtaining a written consent signed by the participant.

Demographic, obstetric, medical, and socio-economic data were collected. Other variables such as gynaecological symptoms were also recorded. A cut-off FSFI score of <26.55 (out of a maximum of 36) was used to define the presence of FSD.

The Study was approved by the ethics committees of both hospitals.

Statistical analysis

Data analysis was performed using Statistical Package for Social Studies (SPSS program) version 26 and p value <0.05 was considered significant. Chi-square tests were used to analyse the different variables.

Results

Total number of patients encountered in our study was 225 fulfilling the inclusion criteria, 84.3% were Bahraini, 11.4% Arabs and 4.5 % other nationalities. The difference in population characteristics between the 3 subgroups was not significant. The majority of women had a university education 58.4%, worked as professionals 32.9%, had > 2 deliveries 39.9% and were non-smokers 97.6%. (table1).

Table 1: Characteristics of Participants (n=255)

		no.	%
Nationality	Bahraini	215	84.3
	Arab	29	11.4
	Others	11	4.3
Education Level	Illiterate	6	2.4
	Primary School	9	3.5
	Secondary School	79	31.0
	University	149	58.4
	High Degree	12	4.7
Income	500 BD Or Less	126	49.4
	500 - 1000	85	33.3
	>1000	44	17.3
Patient Occupation	Unemployed	47	18.4
	Student	15	5.9
	Housewife	59	23.1
	Manual	50	19.6
	Professional	84	32.9
Husband Occupation	Unemployed	19	7.5
	Student	4	1.6
	Manual	33	13.0
	Private Business	100	39.4
	Professional	98	38.6

Gravida	0	29	11.6
	1	30	12.0
	2	51	20.5
	3	47	18.9
	4	32	12.9
	5	29	11.6
	6+	31	12.4
Para	0	50	21.5
	1	36	15.5
	2	54	23.2
	3	39	16.7
	4	30	12.9
	5 +	24	10.3
Smoking	Yes (Shisha)	6	2.4
	No	249	97.6
Maternal Cycle in the Last 3 Month	Amenorrhea	27	10.6
	Regular	182	71.4
	Irregular	46	18.0

It was found that 60% of the participants were complaining of chronic pelvic pain, dysmenorrhea and/or severe premenstrual symptoms, while 11.3% and 2.9% of the study cohort answered having at least one episode of urinary and faecal incontinence over the last 12 months. On further questioning 32.2% gave history of vaginitis. (table2)

Regarding the mode of delivery 31.4% had caesarean section, 56.1% vaginal delivery, whereas instrumental delivery was 4.3% of the study group. Among those who delivered vaginally 50.6% had episiotomy, 16.1% perineal tear and 2.8% suffered from anal sphincter injury.

Table 2: Medical history of Participants

	Yes	%
Having Gynecological Symptoms Over the Last 12 Months		
Infertility	50	19.6
Abnormal Uterine Bleeding	43	16.9
Hirsutism, Acne	52	20.4
Sever Premenstrual Symptoms	69	27.1
Chronic Pelvic Pain/Dysmenorrhea	84	32.9
Vaginitis	82	32.2
Urinary Symptoms; (Frequency, Nocturia, Urgency, Dysuria)	74	29.0
Constipation	69	27.1
Others	14	5.5
Having any of the Following Procedures in Previous Delivery		
Episiotomy	124	50.6
Perineal Tear	41	16.1
Anal Sphincter Injury and Repair	7	2.8
Other tears, Specify	8	3.1

Previous Mode of Delivery		
Normal Vaginal Delivery	143	56.1
Caesarean Delivery	80	31.4
Forceps Delivery	4	1.6
Ventouse/ Vacuum Delivery	7	2.7
Assisted Breech Delivery	5	2.0
Twin Vaginal Delivery	5	2.0
Have Medical Problems or Previous Surgery Operation	113	44.3
Taking Medications	51	20.0
Having Urinary Incontinence (in the last 12 months)	27	11.3
Having Fecal Incontinence (in the last 12 months)	7	2.9

The overall prevalence of FSD was 55.7% (n=142). Four general variables were studied (age, obesity, income, and smoking), among these variables age more than 50 years old was found significantly associated with female sexual dysfunction (p=0.01) (table3)

Table 3: Association between Sexual Dysfunction and Age, Obesity, and Income

		Sexual Dysfunction				Total	Chi-Square Test
		Yes		No			
		no.	%	no.	%	no.	
Age	<50	131	54.4	110	45.6	**241**	0.011
	>=50	11	91.7	1	8.3	**12**	
	Total	**142**	**56.1**	**111**	**43.9**	**253**	
Obesity	Not Obese	77	52.4	70	47.6	**147**	0.181
	Obese	61	61.0	39	39.0	**100**	
	Total	**138**	**55.9**	**109**	**44.1**	**247**	
Income/BD	<= 500	74	58.7	52	41.3	**126**	0.625
	500 - 1000	45	52.9	40	47.1	**85**	
	> 1000	23	52.3	21	47.7	**44**	
	Total	**142**	**55.7**	**113**	**44.3**	**255**	
Smoking	Yes	5	83.3	1	16.7	**6**	0.168
	No	137	55.0	112	45.0	**249**	
	Total	**142**	**55.7**	**113**	**44.3**	**255**	

*Obesity is defined as BMI > 30

Among gynaecological symptoms, there is a significant association between abnormal uterine bleeding 11.8% and vaginitis 22% (p= 0.041, p= 0.005 respectively), whereas the other gynaecological variables: infertility, urinary or faecal incontinence, premenstrual symptoms, chronic pelvic pain were not found to be significantly associated in our cohort (table4).

Table 4: Association between Sexual Dysfunction and Gynaecological Symptoms

		Sexual Dysfunction						Chi-Square Test
		Yes		No		Total		
		no.	%	no.	%	no.	%	
Infertility	Yes	26	10.2	24	9.4	50	19.6	0.558
	No	116	45.5	89	34.9	205	80.4	

Abnormal Uterine Bleeding	Yes	30	11.8	13	5.1	43	16.9	**0.041**
	No	112	43.9	100	39.2	212	83.1	
Hirsutism, Acne	Yes	30	11.8	22	8.6	52	20.4	0.744
	No	112	43.9	91	35.7	203	79.6	
Sever Premenstrual	Yes	36	14.1	33	12.9	69	27.1	0.492
	No	106	41.6	80	31.4	186	72.9	
Chronic Pelvic Pain/ Dysmenorrhea	Yes	47	18.4	37	14.5	84	32.9	0.952
	No	95	37.3	76	29.8	171	67.1	
Vaginitis	Yes	56	22.0	26	10.2	82	32.2	**0.005**
	No	86	33.7	87	34.1	173	67.8	
Urinary Symptoms	Yes	46	18.0	28	11.0	74	29.0	0.183
	No	96	37.6	85	33.3	181	71.0	
Constipation	Yes	45	17.6	24	9.4	69	27.1	0.062
	No	97	38.0	89	34.9	186	72.9	
	Total	**142**	**55.7**	**113**	**44.3**	**255**	**100**	

Medical problems per se; were not found to be associated with FSD, rather; the use of medication was significantly associated (p=0.017) (table 5)

Table 5: The association between Female Sexual Dysfunction and Medical history

		Sexual Dysfunction				Total	Chi-Square Test
		Yes		No			
		no.	%	no.	%	no.	
Have Medical Problems or Previous Surgical Operation	Yes	62	54.9	51	45.1	**113**	0.814
	No	80	56.3	62	43.7	**142**	
	Total	**142**	**55.7**	**113**	**44.3**	**255**	
Taking any Medications	Yes	36	70.6	15	29.4	**51**	**0.017**
	No	106	52.0	98	48.0	**204**	
	Total	142	55.7	113	44.3	**255**	
Having Urinary Incontinence Over the Last 12 Months	Yes	14	51.9	13	48.1	**27**	0.759
	No	116	55.0	95	45.0	**211**	
	Total	**130**	**54.6**	**108**	**45.4**	**238**	
Having Fecal Incontinence Over the Last 12 Months	Yes	4	57.1	3	42.9	**7**	0.969
	No	132	56.4	102	43.6	**234**	
	Total	**136**	**56.4**	**105**	**43.6**	**241**	

The most significant effects on low FSFI score were pain, satisfaction, lubrication, orgasm, desire, and arousal. (Table 6)

Table 6: Domain Effect on the Sexual Dysfunction

Domain	Sexual Dysfunction	Normal	Total
	Mean ± SD	Mean ± SD	Mean ± SD
Desire	3.15±1.07	4.26±0.79	3.64±1.10
Arousal	**3.07±1.30**	4.77±0.65	3.82±1.36
Lubrication	3.29±1.50	5.08±0.69	4.08±1.50

Orgasm	3.18±1.54	5.19±0.72	4.07±1.60
Satisfaction	3.44±1.62	5.44±0.59	4.33±1.61
Pain	**3.57±1.60**	5.10±0.88	4.25±1.53

Discussion

Female sexual dysfunction is defined as sexual problems associated with personal distress. It presents in different ways, including lack of sexual desire, impaired arousal, inability to achieve orgasm or pain with sexual activity (9).

Talking about sexual dysfunction is considered a sensitive issue in the Arabian Gulf countries. Elnashar et.al. found that many women might suffer from this problem, but they feel embarrassed to talk about due to cultural, social, or even religious reasons (10). Therefore, to overcome this matter in our study woman privacy was ensured during completing the questionnaire by herself. Also, a written consent was obtained and signed by the patient, stating that all information obtained is confidential. Some of the participants requested to clarify some questions in order to understand. The results reflect sexual dysfunction prevalence in a population evaluated in a gynecological outpatient clinic and not in the general population, which is considered as a limitation in the study.

This is the second cross sectional study discussing FSD in Bahrain. The first conducted among women attending primary healthcare (7), whereas our study investigated women attending secondary care hospitals.

In our study we aimed to investigate the prevalence and correlates of FSD in Bahrain. We found that FSD is prevalent among married women accounting for 55.7% of the population studied.

The majority of our study group were less than 50 years old and only 12 women were over 50 years, 54.4% and 91.7% were having sexual dysfunction respectively (P value 0.011). That could be attributed to several factors such as hypoestrogenemia. It is known the hypoestrogenic state leads to reduction in vaginal blood flow hence vaginal dryness and atrophy which may cause pain and lead to FSD. Other contributing factors which might have a role in FSD in this age group are abnormal uterine bleeding and the use of medications for chronic medical conditions (11). Interestingly, Asogwa et al found that FSD is prevalent in younger age group due to dysparunea (12). Therefore, it should be investigated to understand the underlying causes of pain.

Upon evaluating the domains of sexual dysfunction in our cohort, pain had the most prominent effect on FSFI whereas Hashemi S et al showed that in a menopausal population, sexual desire and orgasm were the two most adversely affected parameters (13).

In this study, the key strengths are large sample size and the use of a validated questionnaire. There is one limitation that could be addressed in future research which is the population group studied. This study focused on women attending the clinic with gynaecological conditions.

Conclusion

FSD is a highly prevalent condition in married women attending a gynaecology clinic in Bahrain with a significant adverse impact on their quality of life. FSD deserves more attention in the national health agenda and should be a priority in women health care.

References

Phillips N, Female Sexual Dysfunction: Evaluation and Treatment, Am Fam Physician (2000) Jul 1;62(1):127-136.

Jaderek I, Starowicz M, Changes in The Diagnosing of Sexual Dysfunctions of Women in ICD-11 Classification, Przegl Sexs 2018; 2(54):12-20.

Lauman E O, Paik A, Rosen R C, Sexual Dysfunction in the United States: Prevalence and Predictors, JAMA.1999 Feb 10;281(6):537-44.

Clayton A H, Juarez E,Female Sexual Dysfunction, Psychiatr Clin North Am 2017 Jun; 40(2):267-284.

Myers M, Theurich M, Apfelbacher C, Zuelke A, Knuettel H, Predictors of Female Sexual Dysfunction:a Systemic Review and Qualitative Analysis Through Gender Iinequality Paradigm, BMC Women's Health 2018 Jun 22;18:108.

Shifren J, Monz B, Russo P, Segreti A, Johannes C,Sexual Problems and Distress in United States Women: Prevalence and Correlates, Obstet Gynecol.2008November;112(5):970.

Mandoos K, Atalla E, Althawadi A, Alfayez H, A Study of Female Sexual Dysfunction Among Bahraini Women, Bahrain Med Soc.2018 March 18;30(1):9-13.

Zhang C;Tong J;Zhu L;Zhang L;Xu T;Lang J;Xie Y; "A Population-Based Epidemiologic Study of Female Sexual Dysfunction Risk in Mainland China: Prevalence and Predictors." The Journal of Sexual Medicine, U.S. National Library of Medicine, Nov. 2017, pubmed.ncbi.nlm.nih.gov/29110805/.

Sexual Dysfunction. In:Diagnostic and Statistical manual of mental disorders, 5th ed, American psychiatric association, Arlington 2013.

Elnashar A M, Ibrahim M, El-Desoky M, Ali M O, Hassan M,Female Sexual Dysfunction in lower Egypt, BJOG 2007Feb;114(2):201-6.

Sobhgol S, Charndabee S, Rate and Related Factors of Dyspareunia in Reproductive Age Women: Cross Sectional Study, International Journal of Iimpotence Research 2007; 19(1):88-94.

Asogwa S, Nwafor J, Olaleye A, Ugoji D, Obi C, Ibo C, Prevalence of Dyspareunia and Its Effect on Sexual Life Among Gynaecological Clinic Attendees in Alex Ekwueme Federal University Teaching Hospital Abakaliki, Nigeria, Advances in Sexual Medicine, 2019 October; .9 (4):110-119.

Hashemi S, Tehrani F, Simbar M, Abedini M, Bahreinian H, Gholami R, Evaluation of Sexual Attitude and Sexual Function in Menopause Age; a population based cross-sectional study, Iran J Reprod Med 2013 August; 11 (8) :631-636.

معدل انتشار وروابط الاختلالات الجنسية الأنثوية في عيادة أمراض النساء في البحرين

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المُستَخلَص

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الخلفية العامة للبحث: البحث في مجال الاختلالات الجنسية للإناث محدود بشكل أساسي بسبب معضلة التشخيص بسبب تعقيد الاستجابة الجنسية الأنثوية. قد تبدأ المشكلة منذ بداية الحياة الجنسية، أو قد تكتسب لاحقًا بعد الحياة الجنسية الطبيعية. حوالي 40٪ من النساء في جميع أنحاء العالم يعانين من الاختلال الجنسي للإناث. الهدف من هذه الدراسة هو تحديد مدى انتشار الخلل الوظيفي الجنسي للإناث في البحرين والارتباطات الطبية والاجتماعية له وتقييم عواقب الحالة للتحقيق في العبء الصحي العام لهذه الحالة وزيادة الوعي بين مقدمي الرعاية الصحية.

الاساليب المتبعة بالدراسة: اجريت دراسة مقطعية في مستشفيين رئيسيين بالبحرين على 225 سيدة يحملون الخصائص التالية: السيدات المتزوجات غير الحوامل اللاتي تتراوح اعمارهن من 18 إلى 55 سنة والذين قدموا إلى العيادة مع شكاوى عامة لأمراض النساء لا تتعلق بالضعف الجنسي. تم استبعاد النساء الحوامل، غير المتزوجات، الذين تقل أعمارهم عن 18 عامًا أو أكثر من 55 عامًا من مجتمع الدراسة تم ملئ استبيان عالمي معتمد خاص بمؤشر الوظيفة الجنسية بالنسخة الإنجليزية من قبل النساء. اضافة إلى ذلك الاستبيان المصدق تم تجميع المعلومات الاساسية الخاصة بالمشاركات والتي تشمل: البيانات الديموغرافية، التاريخ المرضي، تاريخ الحملات والولادات السابقة، المعلومات الخاصة بالدرجة الاجتماعية والدخل المادي والمستوى التعليمي. بناء على ما تم استخلاصه من الدراسات السابقة تم اعتماد نقاط 26.55 واقل من مجموع 36 كحد فاصل لتشخيص الاختلالات الجنسية النسائية.

النتائج: بلغ إجمالي عدد النساء اللاتي تم ادراجهم في الدراسة 255 امرأة، 84٪ بحرينيات، 11.4٪ عرب و4.5٪ جنسيات أخرى. ولكن لم يكن هناك اختلافات كبيرة في نتائج الدراسة باختلاف هذه المجموعات الثلاث.

غالبية النساء في الدراسة حصلن على تعليم جامعي 58.4٪، وعملن في مجالات تخصصية 32.9٪، ولدن أكثر من ولادتين 39.9٪ وكن غير مدخنات 97.6٪. وجد أن 60٪ من المشاركات كن يشكين من آلام الحوض المزمنة وعسر الطمث و / أو أعراض ما قبل الحيض الشديدة، بينما أجاب 11.3٪ و2.9٪ من مجموعة الدراسة

بوجود نوبة واحدة على الأقل من سلس البول والبراز خلال الـ 12 شهرًا الماضية.

كان معدل انتشار FSD الكلي 55.7 ٪. تمت دراسة أربع متغيرات عامة من بينها تبين أن العمر الذي يزيد عن 50 عامًا يرتبط ارتباطًا وثيقًا بالضعف الجنسي للإناث (P = 0.01). هناك ارتباط معنوي بين نزيف الرحم غير الطبيعي بنسبة 11.8٪ والتهاب المهبل بنسبة 22٪. كانت التأثيرات الأكثر أهمية على درجة FSFI المنخفضة هي الألم، والرضا، والتشحيم، والنشوة الجنسية، والرغبة، والإثارة.

الخاتمة والاستنتاج: تبين من دراستنا ارتفاع معدل الاختلالات الجنسية النسائية بين السيدات البحرينيات المتزوجات، والذي من دوره أن يشكل خطورة وتأثير سلبي على جودة الحياة. ومن هذا المنطلق نستخلص إلى ضرورة ان يلقى هذا الجانب التركيز والاهتمام من قبل الصحة العامة، بل ولابد أن يكون من الاولويات الاساسية في ملفات صحة المرأة.

الكلمات الدالة: البحرين، الاختلالات الجنسية لدى السيدات، مؤشر الوظيفة الجنسية لدى السيدات، صحة المرأة.