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Female Sexual Dysfunction in a Third Level Health Facility, Southern Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Observation during our gynaecology consultations does not tend to agree with reviews in literature suggesting high prevalence of sexual dysfunction. With this background, we decided to subject this general observation to scientific scrutiny to determine the proportion of our patients that actually have sexual dysfunction; and thepredisposing risk factors.
Objective: To determine the prevalence and risk factors associated with sexual dysfunction in females attending the gynaecology clinic of the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt.
Methods: This was a prospective cross-sectional questionnaire based study of 72 females of reproductive age group attending the outpatient gynaecological unit of UPTH. They were interviewed using the Female Sexual Dysfunction Index (FSFI). A total FSFI score of less than 26.5 was indicative of sexual dysfunction. The data were collated and entered into SPSS version23 statistical software which was also used for analysis. A p-value of < 0.05 was considered significant.
Results: The prevalence of sexual dysfunction in females was 61.1% using the FSFI of less than

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26.50. The most common type of sexual dysfunction among the respondents was desire disorders (66.7%) followed by disorders of orgasm (62.5%), lubrication (56.9%), arousal (43.1%) and pain (40.3%). Advanced age, higher education, parity and female genital cutting were found to be associated with sexual dysfunction.
Conclusion: The findings in this study showed that a significant number of women in our centre are affected with sexual dysfunction.

Keywords: Sexual dysfunction; prevalence; risk factors; Port Harcourt.

1. INTRODUCTION

Sexuality is a complex interaction of physical, interpersonal and psycho-social factors. It is an essential feature of being human, and is experienced and expressed in thoughts, roles, desires, values, fantasies and relationships [1]. In many African countries, discussions about female sexuality are considered to be prohibited; hence, these problems are often not volunteered/reported [2–4]. If female sexuality is disturbed, it might lead to psychopathological disturbances, family disharmony and divorce [5].

Female sexual dysfunction is defined as the inability to fully enjoy sexual intercourse [6]. It refers to a difficulty occurring in any phase of the sexual cycle that prevents the woman from experiencing satisfaction from sexual activity [7]. An old model of the human sexual cycle from Masters and Johnson in the 1960s incorporates the stepwise linear progression from sexual excitement leading to a plateau then orgasm and a period of resolution [8]. This was subsequently revised by Kaplan, the cycle involves four phases namely; desire, arousal, orgasm and resolution [9]. The American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (APADSMMD) classified female sexual dysfunction into sexual desire disorder, sexual arousal disorder, orgasmic disorder, and pain related disorders like vaginismus or dyspareunia [3].

The prevalence of female sexual dysfunction may vary among countries due to racial, cultural, health or social variables. It is reported to be present in about 43-87% of women [10–13]. Its incidence in two Nigerian studies were 63% and 71% among women attending the outpatient clinic of Obafemi Awolowoteaching hospital, Ile-Ife, south west Nigeria [14,15]. The incidence is difficult to ascertain precisely because studies used different definitions of normal and abnormal sexual function and used diverse population [16].

The female sexual function is a process that involves an inter-play between physical, psycho-social, environmental, cultural, hormonal and biological factors. Its dysfunction can be caused by any of these factors or their combination [17]. The physical factors include illnesses (such as mental disorders, heart disease and diabetes mellitus with neuropathy or vasculopathy), advanced age, or drugs (such as alcohol and some antidepressants or antihypertensive). Psychological causes include sexual ignorance (such as lack of foreplay), unrealistic expectations, sexual anxiety, poor marital communication and personality difficulties like negative sexual experience (for instance sexual abuse or rape in the past) [3,14,15].

The disorder of sexual desire can be hypoactive, sexual aversion or excessive sexual desires; and is the commonest sexual disorder in females [17]. Arousal disorders can be the inability to achieve physiological or subjective arousal. Mental disengagement and lack of awareness of the sensation can contribute to this [8]. The most commonly used scale for assessing sexual dysfunction in females is the Female Sexual Function Index (FSFI) form which is a 19 item questionnaire related to six sexual desires - arousal, lubrication, orgasm, pain and satisfaction [3]. Other instruments used to assess female sexual function include Golombok Rust Inventory of Sexual Satisfaction (GRISS) and Brief Index for Sexual Functioning for Women (BISF-W) [16].

The management of these females involves a careful medical history to find organic factors known to affect sexual response, as well as therefore mentioned psychological causes. Laboratory investigation is often not helpful but focused evaluation is useful particularly if the history suggests an organic cause. The general principle of treatment includes, treating the couple irrespective of which partner presents, defining the problem and what the couple will want to change, aiming to reduce sexual anxiety and ensuring communication between the

partners. The specific problem may need a specific treatment program [18].

2. MATERIALS AND METHODS

This was a cross-sectional study of female patients of reproductive age attending the gynaecological outpatient clinic of the University of Port Harcourt teaching hospital. The study population comprised women aged 15-45 presenting for routine follow up or gynaecological evaluation. Women excluded from the study were those who did not have sexual intercourse in the last 4 weeks, were pregnant or whose husband had sexual dysfunction. The gynaecology clinic holds daily on Monday through Fridays. The women were educated on the nature of the study. The minimum sample size was determined using the formula sample size = Z^2PQ/d^2 (Z = the normal standard deviation usually set at 1.96, which corresponds to 95% confidence level, p = prevalence, q = 1-p, d = sampling error of 5%). Using prevalence of female sexual dysfunction of 95% in a similar study in women attending outpatient clinics by Shittu et al. [2] a minimum sample size of 72 was obtained.

The women were interviewed by trained 500 level medical students using a pretext structured questionnaire consisting of 2 parts. The first part contained information on demographic data, contraceptive use, smoking chronic illnesses and history of sexual abuse, marital disharmony and ignorance. The second part was the aforementioned female sexual function index (FSFI) form, described by Rosen et al for assessing the main forms of sexual function in the previous 4 weeks [19]. It provides scores on six domains of sexual function; desire, arousal, lubrication, orgasm, satisfaction and pain. The score ranges for items 3–14 and 17–19 are 0–5, and for items 1, 2, 15 and 16, 1–5 as described in the Table 1. The domain scores are gotten by adding the scores of the individual questions that form the domain and multiplying the sum by the domain factor provided in the FSFI for each domain.

Participants were considered to have difficulties in a particular domain if they have score less than 4.28 on desire, less than 5.08 on arousal, less than 5.45 on lubrication, less than 5.05 on orgasm and less than 5.51 onthe pain domain. A total FSFI score of less than 26.5 is indicative of sexual dysfunction as proposed by Wiegel et al. [20].

The data were statistically evaluated using the SPSS 23 package program. The results are presented in tables of frequency. Statistical analysis of data was done by Chi-square test and a p-value of < 0.05 was considered statistically significant.

3. RESULTS

Data were obtained from a total of 72 respondents and61.1% of them had sexual dysfunction when 26.55 was used as the cut off value for sexual dysfunction in the FSFI scale. However, the mean score of the respondents was 27 ± 2.8. The age range of respondents was 18-50 years with a mean age of 33 ± 6 years. The highest frequency (48.6%) was in the age range 31- 40 year group, while the least was in the 41-50 year group (15.3%) (Table 2).

Table 2 also shows that 83.3% of them were married, 15.3% were single and 1.4% were either separated or divorced. The majority (79.2%) of the participant were parous women. Most of the respondents (59.7%) have tertiary education level and 61.15% of all the respondents were employed. The use of hormonal therapy was present among 18.1 % of the participants. Nineteen percent (19.4%) of themwere circumcised and 8.3% of the participants had marital disharmony. The history of sexual abuse, chronic medical condition and medications were seen in 12.5%, 5.6% and 4.2%, respectively. The most common type of sexual dysfunction among the respondents was desire disorders (66.7%) followed by disorders of orgasm (62.5%), lubrication (56.9%), arousal (43.1%) and pain (40.3%) (Table 3).

Table 4 shows the relationship between sexual dysfunction, desire disorder, arousal disorders and some selected variables. Tertiary education ($p=0.04$) and painful intercourse ($p=0.009$) were significantly associated with sexual dysfunction. Desire disorder was equally noted to be significantly associated with advanced age ($p=0.04$), parous women ($p=0.002$) and painful sexual intercourse ($p=0.03$). Circumcised women were highly associated with arousal disorder.

Table 1. Domain factor

Domain	Questions	Score Range	Factor	Minimum Score	Maximum Score
Desire	1, 2	1 – 5	0.6	1.20	6.00
Arousal	3, 4, 5, 6	0 – 5	0.3	0	6.00
Lubrication	7, 8, 9, 10	0 – 5	0.3	0	6.00
Orgasm	11, 12, 13	0 – 5	0.4	0	6.00
Satisfaction	14, 15, 16	0 (or 1) – 5	0.4	0.80	6.00
Pain	17, 18, 19	0 – 5	0.4	0	6.00
		Full Scale	Score Range	2.00	36.00

Table 2. Sociodemographic characteristics

Variables	*Frequency (n)*	*Percentage*
Age		
< 20	2	2.8
21-30	24	33.3
31-40	35	48.6
41-50	11	15.3
Parity		
Nulliparous	15	20.8
Parous	57	79.2
Level of education		
No formal	0	0
Primary	1	1.4
Secondary	28	38.9
Tertiary	43	59.7
Marital status		
Single	11	15.3
Married	60	83.3
Separated/Divorced	1	1.4
Occupation		
Employed	44	61.1
Unemployed	28	38.9

Table 3. Types of sexual dysfunction

	Frequency (n)	***Percentage***
Disorder of desire	48	66.7
Disorder of orgasm	45	62.5
Disorder of lubrication	41	56.9
Disorder of arousal	31	43.1
Pain disorder	29	40.3
Unsatisfied (with sexual function)	24	33.3

Table 4. Relationship between Sexual dysfunction and some selected variables

Variables	**Desire disorder**			**Arousal disorders**			**Sexual dysfunction**		
	Yes	**No**	**P value**	**Yes**	**No**	**P value**	**Yes**	**No**	**P value**
Age <40 years	37	23		26	34		35	25	
Age ≥ 40 years	11	1	0.04	5	7	0.92	9	3	0.29
Nulliparous	5	10		7	8		7	8	
Parous	43	14	0.002	24	33	0.75	37	20	0.20
Non-Tertiary education	18	14		12	20		15	17	
Tertiary education	30	10	0.09	19	21	0.40	28	12	0.04
Circumcised women	11	3	0.29	11	3	0.001	9	5	0.79
Sexual abuse history	8	1	0.13	5	4	0.42	5	4	0.72
Painful intercourse	25	4	0.03	13	16	0.80	23	6	0.009
Marital disharmony	5	1	0.37	2	4	0.62	5	1	0.25

4. DISCUSSION

The prevalence of female sexual dysfunction varies as different authors used different definitions of abnormal and normal depending on the scoring index and the studied population. The prevalence of 61.1% gotten in this study using the female sexual function index (FSFI) implies that a significant number of women are equally affected in this environment. This prevalence is far lower than the 95% gotten from a similar study conducted in Kwara state, north central Nigeria [2]. Nwagha et al reported their prevalence as 53.5% in Enugu [10]. In contrast to our study population, Nwagha et al used a university community. It is surprising that the prevalence of this disorder can be this high in our environment. This brings to the fore the fact the situation has been underestimated because the affected females do not present this as a complaint to the physician. This might be related to the societal obstacles women face when they express sexual displeasure. Thus they rather suffer in silence.

The relationship between age and sexual dysfunction has been a subject of diverse opinion. Kinsey et al proposed a theory in 1953 that the female sexual function shows a declining trend with age, [21] and this was in keeping with this study that showed a relatively reduced sexual function in participants above 40 years. Some authors have attributed it to a reduction in the circulating estrogen, [3] while others feel it might be due to couple's loss of interest for each other as they aged [14].

Aside from our study, others have also reported a higher level of sexual dysfunction in women with university education and higher compared with those with non-tertiary education.[16] However, some studies found out that the sexual dysfunction was more prevalent in women with low educational level, [12,22] This is explained by the fact that the better-educated women are, the bolder bolder they are to express their sexual dissatisfaction, present to experts for care and more importantly understand and respond appropriately to the sex dysfunction scoring index [13].

It was seen that women who were nulliparous had lower scores in all the subgroups of the FSFI with desire score being statistically significant. Circumstances around deliveries like surgery, trauma, and mental illness might be the reason why parous women have higher scores.

The most common of sexual dysfunction in this study was desire disorder followed by the disorder of orgasm and it was in keeping with the findings of Laumann et al in the United States of America.[11] This study had tried to assess the effect of marital status, marital disharmony and sexual anxiety on sexual function but found no significant association. Female genital cutting was present in 19.4% of the participants despite the series of advocacies in this environment since the last decade, and this had a very significant untoward effect on female arousal as noticed in them. However, the overall sexual function was not overly affected. These findings further buttress the need for policy makers, program planners and health care providers not to relent their efforts on tackling the act of female circumcision.

Though pain disorder seems to be relatively lower than the other types of sexual dysfunction, its presence is directly proportional to them. Furthermore, the study showed that pain disorder is significantly related to sexual desire as well as the overall sexual function in females. The specific form of pain disorder was not highlighted in the FSFI. Dyspareunia refers to painful sexual intercourse and it might be superficial or deep and its usually organic while vaginismus is an involuntary spasm of the vaginal entrance making intercourse impossible or painful. Vaginismus appears to be a learned response triggered by fear of penetration and may be due to previous experiences like sexual abuse. However, a significant relationship was not noted between participants with pain disorders and history of sexual abuse.

It is worthy of note that despite the aforementioned high prevalence of sexual disorder in this study, only 33.3% of the participants were not satisfied with their sexual function. This is very low compared to the reported 86% by Shittu et al in Kwara State Nigeria [2]. Therefore treatment is better restricted to individuals who are dissatisfied.

5. CONCLUSION AND RECOMMENDATIONS

Female sexual dysfunction is very common in our environment and can be affected by socio-cultural, psychological and physiological factors. Every woman presenting to the gynaecologist should have sexual history taken and receive care where necessary.

6. LIMITATION

The major problem with using the FSFI is the refrain of participants to express their problems as complaints. The interviewers often encounter major challenge when explaining the questions to the participants with low educational status.

CONSENT

All the participants were provided written informed consent to indicate their agreement.

ETHICAL APPROVAL

The ethical clearance for the study was obtained from the University of Port Harcourt Ethics Committee.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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