

Sexual Dysfunction in Women: An Overview of Risk Factors and Prevalence in Indian Women

Rohina S Aggarwal, Vineet V Mishra, Navin A Panchal, Nital H Patel, Vrushali V Deshchougule, Anil F Jasani

ABSTRACT

Objective: To detect the prevalence of sexual dysfunction and also to investigate possible risk factors that may cause sexual dysfunction in the Indian women.

Materials and methods: The prospective study consisted of 500 women between ages 18 and 66 years from different sociocultural areas. The women were divided into five groups according to their ages <24 years (n = 129), 24 to 30 years (n = 182), 31 to 37 years (n = 125), 38 to 42 years (n = 22), >42 years (n = 42). Female sexual function was assessed with a detailed 19-item FSFI questionnaire to evaluate five domains of sexual dysfunction, i.e. desire, arousal, lubrication, orgasm and pain. Demographic characteristics and medical risk factors were evaluated and findings were compared between the women with and without sexual dysfunction.

Results: Based on total sexual function score, 278 (55.6%) of total 500 patients had sexual dysfunction. The commonest dysfunction was orgasmic (91.7%) followed by lubrication (89.2%). Out of 278 patients, 53 patients (19%) were in the age of more than 38 years in the FSD group. Female sexual dysfunction was more prevalent in illiterate women, 7.19% patients were illiterate in the FSD group as compared to 3.15% patients in the women with no FSD (p = 0.04). It shows that prevalence of female sexual dysfunction was significantly higher in the older age group and in illiterate patients.

Conclusion: The prevalence of female sexual dysfunction rises with age, lower education level, chronic disease and menopausal status.

Keywords: Female sexual dysfunction, General population, FSFI questionnaire, IKDRC.

How to cite this article: Aggarwal RS, Mishra VV, Panchal NA, Patel NH, Deshchougule VV, Jasani AF, Sexual Dysfunction in Women: An Overview of Risk Factors and Prevalence in Indian Women. *J South Asian Feder Obst Gynae* 2012;4(3):134-136.

Source of support: Nil

Conflict of interest: None declared

INTRODUCTION

The sexual response in women is expressed by different phases (desire, arousal, lubrication, plateau, orgasm and resolution). The first three components are interdependent. Healthy sexual functioning is an important contributor to women's sense of well-being and quality of life. The presence of more than one dysfunction should be ascertained, because considerable interdependence may exist. Long-term medical diseases, minor ailments, medications and psychosocial difficulties, including prior physical or sexual abuse, are etiologic factors. Gynecologic maladies and cancers (including breast cancer) are also frequent sources of sexual dysfunction, which in turn

results in distress and agony. Evaluation of psychological and pathophysiological factors responsible for female sexual dysfunction can be easily dealt with psychogenic treatment based on cognitive behavioral and psychodynamic approaches, drug therapy or surgery.

MATERIALS AND METHODS

Total of 500 patients were studied in the Outpatient Clinic of Department of Obstetrics and Gynecology in our Institute at Ahmedabad. Oral informed consent regarding study was taken. Women not living with their husbands in the past 6 months were excluded. Female sexual function index Proforma in three languages (Hindi, English and Gujarati) that had been previously pilot tested for cultural appropriateness and linguistic accuracy was given to consenting participants and illiterate women were interviewed personally. Patients with past history any psychiatric illness, endocrinological disorder or on antihypertensive drugs were excluded from the study.

Female Sexual Functioning Index

Female sexual functioning index (FSFI) is a brief, multi-dimensional scale for assessing sexual function in women. Higher score indicates better sexual function. The questionnaire consists of 19 questions covering 6 domains-desire (2 questions), arousal, lubrication (4 questions-each), orgasm, satisfaction, pain (3 questions each). Response to each question relates to previous month and are scored either from 0 (no sexual activity), 1 (indicative of dysfunction) to 5 (suggestive of normal sexual activity). Individual domain scores are obtained by adding the scores of the individual questions that comprise the domain and multiplying the sum by the domain factor provided in the FSFI for each domain. The full scale score is obtained by adding the 6 domain score. The minimal score possible is 2 and the maximum is 36. The cutoff score to demarcate sexual dysfunction is 26.55, as obtained from a validation study. Accordingly scores less than 4.28, 5.08, 5.45, 5.05, 5.04 and 5.51 on the desire, arousal and lubrication. Orgasm, satisfaction and pain domains respectively were used to classify participants with such dysfunction reliably.

Statistical Analysis

All statistical analysis was performed using the statistical package for the social sciences (SPSS version 12.0). Continuous variables were compared using Student t-test. Chi-square test of Fisher exact test were used to assess the effect of change in differences in categorical variables. Data values are expressed as mean \pm SD, count (%age) and p < 0.05 is considered to be statistically significant.

OBSERVATION AND RESULTS

Out of 500 patients 278 (55.6%) patients were suffering from FSD with mean FSFI score 17.8 ± 5.92 which is statistically significant ($p < 0.0001$) (Table 1). In patients suffering from FSD, 91.7% of patients had orgasmic dysfunction followed by lubrication in 89.2% of patients, dyspareunia in 86.6%, arousal in 80.5% and satisfaction disorders in 79.4% of patients. Desire was the least common sexual dysfunction encountered in (48.2% of patients) (Table 2).

Table 3 depicts that, in the age group of 24 to 30 years, 99 (44.5%) patients had no FSD and 83 (29.8%) patients suffered from FSD (p -value, 0.0006). In the age group of >42 years of total population, 36 (12.9%) patients had FSD as compared to only 6 (2.7%) patients with no FSD (p -value, 0.00004). It clearly indicates that FSD increases as the age advances and prevalence of FSD is lesser in younger age group.

In the 38 to 42 years age group, the most common disorder was orgasmic dysfunction followed by arousal and desire disorder with p -values 0.006, 0.00003 and 0.020 respectively (Table 4). In females of more than 42 years age, the commonest disorder was arousal dysfunction followed by satisfaction with p -values 0.003 and 0.001 respectively (Table 4). Regarding

education status, 7.19% illiterate patients had FSD as compared to only 3.15% illiterate patients with no FSD ($p = 0.047$) (Table 5). Endometriosis and PID are the associated risk factors with female sexual dysfunction (Table 5).

A comprehensive literature review by Simons and Carey¹ notes an overall prevalence of desire 5 to 46%, arousal 7 to 10% and orgasmic disorders 7 to 10%. Shokrollahi² et al in Iran revealed prevalence of desire 15%, orgasm 26%, lubrication 15%, vaginismus 8% and dyspareunia 10%. Thirty-eight percent of women had at least one sexual dysfunction. Alaleh Asghari Roodsari³ et al found prevalence of desire, orgasm, pain and lubrication as 20, 36.7, 6.7 and 33.3%. Cayan⁴ et al depicted the prevalence of FSD 21.7% in the age group of 18 to 27 years, 25.5% in 28 to 37 years, 53.5% in 38 to 47 years, 65.9% in 48 to 57 years and 92.9% in 58 to 67 years. Singh JC et al⁵ in 2009 suggested desire disorders in 77.2%, arousal in 91.3%, lubrication in 96.6%, orgasm in 86.6%, satisfaction in 81.2% and pain in 64.4%. Age more than 40 and lower educational status were the contributory factors. In our study, we found orgasmic dysfunction (91.7% of patients) as the most common and desire dysfunction (48.2% of patients) as the least common.

Table 1: Total population (n = 500)

Total population (n = 500)	FSD +ve (n = 278)	No FSD (n = 222)	p-value
Number of patients (% of age)	278 (55.6%)	222 (44.4%)	<0.0001
FSFI score mean \pm SD	17.84 \pm 5.92	26.91 \pm 1.36	

Table 2: Various domains of FSD and no FSD group

Groups	FSD +ve (n = 278)	No FSD (n = 222)	p-value
Desire	134 (48.2%)	34 (15.3%)	0.000
Arousal	224 (80.5%)	83 (37.3%)	0.000
Lubrication	248 (89.2%)	112 (50.4%)	0.000
Orgasm	255 (91.7%)	124 (55.8%)	0.000
Satisfaction	221 (79.4%)	98 (44.1%)	0.000
Dyspareunia	241 (86.6%)	161 (72.5%)	0.000

Table 3: Age-wise distribution of FSD and no FSD group

Intervals	FSD +ve (n = 278)	No FSD (n = 222)	p-value
<24 years	76 (27.3%)	53 (23.8%)	0.379
24-30 years	83 (29.8%)	99 (44.5%)	0.0006
31-37 years	66 (23.7%)	59 (26.5%)	0.466
38-42 years	17 (6.1%)	5 (2.25%)	0.036
>42 years	36 (12.9%)	6 (2.7%)	0.00004

Table 4: Subgroups of FSD according to age

	24-30 years				p-value	38-42 years				p-value	>42 years				p-value
	FSD +ve (n = 83)		No FSD (n = 99)			FSD +ve (n = 17)		No FSD (n = 5)			FSD +ve (n = 36)		No FSD (n = 6)		
	Y	N	Y	N		Y	N	Y	N		Y	N	Y	N	
Desire	41	42	15	84	0.000	10	7	0	5	0.020	19	17	2	4	0.378
Arousal	67	16	38	61	0.000	16	1	0	5	0.00003	28	8	1	5	0.003
Lubrication	79	4	51	48	0.000	15	2	3	2	0.150	33	3	4	2	0.080
Orgasm	79	4	60	39	0.000	17	0	3	2	0.006	33	3	5	1	0.519
Satisfaction	62	21	50	49	0.0008	16	1	3	2	0.050	29	7	1	5	0.001
Dyspareunia	80	3	69	30	0.000003	12	5	4	1	0.677	29	7	5	1	0.872

Table 5: Education status and pathological factors in general population

	FSD +ve (n = 278)	No. FSD (n = 222)	p-value
Primary	7 (2.5%)	5 (2.2%)	0.847
Matrics	122 (43.8%)	95 (42.7%)	0.807
Higher secondary	65 (23.3%)	55 (24.7%)	0.716
Graduate	57 (20.5%)	55 (24.7%)	0.255
Postgraduate	7 (2.5%)	5 (2.2%)	0.847
Illiterate	20 (7.19%)	7 (3.15%)	0.047
Endometriosis	80/242 (33%)	40/216 (18.5%)	0.0004
PID	128 (46%)	35 (15.7%)	0.000

Personality, obesity, vulvovaginal surgeries, menopause and urinary problems are considered important factors in sexual dysfunction. Inhibitions may be due to disparity or visible disabilities. Marital disharmony, conflict, social taboos and sociocultural factors have negative impact on sexual dysfunction. The final goal is to elicit psychosocial information. The association of FSD with advancing age can be the result of vaginal atrophy caused by peri- or postmenopausal estrogen deficit or it may be confounded by complex cultural expectations and taboos that include women perception and expectations of the sexuality. The hypoestrogenic state of menopause may cause significant physical changes^{6,7} and alterations in mood or a diminished sense of well-being, which have been found to have a significant, negative impact on sexuality. Commercially available gels and creams are used for vaginal dryness and androgens are used to increase libido. Recently, sildenafil citrate has gained popularity to increase vaginal engorgement. HRT can be used in postmenopausal ladies to treat arousal and orgasmic disorders. The mechanism of estrogens effect on desire is indirect and occurs through improvement in urogenital atrophy, vasomotor symptoms and menopausal mood disorders (i.e. depression). Testosterone appears to have a direct role in sexual desire.

CONCLUSION

It is imperative to inculcate awareness of sexual health in women. Primary care physicians must assume a proactive role in the diagnosis and treatment of these disorders.

REFERENCES

1. Simons J, Carey MP. Prevalence of sexual dysfunction: Results from a decade of search. *Arch Sex Behav* 2001;30(2):177-219.
2. Shokrollahi P, Mirmohamadi M, Mehrabi, et al. Prevalence of sexual dysfunction in women seeking family planning services at Tehran. *J Sex Marital Ther* 1999;25:211-15.
3. Alaleh Asghari Roodsari, Afsaneh Khademi, Ehsan A kbari Hamed, Seideh Leila Tabata baiif, Ashraf Alleyassin. *MJM*2005 8(2);104-08.

4. Cayan S, Akbay E, Canpolat MBB, Acar D, Ulusoy E. The prevalence of female sexual dysfunction in Turkish women. *Urologia Internationalis* 2004;72(1).
5. Singh C, Tharyan P, Kekre NS, Singh G, Gopalkrishnan G. Prevalence and risk factors for the female sexual dysfunction in women attending a medical clinic in South India. *J Postgrad Med* 2009; 55:113-20.
6. Laumann E, Paik A, Rosen R. Sexual dysfunction in the United States: Prevalence and predictors. *JAMA* 1999;281:537-44.
7. Mahlstedt PP. The psychological component of infertility. *Fertil Steril* 1985;43:335-46.

ABOUT THE AUTHORS

Rohina S Aggarwal

Assistant Professor, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad, Gujarat, India

Vineet V Mishra (Corresponding Author)

Professor and Head, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad-380016, Gujarat India, Phone: 9426078333, Fax: 22685454, e-mail: vvmishra@yahoo.com

Navin A Panchal

Junior Lecturer, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad, Gujarat, India

Nital H Patel

Junior Lecturer, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad, Gujarat, India

Vrushali V Deshchougule

Clinical Fellow, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad, Gujarat, India

Anil F Jasani

Clinical Fellow, Department of Obstetrics and Gynecology, Institute of Kidney Disease and Research Centre, Ahmedabad, Gujarat, India