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IP Indian Journal of Neurosciences

Journal homepage: www.ipinnovative.com

Original Research Article

Female sexual dysfunction in generalized anxiety disorder

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ARTICLE INFO

Article history:
Received 31-07-2020
Accepted 05-08-2020
Available online 18-09-2020

Keywords:
Female sexual dysfunction
FSFI

ABSTRACT

A lot has been studied about male sexual dysfunction but only few studies have been conducted on female sexual dysfunction so far. Our study aimed to explore sexual dysfunction among female psychiatric patients suffering from Generalized Anxiety disorder (GAD) and among healthy controls.we compared 27 GAD patients with 100 healthy matched controls using FSFI scale.
Chi square and T test was used for statistical analysis. Prevalence of sexual dysfunction was significantly higher in GAD patients as compared to healthy controls. In conclusion, with such an alarmingly high prevalence of sexual dysfunction among psychiatry patients it is important to consider patient's sexual life while investigating.

1. Introduction

Human Sexuality is the sum total of an individual's biological constitution, knowledge, life experiences, behavior and attitudes. It is an important aspect of human lives.[1,2]

It can serve as a vehicle for emotional connection with another person; intimate sexual relationships may act as buffers against impact of life stress and contributes significantly to a sense of competence in an adult.[3–6]

A lot has been studied about male sexual dysfunction but only few studies have been conducted on female sexual dysfunction so far.

Our study aimed to explore sexual dysfunction among female psychiatric patients suffering from Generalized Anxiety disorder (GAD) andamong healthy controls. Ascertaining and attending to sexual dysfunctions not only enhance the therapeutic bond between psychiatrist and patients but also will have several positive spinoffs out of which sense of wellness and competence in the patients can be considered as most important. An explorative study of this nature is likely to add impetus to research in this very important area.

2. Materials and Methods

The study was conducted in a tertiary care teaching hospital in Bhopal (M.P). For our study we took 27 patients with GAD and 100 matched controls. The study had a cross-sectional design and the samples were recruited by purposive sampling.

Psychiatric cases were taken both from OPD and IPD of People's Hospital Bhopal, who were between the age group of 18-45 years, married, and those who were diagnosed as having Generalized anxiety disorder as per DSM 5. Data from control population was collected from the married females between age group of 18-45 years who came along as informant with the psychiatric patient to our hospital. Patients from both Urban and Rural areas are included in the study.

We excluded those subjects who were not in the required age range, those who had significant cognitive impairment, or a major medical conditions and those who were not willing to participate in the study were.

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https://doi.org/10.18231/j.ijn.2020.039

The purpose of the study was explained to every individual included in the study. They were given freedom of choice to accept or refuse to participate in the study. Those who provided written informed consent were included in the study. They were told that less objective information was available regarding sexual experiences of women.We wanted to collect reliable data in this area so that sexual and marital problems could be effectively treated. They were assured that the information will be kept confidential. We did not interview the husband because it was felt that if both partners are interviewed than the chances are that more subjects may give socially acceptable answers. Most of the subjects cooperated in this endeavor.

2.1. Instrument used

Sexual dysfunction was assessed using Female sexual Function Index (FSFI) scale.[5] The scale is a 19 item questionnaire, developed as multidimensional self- report instrument for the assessment of the key dimensions of sexual functioning in women in last 1 month. It is psychometrically sound, easy to administer. The items of the scale are divided into 6-domains which include desire (2 questions), subjective arousal (4 questions), lubrication (4 questions), orgasm (3 questions) and pain (3 questions).Overall test –retest reliability coefficients are high for each of the individual domains (r = 0.79 to 0.86) and the scale has been reported to have high degree of internal consistency (Cronbach' s alpha values of 0.82 and higher) and good construct validity. The questionnaire is designed and validated for assessment of female sexual function in clinical trials and epidemiological studies. FSFI score of less than 26.55 is taken as an indicator of sexual dysfunction. The questionnaire was translated from English to Hindi and was back translated. Subjects were personally interviewed and questions pertaining to individual domains were asked after rapport establishment.

2.2. Statistical test employed for obtaining data were

Chi square test was used to match the demographic data and for comparing the prevalence of sexual dysfunction among patients with GAD and healthy controls.

Student's T test was used to compare the mean FSFI domain scores and total FSFI scores between GAD patients and Healthy controls.

Significance level was fixed at $P \leq 0.05$

3. Results

In our study the mean age of patients with GAD is 34.3 years and the mean age of healthy controls is 32.5 years.There was no statistically significant difference in the distribution of patients with GAD and healthy controls. According to age and various other demographic data (locality, education, occupation, years of marriage and type of contraceptive method used).

The prevalence of sexual dysfunction (as per cutoff score of FSFI scale) in patients with GAD was 85.18% and 38% in healthy controls. The difference in the prevalence of sexual dysfunction in two groups was highly significant (P=0.001).

The mean values of all the domains of FSFI scores were less in patients with GAD than healthy controls(desire 2.51 $\pm$ 0.9 and 3.50 $\pm$ 0.6 P=0.001, arousal 3.48 $\pm$ 0.80 and 3.77 $\pm$ 0.61,lubrication 4.00 $\pm$ 0.87 and 4.45 $\pm$ 0.74, orgasm 3.44 $\pm$ 0.97 and 4.25 $\pm$ 0.63, satisfaction 3.88 $\pm$ 0.8 and 4.53 $\pm$ 0.59, pain 5.33 $\pm$ 0.83 and 5.74 $\pm$ 0.45, FSFI score 22.55 $\pm$ 3.37 and 26.26 $\pm$ 3.05 in patients with GAD and healthy controls respectively). This difference in all the mean values of all the domains was statistically significant

4. Discussion

In our study 85.18% patients with Generalized Anxiety Disorder (GAD) had sexual dysfunction compared to 38% in the healthy controls. All six FSFI domain scores were significantly less among GAD cases as compared to healthy controls. There was statistically significant difference between anxiety cases and healthy controls for all the FSFI domain and total FSFI score (P=0.001, 0.040, 0.008, 0.001, 0.001, 0.001, 0.001 for desire, arousal, orgasm, satisfaction , pain and total FSFI score respectively in comparison between Anxiety disorder and healthy controls).

Our study results confirm the results of previous studies on sexual dysfunction in patients of anxiety disorder.[7–10]

The role of anxiety in arousal is a controversial topic. Some laboratory studies suggest that under certain conditions anxiety may actually facilitate genital sexual arousal.[11,12] The possible explanation of this controversy may be that the state and trait anxiety are associated with sexual arousal.

Different studies have suggested that there is a curvilinear relation between state anxiety and physiological sexual arousal.[13] State anxiety is uniquely associated with increase in sympathetic nervous system response[14] which may independently affect sexual responses.[15]

Most studies on role of sexual arousal in woman have focused primarily on anxiety from specific concern about sexual performance. Masters and Johnson[16] gave the concept of spectatoring, a type of performance anxiety which is characterized by focusing ones attention outwards rather than inwards pleasurable sensation which increases the fear of performance and results in impairment in sexual functioning subsequently.

Barlow[17] suggested that spectatoring interrupts sexual performance through cognitive interference.He speculated that these patients are not able to divert their mind from oneself and sexual performance and are not able to focus on sensory aspects of sexual experience.

Eysenck[18] and Eysenck[19] correlated sexual variables with three factor PEN (Psychoticism, Extraversion,

Table 1: Demographic Distribution of GAD cases and healthy controls.

Demographic		Anxiety cases (N=27)	Healthy controls (N=100)	Total	X^2 Value	P Value
Age	18-23	2	10	**12**	6.09	0.193
	24-29	1	18	**19**		
	30-35	13	36	**49**		
	36-40	7	30	**37**		
	41-45	4	6	**10**		
	Mean age	34.3 years	32.5 years			
Locality	Rural	7	30	**37**	0.171	0.679
	Urban	20	70	**90**		
Education	Illiterate	8	20	**28**	2.25	0.896
	Primary education	3	10	**13**		
	Secondary Education	3	15	**18**		
	High school	3	18	**21**		
	Higher secondary	5	14	**19**		
	Graduate	4	18	**22**		
	Post graduate	1	5	**6**		
Occupation	Working	4	20	**24**	0.373	0.541
	Non- working	23	80	**103**		
Years of Marriage	0-10	8	32	**40**	0.116	0.943
	11-20	12	45	**57**		
	21-30	7	23	**30**		
Type of Contraception	Nil	3	11	**14**	5.09	0.532
	Condom	10	48	**58**		
	Tubectomy	12	25	**37**		
	Coitus interruptus	1	5	**6**		
	OC Pills	0	4	**4**		
	IUD	1	5	**6**		
	Hysterectomy	0	2	**2**		

Table 2: Comparison of Prevalence of Sexual Dysfunction among patients with GAD and Healthy Controls.

Groups	N	Sexual Dysfunction				Chi Square	P Value
		Present		Absent			
		Number	%	Number	%		
Generalized Anxiety Disorder	27	23	85.18%	04	14.82%	19.0	0.001 (HS)
Healthy Control	100	38	38%	62	62%		

Table 3: Comparison of Mean FSFI Domain scores and Total FSFI Scale Scores between GAD patients and Healthy Controls

Groups	N	Desire Mean±SD	Arousal Mean±SD	Lubrication Mean±SD	Orgasm Mean±SD	Satisfaction Mean±SD	Pain Mean±SD	FSFI Score Mean±SD
Anxiety Disorder	27	2.51±0.97	3.48±0.80	4.00±0.87	3.44±0.97	3.88±0.80	5.33±0.83	22.55±3.37
Healthy Control	100	3.50±0.67	3.77±0.61	4.45±0.74	4.25±0.63	4.53±0.59	5.74±0.45	26.26±3.05
Student 't Test Value		6.076	2.073	2.677	5.194	4.610	3.451	5.473
Significance 'P Value		0.001(HS)	0.040(S)	0.008(S)	0.001(HS)	0.001(HS)	0.001(HS)	0.001(HS)

Neuroticism) model of personality and reported that the negative emotionality characteristic of neuroticism (i.e., anxiety, guilt, self-consciousness) would be deterrent to sexual expression.[20] Similarly in a more recent study Heaven et al[21] also found moderate correlation of neuroticism with sexually specific fears and reported that anxiousness is negatively related to sexual motivation.

Central noradrenergic systems play a vital role in general arousal and in the control of autonomic outflow. Cell bodies arise in the locus coeruleus at the border of the midbrain and brain stem and project to virtually all forebrain regions, including the hypothalamus, limbic and motor systems, and cortex[22] play important role in sympathetic arousal during anxiety.Increased sympathetic tone during anxiety can distract the individual from erotic stimuli and thus also impairs sexual arousal.[23,24] Conversely there are reports which suggest that decreased noradrenergic tone could easily account for decreases in sexual desire owing to insufficient general arousal.

Various other studies have shown relationship of Anxiety disorder with sexual dysfunction but most of them have focused on male sexual dysfunction.[16,25–33]

High anxiety levels have also been found in females with dyspareunia[34,35] who seem to experience severe pain during coitus.[36] Involvement of various limbic structures including hippocampal cortex are reported in pain perception in sexual dysfunction,[37–41] these structures also play important role in anxiety disorder.

Sexual satisfaction and pleasure are likely to be impaired in females with social phobia[8,9,42,43] along with concomitant desire disorder, pain during intercourse and less coital frequency[8] but we have not included patients with social phobia in our study.

Previous studies have shown relationship between OCD and PTSD[7,44–50] with sexual dysfunction but we have not included these disorders as a subcategory of anxiety disorder.

All phases of sexual cycle are impaired by the use of antidepressants.30-65% of incidence has been reported by the use of SSRI,[51] SNRI[52] and MAO inhibitors.[53] We have included both the drug naïve patients and patients who were already receiving some treatment for GAD,so we cannot say how much drugs have contributed to the sexual dysfunction as a side effect.

As India being a male dominated society with a censorious moral attitude towards sex, it becomes very difficult for a woman to discuss the problems she faces in her sexual functioning. Sexual dysfunction is underreported as woman does not openly discuss, they may hide the information due to stigma, embarrassment, fear of emotional deprivation from their spouses and to maintain harmony of the family.

In conclusion, with such an alarmingly high prevalence of sexual dysfunction among psychiatry patients it is important to consider patient's sexual life while investigating. Failure to investigate patient's psychological background can have negative influence on the treatment goals in patients with sexual dysfunction. Clinical evaluation should not only be limited to the patient but should be extended to the partner also.

5. Source of Funding

None.

6. Conflict of Interest

None.

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Cite this article: Shringirishi M, Gurnani KC, Kumar M. **Female sexual dysfunction in generalized anxiety disorder**. *IP Indian J Neurosci* 2020;6(3):192-196.