ORIGINAL ARTICLE

Prevalence and nature of sexual dysfunctions in OCD in a tertiary medical college

Rajarshi Guha Thakurta, Om Prakash Singh[1], Pradipto Dhar[2], Sharmila Sarkar, Paramita Ray[4], Asim Kumar Mallick[2]

Department of Psychiatry, Calcutta National Medical College, [1]Department of Psychiatry. NRS Medical College, Kolkata, [2]Department of Psychiatry, Burdwan Medical College, Department of Psychiatry, SSKM Medical College, Kolkata

ABSTRACT

Normal sexual behavior brings pleasure to oneself and one's partner involves stimulation of the primary sex organs including coitus; it is devoid of inappropriate feelings of guilt or anxiety and is not compulsive. Sexual functioning is influenced by a number of factors, mental illness being one of them. Sexual dysfunction in patients with OCD has mostly been studied independently or in gender-specific studies. These studies have reported significant dysfunction in different areas of sexual functioning. The aim of this study is an attempt to assess & compare the presence, prevalence & types of sexual dysfunctions (SD) in OCD mostly coming from rural background in a Tertiary Government Hospital in West Bengal. Our study revealed Sexual dysfunction was in 53.33% of the subjects. Orgasmic dysfunction was the most frequent dysfunction 20.51% in females (N=8), followed by problems in desire15.38%. However since the data were collected from a specific population, the degree to which they represent the general population cannot be commented upon.

Key word : OCD, Sexual Dysfunction

INRODUCTION

Sexuality is determined by anatomy, physiology, the culture in which a person lives, relationships with others, and developmental experiences throughout the life cycle. It includes the perception of being male or female and private thoughts and fantasies as well as behaviour. To the average normal person, sexual attraction to another person and the passion and love that follow are deeply associated with feelings of intimate happiness.

Normal sexual behaviour brings pleasure to oneself and one's partner involves stimulation of the primary sex organs including coitus; it is devoid of inappropriate feelings of guilt or anxiety and is not compulsive. Recreational, as opposed to relational sex, that is sex outside a committed relationship, masturbation, and various forms of stimulation involving other than the primary sex organs, constitutes normal behaviour in some contexts.[1]

Sexual functioning is influenced by a number of factors, mental illness being one of them. Sexual

Corresponding Author
Rajarshi Guha Thakurta, Department of Psychiatry, Calcutta National Medical College, Kolkata
E.mail : rajarshiguha1982@gmail.com

dysfunctions (SD) are characterized by disturbances in sexual desire and in the psycho-physiological changes associated with the sexual response cycle in men and women.[2]

Obsessive Compulsive Disorder is the 4thmost common psychiatric disorder and has an average lifetime prevalence of 2-3%. SDs have a prevalence of 39% in females with OCD. Patients may report sexual disgust, the absence of sexual desire, very low sexual arousal, anorgasmia, and high avoidance of sexual intercourse.[3]

Sexual dysfunction in patients with OCD and GAD has mostly been studied independently or in gender-specific studies. These studies have reported significant dysfunction in different areas of sexual functioning. However, the majority of these studies are uncontrolled and provide limited evidence about the rates of dysfunction across OCD Furthermore, patients in these categories of disorders are usually prescribed antidepressant medications, which are known to cause substantial sexual dysfunction. Simply exemplifying the dysfunction caused by medications is imperfect unless the dyes-function caused by the disease is clearly demarcated.

Theaim of this study is an attempt to assess & compare the presence, prevalence & types of sexual dysfunctions in OCD mostly coming from rural background in a Tertiary Government Hospital in West Bengal.

AIMS & OBJECTIVES

1) To study the presence, prevalence, types of sexual dysfunctions in OCD.
2) To study the relationship of disease severity with Sexual Dysfunctions.

MATERIALS & METHODS

Study Population

Consecutive new patients attending the Psychiatry OPD were screened withPsychiatric Diagnostic Screening Questionnaire (PDSQ).[4] Patients fulfilling the criteria for OCD were included in the study and informed consent was taken from them.

Inclusion Criteria

a. All first time registered patients (male, female) meeting the criteria for OCD (according to DSM-IV).
b. Age 18-65 (male & female).
c. Not taking psychotropic medications for the illness (drug naive).
d. Having a sexual partner.

Exclusion Criteria

a. Co morbid Axis I or Axis II disorders on SCID-I/P, SCID-II
b. Having psychotic symptoms.
c. H/o sexual dysfunction prior to present episode of illness.
d. Endocrinal disease (diabetes mellitus, thyroid dysfunction)
e. Local genital problems.
f. Renal problems.
g. Neurological disorder.
h. Pelvic surgery or abdominal surgery likely to cause sexual dysfunction.
i. H/o STDS, HIV-AIDS.
j. Taking any psychotropic medication in last 3 months.
k. H/o of hypogonadism.

Study Period

February 2013 - January2014.

Sample Size

60 in OCD

Sample Design

Consecutive patients satisfying the selection criteria & meeting criteria for MDD & OCD after giving valid & informed consent were studied.

Study Design

Hospital based, open, cross sectional study.

Parameters to be Studied

1. Socio demographic data & status, using B.G. Prasad's criterion.
2. MDD & OCD against SCID-I/P.
3. Severity of MDD using 17 item Hamilton Depression rating scale (HAM-D)
4. Severity of OCD using Yale Brown Obsessive Compulsive scale (Y-BOCS)
5. Sexual functioning using Arizona Sexual Experiences Scale (ASEX)

Study Tools

1. Structured clinical interview for DSM-IV-TR AXIS I disorders, research version patient edition :

The Structured Clinical Interview for DSM-IVAxis I Disorders (SCID-I) is a diagnostic exam used to determine DSM-IVAxis I disorders (major mental disorders) and Axis II disorders (personality disorders). An Axis I SCID assessment with a psychiatric patient usually takes between 1 and 2 hours, depending on the complexity of the past psychiatric history and the subject's ability to clearly describe episodes of current and past symptoms. A SCID with a non-psychiatric patient takes 1/2 hour to 1-1/2 hours.

2. 17-item Hamilton rating Scale for Depression.[5]

Type : Clinician-rated scale.

Main indications : Designed to measure the severity of depressive symptoms in patients with primary depressive illness, but has since been used to assess depressive symptoms in other groups.

Rating performed by : Trained clinician or trained mental health professional, on the basis of observation during interview. Rating should ideally take place at a fixed time to avoid the influence of diurnal variation.

Time period covered by scale : Clinical condition at the time of the interview.

Time required to complete rating : 15-20 minutes. Semi-structured interview.

Validity can be a problem in patient populations having concurrent somatic illnesses. There is some consensus for interpretation of the total scores :

- Very Severe : >23
- Severe : 19–22
- Moderate : 14–18
- Mild : 8–13
- No Depression : 0-7.

3. Yale-Brown Obsessive compulsive scale :[6]

The Yale–Brown Obsessive Compulsive Scale, sometimes referred to as Y-BOCS, is a test to rate the severity of obsessive-compulsive disorder (OCD) symptoms.

The scale, which was designed by Dr. Wayne Goodman and his colleagues in 1989, is used extensively in research and clinical practice to both determine severity of OCD and to monitor improvement during treatment. This scale, which measures obsessions separately from compulsions, specifically measures the severity of symptoms of obsessive–compulsive disorder without being biased towards the type of obsessions or compulsions present

Time required completing rating : 10–15 minutes.

Remarks : The scale is a clinician-rated, 10-item scale, each item rated from 0 (no symptoms) to 4 (extreme symptoms).

The scale includes questions about the amount of time the patient spends on obsessions, how much impairment or distress they experience, and how much resistance and control they have over these thoughts. The same types of questions are asked about compulsions (i.e., time spent, interference, etc). The results can be interpreted based on the score. The individual items are included in the appendix section.

Gradation of severity : Score of

- 0–7 : Sub-Clinical;

- 8–15 : Mild;

- 16–23 : Moderate;

- 24–31 : Severe; And

- 32–40 : Extreme.

4. Arizona Sexual Experiences Scale

The ASEX is designed to assess five major global aspects of sexual dysfunction:

- drive,

- arousal,

- penile erection/vaginal lubrication,

- ability to reach orgasm, and satisfaction from orgasm.

The Arizona Sexual Experiences Scale (ASEX) can be used to identify individuals suffering from sexual dysfunction. The ASEX is a patient rated scale. The ASEX Scale is intended to give quantitative data regarding sexual functioning in five specific realms.

The following parameters aid in interpreting ASEX scores :

- Receiver-operator characteristic (ROC) analysis revealed a value for area under the curve (AUC) of .929 +.029, indicating excellent sensitivity and specificity of the ASEX at identification of sexual dysfunction.

The target criteria listed below offers a scoring guideline representative of the strong sensitivity and specificity of the ASEX.

- A total ASEX score of ≥19 or

- Any 1 item with an individual score of ≥ 5 or

- Any 3 items with individual scores of ≥4

are highly correlated with the presence of clinician-diagnosed sexual dysfunction.

Total ASEX scores range from a low of 5 to a maximum of 30.

The ASEX was designed to be simple in order to enhance the overall accuracy in measuring sexual dysfunction by

- Minimizing patient non-compliance with rating (Prisant, Carr, Bottini, Solursh, & Solursh, 1994), and
- Allowing for rapid quantification and detection of the presence of sexual dysfunction.[7]

Study Technique

Patients fulfilling the selection criteria were subjected to a detailed history regarding socio-demographicvariables, clinicalhistory, sexual & marital history, physical examination. Necessary investigations were done to rule out co-morbid medical conditions. This was followed byadministration of SCID-I/P for AXIS-I disorders & SCID-II for AXIS-II disorders. Patients with MDD were assessed for severity using Hamilton Rating Scale for Depression, while patients with OCD were assessed for severity of symptoms using Y-BOCS scale. Patients in OCD group were also administered Hamilton rating scale for depression and subjects scoring 7 or more were excluded from the study. Mental Status Examination of the patients were done & recorded. Patients in both groups were assessed for sexual dysfunctions using Arizona Sexual Experiences Scale (ASEX). Scoring on all scales administered was recorded. Appropriate laboratory investigations & consultation liaison were performed where necessary.

Plan for Data Analysis

Data entry was done after gathering relevant data for a particular patient. Statistical analysis was done after completion of data collection for all patients using standard statistical methods.

Ethical Consideration

The study proposal was submitted to the institutional review board for review & appraisal and the study was commenced after such approval was obtained.

STATISTICAL ANALYSIS

The data was pooled and statistical analysis was done using SPSS version 20 (SPSS Inc., Chicago, Ill.) &Statistica version 6 [Tulsa, Oklahoma : Stat Soft Inc., 2001]

Tests for Normality

Following the **Shapiro-Wilk test** & the **Kolmogorov-Simogorov test** and visual examination of the data, no cells deviated substantially from normality.

Significant effects were examined with simple effects tests. Discreet variables were compared by using **$\chi 2$ test** and continuous variables by using **Students t-Test**. Categorical variables between groups were analyzed using the **Pearson's Chi Square test**. Data was presented as percentages, mean and standard deviation. All tests were two tailed. A p value less than 0.05 was considered statistically significant (95% confidence interval). Correlation analysis between total score of ASEX, HAM-D, and YBOCS was done by using Pearson's correlation as data was normally distributed. Regression analysis was done using simple linear regression tests.

This prospective, cross-sectional, hospital based, single interview study was conducted under the Department of Psychiatry of a tertiary medical college. 60 subjects consenting, aged between 18-65 years, of either sex belonging to OCD groups after screening with PDSQ & diagnosed against DSM-IV TR, fulfilling inclusion & exclusion criterion were included in the study after obtaining permission from the Institutional Ethical Board

DISCUSSION

Age and Sex - The overall sample in the OCD group (N = 60) had a mean ± SD age of 36.73 ± 10.33 years. Sex distribution reveals that 65% of the subjects were female (n=39), with a male: female ratio 1:1.8. It is well docu-mented that male:female ratio is 1:1 for OCD. Predominant female representation in the outpatient clinic probably resulted in this selection bias.[8] (Table-1)

Religion – Hindu (60%) were majority population in the MDD group followed by

Muslim population (33.3%). (Table-1)

Family type – Our study supported findings that in OCD group 68.3% (N=41) were from rural areas. (Table-1)

Severity of Illness – As depicted that most study subjects in this group belonged to severe & mild category (26.7%), while 23.3% belonged to extreme category on Y-BOCS. Tests of significance show that gender had no impact on disease severity.

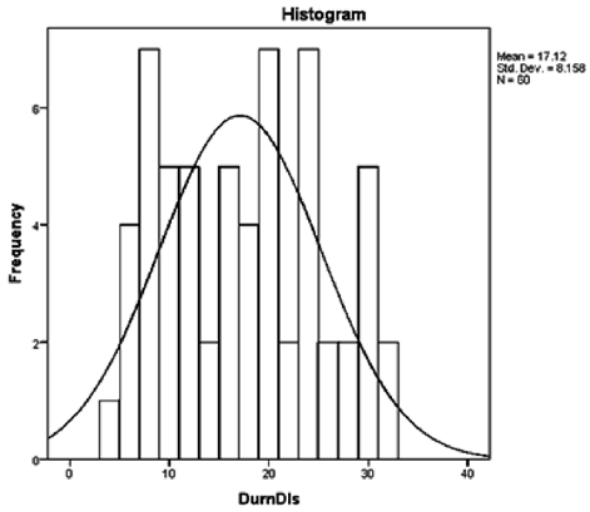

Figure 1 : the histogram of duration of illness

Sexual Dysfunctions - On rating for severity of OCD, the overall sample had Y-BOCS Mean ± SD 23.52 ± 6.6, with slightly higher mean scores on Y-BOCS for females22.72 ± 7.48 (Table 2). Sexual dysfunction was reported in 53.33% of the subjects (N=32). In females total dysfunction was present in 51.28% (N=39) of the subjects,orgasmic dysfunction was the most frequent dysfunction20.51% in females(N=8),followed by problems in desire15.38%. However males reported

Table 1 : Representing the Socio Demographic Characteristics of the OCD sample.

Characteristic	FEMALE (N=39)	MALE (N=21)
Age (Mean ± Sd)	36.38 ± 10.77	38.38 ± 9.66
Duration fillness (Months)	15.38±7.8	20.33±7.8
Religion		
Hindu	53.8%	71.4%
Muslim	38.5%	23.8%
Christian	5.1%	4.8%
Sikh	2.6%	--
Marital Status		
Married	89.7%	90.5%
Single/Widowed	10.3%	9.5%
Residence		
Rural	76.9%	52.4%
Urban	23.1%	47.6%
Family		
Nuclear	46.2%	66.7%
Joint	53.8%	33.3%

greater dysfunction 57.14%, spanning all domains, except desire as compared to females. The Mean ± SD ASEX scores in females was (17.32 ± 3.00). The results from the present study indicate high rates of sexual dysfunction in OCD patients (drug naive, 53.33% which is comparable to the results of Kendurkar et al.[9], who reported that in 50 drug naive patients with obsessive compulsive disorder 50.0% reported having sexual dysfunction, in men 53.6% and in women 45.4%. Which is comparable to our reports as depicted in Figure. Orgasmic dysfunction was the most reported complaint in either gender, and the frequency of occurrence was significantly highest with OCD subjects. Controlled studies of sexual dysfunction in obsessive compulsive disorder are rare. Conflicting results with Fruend and Steketee[7] who reported in 44 obsessive compulsive outpatients retrospectively life histories, and no evidence of sexual dysfunction noted by the authors. Consistent with the findings of our study Aksaray et al.[10] found that 23 women with OCD hadsignificantly higher means on measures of anorgasmia, avoidance, andnon-sensuality than a control group with generalized anxiety disorder. In addition, there was a trend for the women with OCD to

Table 2 : showing the central measures on all sub items of ASEX

	A1- Desire	A2- Excitement	A3-Erection/ Lubrication	A4- Orgasm	A5- Org Satis	Total ASEX
N	60	60	60	60	60	60
Mean	3.35	3.23	3.43	3.70	3.55	17.32
Median	3.00	3.00	3.00	4.00	4.00	19.00
SD	1.117	.963	1.031	1.124	.872	3.006
Range	1-5	1-5	1-5	1-5	1-5	

score higher on vaginismus, sexual non-communication, and dissatisfaction sub-scales.

Comparing our results with that of Vulnik et al.[11] who studied in 101 women with OCD & reported that subjectscored significantly higher than a controlgroup on a measure of sexual disgust, and significantly lower on measures of sexual desire, arousal, and satisfaction with orgasm.

Although some researchers did indeed find that anxiety had an inhibitory effect on sexuality in sexually functional women, most studies with female subjects, indicate that anxiety either facilitates sexual arousal or does not affect it. In their overview of sexuality in women, Andersen and Cyranowski[12] concluded that these studies suggest that the previous conceptualizations of Masters and Johnson and Kaplan may be less relevant for women. Consistent with our results as depicted in Table 4, severity of OCD (Y-BOCS Scale), correlated significantly with all domains of ASEX (r=0.804, P=0.000), Kampmanandcowo-rker[13] found that patients with OCD also suffer from a greater degree of sexual dysfunction and be less satisfied with their sex lives than patients with other anxiety disorders

The robust findingsof this study is that previously sexual desire, sexual thoughts, sexual disgust and sexual arousal hardly have been subject of previous studies in OCD. Monteiro et al.[14] reported low libido in 24% of OCD patients and desire phase difficulties in 22% of OCD patients before Clomipramine treatment. Our results show high percentages of anorgasmic problems (23.9% in males & 20.51% in females) in patients with OCD Consistent with findings of this present study two previous studies reported anorgasmia in 9–12% of OCD patients without medication. Multiple domains of functioning and qualityof life is also strongly affected in first-episode OCD patients, which suggested that OCD psychopathology might impair thesefields since disease onset.[15]

Table 3 : depicts distribution of ASEX severity sc res among subjects:subjects scoring 5 or more on ASEX items or 19 or more on totalscore (sexual dysfunctions)

ASEX items (N%)	Total Subjects (N=60)	Male (N=21)	Female (N=39)
Y-BOCS Score	(23.52 ± 6.6)	(22.28 ± 8.48)	(22.72 ± 7.84)
Desire 2	(9.52%)	6 (15.38%)	8 (13.33%)
Excitement	1 (4.76%)	3 (7.69%)	4 (6.67%)
Penile Erection/	3 (14.3%)	4 (10.25%)	7 (11.67%)
Vaginal Lubrication			
Orgasm	5 (23.9%)	8 (20.51%)	13 (21.67%)
Orgasmic Satisfaction	2 (9.5%)	3 (7.69%)	5 (8.33%)
Total Dysfunction	12 (57.14%)	20 (51.28%)	32 (53.33%)
(Asex Scores)	17.81 ± 2.42	17.05 ± 3.27	17.32 ± 3.00
Mean±Sd			

Stengler-Wenzke and colleagues even repor-ted decreased scores in OCD relative to a sizable sample of schizophrenia patients on two out of four QOL domains (psychological well-being and social relationships). Accordingly, lower scores in OCD, patients relative schizophrenia patients on disease unspecific symptom rating scales such as the Brief Psychiatric Rating Scale or the Global Clinical Impression should not mislead the clinician to assume less despair. Many symptoms are actively suppressed or denied because of embarrassment (e.g., sexual intrusions, obsessions relating to the therapist) or fear of being misdiagnosed as psychotic.[16]

Recently, sexual dysfunction of patients with OCD has become an important concern for diagnosis, life quality, and treatment. Sexual problems or sexualdysfunctions are also associated with mental health, quality of life, and overall life satisfaction in Asian people.[17]

The strong negative association between severity of depression & quality of life domains are consistent with previous work demonstrating a monotonic gradient between OCD & quality of life(Several studies have explored the impact of sexual dysfunction on quality of life and life satisfaction. Bell and Bell [18] and Masters and Johnson (1970) found that life satisfaction and well-being were both associated with sexual satisfaction. In a more recent study, McCabe[19] found that, although sexual dysfunction had a negative impact on quality of life in both sexes, quality of life was more strongly correlated with sexual dysfunction in women than it was in men.The finding of this study that subjects

Table 4 : Showing the correlation matrix between Y-BOCS & all items on ASEX.

Pearson's Correlation (P.C)		YBOCS_ Total	A1_ Desire	A2_ Exct	A3_ Erct_ Lubr	A4_ Orgasm	A5_ Org-Satis	Asex_ Total
YBOCS_Tot	**Pearson Correlation**	1	.424**	.487**	.458**	.534**	.464**	.804**
	Sig. (2-tailed)		.001	.000	.000	.000	.000	.000
	N	60	60	60	60	60	60	60
A1_Desire	**Pearson Correlation**	.424**	1	.269*	-.046	.139	.043	.506**
	Sig. (2-tailed)	.001		.037	.729	.290	.746	.000
	N	60	60	60	60	60	60	60
A2_Exct	**Pearson Correlation**	.487**	.269*	1	.067	.207	.248	.589**
	Sig. (2-tailed)	.000	.037		.610	.113	.056	.000
	N	60	60	60	60	60	60	60
A3_Erct_Lubr	**Pearson Correlation**	.458**	-.046	.067	1	.187	.428**	.540**
	Sig. (2-tailed)	.000	.729	.610		.152	.001	.000
	N	60	60	60	60	60	60	60
A4_Orgasm	**Pearson Correlation**	.534**	.139	.207	.187	1	.327*	.655**
	Sig. (2-tailed)	.000	.290	.113	.152		.011	.000
	N	60	60	60	60	60	60	60
A5_OrgSatis	**Pearson Correlation**	.464**	.043	.248	.428**	.327*	1	.644**
	Sig. (2-tailed)	.000	.746	.056	.001	.011		.000
	N	60	60	60	60	60	60	60
Asex_Total	**Pearson Correlation**	.804**	.506**	.589**	.540**	.655**	.644**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	60	60	60	60	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

in OCD group with sexual dysfunction have statistically significant distress compared to subjects without sexual complaints may be explained by Mowrer's[20] two-stage conceptualization of OCD is particularly useful in explaining the relationship between sexual dysfunction and OCD likely that depressive symptoms and sexual problems are linked in a cyclic fashion with one contributing to the other. Concerning sexual dysfunction alone, there is little agreement about its causes, except that it is multiply determined, and that the relationships between sexual dysfunction and mood are"complex and multidirectional".

Early recognition of SD will lead to better choice of antidepressant medication, behavior therapies & treatment plan with a favorable side effect profile & use of pharmacologic interventions wherever necessary to improve the overall quality of life in OCD.

Future Directions

The following recommendations may be there for considered.

- Thatfurther systematic research needs to be conducted on the nature of sexual dysfunction in OCD, to more definitively show a relationship between OCD and sexual dysfunction.
- That more longitudinal and experimental work is needed to address whether sexual dysfunction causes depression and anxiety, whether depression and obsessions cause sexual dysfunction, or whether the relationship is truly bidirectional and reciprocating.

LIMITATIONS

There are certain inherent limitations with this study.

First, the gender ratio obtained due to methodology of sample selection does not match with the epidemiologic rates for OCD. It is well documented that male:female ratio is for 1:1 for OCD.[21]

Predominant female representation in the outpatient clinic probably resulted in this selection bias.

Second, we tried to control the demographic factors, physical morbidity, and psychiatric morbidity as risk factors for sexual dysfunction in OCD. Besides these, there are other innumerable factors that contribute to sexual dysfunction.

Thirdly the absence of a control group limits our study so far comparison is concerned.

Fourthly, the cross-sectional nature of this study limits our possibility to explore the cause-and-effect relationship between sexual dysfunction and psychiatric diagnoses.

Last, since the data were collected from a specific population, the degree to which they represent the general population cannot be commented on.

REFERENCES

1. Virginia A, Sadock MD. Normal Human Sexuality and Sexual Dysfunctions. In : Sadock BJ, Sadock VA, Pedro R editors. Comprehensive Textbook of Psychiatry. 9th edition. Lippincott Williams and Wilkins; 2009. p. 2058
2. Laumann EO, Park A, Rosen RC. Sexual dysfunction in the United States and prevalence and predictors. JAMA 1999; 281 : 537-44.
3. Freund B, Steketee G. Sexual history, attitudes and functioning of obsessive-compulsive patients. J Sex Marital Ther 1989; 15 : 31-41
4. Zimmerman M, Mattie JI. A self-report scale to help make psychiatric diagnoses : The Psychiatric Diagnostic Screening Questionnaire. Arch Gen Psychiatry 2001; 58(8) : 787–794
5. Hamilton M : A rating scale for depression. J Neurol Neurosurg Psychiatry 1960; 23 : 56–62.
6. Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, Heninger GR, Charney DS. The Yale-Brown Obsessive Compulsive Scale. 1. Development, use, and reliability. Arch Gen Psychiatry 1989; 46 : 1006–1011.
7. McGahuey CA, Gelenberg AJ, Laukes CA, Moreno FA, Delgado PL, McKnight KM, et al. The Arizona Sexual Experience Scale (ASEX) : reliability and validity. J Sex Marital Ther 2000; 26 : 25–40
8. Kendurkar A, Kaur B. Major depressive disorder, obsessive-compulsive disorder, and generalized anxiety disorder: do the sexual dysfunctions differ? Prim Care Companion J Clin Psychiatry 2008; 10 : 299–305
9. Foster K, Meltzer H, Gill B and Hinds K. Adults with a psychotic disorder living in the community, HMSO. London OPCS Surveys of Psychiatric Morbidity in Great Britain 1996; Report 8.
10. Vulink NC, Denys D, Bus L, Westenberg HG. Sexual pleasure in women with obsessive–compulsive disorder? J Affect Disord 2006; 91 : 19–25

11. Bagadia VN, Dave KP, Pradhan PV, Shah LP. Study of 258 male patients with sexual problems. Indian J Psychiatry 1972; 14 : 143-51.
12. Andersen BL and Cyranowski JM. Women' s sexuality: behaviors, responses, and individual differences, Journal of Consulting and Clinical Psychology 1995; 63 : 891- 906.
13. Monteiro WO, Noshirvani NF, Marks IM, Lelliott PT. Anorgasmia from clomipramine in obsessive compulsive disorder : a controlled trial. Br Journal Psychiatry 1987; 151 : 107– 12.
14. Minnen AV, Kampmen M. The interaction between anxiety and sexual functioning : A controlled study of sexual functioning in women with anxiety disorders. Sexual and Relationship Therapy 2000; 15 : 47–57.
15. Ware JE, Snow KK, Kosinski M, Gandek B. SF-36 Health Survey Manual and Interpretation Guide. Boston : The Health Institute 1993.
16. Malik ML, Connor KM, Sutherland SM, Smith RD, Davison RM, Davidson JR. Quality of life and post traumatic stress disorder: a pilot study assessing changes in SF-36 scores before and after treatment in a placebo-controlled trial of fluoxetine. J Trauma Stress 1999; 12 : 387-393.
17. Lau JT, Kim JH, Tsui HY. Prevalence of male and female sexual problems, perceptions related to sex and association with quality of life in a Chinese population: a population-based study. Int J Impot Res 2005; 17 : 494-505.
18. Bell RR, Bell PI. Sexual satisfaction among married women. Medical Aspects of Human Sexuality 1972; 6 : 136-44.
19. Mc Cabe MP. Intimacy and quality of life among sexually dysfunctional men and women. J Sex Marital Ther 1997; 23 : 276-90.
20. Mowrer OH. Stimulus response theory of anxiety. Psychological Review 1939; 46 : 553-65.
21. Balon R. Mood, anxiety, and physical illness: Body and mind, or mind and body? Depression and Anxiety 2006; 23 : 377–87.