Original article

Sexual dysfunction in depressed Indian women attending a hospital out patient department in Mumbai

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Introduction
Female sexual dysfunction is a multifactorial and multidimensional condition with biological, psychological and interpersonal determinants. In India, talking about sex and issues related to sex is taboo and spouses are uncomfortable sharing their problems with each other.

Aims
Aim was to study the prevalence and types of sexual dysfunction in depressed females, identify the association between depression and sexual dysfunction and describe the various myths and misconceptions prevalent in the Indian culture about female sexual behavior.

Method
Forty nine females diagnosed with depressive disorder according to the DSM-IV-TR were assessed using the Becks Depression Inventory, Arizona Sexual Experience Scale and Female Sexual Functioning Index. A questionnaire was designed based on the prevalent cultural beliefs in Indian society to assess the myths and misconceptions about the various aspects of sexuality.

Results
Thirty three (67.34%) had clinical sexual dysfunction. The types of sexual dysfunction were as follows; 26 (53%) had lubrication dysfunction, 25 (51%) had orgasmic dysfunction, 24 (49%) had pain, 22 (45%) had dysfunction of desire, arousal and sexual satisfaction. There was significant association between sexual dysfunction and depression. All patients had several myths and misconceptions about menstruation and sexuality, 98% about pregnancy and 84% about breast size.

Conclusion
This study reported high prevalence of sexual dysfunctions in depressed females. All domains of sexual functioning were affected and there was significant association between sexual dysfunction and depression. All the females had myths and misconceptions about various aspects of sexuality like menstruation, sexuality, pregnancy and breast size.

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Introduction

Sexual health, once regarded as taboo subject, is currently discussed widely. Sexual dysfunction is common among the general population affecting 43% of women and 31% of men (1). Reliable estimates of incidence and severity of sexual dysfunctions in females are difficult to obtain, as patients are often unwilling to raise or discuss the issue of sexual health with health professionals.

Depression is known to hamper sexual relationships with the partner. The prospective Zurich cohort study showed that the prevalence of sexual problems in depressed subjects was approximately twice that in controls (2). A number of investigators have reported various sexual dysfunctions associated with depression (3, 4). Female sexual dysfunction is a multifactorial and a multidimensional condition with biological, psychological and interpersonal determinants. It is known to have a major impact on personal relationships, physical health and quality of life.

There are only a few studies about sexual dysfunction among females in India. In the Indian culture, talking about sex and sex related issues is taboo and spouses are uncomfortable in sharing their problems with each other. Hence we decided to study the prevalence and types of sexual dysfunction in depressed females, and attempted to identify the association between depression and sexual dysfunction. We also studied the various myths and misconceptions prevalent in the Indian culture about female sexual behavior.

Methods

This study was conducted in the psychiatry outpatient department of a general municipal hospital. Inclusion criteria were women aged 18-45 years, diagnosed with depressive disorder, sexually active and not on any psychotropic medication. Depressive disorder was diagnosed according to Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text revision criteria (DSM-IV-TR) (5). All female patients attending the psychiatry out patient department, fulfilling inclusion criteria and willing to participate in study were included. The study was conducted over six months from July to December 2011. All patients were explained about the nature of study and informed consent was obtained. Ethical clearance was obtained from the institutional ethics committee. Fifty two female patients fulfilled inclusion criteria, but three patients refused consent and were not included in the study. A data collection form recorded socio-demographic details, duration of depression and the presence of sexual dysfunctions.

It also contained questions designed by the authors based on the prevalent cultural beliefs in the Indian society, which assessed the myths and misconceptions about sexuality. All patients were interviewed and administered the following scales in the presence of the female co-investigator or a nurse.

Beck's depression inventory (BDI)

This is a 21 item scale which evaluates the key symptoms of depression (6). Individuals rate themselves on a 0 to 3 scale [0=least, 3=most] with a score range of 0 to 63. A total score was obtained.

Arizona sexual experience scale (ASEX)

This scale is designed to measure five core elements of sexual function (7). These core elements are sexual drive, arousal, vaginal lubrication, ability to reach orgasm and satisfaction from orgasm. The items are rated on a six point scale ranging from 1 (hyper function) to 6 (hypo function). A total score of >18 or a score of >5 on any one item indicates clinical sexual dysfunction.

Female sexual functioning index (FSFI)

It is a brief, multidimensional, self reported instrument, used to assess the key domains of sexual function in females (8). It assesses six domains of sexual function; desire, physical arousal-sensation, physical arousal-lubrication, orgasm, satisfaction and pain. The individual domain scores and total score of the FSFI were recorded.

ASEX and FSFI scales are freely available on the internet, and are not copyrighted.

Myths and misconceptions

A questionnaire was designed by the authors to assess the prevalent myths and misconceptions in females in India as there are no existing standardized scales. The questionnaire assessed myths about breast size, menstruation, pregnancy and sexuality. Each question was rated on a 3 point scale where 0=no, 1= not sure, 2= yes. Total and domain scores were obtained.

The BDI, ASEX, FSFI and scale for myths and misconception were translated into the regional languages, Marathi and Hindi and validated by an expert committee comprising of a local language translator, a professor of Psychiatry and a professor of Community Medicine. These results were not published. Data was analysed using SPSS version 17.

Table 1 – Type of sexual dysfunction according to FSFI

Type of Sexual Dysfunction	Number	Percentage (%)
Low Desire	22	44.89
Low arousal	22	44.89
Low lubrication	26	53.06
Orgasmic dysfunction	25	51.02
Low satisfaction	22	44.89
Pain	24	48.97

Results

Forty nine patients were included in the study. The mean age of the sample was 28.9 years (SD 3.03). The age range was 23- 39 years and 40 (81.6%) were aged 25-31 years. Our study was done in a tertiary centre at a metropolitan city. Thirty one (63.26%) patients had completed their secondary education. Majority of our sample (n=46, 94%) were home makers while 3 (6%) were employed. Thirty four (69.38%) were Hindus, 10 (20.4%) were Muslims and 5 (10.2%) were Catholics.

All patients were clinically diagnosed as having Major Depressive Disorder according to DSM-IV-TR criteria. The mean duration of depression was 2 years (SD 1.8). According to the BDI scores 22 (44.89%) had moderate depression, 16 (32.65%) had severe depression and 11(22.44%) had extreme depression.

The total ASEX score was used to assess the presence of clinical sexual dysfunction. Thirty three (67.34%) had clinical sexual dysfunction. Sixteen (32.6%) females did not score more than the cut off score for clinical sexual dysfunction, though they had responded positively to certain items in the ASEX scale. Pearson's correlation coefficient was used to assess association between depression and sexual dysfunction. There was significant association between ASEX scores with the BDI scores ($r=0.4274$, $p<0.001$).

The types of sexual dysfunction were as follows; 26 (53%) had lubrication dysfunction , 25 (51%) had orgasmic dysfunction, 24 (49%) had pain, 22 (45%) had dysfunction of desire, arousal and sexual satisfaction (Table 1).

All patients had myths and misconceptions about menstruation such as woman should not touch anybody or participate in social or religious functions during menstruation and that waste and impure blood is sent out of the body during menstruation. All patients believed that females should not have sexual intercourse during menstruation and sexual intercourse during menstruation was associated with higher chance of contracting venereal diseases. All females had myths and misconceptions about sexuality such as use of condoms reduce pleasure and potency and that alcohol and certain foods increase sexual desire. They also believed that sexual intercourse alters the gait of men and women and that sexual intercourse leads to weakness and backache. All described penetrative sex as the only type of sexual activity. All felt that sex education should not be given to adolescent children.

Of the sample, 98% felt that sexual intercourse should not be performed during pregnancy and that intercourse must be performed several times for a woman to become pregnant.

Misconceptions about breast size was present in 84%. These included beliefs that the sexual desire of a female is directly proportional to the size of the breast (i.e. females with small breast size have less sexual desire and females with large breast size have greater sexual desire) and females with small breast size have less amount of milk in breast so they can't fulfill the hunger of their babies.

Discussion

We are not aware of any studies in India which described the prevalence of sexual dysfunction in depressed females. Severity of depression in our study was similar to that in other out patient samples. Rush et al reported that 10.4% had mild symptoms, 38.6% moderate symptoms, 38% severe and 12.9% very severe symptoms of depression (9). Studies from India report prevalence of sexual dysfunction in non depressed women varying from 33.3% to 73.2% (10, 11). Rates of sexual dysfunction in hospital based studies from other developing countries, especially those which used the FSFI scale, report prevalence rates for female sexual dysfunction ranging from 43% to 69% which is similar to that in our study (12-16).

Studies from Western countries, have reported association between sexual dysfunctions and depression (17-20). About two-thirds of our sample (67.34%) had clinical sexual dysfunction, which is similar to rates of 35-72% reported in these studies (2,18,19).

Rates of sexual dysfunction spontaneously reported by patients and elicited by direct questioning by physicians differ by as much as 60 % (21). Therefore, because of the high prevalence of sexual dysfunctions in depressed females, it is important to question all patients with depression about sexual function. In our sample, 33% of the patients did not have clinical sexual dysfunction according to the ASEX though they reported some areas of sexual dysfunction. This could be due to better understanding of sexuality, awareness and probably a milder form of depression.

Our study revealed a highly significant association between sexual dysfunction and depression. The cognitive changes of low self esteem, feelings of hopelessness and worthlessness, and negative self evaluation can cause impairment in sexual functioning. Depression is also associated with neurotransmitter changes which may contribute to sexual dysfunction in depression (17).

In our study, all components of sexual functioning were affected, with majority having lubrication dysfunction followed by difficulty in achieving orgasm, pain, low desire, low arousal and low satisfaction. Kennedy et al found that 50% of women had decreased sexual desire, 40% had poor vaginal lubrication and 15% had problems achieving orgasm (22). Singh et al reported the prevalence of sexual dysfunctions in women attending general medical clinics; reduced desire (78%), reduced arousal (91%), reduced lubrication (97%), difficulty achieving orgasm (87%), problems with satisfaction (81%) and pain (64%) which is higher than our sample (11). But these findings were in females aged more than 40 years and these patients had comorbid medical illness. Frohlich and Meston found that the depressive symptoms diminished the desire for sex, causing inhibitions of arousal, lubrication, plateau, orgasm and satisfaction (23). Loss of libido is known to be associated with depression (19, 20). Shah et al found that 30% of depressed patients have loss of libido (21).

Sexual dysfunction may be the presenting complaint in some patients, who are later found to have significant depressive symptoms. In others, low sexual desire may precede the onset of depression. Sexual dysfunction is prevalent in depression and it affects nearly all areas of sexual functioning.

India has a diverse culture and is home to several religions and spiritual beliefs. These influence various aspects of an individual's life. This was reflected in the various myths and misconceptions about sexuality in our study. There are some Indian studies regarding myths about menstruation. Gupta et al found that 82% of adolescent girls considered menstruation to be impure and polluting and attributed various religious beliefs as contributing to these beliefs (24). However there is very little data regarding cultural misconceptions regarding sex in India (25). Cultural traditions and religious practices influence even literate Indian women, and these can have a negative impact on their sexual and marital happiness.

This study had several limitations. There was a selection bias as the cases were recruited from a a tertiary centre and the findings cannot be generalized to the entire population. The sample size in this study was small and this study did not include a control group.

Declaration of interest

None declared.

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