

# Sexual Dysfunction in Perimenopause

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## ABSTRACT

**Background:** Several psychological, biological and social factors contribute to a poor sexual function during the transition to menopause aka perimenopause. On sexual dysfunction in perimenopausal women in India, there are few studies available. Aim of the study was to evaluate and assess sexual dysfunction in perimenopausal women. **Methods:** 100 women between the ages of 45 and 55 were recruited for the study and, after giving their informed consent, were evaluated using self-made socio-demographic pro-forma, Female Sexual Function Index (FSFI) and the Arizona Sexual Experiences Scale (ASEX). **Results:** 94 % of the studied women reported significant sexual dysfunction. Findings in this study indicate that prevalent life stressors like poor financial status, loss of husband, neglecting relationships, domestic abuse, substance use in husband etc was seen to negatively affect the sexual function and were found to be correlated with ASEX and FSFI. 55% of sexual inactive women also had high prevalence of mood disorders which was statistically significant. **Conclusion:** A strikingly high proportion of Indian perimenopausal women irrespective of their sexual status are suffering from sexual dysfunction in perimenopause.

**Keywords:** perimenopause, women, sexual dysfunction

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## Introduction

Often, the term, 'perimenopause' is confused with 'premenopause', or menopause itself. Both the World Health Organization and North American menopause society have described perimenopause as the time ranging anywhere between two to eight years before menopause and one year after the final menstruation [1]. The beginning of perimenopause is indicated by a decrease in follicular activity and a rise in the levels of both the ovarian gonadotropin hormones oestrogen and progesterone. The physical manifestations of hormonal changes during perimenopausal phase include vasomotor symptoms, sexual symptoms, cardiovascular effects, musculoskeletal symptoms, urogenital symptoms and even psychological symptoms which can be attributed to endocrine changes or psychosocial stressors during this transition. Several studies and systematic reviews have suggested sexual dysfunction during menopause to be somewhere around 30-70 % in several countries across the world [2-9].

A majority of women experience sexual symptoms which can be attributed to hormonal changes in oestrogen and testosterone; among them are loss of libido, dyspareunia, vaginal itching and dryness, vaginal atrophy and urinary difficulties, which affects one third to half or even more [2]. Decrease in desire and decline in sexual performance occurs early in the transition whereas dyspareunia occurs later [10,11]. Around 40% of women who reported vulvovaginal symptoms also said they had general sexual dysfunction [12]. Women place a lot of importance on vaginal dryness and how it affects their standards of living, particularly how it affects their sexual function. While hormones are quickly to be blamed for the sexual changes that women experience during menopausal transition, it is equally important to address the psycho-social factors leading to a poor sexual function in them. The complexity of physiological factors interacting with motivational behaviour makes it challenging to assess sexual intimacy in perimenopause [13-15].

One Indian study was done on postmenopausal women and

80.9% were found to have sexual dysfunction (SD) [16]. Another Indian study suggested that the prevalence of dryness in vagina, absence of libido and dyspareunia were 10.7%, 55.36% and 10.7 % respectively in postmenopausal women who were sexually active [17]. Due to the stigmatised status of sexual health of middle-aged to older women and paucity of studies in this subject, this study was chosen to explore sexual function in perimenopausal Indian women.

The investigation was a cross-sectional, observational, hospital-based study carried out at the Department of Psychiatry in a tertiary care facility connected to a medical college. The Institutional Ethical Committee reviewed and approved the protocol after it was presented to them.

### **Inclusion Criteria**

- All elderly women, 45-55 years of age who give written

### **Exclusion Criteria**

- Women not giving consent.
- Women who have undergone surgical menopause.
- Women with history of any psychiatric or major medical illness.

### **Procedure**

After receiving written informed consent, 100 perimenopausal women between the ages of 45 and 55 were recruited for the study and its nature and goals were explained to them beforehand.

For the purpose of evaluating the selected women, the following resources were used:

### **Socio-Demographic Proforma**

A specially designed socio-demographic and clinical questionnaire including sex, age, marital status, level of education, family type, occupation, age at menarche, number of living children, physical abuse, loss of spouse, substance use in husband, neglecting relationships with in-laws and husband and other perimenopausal complaints.

### **Female Sexual Function Index (FSFI)**

The scale consists of 19 elements, with two things each in desire, four items in arousal, four items in lubrication, three items each in satisfaction, orgasm, and pain, and six domains overall. Scores of  $\geq 26.55$  on the scale were shown to be the most reliable indicators of clinically meaningful sexual dysfunction (specificity = 0.733; sensitivity = 0.889) [18].

### **Arizona Sexual Experiences Scale (ASEX)**

Each domain of the five questions that make up ASEX is scored from 1 to 6, for a total score that ranges from 5 to 30. which states that "Sexual dysfunction" is defined as a total score of 19 or above, a single item scoring a 5 or 6, or any

three items scoring a 4 or higher. ( $\alpha = 0.9055$ ) [19].

### **Mini-International Neuropsychiatric Interview (MINI)**

It was created as a quick, organised interview for DSM-IV and ICD-10 major Axis I mental illnesses. It has acceptable validation and reliability ratings, and it can be applied to an individual in far less time [20].

### **Statistical Analysis**

Using the Statistical Package for Social Sciences (ver. 19) appropriate nonparametric (Chi-square) and parametric statistical techniques were used to analyse the gathered data (IBM, SPSS 19.0). The significance level for the analyses was set at 0.05, and the level of confidence was 95%.

### **Results**

The mean age of perimenopausal women ( $\pm$ SD) was 49.26 (3.58). The mean age of menarche ( $\pm$ SD) was 13.53 (1.48). The mean age of menopause ( $\pm$ SD) was 46.49 (3.73). The mean ( $\pm$ SD) of years of marriage, number of children and number of abortions was 27.44 (6.37), 2.18 (1.02), 0.65 (0.75) respectively. The mean ( $\pm$ SD) of total scores of ASEX and FSFI was 21.86 (6.83) and 11.43 (10.58) suggesting a significant sexual dysfunction in perimenopausal women. (Cut-off for  $ASEX \geq 19$ ;  $FSFI \leq 26.55$ ). (Table 1 and 2).

The Women with inactive sexual status came to be 56 % whereas 44 % had active sexual status. Sexually inactive women were compared with active women and certain factors like poor education, poverty, loss of spouse, poor social support, domestic abuse and substance use in spouse were found statistically significant and different (Table 3). Amongst the 56 women who were sexual active, around 51 women scored  $\geq 19$  indicating that 91.07 % of sexually inactive women had sexual dysfunction on ASEX and all 56 sexually inactive women scored  $\leq 26.55$  on FSFI domains of desire, orgasm, lubrication, pain, arousal and satisfaction, suggesting that around 99.99 % of sexually inactive women had sexual dysfunction in these 5 domains of FSFI. Amongst the 44 women who were sexual active, around 6 women scored  $\geq 19$  indicating that 13.64 % of sexually active women had sexual dysfunction on ASEX and 38 sexually active women scored  $\leq 26.55$  on FSFI domains of desire, orgasm, lubrication, pain, arousal and satisfaction, suggesting that around 86.36 % of sexually active women had sexual dysfunction in these 5 domains of FSFI (Table 4). 55% of sexual inactive women had high prevalence of mood disorders which was statistically significant and different ( $\chi^2=18.239$ ,  $p=0.00001$ ), amongst which 20 % had MDD, 27 % had GAD and 13 % has dysthymia. Amongst the women with active sexual function, only 18 % had presence of mood disorders, 4.4 % had GAD and 13 % had MDD.

According to individual domain scores of FSFI, domain of orgasm had least mean score of 0.89, followed by lubrication 1.65, arousal 1.78, pain 2.23, desire 2.31 and satisfaction 2.54. Mean full-scale score of 11.46 indicates that all 100 women had symptoms suggestive of sexual dysfunction (Table 5). 97 % of women scored less than 3 in orgasm domain, followed by 71 % of women who scored less than 3 in lubrication and arousal, followed by satisfaction (65 %), desire (64%) and pain (63%).

Signification correlations using Spearman's were found between FSFI and ASEX with poor socio-economic status, negative sexual history, substance use in husband, poor relationship quality with husband and domestic abuse, respectively.

Correlations were calculated using spearman's correlations between FSFI and socio-economic status, positive sexual history, substance use in husband, poor relationship quality with husband, and domestic abuse respectively. Findings suggested the following: FSFI Score and socioeconomic status have a positive correlation, meaning that as socioeconomic status increases, so does FSFI Score, and sexual dysfunction decreases. (Spearman's  $\rho = 0.335$ ,  $p = 0.001$ ), a positive correlation between positive sexual history (that is an active sexual status) and FSFI Score implying that in perimenopausal women with active sexual status, the FSFI score will be high and hence, lesser will be the sexual dysfunction. (Spearman's  $\rho = 0.887$ ,  $p = 0.000$ ), a negative correlation between substance use in husband and FSFI Score implying that higher is the substance use in husband, lower will be the FSFI score and greater will be the sexual dysfunction. (Spearman's  $\rho = -0.312$ ,  $p = 0.002$ ), a negative correlation between poor relationship quality with husband and FSFI Score implying that more neglecting relationships with husband lead to lower FSFI scores and greater will be the sexual dysfunction. (Spearman's  $\rho = -0.270$ ,  $p = 0.007$ ), a negative correlation between domestic use by husband and FSFI Score implying that more is the domestic use by husband, lower will be the FSFI score and greater will be the sexual dysfunction. (Spearman's  $\rho = -0.233$ ,  $p = 0.02$ ).

Correlations were also calculated using spearman's correlations between ASEX and socio-economic status, positive sexual history, poor relationship quality with husband, and domestic abuse respectively. Findings suggested the following: ASEX Score and socioeconomic status have a negative correlation, which suggests that as socioeconomic status increases, ASEX Score decreases and sexual dysfunction decreases as well. (Spearman's  $\rho = -0.240$ ,  $p = 0.016$ ), a negative correlation between positive sexual history (that is an active sexual status) and ASEX Score implying that in perimenopausal women with active sexual status, the FSFI score will be lower and hence, lesser will be the sexual dysfunction. (Spearman's  $\rho = -0.740$ ,  $p =$

0.000), a positive correlation between poor relationship quality with husband and FSFI Score implying that more neglecting relationships with husband lead to greater ASEX scores and greater will be the sexual dysfunction. (Spearman's  $\rho = 0.284$ ,  $p = 0.004$ ), a positive correlation between domestic use by husband and ASEX Score implying that more is the domestic use by husband, more will be the ASEX score and greater will be the sexual dysfunction. (Spearman's  $\rho = 0.204$ ,  $p = 0.042$ ). There is also a negative correlation between ASEX and FSFI Scores implying an inverse relationship between the two, higher the ASEX score, lower will be the FSFI score and greater will be the sexual dysfunction. (Spearman's  $\rho = -0.670$ ,  $p = 0.000$ ).

## Discussion

Particularly, an alteration in sexual urges due to hormones is one way that the menopausal transition can be identified [21]. Between 20 months prior to the final menstrual period and 1 year after it, perimenopausal women experience the greatest decline in sexual function [22]. Women also appear to experience a decrease in sexual urges and a rise in painful sexual activity starting in late perimenopausal stages [23]. Strangely, masturbation is not dependent on the presence of a partner, rises momentarily in the early perimenopause and then falls off in post-menopause [23]. In the five years after the FMP, sexual activity declines however at a relatively slow rate, regardless of lubricant use, vaginal dryness, or presence of mood disorders [22]. Further, vulvovaginal symptoms may worsen sexual dysfunction and impair social, interpersonal, and psychological well-being because they may cause dyspareunia, which makes it difficult to engage in intimate relationships with a partner [21].

In line with findings from earlier studies, this study found that 94% of the perimenopausal women, regardless of their sexual activity status, had considerable sexual dysfunction on the FSFI and 56% had sexual dysfunction on ASEX. A study suggested that 41% of perimenopausal women all around the world reported to have Sexual dysfunction [3]. Another study found out the prevalence of sexual dysfunction during menopausal to be around 88.7%. [24,25] In our study, poor performance was seen on FSFI more than ASEX as both sexually inactive and active women scored poorly specially in arousal, orgasm, lubrication, and pain and satisfaction, with orgasm being the poorest scored domain. One Indian study found out that Mean full scale scores of 14.46 indicating that female sexual dysfunction was seen in all 100 women who were included in the study. [26] According to a REVIVE study done in Europe found that sexual satisfaction is significantly impacted by pain during sex [27].

According to several studies, perimenopause is linked to a decline in sexual desire that is unrelated to aging [28]. Surprisingly, in our study, perimenopausal women scored

comparatively better on desire domain of FSFI which suggests that even if desire is present, sexual function around this time difficult which can be attributed to increasing age, early menopause, reducing levels of oestrogen and progesterone, urogynecologic problems which are in agreement with earlier studies.[29] Reduction in sexual intimacy can be due to many psychological factors like inter personal issues in couples, closeness with partner as well as psychiatric comorbidities. Variables in our study like poor education, poverty, loss of spouse, poor social support with husband and in-laws, domestic abuse and substance use in spouse were statistically different in sexually inactive women when compare to sexually active and they were also found to be predictors of FSFI and ASEX. Many studies have been in favour of this notion that the most significant variables affecting sexual function, however, weren't really due to hormones but rather the psycho-social factors which further contribute to sexual dysfunction. [24,30, 31-36].

In this study, mood disorders were prevalent in sexually inactive women more than sexually active women. Undiagnosed underlying psychiatric illnesses such as depression and anxiety have a significant negative impact on sexual function and overall leads to a poor quality of life. The loss of sexual activity and related intimacy with husband or partner may also be impacted by a decrease in one's overall self-esteem and wellbeing following menopause [37]. Long-term relationships, however, appear to maintain a fulfilling sexual life even in elderly late menopausal women [21]. Women often want to completely forego romantic relationships in order to get rid of the rejection anxiety that stems from their lack of confidence. [38] As a result, this fusion of psychological and physical factors may cause a total decline in libido and complete avoidance of sexual activity leading to an overall sexual dysfunction in women undergoing menopausal transition.

### Strengths and Limitations of the Study

The strengths of this study were that Standardized scales were used for the study. Assessment was done by MINI, ASEX and FSFI scales. People with physical co-morbidities were excluded. The limitations were that a small sample size was taken from one tertiary hospital center and neighbouring localities which limits the general is ability of sample. Women with co-morbid psychiatric disorders were not excluded from the study.

### Conclusion

This study highlights that a strikingly high proportion of Indian perimenopausal women irrespective of their sexual status are suffering from sexual dysfunction in perimenopause. The current plethora of sexual dysfunction in perimenopausal women calls for an intervention during

early perimenopause; and evaluate psycho-social factors like poor education, poverty, loss of a loved one, poor social support with husband and in-laws, domestic abuse and substance use in partner; in order to positively affect the outcome in menopause and improve the overall quality of life.

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<b>Ethics:</b>	There is no ethical violation as it is based on voluntary anonymous interviews
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