

Sexual dysfunction among perimenopausal women attending a tertiary care centre: A descriptive cross-sectional Study

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ABSTRACT

Introduction: The perimenopausal phase involves declining estrogen and ovarian function, causing changes like weakened pelvic muscles and vaginal thinning that often result in sexual dysfunction. The Female Sexual Function Index-6 is a validated tool commonly used to assess these female sexual function issues for early identification and management.

Objectives: This study aimed to determine the prevalence of sexual dysfunction using the Female Sexual Function Index-6 among perimenopausal women attending the Obstetrics and Gynaecology outpatient department.

Methodology: A descriptive cross-sectional study was conducted among perimenopausal women visiting the Obstetrics and Gynaecology outpatient department in a tertiary care centre. Ethical approval was obtained from the Institutional Review Committee. Women with incomplete questionnaires, those with diagnosed psychiatric disorders, unable to provide consent to participate, women with cervical pathology like cervical polyp or carcinoma, malignancies or pelvic surgery, women under hormone replacement therapy and those with surgical menopause were excluded. A convenience sampling technique was used. Point estimate and confidence interval were calculated for binary data.

Results: Among 60 perimenopausal women, the mean total Female Sexual Function Index score was 11.77 ± 6.44 , indicating a high prevalence of sexual dysfunction across all six domains. Sexual function was poorer among women whose partners worked abroad, with only 25.21% of the FSFI score. The orgasm domain was the most impaired (1.25 ± 1.22), followed by desire (1.43 ± 0.74) and arousal (1.45 ± 1.08).

Conclusion: It was found that a larger number of perimenopausal women had sexual dysfunction, with the lowest score in orgasm and desire.

Keywords: perimenopause; prevalence; sexual dysfunction.

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INTRODUCTION

The perimenopausal stage is the period where a woman has a variable menstrual cycle length (different from previously normal) up to one year after the final menstrual period. The perimenopausal phase is a significant stage in a woman's life, marked by a decline in estrogen levels and ovarian function. It brings physiological changes such as pelvic muscle weakening, reduced blood flow, and thinning of the vaginal epithelium.¹ These changes often lead to female sexual dysfunction (FSD), which includes low libido, arousal difficulties, orgasmic disorders, and dyspareunia, significantly affecting quality of life.² While often attributed to ageing, FSD during perimenopause is underreported and undertreated, despite being manageable with early identification.³ The Female Sexual Function Index-6 (FSFI-6) is a widely reliable and validated tool for assessing female sexual function.^{4,5}

This study aims to determine the prevalence of sexual dysfunction using FSFI-6 among perimenopausal women

attending the Obstetrics and Gynaecology outpatient department at a tertiary care centre.

METHODOLOGY

A descriptive cross-sectional study was conducted among perimenopausal women visiting the Obstetrics and Gynaecology outpatient department of Kathmandu Medical College and Teaching Hospital, Sinamangal, Kathmandu, Nepal, from 15th February to 15th July 2025. Ethical approval was obtained before commencement of the study from the Institutional Review Committee KMC (Reference number: 07022025/05). A convenience sampling technique was used. Exclusion criteria included women with incomplete questionnaires, those with diagnosed psychiatric disorders, unable to provide consent to participate, women with cervical pathology like cervical polyp or carcinoma, malignancies or pelvic surgery, women under hormone replacement therapy and those with surgical menopause. Women with physical problems related to spinal cord injury, paralysis, or a partner's sexual dysfunction were also excluded.

Sample size calculation was done by using the following formula:

$$\begin{aligned} n &= (Z^2 \times p \times q) / e^2 \\ &= (1.96^2 \times 0.965 \times 0.035) / 0.05^2 \\ &= 52 \end{aligned}$$

Where,

n = minimum required sample size

Z = 1.96 at 95% Confidence Interval (CI)

p = prevalence of sexual dysfunction taken from a previous study, 96.59%⁶

q = 1-p

e = margin of error, 5%

Data was collected through a proforma via one-to-one interview. The sample population was selected as women in the perimenopausal stage attending the Obstetrics and Gynaecology outpatient department.

Socio-demographic details of the participants were collected. Age, Ethnicity, religion, education level, marital status, duration of marriage, employment status, parity, mode of delivery, contraception use, BMI, tobacco and alcohol use, caffeine use, co-morbidities under treatment, partners' age, education, partners' occupation, partner abroad or not, were noted.

The Nepali translated version of FSFI-6 (Female Sexual Function Index- 6)^{4,5} was used to screen sexual dysfunction. This tool consists of a 6-question survey

The patient ticks to score each question on a scale: (no sexual activity-0), always-5, most times-4, sometimes-3, a few times-2, never/almost never-1 and self-scores. The total score ranges from 0-5, with a lower score indicating worse sexual functioning.

The FSFI-6 (Female Sexual Function Index-6) is a shortened version of the Female Sexual Function Index (FSFI), which is one of the most widely used and validated tools for assessing sexual function in women. The FSFI-6 consists of 6 key items from the original FSFI, focusing on the most important aspects of sexual function. This tool consists of 19 questions assessing 6 dimensions of female sexual function: sexual desire, arousal, lubrication, orgasm, satisfaction and pain in the previous 4 weeks. It can be particularly useful in clinical settings or as a screening tool to quickly identify women who may need a more detailed evaluation or intervention for sexual dysfunction. It asks questions about sexual function over the past 4 weeks.

Data was entered and analysed in Microsoft Excel 2016. Point estimate and confidence interval were calculated for binary data.

RESULTS

Among 60 women, 26 (43.33%) were in the 46-50-year age group. The total FSFI scores of participants in all six domains were 706. The mean age was 48.9±3.25 years (Table 1).

Among 60 participants, 31 (51.67%) were unemployed and had an FSFI score of 371 (52.55%), than the employed 335 (47.45%). Also, 6 (10%) women had Para≥4 with the FSFI score of 98 (13.88%, Table 2).

Women with partners working abroad had a lower FSFI score of 178 (25.21%) than those not working abroad (Table 3).

The total mean FSFI score was 11.77±6.44 with highest in the satisfaction and lowest in the orgasm domain (Table 4).

Table 1: Age group of study participants with FSFI (n=60)

Age group	n (%)	Total FSFI score (706) n (%)
40-45 years	10 (16.67)	126 (17.85)
46-50 years	26 (43.33)	319 (45.18)
51-55 years	24 (40)	261 (36.97)

Table 2: Demographic characteristics of study participants and FSFI score

Variables	n (%)	Total FSFI score (706) n (%)	
Address	Inside valley	35 (58.33)	185 (26.20)
	Outside valley	25 (41.67)	521 (73.80)
Ethnicity	Brahmin/Chettri	49 (81.67)	571 (80.88)
	Janajati	11 (18.33)	135 (19.12)
Religion	Hindu	54 (90)	638 (90.37)
	Others	6 (10)	68 (9.63)
Education level	Literate	18 (30)	168 (23.80)
	Illiterate	20 (33.33)	187 (26.49)
	Primary	14 (23.33)	225 (31.87)
	Secondary	3 (5)	30 (4.25)
	Bachelors	5 (8.33)	96 (13.60)
Employment status	Employed	29 (48.33)	335 (47.45)
	Unemployed	31 (51.67)	371 (52.55)
Parity	Para 1	3 (5)	31 (4.39)
	Para 2	29 (48.33)	346 (49.01)
	Para 3	22 (36.67)	231 (32.72)
	Para ≥4	6 (10)	98 (13.88)
Mode of delivery	Vaginal	37 (61.67)	422 (59.77)
	Caesarean	6 (10)	92 (13.03)
	Both	17 (28.33)	192 (27.20)
Current contraception use	Yes	12 (20)	159 (22.52)
	No	48 (80)	547 (77.48)
Tobacco use	Yes	9 (15)	72 (10.20)
	No	51 (85)	634 (89.80)
Alcohol use	Yes	10 (16.67)	144 (20.40)
	No	50 (83.33)	562 (79.60)
Caffeine use	More than 4 cups per day	18 (30)	212 (30.03)
	Less than 4 cups	42 (70)	494 (69.97)
Co-morbidities under treatment	Yes	35 (58.33)	376 (53.26)
	No	25 (41.67)	330 (46.74)

Table 3: Partners' characteristics and FSFI score

Variables	n (%)	Total FSFI score (n=706)	
Duration of marriage	10-20 years	23 (38.33)	283 (40.08)
	>20 years	37 (61.67)	423 (59.92)

Partners age	≤50 years	12 (20)	185 (26.20)
	>50 years	48 (80)	521 (73.80)
Partners education	Literate	21 (35)	186 (26.34)
	Illiterate	9 (15)	77 (10.91)
	Primary	12 (20)	170 (24.08)
	Secondary	7 (11.67)	91 (12.89)
Partners occupation	Bachelors	11 (18.33)	182 (25.78)
	Employed	22 (36.67)	224 (31.73)
	Unemployed	38 (63.33)	482 (68.27)
Partner works abroad	Yes	16 (26.67)	178 (25.21)
	No	44 (73.33)	528 (74.79)

Table 4: The mean FSFI score in each domain

Domain	Mean±SD
Desire	1.43±0.74
Arousal	1.45±1.08
Lubrication	2.27±1.91
Orgasm	1.25±1.22
Satisfaction	2.83±1.25
Pain	2.63±2.04
Total	11.77±6.44

DISCUSSION

Among 60 women, there is a strong concentration of participants (43.33%) in the 46-50 age group, which corresponds with the highest percentage (45.18%) of total FSFI scores, indicating that age-related sexual function is most prominent in this group. The relatively lower FSFI score contribution from the 51-55 and 40-45 age groups, despite their considerable sizes (40% and 16.67%, respectively), suggests age has a nuanced but significant influence on sexual function, possibly declining after the mid-40s peak. Research highlights that elderly and postmenopausal women experience declines in sexual function, affecting quality of life, which mirrors the dominant FSFI contribution by the mid-40s group in the data.^{7,8}

Employment status critically influences sexual function, with unemployed women representing a slight majority (51.67%) but contributing disproportionately more to the total FSFI score (52.55%) than employed women (47.45%). This could imply that employment conditions, stress, or work-life balance significantly affect sexual function. Similarly, geographic factors highlight a paradox where participants outside the valley (41.67%) have a higher 73.80% of FSFI scores, possibly suggesting better sexual health or less socio-environmental stress compared to the majority inside the valley. Some reports

suggest that employed women have higher sexual desire due to financial independence and self-confidence, while others found that housewives might experience better sexual quality of life, highlighting sociocultural impacts of employment on sexual satisfaction and function.^{7,8}

The reproductive health and lifestyle data reveal complex interactions: 48.33% of women who have had two childbirths contribute nearly half (49.01%) of the total FSFI score, underscoring parity's role in sexual function. In contrast, no use of contraception (80% participants) is linked with a higher (77.48%) FSFI score, suggesting that contraceptive use impacts sexual function. However, a study shows that among women with at least one childbirth event, parity and mode of delivery are not major determinants of sexual desire, activity, or satisfaction later in life.⁹ Substance usage percentages are low (tobacco 15%, alcohol 16.67%), yet these groups show a relatively low FSFI score contribution (10.20% and 20.40%), hinting at negative associations between these habits and sexual health. A study shows that partners' alcohol abuse might as well have some influence in female sexual function.¹⁰

Partner characteristics play a substantial role, with long marriages (20+ years, 61.67%) correlating to higher FSFI scores (59.92%), possibly reflecting stability benefits on sexual health. Partners under 50 years (80%) contribute 73.80% of FSFI scores, highlighting age dynamics in sexual functioning as shown by the literature from Spain.¹⁰ However, partners' unemployment (63.33%) is associated with higher FSFI percentages (68.27%), an interesting contrast warranting deeper investigation into socio-economic and relational factors. Partners working abroad (26.67%) reflect markedly lower FSFI contributions (25.21%), suggesting physical separation may detrimentally influence sexual function. Overall, these percentages reveal intricate socio-demographic

and behavioural influences on FSFI among the surveyed women.

Since this is a descriptive cross-sectional study done in a single centre in a relatively developed part of the country, it needs to take into account the condition of the entire country.

CONCLUSION

The study finds that female sexual function involves a mix of biological, social, and relationship factors. The FSFI-6 effectively measures important areas like desire, arousal, lubrication, orgasm, satisfaction, and pain. Age, especially in the mid-40s, is an important factor

in sexual health. Other elements, such as employment, location, and reproductive history, also affect sexual function outcomes. Partner traits, including age, job status, and physical presence, are important, showing how relationships influence sexual health. The FSFI-6 is confirmed as a trustworthy tool for assessing sexual function. This emphasises the need for well-rounded approaches in clinical evaluations and treatments that consider the many factors affecting female sexual health across different groups.

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