



Association between Sexual Drive Dysfunction and Premenstrual Symptoms

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ABSTRACT

OBJECTIVE Sexual drive can be affected by premenstrual symptoms. The study objectives were to document characteristics of reproductive age women with sexual drive dysfunction and to evaluate the association between sexual drive dysfunction and the presence of premenstrual symptoms.

METHODS Data were collected through an online survey study of adult females age 18-45 years, with some premenstrual complaints. Participants completed the following questionnaires: the Desire component of the female Sexual Function Questionnaire (SFQ-D), the Premenstrual Symptoms Impact Survey (PMSIS), SF-12v2, and retrospective criteria from ACOG for determining presence/absence of PMS. Logistic regression was used to assess which factors (PMS, current age, age at first menstruation, race, employment status, current and past use of oral contraception (OC), presence of any chronic condition) were related to sexual drive dysfunction.

RESULTS 703 women (mean age = 30.8) who were sexually active within the last three months were included in the study. Based on the SFQ-D cutoff, 36.1% of women were identified as having high probability of sexual drive dysfunction. T-test demonstrated significant score differences between women with and without sexual dysfunction both for the SF-12v2 mental component summary and PMSIS. Logistic regression showed that presence of PMS ($p=0.040$) was associated with a higher risk of sexual drive dysfunction while current use of OC reduced risk ($p=0.002$).

CONCLUSION Our study showed that a substantial number of women with PMS experienced sexual drive dysfunction. Probability of experiencing sexual drive dysfunction increases with age and presence of PMS, while oral contraception use appears to mitigate the impact to sexual desire.

BACKGROUND

Premenstrual disorders, including both premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD), can interfere with an affected woman's interpersonal relationships, social activities, work absenteeism, work productivity, and health-related quality of life (HRQOL).¹⁻⁴

Specifically, studies have shown that female sexual interest and marital relationship can be affected by premenstrual symptoms.⁵⁻⁸ While the economic and HRQOL burden of premenstrual symptoms are well established, there is need to evaluate the association between premenstrual symptoms and change of sexual drive.

OBJECTIVES

To document the characteristics of women with sexual drive change related to premenstrual symptoms and evaluate the factors related to sexual drive change among women with premenstrual disorders

METHODOLOGY

Data Sources

- Study Overview** : An internet survey study including eligible participants of the U.S. female members of the Zoomerang panel
 - 18 – 45 years old
 - Must experience regular menstrual cycles for the past three months
 - Must endorse at least one of the premenstrual symptoms from the 2000 ACOG diagnostic criteria for PMS⁹
 - Sexually active in the past-three months

Survey Instruments

- Premenstrual Symptoms Impact Survey (PMSIS)¹⁰
- SF-12v2® Health Survey¹¹
- Sexual Function Questionnaire – Desire Domain (SFQ-D)¹²
- Retrospective component of ACOG criteria⁷ for the diagnosis of PMS

Analysis Procedures

- logistic regression model was used

- **Dependent Variable**: Dichotomized sexual drive dysfunction based on the suggested cutoff SFQ-D score (≤ 16)¹²

Independent variables

- Model I: Presence/absence of PMS using ACOG diagnostic criteria
- Model II: PMSIS score (range from 0-100, with a higher score indicating worse impact on HRQOL)
- Model III: Mental Component Summary (MCS) scores from the SF-12v2

- **Covariates**: age (current, menarche age); race (white vs. non-white); employment status; current and past use of oral contraceptives; and presence of any chronic conditions

Table 1 – Comparisons of the Means and Frequencies of Characteristics of All Women in the Study and by Status of Sexual Desire Dysfunction

	All (N=703)	High Probability Dysfunction (n=254)	Low Probability Dysfunction (n=449)	t	p
Current age	30.8 ± 7.7	31.6 ± 7.7	30.4 ± 7.6	2.06	0.0396
Menarche age	12.4 ± 1.5	12.5 ± 1.3	12.4 ± 1.5	0.85	0.3797
PMSIS	36.6 ± 22.0	39.8 ± 22.1	34.7 ± 21.8	2.99	0.0029
PCS-12	51.9 ± 7.7	51.4 ± 8.4	52.1 ± 7.2	1.16	0.2476
MCS-12	46.2 ± 9.2	44.5 ± 8.8	47.5 ± 8.8	3.71	0.0002
SFQ-D	18.4 ± 6.2	11.9 ± 3.8	22.1 ± 3.9	33.14	<0.0001

	N (%)	Chi-Square	p		
Race (White)	590 (83.9)	213 (83.9)	377 (84.0)	0.0014	0.9707
Employed	447 (63.6)	160 (63.0)	287 (63.9)	0.0603	0.8060
Current OC use	187 (26.6)	50 (19.7)	137 (30.5)	9.7404	0.0018
Past OC use	326 (46.4)	125 (49.2)	201 (44.8)	1.2897	0.2561
Chronic condition	337 (47.9)	133 (52.4)	204 (45.4)	3.1198	0.0773
PMS	232 (33.0)	98 (38.6)	134 (29.8)	5.6028	0.0179

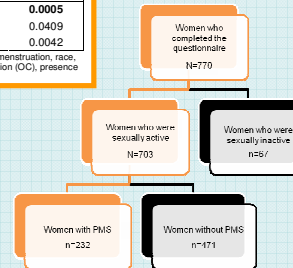
Chronic condition: presence of any chronic conditions including hypertension, diabetes, heart disease, migraine, liver disease, kidney diseases, anemia, or cancer
 OC: oral contraception; PMS: premenstrual syndrome; PMSIS: Premenstrual Symptoms Impact Survey; PCS: physical component summary; MCS: mental component summary; SFQ-D: Sexual Function Questionnaire – Desire Domain

Table 2 – Factors Associated with Sexual Desire Dysfunction

Model	Factors	β	p
I	ACOG PMS	0.1758	0.0402
	Age	0.0219	0.0528
	Current OC	-0.3422	0.0024
II	PMSIS	0.0097	0.0096
	Age	0.0220	0.0524
	Current OC	-0.3252	0.0040
III	MCS-12	-0.0308	0.0005
	Age	0.0233	0.0409
	Current OC	-0.3245	0.0042

Covariates included in all models: current age, age at first menstruation, race, employment status, current and past use of oral contraception (OC), presence of any chronic condition.

Flow Chart of the Study Participants



RESULTS

Descriptive Results (Table 1)

T-test showed that women with high probability of sexual desire dysfunction had significantly worse scores on PMSIS and MCS-12. Chi-square analyses showed that women currently using oral contraceptives were significantly less likely to experience sexual drive dysfunction.

Chi-square analyses showed that women with PMS were significantly more likely to experience sexual drive dysfunction.

Factors significantly associated with Sexual desire dysfunction (Table 2)

All three models were significant with largely similar findings.

- Primary independent variable was significant in all three models
 - Presence of PMS was associated with an increased likelihood of sexual drive dysfunction
 - A higher PMSIS score and thus more severe impact of PMS was associated with an increased likelihood of sexual drive dysfunction
 - A lower MCS-12 score and thus a worse mental health status was associated with an increased likelihood of sexual drive dysfunction

Two covariates were significant.

- Current use of oral contraceptives consistently suggested a protective effect in sexual drive dysfunction.
- Age showed a marginal association in that increasing age may be related to increased likelihood of sexual drive dysfunction.

LIMITATIONS

This is a patient-reported outcome study based on online internet survey.

Only retrospective component of the ACOG diagnostic criteria was used for determining whether women were likely to have PMS. Symptom checklist was used for premenstrual symptom complaints.

CONCLUSIONS

The results indicate that PMS negatively impacts sexual desire.

The factors that are significantly associated with sexual desire dysfunction include age and presence of PMS, while current use of oral contraceptives consistently suggest a protective effect on sexual drive dysfunction.

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