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Prevalence, knowledge and attitude of premenstrual syndrome in women of reproductive age group

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Abstract
Introduction: The epidemiological burden of premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) is mostly overlooked and underdiagnosed due to the stigma around female-prevalent conditions, especially among the Indian population. The limited studies on this show that most of the women suffer from some or other symptoms of PMS&PMDD. Hence, the need of the hour is to educate, evaluate, and treat the condition.
Aim: To understand the epidemiology of premenstrual syndrome in women of reproductive age by providing a structured self-devised novel screening questionnaire.
Methods: This cross-sectional study was conducted on 450 reproductive age women after attaining consent and educating them about PMS and PMDD. They were then provided the novel questionnaire and screened based on their answers if they experienced the common behavioural and/or somatic symptoms and aggregating the scores based on Likert scale.
Results: 414 (92%) of the screened women had some symptoms. 351 (78%) of these women were screened positive for PMS/PMDD.PMS was prevalent in 189(42%) patients, PMDD in 162 (36%).18 (4%) subjects had severe PMS affecting their lifestyle and wanted to seek immediate treatment, along with 288(64%) affected with moderate PMS. 382(85%) women had no or minimal knowledge about PMS&PMDD. None used or knew about tools for PMS screening. The severity of symptoms was influenced by Body mass index, lifestyle and pre-existing medical conditions like polycystic ovarian disorder, Diabetes Mellitus etc. Based on this study, there is a significant impact of PMS & PMDD on the lives of Indian women without they being aware of it. Despite the growing awareness, there remains a considerable deficiency of knowledge about this condition.

Keywords: Premenstrual syndrome**,** PMS**,** Prevalence, PMDD

Introduction
The epidemiological burden and social impact of premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) are not well characterized and overlooked among the Indian population. Premenstrual syndrome is the occurrence of cyclic physical and behavioral symptoms that appear in days preceding menses and subside within an hour or two of attaining menses, are bothersome enough to interfere with work or lifestyle [1], and are followed by a symptom-free interval. Epidemiological data show that 45 to 75 percent of women of reproductive age suffer from some PMS symptoms [2]. Pre-menstrual syndrome is bothersome enough to interfere with the work and lifestyle of women and lower their quality of life [3]. Premenstrual disorders are diagnosed depending upon diagnostic criteria followed from the American College of Obstetricians and Gynecologists (ACOG) or from the Diagnostic and Statistical Manual - fifth edition (DSM-five) of the American Psychiatric Association (APA) [4]. Premenstrual Syndrome (PMS): Diagnosis includes the presence of both behavioral and somatic symptoms [5].Premenstrual dysphoric disorder (PMDD): Diagnosis can include, but does not require presence of somatic symptoms [4, 5].

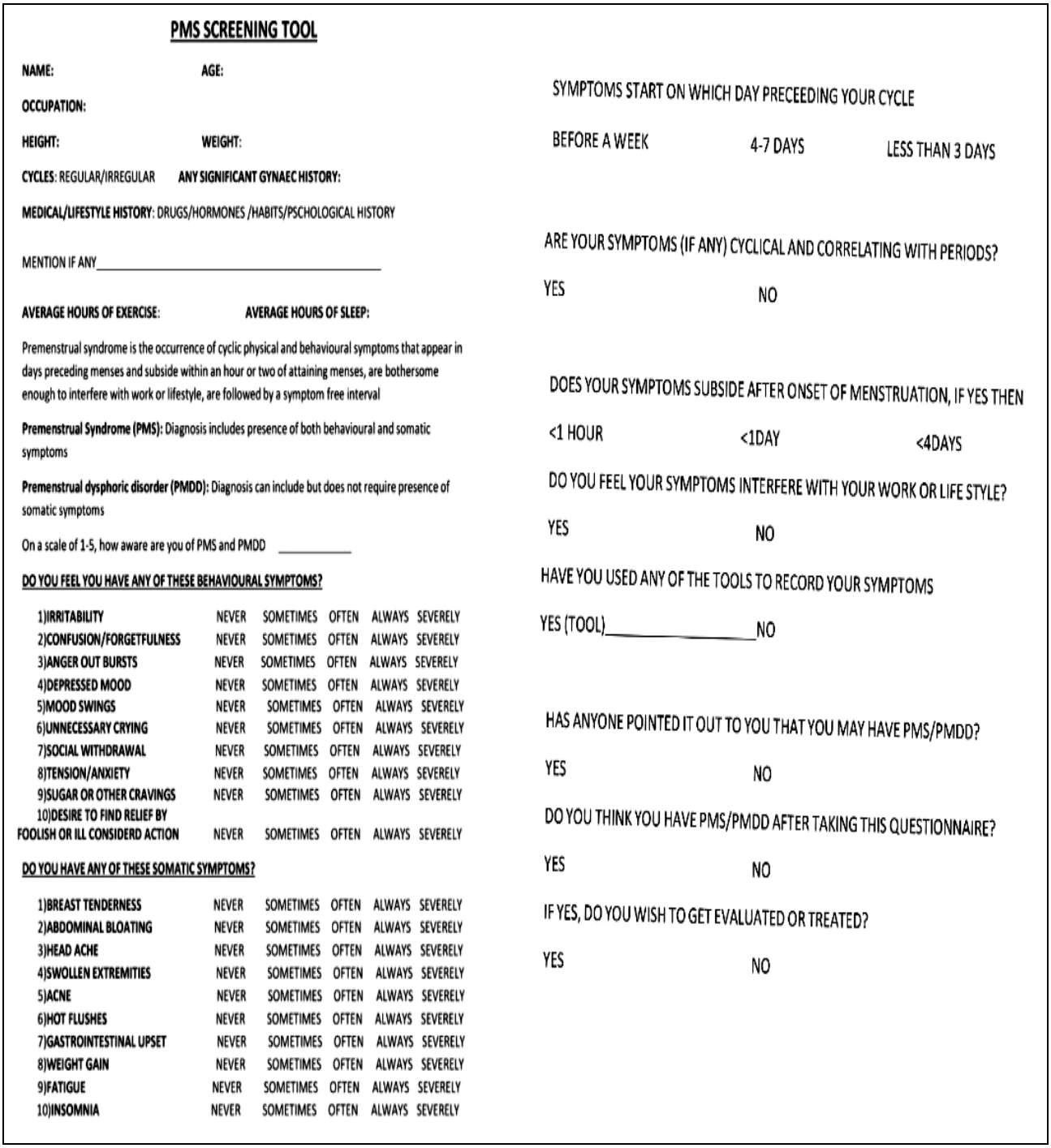
Materials and Methods
This was a Cross-sectional observational study conducted on resident doctors, postgraduates, undergraduates, and the nursing staff of the reproductive age group fulfilling the inclusion criteria after attaining informed and written consent. This study took place in Anil Neerukonda Hospital, affiliated with NRI Institute of Medical Sciences, Visakhapatnam, during a study period from November 2023 to March 2024.
Sample size: 450, calculated by N= 4PQ/d x d, where P= Prevalence from the latest studies,

taken as 48.5%, Q= 100-P, d= allowable error (five, which is 20% of P).

Inclusion criteria: All Women aged eighteen to forty-five years who were willing to participate in the study were included after obtaining their informed and written consent.

Exclusion criteria: Women previously diagnosed with any psychological disorders and being treated for the same were excluded from the study.

The researchers verbally informed all participants about study objectives and took written consent before providing the questionnaire. The screening tool [Figure 1] was self-devised by the researchers by pooling the commonly occurring somatic and behavioral symptoms. The structured questionnaire, as a premenstrual screening tool, also included Socio-demographic data, gynecological history, medical or lifestyle history, dietary and sleeping habits, awareness scale, and the chosen set of symptoms. The study population was asked to score on a scale of one to five about how aware they were of the condition, where one = least aware, two = minimal knowledge, three = aware, and four and five = well aware. Each symptom had a five-point Likert scale (never, sometimes, often, always, and severely) based on the frequency of occurrence and severity, and each answer was scored from zero to four. Based on the answers and collected data, prevalence, association with various factors, severity of PMS, and PMDD were calculated, and the epidemiological burden was estimated. The type of lifestyle was categorised as healthy if the sleeping hours per day were more than six, had healthy food habits, and the exercise hours were more than six per week; deviations from these were categorised as an unhealthy lifestyle.



PMS SCREENING TOOL

NAME: **AGE:**

OCCUPATION:

HEIGHT: **WEIGHT:**

CYCLES: REGULAR/IRREGULAR **ANY SIGNIFICANT GYNAEC HISTORY:**

MEDICAL/LIFESTYLE HISTORY: DRUGS/HORMONES /HABITS/PSCHOLOGICAL HISTORY

MENTION IF ANY_____

AVERAGE HOURS OF EXERCISE: **AVERAGE HOURS OF SLEEP:**

Premenstrual syndrome is the occurrence of cyclic physical and behavioural symptoms that appear in days preceding menses and subside within an hour or two of attaining menses, are bothersome enough to interfere with work or lifestyle, are followed by a symptom free interval

Premenstrual Syndrome (PMS): Diagnosis includes presence of both behavioural and somatic symptoms

Premenstrual dysphoric disorder (PMDD): Diagnosis can include but does not require presence of somatic symptoms

On a scale of 1-5, how aware are you of PMS and PMDD _____

DO YOU FEEL YOU HAVE ANY OF THESE BEHAVIOURAL SYMPTOMS?

1)IRRITABILITY	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
2)CONFUSION/FORGETFULNESS	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
3)ANGER OUT BURSTS	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
4)DEPRESSED MOOD	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
5)MOOD SWINGS	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
6)UNNECESSARY CRYING	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
7)SOCIAL WITHDRAWAL	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
8)TENSION/ANXIETY	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
9)SUGAR OR OTHER CRAVINGS	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
10)DESIRE TO FIND RELIEF BY FOOLISH OR ILL CONSIDERD ACTION	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY

DO YOU HAVE ANY OF THESE SOMATIC SYMPTOMS?

1)BREAST TENDERNESS	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
2)ABDOMINAL BLOATING	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
3)HEAD ACHE	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
4)SWOLLEN EXTREMITIES	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
5)ACNE	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
6)HOT FLUSHES	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
7)GASTROINTESTINAL UPSET	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
8)WEIGHT GAIN	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
9)FATIGUE	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY
10)INSOMNIA	NEVER	SOMETIMES	OFTEN	ALWAYS	SEVERELY

SYMPTOMS START ON WHICH DAY PRECEEDING YOUR CYCLE

BEFORE A WEEK 4-7 DAYS LESS THAN 3 DAYS

ARE YOUR SYMPTOMS (IF ANY) CYCLICAL AND CORRELATING WITH PERIODS?

YES NO

DOES YOUR SYMPTOMS SUBSIDE AFTER ONSET OF MENSTRUATION, IF YES THEN

<1 HOUR <1DAY <4DAYS

DO YOU FEEL YOUR SYMPTOMS INTERFERE WITH YOUR WORK OR LIFE STYLE?

YES NO

HAVE YOU USED ANY OF THE TOOLS TO RECORD YOUR SYMPTOMS

YES (TOOL)_____NO

HAS ANYONE POINTED IT OUT TO YOU THAT YOU MAY HAVE PMS/PMDD?

YES NO

DO YOU THINK YOU HAVE PMS/PMDD AFTER TAKING THIS QUESTIONNAIRE?

YES NO

IF YES, DO YOU WISH TO GET EVALUATED OR TREATED?

YES NO

Fig 1: Screening tool for Premenstrual Syndrome

Calculation of score: The total score was calculated as the sum of individual symptom scores according to the frequency and severity answered on the Likert scale. The women who had both behavioural and somatic symptoms were diagnosed with PMS, and those with primarily behavioural symptoms were categorised under PMDD. PMS was further categorized based on total score as severe is they scored more than 60, as moderate if they scored between 40 to 60, and as mild if they scored between 20 to 40. The patients with moderate and severe scores were considered significant and diagnosed to have PMS and PMDD.

Data Analysis: The collected data were coded and analysed with the Statistical Package for Social Sciences software version 30. Continuous and categorical values were analysed by frequency and descriptive analysis. ANOVA and Chi square tests were used to evaluate the association between Socio-demographic data, sleeping and dietary habits, and PMS symptoms. Multivariate simple linear regression analysis tests were conducted to evaluate the relationship between PMS symptoms, BMI, and physical activity.

Results

All the participants answered the complete set of questions, and the response rate was 450 (100%) out of 450. Out of the 450 (N) screened women, 450 (100%) had one or the other PMS/PMDD symptoms. The prevalence of PMS was calculated as 189 (42%) and PMDD as 162 (36%). Hence, a total of 351 (78%) of these women had PMS and PMD

Table 1: Age distribution of population N=450

Age Group In years	N=450	PMS N=189	PMDD N=162	Effected population in the age group
15-25	251 (55.77%)	100 (52.9%)	80 (49.38%)	180 (71%)
26-35	148 (32.88%)	66 (29.6%)	62 (38.2%)	128 (86%)
36-45	51 (11.33%)	23 (17.5%)	20 (12.34%)	43 (84%)

Table I shows the age distribution of the population with PMS and PMDD. 100 (52.9%) women with PMS and 80 (49.38%) with PMDD belonged to the 15-25 years age group.66 (29.6%) women with PMS and 62 (38.2%) with PMDD belonged to the age group of 26-35 years, and 23 (17.5%) women with PMS and 20 (12.34%) with PMDD belonged to the age group of 36-45 years. 180 (71%) women of the age group 15-25 years were affected, 128 (86%) from the 26-35 years age group were affected, and 43 (84%) from the 36-45 years age group were affected with PMS and PMDD. The p-value for the association between age group and the presence of PMS/PMDD is 0.0084, indicating a statistically significant relationship (p<0.05).

Table 2: Marital status in the study population

Marital Status	N=450	PMS N=189	PMDD N=162
Married	280 (62.2%)	116 (61.3%)	102 (62.96%)
Unmarried	170 (38.8%)	73 (38.7%)	60 (37.14%)

Table II shows that 280 (62.2%) of the study population were married, and 170 (38.8%) were unmarried. 116 (61.3%) of the women with PMS were married, and 73 (38.7%) were unmarried.102 (62.96%) of women with PMDD were married, and 60 (37.14%) were unmarried. Since the p-value is much greater than 0.05, there's no statistically significant association between marital status and the presence of PMS or PMDD in this sample.

Table 3: Awareness Scale of premenstrual syndrome and premenstrual dysphoric disorder

Score from 1-5	N=450
One	48 (10.67%)
Two	151 (33.56%)
Three	114 (25.33%)
Four	72 (16%)
Five	65 (14.44%)

Table III shows awareness about the condition of PMS and PMDD in the study population. The study population was a relatively educated one, but still 313(69.56%) of women had no or minimal knowledge about PMS and PMDD scored between one to three while only 65 (14.44%) were well aware of the condition. This suggests areas of education and improvement in relation to PMS and PMDD.

Table 4: Prevalence of Premenstrual syndrome and pre-menstrual dysphoric disorder according to BMI Category

BMI RANGE (Kg/m²)	N=450	PMS N=189	PMDD N=162	Effeceted Population Percentage
Underweight(<18.5)	18	2	4	6 (33.33%)
Normal Weight (18.5-24.9)	234	54	96	150 (64%)
Over Weight (25-29.9)	162	109	50	159 (98.14%)
Obese (>30)	36	24	12	36 (100%)

Table IV shows association of PMS and PMDD in study population with BMI. 159 (98.14%) out of 162 women of the overweight population had PMS or PMDD and 36(100%) out of 36 obese population had PMS or PMDD. 6(33.33%) out of 18 underweight women and 150(64%) out of 234 normal BMI category population had PMS or PMDD.

Table 5: Medical and surgical history and prevalence of Premenstrual syndrome and pre-menstrual dysphoric disorder in them

Condition	Prevalence in population	PMS	PMDD	Total effected population in taken condition	P value
PCOS	98	31 (31.63%)	59 (60.2%)	90 (91.84%)	0.00032 Highly significant association
Diabetic	9	2 (2.2%)	3(3%)	5 (55.55%)	0.21 Not significant
Thyroid Disorders	74	26 (35%)	48 (54.86%)	74 (100%)	1.27×10^{-6} Extremely significant
Hypertension	4	1 (25%)	0	1 (25%)	0.05 Not significant
Surgical history	32	1(3%)	3 (9.3%)	4 (12.5%)	Not significant

Table: **V** shows the association of PMS and PMDD with prevalent medical condition in the study sample. Out of the 98 women who had pre-existing PCOS, 31 (31.63%) had PMS and 59 (60.2%) had PMDD and in 74 women with pre-existing Thyroid disorders, 26(35%) had PMS and 48 (54.86%) had PMDD, notably showing higher prevalence rates of PMS and PMDD.

Table 6: Influence of Life style on prevalence of Premenstrual syndrome and pre-menstrual dysphoric disorder

Type of life style	N=450	PMS N=189	PMDD N=162
Healthy	108 (24%)	32 (17%)	25 (15.4%)
UNHEALTHY	342 (76%)	157 (83%)	137 (84.6%)

Table VI shows that 108 (24%) of the population had a healthy life style of which only 32(17%) had PMS and 25(15.4%) had PMDD. But out of the 342 (76%) maintaining an unhealthy life style, 157(83%) had PMS and 137(84.6%) had PMDD.

Table 7: Presence of behavioural symptoms of Premenstrual syndrome and pre-menstrual dysphoric disorder

Symptoms	Never	Sometimes	Often	Always	Severely
Irritability	99 (22%)	49 (11%)	171 (38%)	102 (23%)	27 (6%)
Confusion/forgetfulness	126 (28%)	27 (6%)	135 (30%)	135 (30%)	27 (6%)
Anger outbursts	104 (23%)	54 (12%)	153 (34%)	117(26%)	22 (5%)
Depressed mood	63 (14%)	50 (11%)	139 (31%)	157 (35%)	41(9%)
Mood swings	54 (12%)	68 (15%)	153 (34%)	140 (31%)	36(8%)
Unnecessary crying	126 (27%)	63 (14%)	153(34%)	81 (18%)	27 (6%)
Social withdrawal	140 (32%)	90 (20%)	126 (27%)	76 (17%)	18 (4%)
Tension/anxiety	117 (26%)	90 (20%)	135 (44%)	90 (20%)	18 (4%)
Food cravings	90 (20%)	72 (16%)	135 (44%)	135 (44%)	18 (4%)
Foolish actions	216(48%)	72 (16%)	90 (20%)	54 (12%)	18 (4%)

Table VII elaborates all ten behavioural symptoms screened through the questionnaire. Mood swings 397(88%) were the most prevalent behavioural or overall symptom, 41(9%) women suffered most severely with depressed mood. The women had behavioural symptoms more than somatic symptoms. The desire to find relief by foolish actions was the least common behavioural symptom.

Table 8: Presence of Somatic symptoms of Premenstrual syndrome and Pre-menstrual dysphoric disorder

Symptoms	Never	Sometimes	Often	Always	Severely
Breast tenderness	207 (46%)	63 (14%)	63 (14%)	99 (22%)	18 (4%)
Abdominal Bloating	288 (64%)	36 (8%)	68 (15%)	36 (8%)	22 (5%)
Head ache	315(70%)	27 (6%)	45 (10%)	45 (10%)	18 (4%)
Swollen extremities	306(68%)	18 (4%)	45 (10%)	63 (14%)	18(4%)
Acne	234 (52%)	45 (10%)	72 (16%)	72 (16%)	27 (6%)
Hot flushes	306 (68%)	63 (14%)	54 (12%)	18 (4%)	9 (2%)
Gastrointestinal upset	261 (58%)	54 (12%)	72 (16%)	45 (10%)	18 (4%)
Weight gain	270 (60%)	45 (10%)	63 (14%)	54 (12%)	18 (4%)
Fatigue	315 (70%)	18 (4%)	63 (14%)	45 (10%)	9 (2%)
Insomnia	324 (72%)	36 (8%)	54 (12%)	27 (6%)	9 (2%)

Table VIII shows the somatic symptoms screened for in the study population through the provided questionnaire. The occurrence of Insomnia was the least prevalent with 324 (72%) never experiencing this somatic symptom. Breast tenderness was the most common somatic symptom experienced by 243(54%) women, and acne was the most severe somatic symptom. The women who had somatic symptoms more frequently than behavioural symptoms had interference with work and lifestyle, and were interested in getting evaluated and seeking treatment.

All the 450(100%) women had some symptoms either somatic or behavioural, though not diagnosed with PMS and PMDD due to low overall score

Table 9: Appearance of symptoms of Premenstrual syndrome and pre-menstrual dysphoric disorder

Days before onset of menstruation	N=450
<3	405 (90%)
3-7	36 (8%)
>7	9 (2%)

Table IX shows the appearance of symptoms of PMS and PMDD with respect to the day of the menstrual cycle. The majority, that is 405 (90%) had the appearance of symptoms three days before the onset of menstruation, while only 9 (2%) had the appearance of symptoms before seven days of the onset of menstruation.

Table 10: Cyclicity of symptoms of premenstrual symptoms and premenstrual dysphoric disorder

Cyclical	N=450
Yes	351 (78%)
No	99 (22%)

Table X shows the association of cyclicity of PMS and PMDD with the Cyclicity of menses. 351 (78%) of the population had cyclical appearance of symptoms, which is characteristic of premenstrual syndrome and premenstrual dysphoric disorder.

Table 11: Subsidence of symptoms of Premenstrual syndrome and pre-menstrual dysphoric disorder

After onset of menstruation	N=450
Less than 1 hour	153 (34%)
Less than 1 day	261 (58%)
Less than 4 days	36 (8%)
More than 4 day	0

Table XI shows that majority of the population, i.e., 414 (92%) women had subsidence of symptoms in less than 1 day after the onset of menstruation and out of them 153(34%) had symptoms subsided in less than an hour after onset of menstruation. The rest 36(8%) women had subsidence of symptoms in less than 4 days.

Table 12: Interference with work or life style due to Premenstrual syndrome and pre-menstrual dysphoric disorder

Response	N=450
YES	45 (10%)
NO	405 (90%)

Table XII shows that 405(90%) women of the population had no interference with work or lifestyle. But 45(10%) women of the study population were suffering from a severe form of Premenstrual syndrome and had interference with work and daily activities

Table 13: Usage of any tools prior for screening or diagnosis of Premenstrual syndrome and pre-menstrual dysphoric disorder

Response	N=450
Yes	0
No	450 (100%)

Table XIII shows that none of the study population has used tools such as the one used in this study for screening of premenstrual syndrome or premenstrual dysphoric disorder. This emphasizes how the condition is given a back seat in the clinical protocols

Table 14: Grading of severity in positively screened population

Severity Level	Frequency	Percentage
Mild	8	4.2%
Moderate	121	63.7%
Severe	60	31.6%
Total	189 (N)	100%

Table XIV grades the severity of PMS and PMDD in the positively screened study population. 8(4.2%) women of the positive screened population had severe PMS and sought immediate treatment. The majority, 121(63.7%) women, had a moderate grade of PMS, whereas 60(31.6%) members of the study population had a mild condition of the spectrum

Discussion

The present study aimed to investigate the prevalence, awareness, symptomatology, and associated factors of Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD) in a cohort of 450 women. There are not many studies on this condition. This study's findings indicate that all participants experienced at least one premenstrual symptom, with PMS diagnosed in 189(42%) and PMDD in 162(36%), amounting to a combined prevalence in 351 (78%) members. This high prevalence is consistent with similar findings from a large-scale study conducted in Arab countries by Al-Kadi., *et al* in 2022, which reported PMS in 73% and PMDD in 35% of participants [6]. However, it stands in contrast to several Indian studies, where pooled prevalence rates are significantly lower-around 43% for PMS and 8% for PMDD, according to a systematic review and meta-analysis by Racal CM *et al* in 2021 [7]. Such variation in prevalence may stem from differences in diagnostic tools, awareness levels, cultural attitudes, or population characteristics.

Awareness of PMS and PMDD was notably lacking in our sample. Despite being relatively educated, 382(85%) women had little to no knowledge of these conditions, and none had ever used or even heard of standardized screening tools. This lack of awareness mirrors findings from a study among female university students in Karachi by Nisar N *et al* in 2008, where although 96.4% had heard of PMS, only 19% were aware of PMDD and less than half sought treatment for symptoms [8]. This widespread knowledge gap suggests a substantial need for targeted educational interventions to normalize discussion of these disorders and integrate screening into routine clinical practice.

Interestingly, this study found no significant association between age or marital status and the prevalence of PMS and PMDD, as indicated by a p-value of 0.85. This supports similar findings in study done by Seedhom *et al* in Egypt in 2013, where sociodemographic variables, including marital status, had limited or no impact on the occurrence of premenstrual disorders [9]. In contrast, body mass index (BMI) emerged as a relevant factor; the prevalence and severity of PMS/PMDD symptoms were significantly higher in overweight and obese participants (p<0.05). These findings align with results from the Nurses' Health Study done by Berton-Johnson *et al* in 2010, where obesity was linked to an elevated risk of PMS over a ten-year follow-up period [10]. This connection may be due to hormonal imbalances and inflammation associated with higher adiposity.

Exercise habits were also notably associated with symptom severity. Women who engaged in more hours of physical activity reported fewer and less intense symptoms (p = 0.01), corroborating to Lustyk MK *et al*s study done in 2004 that highlights the protective effects of physical exercise on mood and somatic symptoms related to the menstrual cycle [11]. This implies that lifestyle interventions may be a viable and non-pharmacological means of managing premenstrual symptoms.

In terms of symptomatology, behavioral symptoms were more frequently reported than somatic ones. Mood swings were the most prevalent behavioral symptom, while depressed mood was the most severely experienced by the participants. Among somatic symptoms, breast tenderness was the most common, and acne was noted as the most severe which was comparable to the findings in the cross-sectional study done by Crow *et al* in Ukraine [12]. Notably, in our study, those with prominent somatic symptoms experienced greater interference with work and daily functioning and expressed more willingness to seek evaluation and treatment

The cyclic nature of symptom onset and resolution further supports a PMS/PMDD diagnosis. In our sample, 405 (90%) of women experienced symptom onset within three days before menstruation, and 351(78%) reported cyclical symptom

occurrence. Additionally, 261(58%) had symptoms that subsided within three days before menstruation, with a significant proportion reporting symptom relief within hours after menstruation began. These patterns are consistent with diagnostic criteria for PMS and PMDD, which emphasize the cyclical and recurrent nature of symptom presentation in the luteal phase [13].

90 (91.84%) of the 98 population with PCOS had PMS and PMDD in this study which was similar to the findings in the studies done by Rasgon *et al* and Tedee *et al* showing elevated risk due to hormonal imbalances and 100% in women with thyroid disorders correlating with the finding of the study conducted by Sharma *et al* in Delhi [14-16].

Despite the clear impact on physical and emotional well-being, only 45 (10%) of participants reported interference with daily life and productivity. However, this subgroup's significant distress highlights the broader implications of unrecognized and untreated PMS/PMDD. The fact that none of the women had used screening tools such as the one employed in this study underscores a systemic gap in clinical practice. This finding reflects how these disorders are often underprioritized in both research and healthcare, despite their substantial effects on quality of life. From this study, we found a high prevalence of PMS and PMDD among the Indian female population of the reproductive age group, showing the iceberg phenomenon, with a comparatively low prevalence among those with an active lifestyle. There is a significant impact of PMS and PMDD on the lives of Indian women without them being aware of it. Despite the growing awareness, there remains a considerable deficiency of knowledge about this condition among the educated population even in the medical field. The necessity to educate and consult a doctor, the development of health policies and guidelines for the treatment of these symptoms, and raising awareness of this spectrum and the impact of lifestyle and obesity seems to be the need of the hour. Development of more such tools for the diagnosis of PMS and PMDD is required to find out a more robust estimate of the disease burden and associated risk factors. Overall, study findings suggest that PMS and PMDD are highly prevalent, especially in women already affected with PCOS and Thyroid disorders, emphasizing the hormonal imbalances web and impactful yet underrecognized conditions. There is a pressing need to implement standardized screening in clinical settings, raise awareness through educational campaigns, areas of improvement and promote lifestyle interventions such as regular exercise and weight management. Future research should aim to explore longitudinal outcomes, intervention efficacy, and barriers to care-seeking in a more diverse population.

Disclosures: All the authors declare no conflicts of interest.

The ethical committee clearance was obtained on 30-10-2023, with serial number: IEC/NRI/100/2023.

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