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Original Research Article

A study on assessment of knowledge, attitude and practice of premenstrual syndrome among female in urban area

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ABSTRACT

Background: Premenstrual syndrome (PMS) is a significant clinical disorder affecting a substantial percentage of women. This study aims to investigate the existence, knowledge, and attitude of female students towards PMS.

Methods: A cross-sectional descriptive study was conducted, with 250 female participants between the ages of 18 to 30 years. The participants completed a self-reporting menstrual distress questionnaire (MDQ) and a standardized health questionnaire to assess the prevalence and severity of premenstrual symptoms and also to assess the knowledge, attitude, and practice of PMS for subjective perceptions of health, stress, lifestyle, and demographic variables. The questionnaire was set in four parts, one each to assess the knowledge, the attitude, and practices regarding PMS and one to assess the gap between self-perceived PMS and actual PMS. The data were analysed using descriptive statistics.

Results: The results revealed that 80% of the participants reported experiencing PMS, but only 48% met the criteria defined by the American College of Obstetricians and Gynecologists (ACOG). The most common symptoms reported were irritability, mood swings, headache, fatigue, and menstrual cramps. PMS had a significant impact on participants' normal life, with 60.4% reporting disturbances in their routine. While 51.2% believed that PMS/menstrual leave should be an option at universities, only 39.2% supported the idea at the workplace.

Conclusions: Surprisingly, over 60% of participants did nothing to relieve their PMS symptoms. So, there is a significant impact of PMS in the lives of urban women and it is also a common problem all over the globe. The study underscores the need for increased awareness and education about PMS and its management, as well as the importance of promoting a stress-free environment to mitigate its impact on women's quality of life.

Keywords: Gonadotropin-releasing hormone, Knowledge, Pre menstrual syndrome, Prevalence

INTRODUCTION

Premenstrual syndrome (PMS) is a significant clinical condition that affects a significant portion of the female population. A symptom-free period is followed by a cyclical onset of somatic and affective symptoms that interfere with one's work or lifestyle in the days before menstruation.^{1,2} Premenstrual syndrome (PMS) is that occurs in the days after ovulation. It is most common in women in their late 20s to early 40s, who have had a child, have family members with depression, or have had

postpartum depression or bipolar disorder. The prevalence of PMS and premenstrual dysphoric disorder (PMDD) in the population has been overestimated due to the failure of strictly applied diagnostic criteria. PMS have reported an estimation of above 80% based on the inclusion of women who have any form of premenstrual mood or physical symptoms.³ When strict inclusion criteria is applied for PMDD, the prevalence is around 2%.^{4,5} PMS has been described in diverse cultural settings, with the point prevalence of retrospectively reported symptoms range from 2.8 to 6.4 percent.^{6,7} A predictable value of 3% to 8%

of reproductive-age women have symptoms of sufficient severity which are classified as PMDD.⁸

Studies have found that stress, age, body mass index, and marital status are risk factors for premenstrual symptoms.⁹ Lifestyle factors such as lack of exercise and being overweight, stress, and a poor diet are also linked to PMS. Caffeine intake is not associated with PMS, but is thought to be linked to the changing levels of hormones during a woman's menstrual cycle.¹⁰

Premenstrual disorders can affect woman at any stage in her reproductive life, beginning around age 14 or 15 years after menarche, and persist until around age 51. The key challenge of premenstrual syndrome is poor understanding of its etiology. Studies suggest that these symptoms are triggered by rising and falling of estrogen and progesterone levels. Gonadotropin-releasing hormone analogs which suppress estrogen significantly reduce PMS symptoms. The cyclic effect of estrogen and progesterone on serotonin, Gamma-aminobutyric acid, and dopamine systems may be the cause of changes in mood. Usually, women have approximately 481 menstrual cycles during their age span, and women with PMDD experience an average of 6.4 days of severe symptoms per menstrual cycle.^{11,12} This extrapolates to a lifetime total of roughly 2938 days, equivalent to approximately 8 years with severe symptoms.¹³

In diagnosis the PMS the American College of Obstetricians and Gynaecologists defined PMS as a clinical condition characterised by the cyclic presence of physical and emotional symptoms that appear during the five days prior to menstruation in each of the three previous menstrual cycles and disappear within four days of the start of menses, without recurrence until at least cycle day thirteen and must be present in the absence of any pharmacologic therapy, hormone ingestion, or drug or alcohol use. The symptoms must occur reproducibly during two cycles of prospective recording.¹⁴ The physical symptoms of PMS include bloating, breast pain, mood swings, and feeling irritable. Emotional symptoms include tense or anxious, depressed, crying, mood swings, can't sleep, don't want to be with people, feel overwhelmed or out of control, and angry outbursts, fatigue, nausea, food cravings and aversions, and cramping. Behavioural symptoms include forgetting things, loss of mental focus, and tiredness.

There are various ways to cope with and treat symptoms such as pain, breast tenderness and mood swings. General management includes exercise, emotional support, salt restriction, decreased caffeine intake, smoking cessation, limited alcohol intake, and reduced refined sugar. Medications to relieve PMS pain and other symptoms include diuretics, analgesics, oral contraceptives, antidepressants, and drugs that suppress ovarian function. Diuretics are medications that increase the rate of urine production, while analgesics are commonly given for menstrual cramps, headaches, and pelvic discomfort.

The most effective analgesics for PMS are nonsteroidal anti-inflammatory drugs (NSAIDs), benzodiazepines include alprazolam, oral contraceptive pills, ovarian suppressors, gonadotropin-releasing hormone (GnRH) analogs, and antidepressants. Nonsteroidal anti-inflammatory drugs (NSAIDs) include ibuprofen, naproxen, and mefenamic acid can ease cramping and breast discomfort. GnRH analogs are not given over the long term due to their potential for adverse effects on bone density. Antidepressants are widely used in treating mood disturbances related to PMS. The serotonin reuptake inhibitor group of antidepressants is the most effective for symptoms of PMS. Exercise can help relieve some of the symptoms of PMS, such as cardiovascular fitness, muscle tone, weight loss, and decreased fluid retention.¹⁵ With this, the purpose of this study is to see how many females in urban area are aware of the risk factors and the treatment options. The aim of this study was to investigate the prevalence, knowledge, and the attitude of female towards premenstrual syndrome (PMS). Our study aimed to find out the women's perception of the situation and whether PMS has a significant or insignificant impact on the lives of women living in urban area.

METHODS

A cross-sectional study was conducted on female in Hyderabad from January 1, 2023 to March 16, 2023. Participants were selected by random sampling between the ages of 18 to 30 years from different areas of Hyderabad. Women with menstrual irregularities in the past six months and known cases of any psychological or medical disorder were excluded with menstrual irregularities being defined as cycles less than 26 days or longer than 35 days. Based on the inclusion and exclusion criteria a sample size of 250 subjects participated in the study.

A structured questionnaire was designed after thorough literature searches, questions were adapted and modified from previously published studies as per the requirement, and questions were added which were considered relevant. The questionnaire was thoroughly reviewed by two proficient doctors. Data were collected using the self-administered anonymous questionnaire after obtaining informed consent.

The subjects completed a rating of their premenstrual experiences relative to 28 symptoms in eight categories of the self-reporting menstrual distress questionnaire (MDQ) to evaluate the prevalence and severity of premenstrual symptoms. The participants also answered a standardized health questionnaire regarding subjective perceptions of health, self-rating stress, lifestyle, and demographic variables. The questionnaire was comprised of six parts. The first part included questions on demographic data, e.g., age, marital status, education, income, smoking, and exercise habits. The second part consisted of a series of questions inquiring if the women experienced PMS, their symptoms and onset, and duration of those symptoms.

Women were also asked regarding the impact PMS had on their lives, including the effect of stress on the severity of PMS. The third part included questions about their knowledge about PMS, including its risk factors and treatment options. Furthermore, we questioned the women on their knowledge about the premenstrual dysphoric disorder. In the fourth part of the questionnaire, the participants were questioned about their practices to relieve their symptoms of PMS. In the next section, participants were questioned regarding their attitude towards PMS, their reservations, and opinions regarding a discussion about PMS. In the final section, the participants were asked to record their premenstrual symptoms for the next two cycles. To diagnose PMS, the criteria of American College of Obstetricians and Gynecologists (ACOG) for PMS was used. The symptoms must occur reproducibly during two cycles of prospective recording. The patient must exhibit identifiable dysfunction in social, academic, or work performance. Data were analyzed descriptively using IBM Statistical Package for the Social Sciences (SPSS) version. Results for a quantitative variable were presented as frequencies and percentages.¹⁶

RESULTS

A total of 250 adolescents participated, of which 250 had filled the questionnaire completely without any missing data. Analysis of frequencies and distribution of PMS symptoms and other factors were calculated out of 250 participants. Table 1 shows that among 250 participants the majority (57.6%) of the females in our study were single and remaining (42.4%) were married women. 64.8% were educated people and remaining 35.2% were uneducated.

Table 1: Socio-demographics.

Characteristics	N	%
Education		
Educated	162	64.80
Uneducated	88	35.20
Marital status		
Married	106	42.40
Unmarried	144	57.60

From our study Figure 1 shows that almost 200 females (80%) when asked, said that they experience PMS, while 50 (20%) said they do not experience PMS. When evaluated according to the criteria, it turned out that only 120 females (48%) actually experienced PMS.

From our study Table 2 shows the symptoms of PMS among the 250 females who underwent a survey. Menstrual backache and menstrual cramps were the most common complaint with 73.2% and 70% of females reporting it as one of their symptoms followed by backpain (68%), irritability and headache, dizziness, acne, abdominal boating, mood swings.

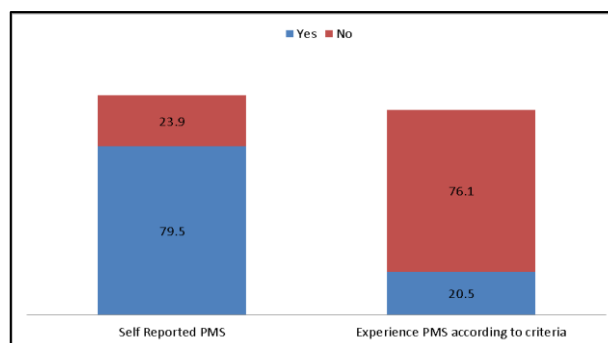


Figure 1: Comparison between self-reported premenstrual syndrome (PMS) and premenstrual syndrome (PMS) According to the American College of Obstetrics and Gynecology (ACOG) criteria.

Table 2: Symptoms of premenstrual syndrome.

Symptoms	N	%
Anxiety	114	45.6
Irritability	145	58
Mood swings	130	52
Nervous tension	71	28.4
Appetite increase	69	27.6
Headache	146	58.4
Fatigue	119	47.6
Dizziness/fainting	141	56.4
Palpitations	54	22
Depression	117	47
Crying	91	36.5
Forgetfulness	58	23.5
Confusion	88	35.5
Insomnia	87	35
Fluid retention	63	25
Weight gain	106	42
Swollen extremities	60	24
Breast tenderness	89	36
Abdominal bloating	130	52
Oily skin	119	48
Acne	144	55
Constipation	60	24
Diarrhea	70	28
Backache	171	68
Hives	37	15
Weakness and radiation down thighs	112	45
Menstrual cramps	175	70
Menstrual backache	183	73.2

From our study Table 3 describes how PMS affects the normal life of females who experience PMS. More than half (60.4%) said PMS disturbs their normal routine whereas 40.2% said that they missed social event due to PMS whereas 35.4% said that they will miss school or work due to PMS.

Table 3: Premenstrual syndrome (PMS) and normal life.

How PMS affects normal life	N (%)
PMS disturbs normal routine	215 (60.4)
Missed school or work due to PMS	126 (35.4)
Missed social event due to PMS	143 (40.2)
Stress exacerbates PMS	220 (81.5)

Table 4: Attitude towards premenstrual syndrome (PMS).

Attitude towards PMS	N	%
Should PMS /menstrual leave be an option at university?	128	51.20
Should PMS /menstrual leave be an option at workplace?	98	39.20
Are you likely to talk to your family/spouse about PMS?	75	30

Table 4 describes the attitude of females towards PMS. About 51.2% of the females believed that PMS/menstrual leave should be an option at the university and 39.20% of females believed that PMS should be an option at workplace.

Table 5: Treatments options in use for premenstrual syndrome (PMS).

For relieving of symptoms of PMS	N	%
Painkillers/vitamin supplements/analgesics	99	39.60
Do nothing	151	60.40
Vitamin supplements	20	5.1
Exercise	65	17.7

Table 5 lists the treatment options used by the women experiencing PMS in order to relieve their symptoms. More than half (60.4%) of the women said they did nothing to relieve their PMS symptoms.

DISCUSSION

This study found that a significant fraction of women in Telangana are afflicted with premenstrual dysphoric disorder (PMDD). This disorder is usually described as a constellation of both somatic and affective symptoms manifesting prior to the occurrence of menstruation and resolving with the onset of menstruation or within few days of menstruation. The self-reported prevalence of PMS was almost thrice the rate as diagnosed by means of the ACOG criteria, which is a staggering difference. This finding is crucial in achieving an understanding regarding the awareness and perception of PMS amongst women.⁸

This study found that 81.5% of participants reported that stress exacerbated their PMS. However, 77.5% of women believed that PMS is a significant issue to be discussed and many said that an option to take leave from work or school

due to PMS should be available to women. Despite this encouraging response, almost half of the women reported they took no treatment to relieve their symptoms. The findings could be explained by the condemnation of the subject of menstruation in our society, which has created a hesitancy in consulting a doctor or seeking treatment for it.³

One of the limitations of this study is the use of the self-reported method of data collection. This can result in an overestimation of the prevalence of PMS. Another limitation is the small and selective sample size which was not evenly distributed. Hence, we were not able to compare the prevalence of PMS and differences between different socio-economic background and their marital status.¹⁶

CONCLUSION

This research concluded that PMS is a common problem in our part of the world affecting the quality of life of women significantly. Despite the growing awareness, there remains a considerable deficiency of knowledge about the necessity to consult a doctor or seek any treatment for their symptoms. Further research is required on a larger population and including women from various socio-economic backgrounds to better assess the situation and strategize to manage this rising problem. The majority of females said that stress exacerbates their PMS, and stress is a prevalent condition in our society. It is important that a healthy culture is promoted which is stress-free in order to avoid the symptoms of PMS, which tend to disturb normal routines and reduce productivity.

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REFERENCES

1. Speroff L, Fritz MA. Menstrual disorder. In: Clinical Gynecologic Endocrinology and Infertility. 8th edn. Philadelphia, PA: Lippincott Williams and Wilkins; 2011:568-578.
2. Dennerstein L, Lehert P, Heinemann K. Global study of women's experiences of premenstrual symptoms and their effects on daily life. *Menopause Int.* 2011;17:88-95.
3. Budeiri DJ, Li Wan Po A, Dornan JC. Clinical trials of treatments of premenstrual syndrome: entry criteria and scales for measuring treatment outcomes. *Br J Obstet Gynecol.* 1994;101(8):689-95.
4. Rivera-Tovar AD, Frank E. Late luteal phase dysphoric disorder in young women. *Am J Psychiatr.* 1990;147(12):1634-6.
5. Soares CN, Cohen LS, Otto MW, Harlow BL. Characteristics of women with premenstrual dysphoric disorder (PMDD) who did or did not report history of depression: a preliminary report from the Harvard Study of Moods and Cycles. *J Womens Health Gen Based Med.* 2001;10 (9):873-8.

6. Dennerstein L, Lehert P, Heinemann K. Epidemiology of premenstrual symptoms and disorders. *Menopause Int.* 2012;18(2):48-51.
7. Choi D, Lee DY, Lehert P, Lee IS, Kim SH, Dennerstein L. The impact of premenstrual symptoms on activities of daily life in Korean women. *J Psychosom Obstet Gynaecol.* 2010;31(1):10-5.
8. Ginsburg KA, Dinsay R. Premenstrual syndrome. In: Ransom SB, ed. *Practical Strategies in Obstetrics and Gynecology.* Philadelphia, Pa: WB Saunders; 2000:684-694.
9. Hamaideh SH, Al-Ashram SA, Al-Modallal H. Premenstrual syndrome and premenstrual dysphoric disorder among Jordanian women. *J Psychiatr Ment Health Nurs.* 2014;21:60-8.
10. Purdue-Smithe AC, Manson JE, Hankinson SE, Bertone-Johnson ER. A prospective study of caffeine and coffee intake and premenstrual syndrome. *Am J Clin Nutr.* 2016;104 (2):499-507.
11. Halbreich U, Borenstein J, Pearlstein T, Kahn LS. The prevalence, impairment, impact, and burden of premenstrual dysphoric disorder (PMS/PMDD). *Psychoneuroendocrinology.* 2003;28:1-23.
12. Hylan TR, Sundell K, Judge R. The impact of premenstrual symptomatology on functioning and treatment seeking behavior: experience from the United States, United Kingdom, and France. *J Womens Health Gend Based Med.* 1999;8:1043-52.
13. Pearlstein T, Joliat MJ, Brown EB, Miner CM. Recurrence of symptoms of premenstrual dysphoric disorder after the cessation of luteal-phase fluoxetine treatment. *Am J Obstet Gynecol.* 2003;188:887-95.
14. ACOG Practice Bulletin. Premenstrual syndrome. Clinical management guidelines for obstetrician-gynecologists. Number 15. *J Obstet Gynecol.* 2001;73:183-91.
15. Stöppler MC. Premenstrual Syndrome (PMS). *Emedicine Health.* 2022. Available at: https://www.emedicinehealth.com/premenstrual_syndrome_pms/article_em.htm. Accessed on 14 May 2023.
16. Silva CM, Gigante DP, Carret ML, Fassa AG. Population study of premenstrual syndrome. *Rev Saud Pub.* 2006;40:47-56.

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