

## SEVERITY AND FREQUENCY OF PREMENSTRUAL SYNDROME IN COLLEGE GIRLS AGED 18-25 YEARS

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**ABSTRACT: BACKGROUND:** Research has been done on PMS in many countries, but very few studies have been reported on the experience of Indian women. This study was conducted so that Measures can be adopted to reduce the incidence of this disorder which influences the quality of life in young girls. **OBJECTIVES:** To find out the frequency of premenstrual syndrome (PMS) in young college girls and to describe the severity of physical and emotional symptoms. **METHODS:** An observational study was conducted at katuri medical college, Guntur by convenient sampling On 400 young girls aged 18-25 years. The consent of the medical students was taken and they were asked to fill Moos Menstrual Distress Questionnaire. Results were given according to both criteria i.e. ICD-10 **RESULTS:** The frequency of premenstrual syndrome was 55% according to ICD-10 criteria, among which 48% was mild, 27% moderate and 25% severe. The order of frequency of symptoms occurring in PMS was general body discomfort, anxiety, backache, fatigue and depression. **CONCLUSION:** Premenstrual syndrome is a physiological problem effecting young girls. Doctors should adopt healthy lifestyle recommendations to reduce the incidence of premenstrual syndrome and improve the quality of life in young girls.

**KEYWORDS:** premenstrual syndrome, young girls, menstrual cycle.

**INTRODUCTION:** PMS was originally seen as an imagined disease.<sup>(1)</sup> Women who reported its symptoms were often told it was "all in their head". Woman's reproductive organs were thought to have complete control over them. The formal medical description of premenstrual syndrome (PMS) and the more severe, related diagnosis of premenstrual dysphoric disorder (PMDD) go back at least 70 years to a paper presented at the New York Academy of Medicine by Robert T.

Frank titled "Hormonal Causes of Premenstrual Tension." The specific term premenstrual syndrome appears to date from an article published in 1953 by Dalton and Green in the British Medical Journal. Since then, PMS has been a continuous presence in our popular culture, occupying a place that is larger than the research attention accorded it as a medical diagnosis.

It is argued that women are partially responsible for the medicalization of PMS. By legitimizing this disorder, women have contributed to the social construction of PMS as an illness. It has also been suggested that the public debate over PMS was impacted by organizations who had a stake in the outcome including feminists, physicians and scientists.

Up until this point, there was little research done surrounding PMS and it was not seen as a social problem. By the 1980s, however, viewing PMS in a social context had begun to take place.

Premenstrual syndrome.<sup>(2)</sup> refers to any of a complex of symptoms (Including emotional tension and fluid retention) experienced by some women in the days immediately before menstruation

It is not caused by organic disease. It is absolutely Physiological and it occurs regularly during the same phase of menstrual cycle and significantly regresses or disappears during the remainder of

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the cycle. Usually, no physical findings are specifically helpful in establishing the diagnosis of PMS. If the adolescent presents during the luteal phase, she may have mastalgia or edema of the breasts or legs.

It is important to rule out other conditions that cause erratic or dysphoric behavior before diagnosing PMS. Rare conditions, such as temporal lobe epilepsy, may cause behavioral changes consistent with PMS. However, these behaviors should not cluster during the luteal phase.

Some parents view their daughter's dysphoria as PMS instead of recognizing a more serious depression and suicidal ideation. In this situation, the parent often is looking for a way to avoid recognizing the possibility that their child is experiencing mental health symptoms.

If the physician accepts this history uncritically, a serious depressive disorder may be misdiagnosed as PMS. At present, there are no laboratory studies that reliably assist in the diagnosis of premenstrual syndrome (PMS)

Medical care of premenstrual syndrome (PMS) is primarily pharmacologic and behavioral, with an emphasis on relief of symptoms. No single pharmacologic treatment is universally effective, and studies with all therapies have not produced consistent results. Current recommendations in the literature regarding oral contraceptive pills are conflicting.

It has been estimated from community Surveys that nearly 90% of women.<sup>(3)</sup> have experienced at least one premenstrual syndrome (PMS) as defined by ICD-10 criteria. Symptoms often vary between women and resolve around the start of bleeding.

Common symptoms include acne, tender breasts, bloating, feeling tired, irritability, and mood changes. Often symptoms are present for around six days. A woman's pattern of symptoms may change over time.

This study was conducted to find out the frequency of PMS in young college girls according to ICD-10 and to assess the severity of emotional, physical and behavioral symptoms.

**METHODS:** The study was conducted at the Katuri medical College College, Guntur from 15th January to 15th march 2015 Sample size was 400, calculated by using standard statistical formula. Data was collected on a 29 itemed shortened premenstrual assessment form based on Moos Menstrual Distress Questionnaire.

Physical, psychological and behavioral symptoms were studied for 2 cycles.

The days of the menstrual period and the days on which the symptoms are caused were studied separately. The week before onset of menstruation (The last week of the luteal phase) was compared with first week of follicular phase, beginning on day 2 of the same cycle.

Number of the symptoms present was noted on each day of luteal phase starting from day 14 of the same cycle, assuming total cycle length to be 28days. It was also asked in the questionnaire if symptoms were relieved with onset of menstruation. Questionnaire was discussed, consent taken and given to students to be filled prospectively over 2cycles.

Inclusion criteria were unmarried girls, who had regular menstrual period for last 6 months. Married girls, known case of any psychological or medical disorder, as thyroid disease and girls with irregular cycle in the last 6 months were excluded.

An ICD-10 symptom checklist for PMS was used to identify girls with PMS.

The ICD-criteria for PMS includes even symptoms: minor psychological discomfort, bloating or weight gain, breast tenderness, muscular tension, aches and pains, poor concentration and changes in

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appetite. Only one of these symptoms is required for diagnosis. Symptoms must be restricted to luteal phase of the menstrual cycle and cease with commencement of menstrual flow.

Further division in mild, moderate and severe PMS was done according to criteria given by Sternfeld.<sup>1</sup>

**RESULTS:** Among 400 girls, 208(52%) girls were subsequently diagnosed as having PMS according to ICD-10 criteria. Among those 208, 91 girls were diagnosed as having mild PMS, 32 as moderate and 56 as severe.

### A table 1 on symptom severity

Sl.no	Symptoms	Mild %	Moderate %	Severe %	Total %
	<b>Psychological symptoms</b>				
1	Angered easily	42%	25%	7.1%	74.1%
2	anxiety	50%	25%	4%	79%
3	confused	36%	11%	3.3%	50.3%
4	depressed	29%	23.8%	11%	63.8%
5	Guilt	15%	5%	6.2%	26.2%
6	Hopeless feelings	29%	1. %	11%	41%
7	irritability	45%	22%	12%	79%
8	loneliness	26%	21%	15%	62%
9	Low self esteem	30%	21.2%	6.5%	57.7%
10	Moodiness	40%	23%	12%	75%
11	Stressful feelings	45%	25%	6%	76%
12	Disinterest in life	30%	20%	12%	62%
	<b>Physical symptoms</b>				
13	Abdominal bloating	34%	11%	3.6%	48.6%
14	Absent mindedness	25%	12%	5%	42%
15	Back pain	35%	29%	15%	79%
16	Binge eating	35%	5%	12%	52%
17	Breast tenderness	40%	8%	5.5%	53.5%
18	Constipation	20%	6%	4.5%	30.5%
19	edema	12%	3%	3.2%	18.2%
20	Fainting, vertigo	12%	5%	4.1%	21.1%
21	General body discomfort	45%	37%	22%	104%
22	Insomnia	32%	6%	5.4%	43.4%
23	Weight gain	41%	6%	7.2%	54.2%
24	headache	23%	16.3%	2.9%	42.2%
25	Fatigue	38%	25%	15%	78%
26	Nausea	29%	5%	5.5%	39.5%
27	Prone to violent outbursts	32%	6%	10%	48%
28	Abstinence from work	22%	21%	2.6%	45.6%
29	Personality change	35%	15%	5%	55%

**DISCUSSION:** Our study indicated that approximately 55% of the young college girls experience PMS. Which is supported by studies of Rivera-Tovar AD, Frank E.<sup>(4)</sup> who have observed Late luteal phase dysphoric disorder in young Women and Zhao G, Wang L, Qu C.<sup>(5)</sup>

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The limitations of our study included a highly selective sample comprising of medical students which was also small in size.

While PMS is linked to the luteal phase, the causes of PMS are not clear, but several factors may be involved. Changes in hormones<sup>(6)</sup> during the menstrual cycle seem to be an important factor; changing hormone levels affect some women more than others.

Chemical changes in the brain, stress, and emotional problems, such as depression, do not seem to cause PMS but they may make it worse. Low levels of vitamins and minerals, high sodium, alcohol, and/or caffeine can exacerbate symptoms such as water retention and bloating. PMS occurs more often in women who are between their late 20s and early 40s; have a family history of depression;

The results of a large longitudinal study carried out by Bertone-Johnson et al suggest that the experience of abuse (emotional, sexual, or physical) in early life places women at higher risk for PMS in the middle-to-late reproductive years

Magnesium and calcium deficiencies<sup>(7)</sup> are postulated as nutritional causes of PMS; studies evaluating supplementation show improvement in physical and emotional symptoms Two risk factors for PMS are obesity and smoking.

Research reveals that women with a body mass index (BMI) of 30 or above are nearly 3 times as likely to have PMS as women who are not obese. Women who smoke cigarettes are more than twice as likely to have more severe PMS symptoms

PMS affects women with ovulatory cycles<sup>(8)</sup> Older adolescents tend to have more severe symptoms than younger adolescents do. Women in their fourth decade of life tend to be affected most severely. PMS completely resolves at menopause.

In women who are severely affected, bilateral oophorectomy has been effective in alleviating symptoms because it renders the patient postmenopausal. A hysterectomy is not needed to gain the symptomatic relief. For obvious reasons, this therapy is not recommended for adolescents and young women.

Despite a lack of evidence to indicate that dietary changes can definitively change PMS symptoms, healthy lifestyle recommendations are worth making in that they benefit the patient overall, as well as give her a sense of control.

Eating four to six smaller meals per day during the premenstrual period may help reduce symptoms or food cravings. One study found that women with PMS typically consume more dairy products, refined sugar, and high-sodium foods than women without PMS.

Accordingly, many clinicians recommend reducing or eliminating these foods from the diet. Avoidance of salt, caffeine, alcohol, chocolate, or simple carbohydrates may alleviate symptoms the benefits of exercise include physical improvements as well as stress reduction.

Regular aerobic exercise has been shown to decrease symptoms in some adolescents and young women. Preliminary studies suggest that yoga may also alleviate symptoms in some women.

**CONCLUSION:** Premenstrual syndrome (PMS) is a recurrent luteal-phase condition characterized by physical, psychological, and behavioral changes of sufficient severity to result in deterioration of interpersonal relationships and normal activity.

Causes of PMS include an estrogen excess, estrogen withdrawal, progesterone deficiency, pyridoxine (vitamin B6) deficiency.<sup>[3]</sup> Alteration of glucose metabolism, and fluid-electrolyte imbalances

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The study concluded that PMS is a common problem in the reproductive age group and severe forms are more prevalent in this part of the world.

Measures should be adopted to reduce the incidence of this disorder which influences the quality of life in young girls.

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