

## Research Article

# A prospective survey study on premenstrual syndrome in young and middle aged women with an emphasis on its management

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## ABSTRACT

Premenstrual syndrome (PMS) is defined as the recurrence of psychological and physical symptoms in the luteal phase, which remit in the follicular phase of the menstrual cycle. Symptoms of which fall in three domains: emotional, physical and behavioural e.g. irritability, anger, headache, fatigue, food cravings etc. The survey study of was conducted among 50 young & 50 middle aged women of S.B.K.S Medical Institute and Research Centre to find the prevalence of premenstrual syndrome with an emphasis on its management. Responses to a feedback questionnaire covering various aspects related PMS were obtained from 50 participants belonging to each group. The participants belonged to different range of literacy. It was found that 42% faced PMS regularly, while 58% occasionally. Of the 100 participants 68% suffered with backache, 64% leg cramps, 62% fatigue, breast tenderness and anger whereas 58% suffered with anxiety and generalized body ache. Of all the sufferers only 34% had received the treatment for PMS. Irrespective of the age PMS is common problem faced by women. With our study we observed that literacy has not mattered in the management of this health problem. Since there are reports stating that the severity of PMS can hamper the daily routine and even lead to suicidal tendency, it is essential that awareness programs need to be conducted to address the importance of managing the issue by pharmacological and non-pharmacological methods.

**Keywords:** Premenstrual syndrome, Luteal phase, Follicular phase

## INTRODUCTION

Premenstrual syndrome (PMS) is the name given to a collection of physical and psychological symptoms that most women experience during the late luteal phase of each menstrual cycle (7 to 14 days prior to menstruation). The symptoms of which fall into three domains: emotional, physical, and behavioural.

The most common emotional and mood-related symptoms of PMS include depression, irritability,

tension, crying, over sensitivity (hypersensitivity), and mood swings with alternating sadness and anger. Physical discomforts include abdominal cramps, fatigue, bloating, breast tenderness (mastalgia), acne and weight gain. Behavioural symptoms include food cravings, poor concentration, social withdrawal, forgetfulness and decreased motivation.

Women are affected irrespective of socioeconomic status, race, or cultural background. Symptoms seem to worsen as menstruation approaches and subside at the onset or

after several days of menstruation. A symptom-free phase usually occurs following menses.<sup>1</sup> Despite considerable research, causes of PMS remain enigmatic and the exact causes of PMS are not clearly understood but have been attributed to hormonal changes, neurotransmitters, prostaglandins, diet, drugs, and lifestyle.<sup>1,2</sup>

About 80% of women report mild symptoms, 20%-50% report moderate symptoms, and about 5% report severe symptoms for several days with impairment of functioning. Although severity of symptoms vary, individual with severe symptoms are prone to suffer with premenstrual dysphoric disorder (PMDD). In such patients, the symptoms are so severe that they interfere with daily life, cause disability and at times they are life threatening.<sup>3,4</sup>

As per previous studies, in India the prevalence with PMS is 20% of which 8% suffer with severe symptoms. It has also been reported by the same group of authors that 10% of the sufferers were found to have suicidal ideas.<sup>4</sup>

It has been found that mild to moderate symptoms can be relieved by various lifestyle changes. However, severe symptoms often require more aggressive treatment that requires pharmacological intervention in addition to non-pharmacological treatments.<sup>1</sup>

Hence, the study was taken up to know prevalence of PMS with the objectives to describe the symptoms perception, severity & distress in young and middle aged women.

**METHODS**

The survey study was conducted to find the prevalence of PMS among medical & nursing students, teaching and non teaching staff of S.B.K.S.M.I. & R.C. and Dhiraj hospital of Sumandeep Vidyapeeth, Piparia, Vadodara. Brief information about PMS was given to every participant following which, objectives and procedure were explained to them. Participants who filled the informed consent form were enrolled for the study. Feedback questionnaires covering various aspects of PMS were distributed among the participants. The filled questionnaire feedbacks were retrieved from 100 of them (that included 50 participants from each group). The study was commenced only after obtaining the permission from Institutional Ethical Committee, Sumandeep Vidyapeeth.

All data obtained were analyzed using the Microsoft Excel software. Descriptive analysis was performed on all the variables to obtain the frequency and percentage, followed by chi square test.

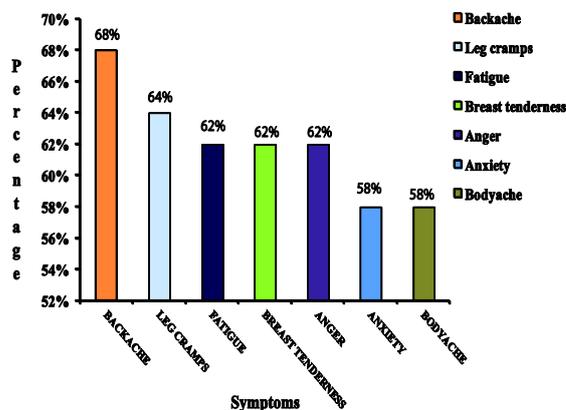
**RESULTS**

From the information gathered with the feedback questionnaires it is emphasized that PMS is common in women during reproductive age. All the participants suffered with PMS, among them 42% were found to be suffering regularly & 58% occasionally. The most common symptoms they suffered with were backache (68%), leg cramps (64%), fatigue (62%), breast tenderness (62%), anger (62%), anxiety (58%) and generalized body ache (58%).

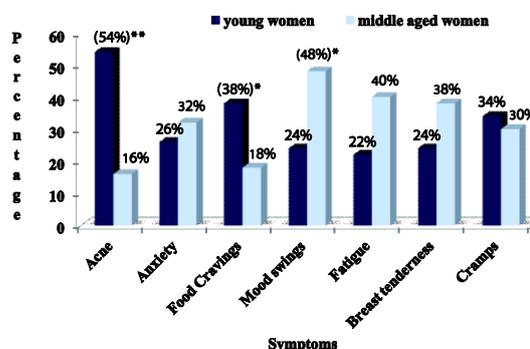
**Table 1: Comparison of premenstrual symptoms among the two groups.**

Symptoms	Group I (Young Women) n=50	Group II (Middle aged Women) n=50	p value
Acne	27**	8	< 0.001
Anxiety	13	16	> 0.05
Food cravings	19*	9	< 0.05
Mood swings	12	24*	< 0.05
Fatigue	11	20	> 0.05
Breast tenderness	12	19	> 0.05
Cramps	9	15	> 0.05

\* p< 0.05, \*\* p<0.001



**Figure1: Percentage of common symptoms of PMS.**



**Figure 2: Comparison of symptoms in young & middle aged women.**

Later the two groups were compared for the various symptoms with which they suffered. We observed that following were the more severe symptoms suffered in common among the two groups. We observed that acne (54%) & food cravings (38%) were significantly more in young women, while mood swings (48%) were more significant with middle age. However, we found that 34% participants had received treatment for PMS, which was symptomatic self medication.

## DISCUSSION

Premenstrual syndrome remains a clinical entity of great significance in medical practice. It has been worrisome problem for 25-35% of sufferers and grave for about 5-10% sufferers.<sup>5</sup>

Although premenstrual symptoms are described in women from menarche to menopause, it is unclear whether symptoms would remain stable or increase in severity with age.<sup>6,7</sup> The characteristics of menstrual cycle, age, cognitive attributions, socio economical variables, number of children and life style variables have not been identified as influencing factors for PMS.<sup>7,8</sup>

Altered luteinizing hormone pulse, abnormalities in thyroid hormone, cortisol, prolactin, glucose, prostaglandins,  $\beta$ -endorphins and vitamins cause abnormality in hypothalamo-pituitary gonadal (HPG) axis that may result in mood disturbances.<sup>9-11</sup> Specific neurotransmitter, neuroendocrine, neurosteroid abnormalities are not known to cause PMS.

However 5 HT, nor adrenaline, Gamma amino butyric acid (GABA), allopregnanolone (ALLO), endorphins may be involved for resulting symptoms.<sup>9</sup> Imaging studies have reported altered serotonin function and altered GABAergic function in women with PMDD when compared with healthy control subjects.<sup>12,13</sup>

The most systematically studied treatments have been the elimination of hormonal fluctuations with ovulation suppression treatments or the "correction" of neurotransmitter dysregulation with antidepressant or anxiolytic medications. Other treatments include putative vitamin or mineral deficiencies & symptomatic treatment.

Studies & trials have reported that oral contraceptives containing ethinyl estradiol 30  $\mu$ g and unique progesterone, drospirenone 3 mg, improved mood and quality of life during the luteal phase.<sup>14-16</sup>

Ovulation suppressants like Gonadotropin-releasing hormone (GnRH) agonists lead to decreased follicle stimulating hormone (FSH) and luteinizing hormone (LH) release from the pituitary resulting in decreased estrogen and progesterone levels.<sup>17</sup> Use of progesterone

in luteal phase has been one of the strategic measure to treat PMS which holds good even today.<sup>18</sup>

Recently selective serotonergic reuptake inhibitors (SSRI) have gained greater importance in the management of PMS. Other medications include anxiolytics like Alprazolam & Bromocriptine for decreasing breast tenderness.<sup>3,19</sup>

However, life style modifications in the form yoga, meditation & exercises are helpful in management of mild symptoms along with dietary supplements in the form of calcium, vitamin B6 & soy isoflavones. Counselling the victims & relatives is more essential so that sufferers gain adequate care & attention and it also helps to overcome them with the sufferings.<sup>3,20-22</sup>

As it was a survey study conducted in small groups it may not represent the behavior of general population. Future studies can be carried out to compare the sufferings between states and countries, among rural and urban population also.

## CONCLUSION

Currently SSRI such as Fluoxetine, Sertraline etc. are more opted as choice for management of PMS. However, introduction of OC pills that would ameliorate the symptoms of PMS along with health benefits and prevention of ovulation would prove to be more advantageous for the sufferers.

Premenstrual symptoms can be managed if diagnosed in right time with suitable pharmacological and non pharmacological aids. Therefore it is suggested that life style modification & counselling are essential. If neglected, may even be life threatening in patients with severe symptoms. Irrespective of the age, literacy and socio economic status, most of the women tend to suffer with the PMS, which may be understood by them or they may be ignorant of it. In country like ours, often it is even taken as a stigma to discuss the issues related menstrual cycle.

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