

ORIGINAL ARTICLE

Prevalence of Premenstrual Syndrome Among Women of Pakistan

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ABSTRACT:

Objectives: To find out the prevalence of Premenstrual Syndrome amongst women of Pakistan

Materials and Methods: A cross sectional self reported survey was conducted from 1st August 2011 till 31st January 2012 by collecting data from different cities that is Islamabad , Quetta , Karachi , Multan , Hyderabad. 382 participants from various hospitals, universities, colleges, shopping malls filled up a self administered closed ended questionnaire designed on DSM IV.11 premenstrual syndrome symptoms based on occurrence and severity were used for diagnosis. If 4 of them were positive then a female was labeled to be suffering from Premenstrual Syndrome (PMS)

Results: The prevalence of premenstrual syndrome was 191(55%). The ascending order of prevalence of symptoms occurring in PMS was depression, tension, labile mood, bloating, swollen breast and headache.

Conclusion: Premenstrual syndrome is a common problem in women of reproductive age group. There is a need for simple diagnostic methods for early detection. Social media and physicians should provide education to reduce its prevalence and improve the quality of life in the affected females

Key words: Premenstrual Syndrome, Prevalence, Pakistan, depression, DSM criterion IV

INTRODUCTION:

Premenstrual syndrome refers to distressing physical, psychological and behavioural symptoms not caused by organic disease, which regularly occurs during the luteal phase of menstrual cycle and significantly regresses or disappears during the remainder of the cycle.^{1,2,3,4} Premenstrual syndromes (PMS) are quite prevalent among women of reproductive age. Even though the etiology of PMS is still unknown, several treatment modalities have been shown to be effective. Diagnosis of premenstrual syndrome is made when the symptoms occur before the onset of menstrual periods and subside a few days after they start. These symptoms may be physical or psychological, and they vary in severity from mild, moderate to severe. Depending on the severity of the symptoms, it could be unbearable and leads to disruption of work and social life of women who are afflicted by it. Despite the prevalence of the disorder, the availability of treatment and media exposure, many lay people and professionals are still unaware of its impact on the individual, her family and environment^{5,6,7}. Premenstrual impairment may be more severe at home, influencing marital relationships and homemaking, as compared to social and out-of-home occupational impairment.⁸ A lot of premenstrual complaints have been reported in patients with PMS. Only a handful of these symptoms are consistently assessed and identified in studies, most commonly irritability, tension, depression, bloating,

mastalgia, and headache.^{9,10,11,12}

Premenstrual syndrome is often classified under the generic term Premenstrual Syndrome which is listed in the International Statistical Classification of diseases and Related Health Problems, 10th revision (ICD-10). The DSM-IV research criteria for this disorder help to identify and classify women who experience severe psychological symptoms during the premenstrual phase.^{13,14,15} DSM-IV defines the premenstrual syndrome (PMS) as a separate entity: premenstrual symptoms must occur in the last week before the start of menstrual cycle and remit within a few days of the onset of menses; they must also be severe enough to interfere with work, family and social relationships; at least 4 symptoms (including at least one of the major dysphoric symptom out of a list of 11 must be present.

Despite its official status recognized globally as a medical disorder,¹⁶ it is rarely discussed in Pakistan and is surrounded by stigma which leads to lot of misconceptions.¹⁷ Our research was not confined to any specific age group. It has been estimated from retrospective community surveys that nearly 90% of women have experienced at least one premenstrual syndrome (PMS) as defined by ICD-10 criteria. It is notable that the majority of women suffering from premenstrual syndrome PMS (55%) in this study, never used any treatment or medication to relieve their symptoms. This is the cultural influence that Pakistani women accept to believe that these symptoms are part of being a woman rather than complain about it, there are more pains to bear as a woman. Education about body physiology and counselling for Pakistani women, especially the less privileged one, is recommended to educate the people about Premenstrual syndrome, and to reduce its incidence and improve the quality of life in the affected.¹⁸

Research has been done on PMS in many countries but very few studies have been reported on the experience of Pakistani women. This study has been conducted to find out the prevalence of premenstrual syndrome (PMS)

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Received: January 5, 2014
Revised: January 30, 2014
Accepted: February 3, 2014

in Pakistani women¹⁹.

MATERIALS AND METHODS:

The study was conducted in various cities of Pakistan that is Islamabad, Quetta, Karachi, Multan, Hyderabad at different hospitals, universities, colleges and shopping malls. It took 6 months i.e. from 1st August 2010 to 31st January 2011 to collect and analyze the data. The team asked the participants to fill out a self-administered closed-ended questionnaire designed using the validated criterion of DSM IV. All women of reproductive age who gave verbal consent were included in the study. Women who were pregnant, lactating, wanted new pregnancy, taking contraceptive pills or injections and with cycles more than 35 days in length were excluded from the study. Women with medical disorder such as thyroid disease, irregular menstrual cycle and psychiatric disorders were also excluded. Symptoms studied were physical, psychological and behavioral. Each woman enrolled in this study was followed for two consecutive cycles. The ratings were prospectively completed for 2 menstrual cycles. The days of the period and the days on which the symptoms caused any dysfunction were studied separately. Last week of the luteal phase i.e. the week before onset of menstruation was compared with first week of follicular phase, beginning on day 2 of the same cycle. Numbers of the symptoms present were noted on each day of luteal phase starting from day 14 of the same cycle, assuming total cycle length to be 28 days. It was also asked in the questionnaire if symptoms were relieved with onset of menstruation.

Study Tool:

The questionnaire for study was designed on DSM IV criteria according to which there are 11 premenstrual syndrome symptoms based on occurrence and severity, labeled to diagnose PMS. If 4 of them are positive, then a female is suffering from PMS. DSM-IV criteria was used by the American Psychiatric Association to diagnose premenstrual syndrome which is called premenstrual dysphoric disorder. This is characterized by the presence of at least five symptoms (one of which must be affective) that occur in the late luteal phase, are not a luteal exacerbation of an existing psychiatric condition, that significantly interferes with social activities or relationships with others. Symptoms are depressed mood, anxiety and tension, fluctuating moods, anger and irritability, decreased interest, poor concentration, lethargy and fatigue, change in appetite, feeling overwhelmed and out of control. Physical symptoms include breast tenderness and weight gain.

Sample Size: The sample size was 382, calculated by using standard statistical formula.

RESULTS:

Out of 382 women included in the study, 143 were married and 239 were single (Fig 1a). Women belonged to a diverse economic strata and ethnic backgrounds. The prevalence of premenstrual syndrome was 55%. The common symptoms occurring in PMS were depression, tension and irritability, labile mood, bloating, swollen breast, increased appetite, sleeping disturbances and headache.

Prevalence of depression was 147 (fig 1b). Prevalence of tension and irritability was 204 (Fig 2a) labile mood was 261 (fig 2b), bloating and body aches was 306 (Fig 2c). Headache was present in 277 (Fig 2d). Swollen breast was 69, sleep disturbance i.e. insomnia was 158 and increased appetite was 132 and headache was 277 ((fig 3).

Fig 1a. Ratio of single vs. married women

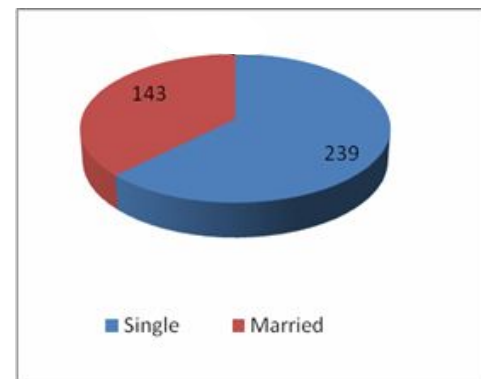


Fig 1b. Depression

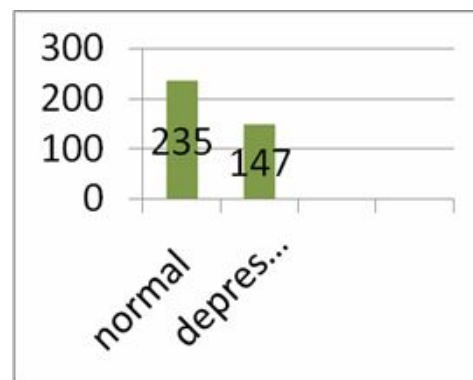
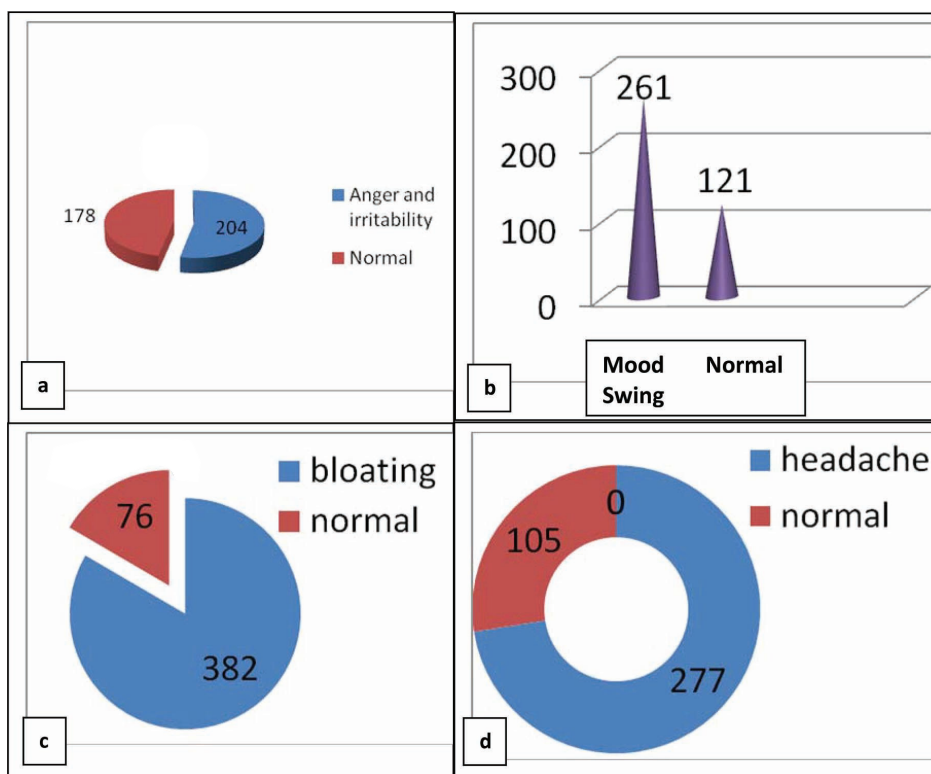
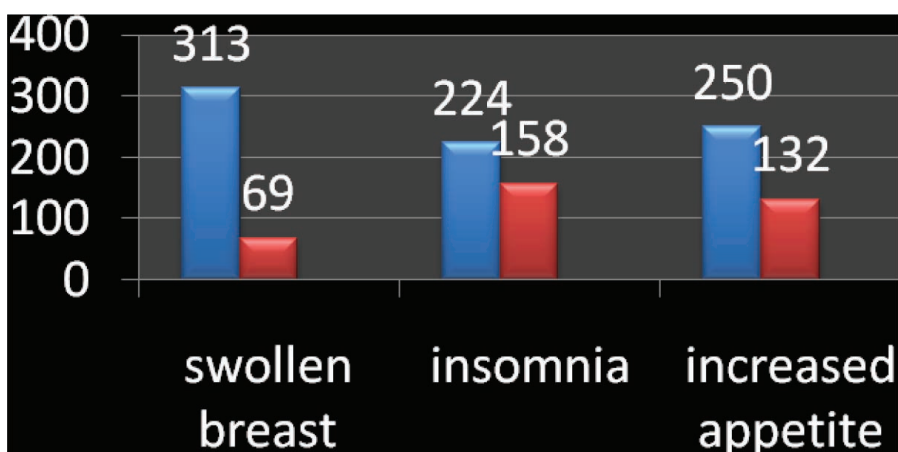


Fig 2.



a) Tension and irritability b) Labile mood c) Body aches d) Headache

Fig 3. Swollen breast, sleep disturbance (insomnia) and increased appetite



Blue colour shows positive results

DISCUSSION:

It has been estimated that as many as 80% of women of reproductive age may be suffering from some symptoms of Premenstrual syndrome. Premenstrual syndrome, a common cyclic disorder of young and middle-aged women, is characterized by emotional and physical symptoms that consistently occur during the luteal phase of the menstrual cycle. Premenstrual syndrome is a diagnosis of exclusion; therefore, alternative explanations for symptoms must be considered before either diagnosis is made. The disorders can manifest with a wide variety of symptoms, including depression, mood liability, abdominal pain, breast tenderness, headache, and fatigue. However, mood symptoms--anxiety, irritability, and mood liability were the most stable symptoms in this group of women with PMS.

Although the etiology of these disorders remains uncertain, research suggests that altered regulation of neurohormones and neurotransmitters is involved. The three classes of endogenous opioid peptides are endorphins, enkephalins and dynorphins. Beta-endorphin is the major representative of endogenous opioid peptides. Previous studies have suggested the symptoms of Premenstrual syndrome may be due to noradrenergic rebound following beta-endorphin decline^{20,21,22,23,24}. Women with PMS should be instructed about lifestyle changes, including healthy diet, sodium and caffeine restriction, exercise, and stress reduction. Supportive strategies, such as use of a symptom diary, may be helpful in diagnosing and managing the disorders. In women with moderate symptoms, treatment includes both medication and lifestyle modifications. Dietary supplements, such as calcium and evening primrose oil, may offer modest benefit. Many researchers suggest that a variety of nutrients may have an important function in the phase related mood and behavioural disturbances of the premenstrual syndrome. Different studies suggest, at least a little of these micronutrients, mainly calcium and vitamin D, supporting cyclic fluctuations throughout the menstrual cycle that may explain some features of premenstrual syndrome (PMS).²⁵

Ovarian hormones have an influence on calcium, magnesium and vitamin D metabolism. Estrogen regulates the calcium metabolism, intestinal calcium absorption and parathyroid hormone secretion, causing fluctuations during menstrual cycle. The similarity between the findings of premenstrual syndrome like depression, anxiety and behavioural changes, and hypocalcemia is significant. Clinical trials suggest that blood calcium and vitamin D levels are lesser in women with premenstrual syndrome and that calcium supplementation has reduced the severity of symptoms. This put forwards that PMS represents the clinical appearance of a calcium deficiency state which is revealed by the rise of ovarian steroid hormone

concentrations during the menstrual cycle. So the possibility of suffering from premenstrual syndrome is lower in women who consume more dairy products in daily life.

Selective serotonin reuptake inhibitors such as fluoxetine and sertraline are the most effective pharmacologic agents. Serotonin deficiency is proposed because patients who are most influenced by PMS have decreased level of serotonin. Selective serotonin reuptake inhibitors (SSRIs), the medications that increase the level of circulating serotonin are reported to relieve the symptoms of premenstrual syndrome. Serotonin is predominantly involved in the depressive symptoms, expression of irritability, anger, specific food cravings, specifically found in the premenstrual syndrome. Along with their different effects, estrogens increase the density of serotonin receptors enhancing the sensitivity to serotonin agonists.^{26,27}

Prostaglandin inhibitors and diuretics may provide some relief of symptoms. Usually the women with premenstrual syndrome have an exaggerated response to normal hormonal changes, Rapidly shifting levels of estrogen and progesterone promote pronounced emotional, behavioral and physical responses, although their hormonal levels are similar to women without premenstrual syndrome. Only weak evidence supports the effectiveness of gonadotropin-releasing hormone agonists, androgenic agents, estrogen, progesterone, or other psycho-tropics, and side effects limit their use^{28,29}. The Premenstrual syndrome was considered for a long time resembling a somatic disease, but currently the psychiatric symptoms severity justifies most often the medical cares. In order to discriminate some isolated and mild complaints, of a disabling disorder, the standardized prospective auto-assessment is the most applicable method. Ultimately, intermittent prescription of serotonin re-uptake inhibitors appears to be an effective treatment³⁰. As not a single drug has been proven valuable in the treatment of premenstrual syndrome, consequently, its management includes education, reassurance and drug therapy. There is a need to build up methods to conduct the trials in rural and urban areas to find out the exact prevalence of the disease. There is a need to recognize the syndrome and develop perception regarding its assessment, diagnosis and treatment among the physicians.

CONCLUSION:

Premenstrual syndrome is a common cyclic disorder of young and middle-aged women that is poorly recognized and inadequately treated. Physical and emotional symptoms are quite common in the luteal phase of the Pakistani women and have a significant impact on their daily life activities. Doctors should adopt comprehensive measures to reduce its prevalence and improve the quality of life in the affected population.

ACKNOWLEDGEMENT:

We are thankful to Dr.Sabeena Jalal Khan, Department of Community Health Sciences for her supervision.

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