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Women Mental Health w.s.r. to Premenstrual Syndrome - An Online Survey

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ABSTRACT

Introduction: Premenstrual syndrome (PMS) is a psycho neuroendocrine disorder of unknown aetiology. Prevalence of PMS is 47.8% in world-wide and in India it is 43%. It is mainly affecting mental health of the women, and quality of life of the women so this research was planned to explore the severity of the premenstrual syndrome and to evaluate the impact of PMS on Women mental health. **Materials & Methods:** Among 160 females, 130 females enrolled in the study based on criteria. The data was collected through Google form which was prepared based on PSST (premenstrual Symptom Screening Tool) Scale. **Results:** One hundred and twenty-two participants reported at least three somatic and two affective symptoms. 34.7% participants mentioned that PMS affects their quality of life. 30.3% participants reported mild, 24.6% female reported moderate, 10.7% reported severe and 7.4 % stated very severe. PMS significantly having relation with occupation, stress, and physical exercise. 57% participants reported that they are stressed due to any personal/ occupational issues. The participants who are doing regular exercise/ yoga are having less severity of symptoms compared to other participants. **Discussion:** This study reveals that PMS is common in almost all females but degree of severity differs. It affects both mental and physical health and also quality of life of the women. By this study additional thing we found that women who practice yoga, *Pranayama*, any physical exercise have less severity of premenstrual symptoms.

Key words: *Mental health, Quality of life, Mood swings, Irritability, Stress, Anxiety, Depression*

INTRODUCTION

Premenstrual syndrome (PMS) is a psycho neuroendocrine disorder of unknown aetiology, often noticed just prior to menstruation there is cyclic appearance of large number of symptoms during the last 7-10 days of the menstrual cycle.[1] Prevalence of PMS is 47.8% in world-wide and in India it is 43%.[2,3] It is an important health problem among women. It adversely affects working, social and quality of life.

Pathophysiology of the disease[1] - The exact cause is not known but following hypotheses are postulated. 1) Alteration in the level of oestrogen and progesterone starting from the mid luteal phase. 2) Neuroendocrine factors like decreased synthesis of serotonin and withdrawal of endorphins from the CNS during the luteal phase. 3) Psychological factors may be involved and other factors like Thyrotropin Releasing Hormone (TRH), prolactin, renin, aldosterone, and prostaglandins. As there is no clear evidence to prove the pathology some studies say that PMS is because of an enhanced responsiveness/ sensitivity exists to normal levels of these fluctuating hormones.[4]

Symptoms of PMS[1] - Irritability, depression, mood swings, forgetfulness, restlessness, increased appetite, tearfulness, anxiety, tension, confusion, head ache,

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anger, fatigue, tiredness, dyspareunia, insomnia, weight gain, breast tenderness, abdominal bloating, swelling of the extremities.

The line of treatment in the contemporary medical science is use of tranquilizers, antidepressants, diuretics, anxiolytic agents, hormonal pills, SSRI's (selective serotonin reuptake inhibitors), SNRIs (Selective noradrenaline reuptake inhibitors). But these medications cause so many side effects such as antidepressants cause nausea, sleep problems, decreased libido and diuretics can cause too much fluid loss from the body, hormonal pills cause nausea, spotting, and also increases risk of blood clotting.[5] SSRIs cause nausea, asthenia, somnolence, fatigue, decreased libido, and sweating.[6]

It is found that *Yoga* and *Pranayama* based relaxation training normalizes the function of autonomic nervous system. Numerous studies have proved the efficacy of *Yoga* and *Pranayama* on mood related disorder.[7] As PMS is a psycho-neuro endocrine disorder in which stress is the main factor. Thus *Yoga* offers a non-pharmacological natural and effective treatment to alleviate PMS symptoms and serves as alternative to medications.[8,9]

We planned this online survey to know the causes, other risk factors, most common symptoms and severity of PMS in women and quality of life of the women who is suffering from Premenstrual syndrome.

Materials and Methods

First Step: The study was conducted in the month of May 2022, for this a google form was prepared for data collection which consists of 4 sections based on the PSST[10,11] (Premenstrual Symptom Screening Tool) Scale.

The first section consists of questions related to demographic data like age, sex, qualification, occupation etc. The second section included history of menstruation and premenstrual symptoms and the third section is covered with gynecological history. The fourth section included the questions related to quality of life, stress, physical exercise and yoga and severity of the PMS.

Second Step: Circulation of the google form among friends, family members, patients etc. based on inclusion criteria and exclusion criteria.

Third Step: Received the responses of Google forms from participants.

Fourth Step: Analysis of results, discussion on results and conclusion about the study.

Eligible Criteria

1. Females age between 16- 35 years
2. Females with regular menstrual cycles between 21–35 days.

Exclusion Criteria

1. History of untreated depression or psychiatric disorders
2. Recent history of relatives or family member death / medical emergency
3. Using hormonal medication such as oral contraceptive pills.

Diagnostic criteria[12,13]

In this study the diagnosis was made according to the ACOG diagnostic criteria i.e., PMS can be diagnosed if the patient reports at least one of the following affective symptoms including depression, angry outbursts, irritability, anxiety, confusion, or social withdrawal and at least one of somatic symptoms including breast tenderness, abdominal bloating, headache, or swelling of extremities during the 5 days before menses in each of the three prior menstrual cycles.

In addition, these symptoms are typically relieved within 4 days of the onset of menses, without recurrence until at least cycle day 13.

The symptoms are present in the absence of any pharmacologic therapy, hormone ingestion, or drug or alcohol use.

The symptoms must reproducibly occur during two cycles of the prospective records.

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RESULTS

Among the 160 participants one hundred and thirty participants were selected based on the inclusion criteria and they filled the Google form completely. One hundred and twenty-two participants reported at least three somatic and two affective symptoms. PMS significantly having relation with occupation, stress and physical exercise. The participants who are doing regular exercise/ yoga are having less severity of symptoms. Stressed participants are complaining of more severity of symptoms. 41.3% participants are regularly doing yoga / physical exercises. 57% participants reported that they are stressed due to any personal / occupational issues (fig. 1). 34.7% participants mentioned that PMS affects their quality of life (fig. 2).

Among the participants 69.2% participants reported pain before the menstruation, 41.5% participants reported anxious / nervousness, 47.7% participants expressed sadness/ tearfulness, 59.2%, 63.1% and 60.8% participants stated decreased interest in doing routine activities, anger outburst, and irritation respectively. 32.3% reported depression, 67.7% expressed fatigue (fig. 5), 36.9% reported breast tenderness, 46.2% stated bloating and 70.5% reported mood swings (fig. 3), least reported symptom is insomnia (15.4%) (fig. 4).

Among the participants 7.4% participants are having very severe symptoms, 10.7% participants reported severe, 24.6% mentioned moderate, 30.3% reported mild, and 18.9% expressed very mild, 8.2% reported no symptoms. Participants reported that PMS affects their relation with friends, family members, and quality of work in working place, concentration, education.

DISCUSSION

Premenstrual syndrome (PMS) is psycho neuroendocrine disorder of unknown aetiology, often noticed just prior to menstruation.[1] It is characterized by the presence of both physical and behavioural symptoms that occur in luteal phase of the cycle. Previous studies report that 80% of women experience symptoms of PMS during their reproductive age. 95% of girls had at least one PMS symptoms, 90% had more than one symptoms, and 66% had at one moderate to severe symptoms. Physical symptoms were reported by 53.5%, disruption of daily activities by 41.7%, while 25.1% had to miss school/college.[14]

In the present study, one hundred and twenty-two participants reported with at least three somatic and two affective symptoms. The PMS mainly affect the middle age women who are stressed due to many reasons like studies, family issues, occupational stress etc. In this study it is found that 57% participants were having the symptoms like stress due to personal or occupational reasons. This study reveals that PMS had effects on the relationship with friends, family members or colleagues and affects educational activities including lack of concentration, lack of motivation, and decreased interest in doing routine activities decreased individual or collaborative work performance and low scores.

Premenstrual syndrome suffering women are very prone to anxiety disorders. It is notable that the risk of developing pre-menopausal depression and postnatal depression has been reported to be higher in women who have PMS. They are more likely to panic when exposed to substances that cause panic, such as lactate and carbon dioxide. It is yet unknown whether premenstrual somatic symptoms, such as breast tenderness, bloating, and joint and muscle pain, are brought on by changes in hormone-responsive tissues in the periphery or result from a diminished tolerance to physical discomfort when in a dysphoric mood state. Evidence suggests that women with and without PMS do not differ with respect to the production of gonadal steroids, indicating that PMS might instead be associated with enhanced responsiveness to normal, fluctuating concentrations of these hormones.[11] It is an important health problem among women. It adversely affects working, social and quality of life. Moderate-to-severe PMS is associated with increased work absenteeism and reduced work productivity. Its need of an hour to address so as to improve the working efficiency of the women, who are in risk of suffering with PMS.[15] It is stated that women who had never worked outside the home were less likely to

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report PMS, and working women is more prone to PMS. One study shows that 24-hour shifts increases the rate of PMS example female medical school interns. Increased responsibilities and stress at work may cause or worsen PMS. Self-help techniques to promote self-awareness, as well as psychological and psychiatric interventions, may assist vulnerable women in overcoming this cyclical condition to improve their quality of life and productivity.[16]

The study shows adolescents, unmarried are the most suffering group by the PMS. Limitations of this study are small sample size, as we are collecting retrospective data; recall bias might be there, further large sample size studies have to be conducted to know the severity, and effects of PMS on health, quality of life, relations etc.

CONCLUSION

The prevalence of PMS is high in adolescents mainly students and working women. The most repeatedly reported symptoms are mood swings (70.5%) and fatigue (67.7%) least reported symptom is insomnia (15.4%). PMS is affecting the quality of life of the women. 41.3% participants are regularly doing *Yoga*/ physical exercises and their severity of symptom was less. 57% participants reported that they were stressed due to any personal/ occupational issues and their symptom severity was more, so this shows that stress is also a causative factor for psycho neuro endocrine disorders. *Yoga*, *Pranayama* or any other physical exercise we can reduce the severity of the symptoms and stress of the person, so these offers a non-pharmacological, natural and effective treatment to alleviate PMS symptoms and serves as alternative to medications. It is the need of the hour to find the solution to maintain women mental health. To know the effect of *Yoga*, *Pranayama* and other physical exercise on premenstrual syndrome we can conduct further research work as these therapies offers a non-pharmacological, natural and effective treatment to alleviate PMS symptoms and serves as alternative to medications.

Fig.1

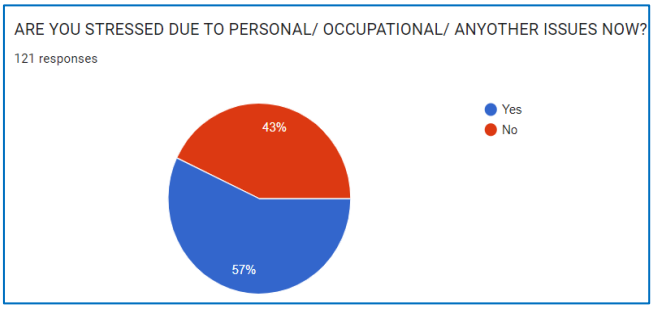


Fig. 2

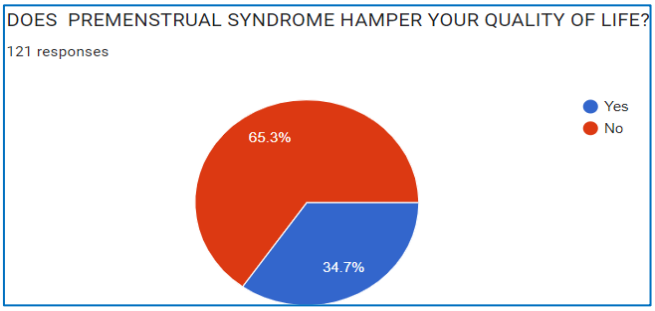


Fig. 3

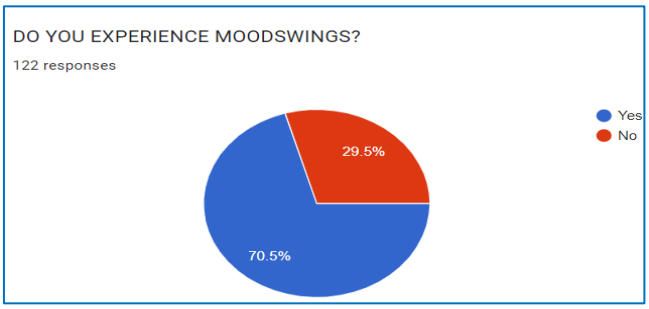


Fig. 4

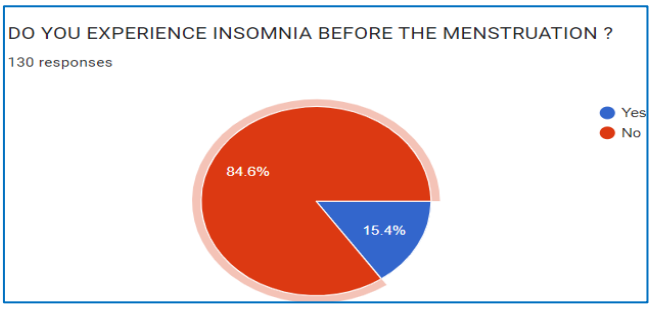
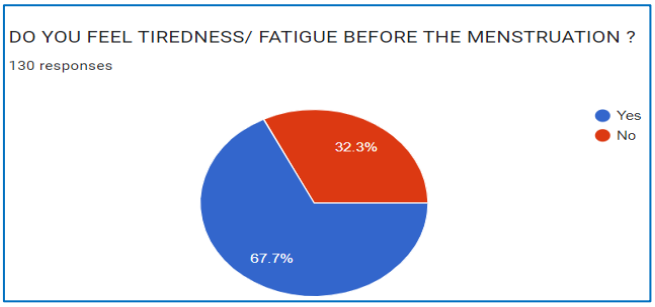


Fig. 5



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