



# EFFECT OF YOGA ON PREMENSTRUAL SYNDROME: SYSTEMATIC REVIEW

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**Abstract:-** Pre-menstrual syndrome (PMS) is a non-pathological state distinguished by a range of symptoms, including acne, weight gain, insomnia, mood fluctuations, frustration, abdominal discomfort, headache, anxiety, stress, irritability, decreased concentration, constipation, fatigue, and disturbances in appetite. Premenstrual syndrome (PMS) is a frequently occurring and recurring condition that impacts women between adolescence and adulthood. Abdominal discomfort, mastalgia, sleeplessness, lethargy, mood swings, irritability, and depression are among the several mental, physiological, and behavioral symptoms that differentiate it. These symptoms regularly appear during the luteal phase of the menstrual cycle and usually diminish within a few days after the start of menstruation. The medicinal interventions for premenstrual syndrome (PMS) are transient and might potentially result in significant adverse reactions if used for a prolonged duration. Nevertheless, research suggests that yoga can be efficacious in the management and alleviation of PMS symptoms. The objective of this study is to examine the effectiveness of yoga in the management of premenstrual syndrome (PMS) by analysing scientific studies that have been published. The study assessed the effects of yoga on many variables, such as oedema, anger intensity, mental health, mastalgia, anxiousness, and depression, in women experiencing PMS.

**Keywords:-** Yoga practice, Premenstrual syndrome (PMS)

In today's fast-paced world, we have largely moved away from our traditional customs and cultural heritage. Unfortunately, this lifestyle shift has resulted in the adoption of diseases caused by our modern ways of living. Due to various factors disrupting their body's rhythm, women in particular suffer from a wide range of psychological and psychosomatic illnesses. This disruption can lead to a wide range of health issues, such as metabolic disorders, reproductive disorders, menstrual cycle irregularities, ovarian cysts, irritability, stomach bloating, alopecia, acne, excessive weight gain, and many others. Premenstrual syndrome (Mohan, 2010) Premenstrual syndrome (PMS) is defined as a variety of physiological and psychological symptoms that generally appear during the luteal phase of a woman's menstrual cycle and impact women in their reproductive age. woman's menstrual cycle and affect women during their reproductive years. ( Dickerson, L. M., Messi, et al.), it affects the majority of women during the third phase of their menstrual cycle. The symptoms of PMS can have a significant impact on their interpersonal relationships, social activities, work productivity, and overall quality of life. This condition affects women from all social classes and cultural backgrounds (Rumana et. al., 2017).

Premenstrual syndrome (PMS) significantly impacts women, eliciting a range of physical and psychological manifestations, including bloating, mastalgia, insomnia, exhaustion, fluctuating moods, irritability, and feelings of melancholy (BHARTI M. 2016). It can lead to worry, anger, and other mental and physical problems, and it makes life less enjoyable. Researchers have said that between 50 and 90% of women of childbearing age have different signs before their periods. (Kucukkelepce, D. S. 2021).

Studies indicate that premenstrual symptoms are composed of interconnected groups of symptoms with different subtypes, and seven underlying biological functions initiate after ovulation. By monitoring the disappearance of symptoms after the menstrual cycle, one can reliably ascertain the presence or absence of a premenstrual disorder. The reason behind the occurrence of PMS symptoms in women remains unclear. However, there is a contradiction in this theory, as symptoms may occur during ovulation and the early luteal phase before the onset of progesterone decline. (Yonkers, K. A.)

Premenstrual syndrome (PMS) can result from a variety of factors, including hormonal imbalances, fluid retention, high levels of oestrogen and progesterone, increased sensitivity to androgen hormones, low blood sugar, a deficiency in vitamin B6, and mental health issues. Some of the potential causes of PMS include inadequate prostaglandins, heightened plasma renin and aldosterone activity, serotonin insufficiency, and thyroid disorders. Biggs, W. S., & Demuth, R. H. (2011).

The menstrual cycle is when the ovary releases hormones in cycles that cause the endometrium to get thicker, ovulation, and bleeding.

- The menstrual cycle consists of the following three phases:

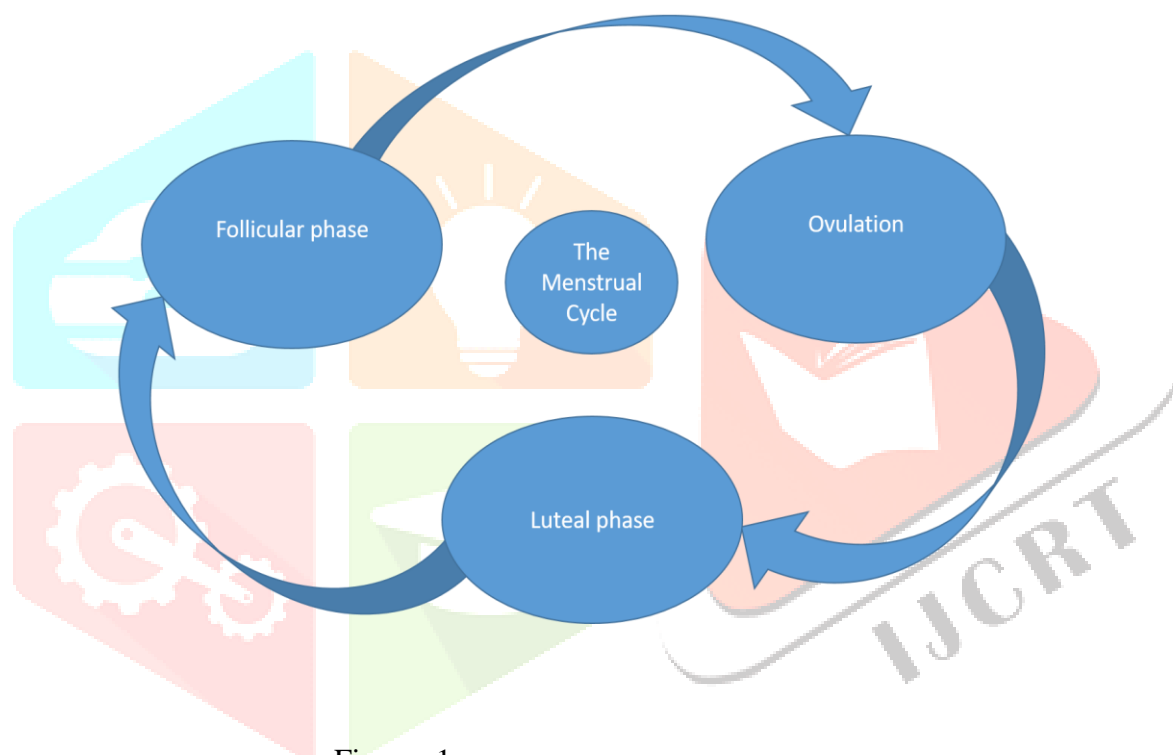


Figure -1

<https://www.swimming.org/sport/3-stages-menstrual-cycle/>

The follicular phase starts from the first day of periods to the fourteenth day of ovulation. During this phase, the pituitary gland releases the hormone FSH, which helps in the growth and maturation of the ovarian follicles. These follicles secrete oestrogen in the presence of LH (luteinizing hormone), which stimulates the growth of the endometrium and prepares the uterus for potential pregnancy. By the second week of the follicular phase, one follicle becomes dominant while the rest undergo degeneration.

The ovulatory phase occurs around day 12 of the menstrual cycle, during which a surge in luteinizing hormone (LH) leads to the enlargement of the follicle. By day 14, the follicle ruptures, resulting in the discharge of the ovum into the pelvic cavity.

Luteal phase: This particular period begins on the fifteenth day and concludes upon the onset of menstruation. The mature empty follicle, also known as the corpus luteum, secretes progesterone and, to a lesser extent, oestrogen. The corpus luteum continues to be regulated by luteinizing hormone (LH). If implantation does not take place, the levels of oestrogen and progesterone induce a drop in LH, leading to the atrophy of the corpus luteum. Subsequently, a decline in hormone levels ensues, leading to the onset of menstruation. Esmailjee, F. (2018).

## Previous studies on yoga and premenstrual syndrome

A random study on effect of a 16-week yoga exercise on premenstrual symptoms (Choudhary and Mishra (2013)) found that the use of yogic techniques may have a positive impact on reducing premenstrual symptoms and mitigating premenstrual stress and syndrome. Another systematic review (Pearce et al. (2020)) found that Individuals who were randomized to an exercise intervention through a random process had a decrease in overall PMS symptom scores.

A scientific study (Sharma.B; et al. (2013)) compared the effects of Anuloma-Viloma and asana on women with PMS. 60 women were participated in this study and they were split into two groups. There was no intervention on Group A, Group B did anuloma –viloma and group C did asana. They found significantly higher basal sympathetic activity reduction in the relaxation reaction of women with PMS. A clinical study performed (Rakhshae (2011)) on women with primary dysmenorrhea. The experimental group did yoga poses during the luteal phase and result showed that the experimental group's pain was significantly worse and lasted longer than that of the control group.

A study (Raghunath et al. (2016)) investigated the impact of yoga therapy on quality of life and depression in premenopausal nursing students with mastalgia. The study found that yoga treatment boosted quality of life and reduced depression in nursing students with Mastalgia. Another Empirical study (Posadzki, Ernst, Terry, and Lee (2011)) evaluate the effectiveness of yoga as a therapeutic choice for any type of pain. After analyzing nine randomized controlled trials, researchers determined that the practice of yoga effectively reduced pain situations compared to other control interventions such as self-care, therapeutic exercises, relaxation treatment, and standard care. A comprehensive review (Li & Goldsmith (2012)) conducted on stress and anxiety symptoms through yoga. A significant reduction were observed. A study conducted (Lustyz et al. (2004)) to assess anxiety and activity levels among women with premenstrual symptoms and results showed a significant correlation between high premenstrual symptoms and higher stress levels and a lower quality of life compared to low premenstrual symptoms. However, there was no significant difference in workout variables. The study suggests that women with severe symptoms may respond to exercise more than those who have rarely or never exercised. (Monika et al.)

Gawali and Dhule (2013) conducted research that revealed that consistent engagement in yoga leads to a decrease in anxiety and an enhancement in subjective well-being. Consequently, this study suggests that yoga is becoming more popular among women in the workforce.

According to research conducted by Samy et al. (2019), Zumba exercise has been shown to alleviate menstrual discomfort in young women diagnosed with primary dysmenorrhea. The participants were categorised into two groups: one that participated in Zumba sessions lasting 60 minutes, twice a week, for eight weeks, while the other group did not engage in any Zumba activities. The main measure of interest was the intensity of menstrual pain, whereas the secondary outcome focused on the disparity in the length of discomfort between the two groups.

Research done in Semarang, Central Java, revealed that with the help of yoga women who have menopause experiencing sound sleep . Another study (Baat et al. (2018)) shows that physical activity might enhance the occurrence of postmenopausal stress disorder (PMS) in 22.2 percent of women.

In 2008, Mindy Hightower did a study on how exercise affected menstrual pain and symptoms. Twenty busy women and twenty idle women took part in the study. PRISM records were used for two menstrual cycles. The results showed that all women had serious pain during their periods. Not surprisingly, women who exercised regularly had less pain than women who didn't exercise.

A Research (Carvalho, Weires, and Ebling (2013)) has shown that acupuncture has the potential to alleviate the symptoms of anxiety and despair associated with premenstrual dysphoric disorder (PDD). Result showed that the participants that received acupuncture treatment saw a significant reduction of 58.9% in both anxiety and depression ratings. The study (Yonglitthipagon et al. (2017)) aimed to explore the effects of yoga on young women diagnosed with primary dysmenorrhea. The study found that the yoga group showed significant improvements in menstruation pain, physical fitness, and quality of life compared to the control group.

A study (Dauneria and Keswani (2014)) compared the effectiveness of yoga and naturalopathy in treating dysmenorrhea in a group of 56 females. The result found that the participants who practiced yoga had a significant reduction in symptoms.

Research (Monika et. al (2012)) found that yoga treatment resulted in increases in blood pressure, strength, respiratory rate, expiration inspiration ratio, and 30:15 beat ratios.

Another study (Dutta and Sharma (2021)) conducted research in India and discovered that premenstrual syndrome (PMS) affects 43% of women, whereas premenstrual dysphoric disorder (PMDD) affects 8% of women. Premenstrual syndrome (PMS) is prevalent throughout adolescence, affecting around 49.6% of the population. The research discovered a significant degree of diversity which might be attributed to many variables. Nevertheless, it is essential for stakeholders and politicians to promptly tackle this problem, since it has a substantial influence on the community.

## Conclusion

It has been discovered that practicing yoga has positive effects on women suffering from premenstrual syndrome (PMS). Yoga can help lower heart rate, blood pressure, and inflammatory secretions, leading to increased comfort and reduced anxiety levels. Due to its safety and lack of negative consequences, yoga is a preferred option for ladies dealing with PMS. Mindfulness can be practiced flexibly, without any limitations of time or location, and it serves as a therapeutic intervention to improve both mental and physical well-being. Given that mental health problems can lead to physical diseases, yoga can also serve as a primary care strategy for treating mental health illnesses.

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