iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 **Issue:** V **Month of publication:** May 2025

DOI: https://doi.org/10.22214/ijraset.2025.70753

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 13 Issue V May 2025- Available at www.ijraset.com

Understanding PMS and PMDD: The Role of Body, Mind, and Society

Shivani Yadav
Student, S. Tentishev's Memorial Asian Medical Institute, Kant, Kyrgyzstan

Abstract: ***Premenstrual Syndrome (PMS) — a condition characterized by a range of recurring physical, emotional, and behavioral symptoms that occur during the luteal phase of the menstrual cycle, just before menstruation that has gained substantial attention in recent decades, both within medical circles and broader social discourse. In more severe cases, some women experience Premenstrual Dysphoric Disorder (PMDD), a mood-related condition recognized as a clinical mental health disorder in the DSM-5. Women with PMDD often face intense emotional shifts that interfere with daily life, relationships, and work. PMS has been investigated at different levels: biological, psychological, and sociocultural. The biological basis of PMS is most closely associated with cyclical changes in hormones, particularly regarding the fluctuation of estrogen and progesterone. This study utilizes a qualitative research approach through a comprehensive literature review to explore the underlying causes of Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD) using a biopsychosocial framework. This model acknowledges the complex interplay between biological, psychological, and sociocultural factors in influencing symptom expression, diagnosis, and treatment. Using a narrative synthesis approach, data from the selected studies were compared, contrasted, and synthesized to identify common patterns, theoretical perspectives, and gaps in the literature. Recent research advocates for a more comprehensive biopsychosocial approach to understanding PMS and PMDD. From a biological standpoint, fluctuations in estrogen and progesterone influence neurotransmitters such as serotonin and GABA, which are crucial for mood regulation. Women who are biologically sensitive to these hormonal shifts may experience more intense emotional and physical symptoms. Given this complex interplay of biological, psychological, and social factors, effective treatment for PMS and PMDD must be multidimensional. Pharmacological interventions such as selective serotonin reuptake inhibitors (SSRIs) and hormonal contraceptives can provide relief, but non-pharmacological strategies like cognitive behavioral therapy (CBT), regular exercise, and dietary changes have also proven beneficial. Ultimately, the most successful treatment outcomes occur when care is tailored to a woman's unique physiological and psychosocial background. A holistic, interdisciplinary approach that integrates clinical, psychological, and cultural considerations is essential for effectively managing PMS and PMDD, ensuring more personalized and comprehensive care for affected women.***

Keywords: ***Premenstrual Syndrome (PMS), Premenstrual Dysphoric Disorder (PMDD), biopsychosocial model, gendered health stigma, psychological factors, sociocultural influences, menstrual health, biopsychosocial model, gendered health stigma.***

I. INTRODUCTION

Premenstrual Syndrome (PMS) — a condition characterized by a range of recurring physical, emotional, and behavioral symptoms that occur during the luteal phase of the menstrual cycle, just before menstruation that has gained substantial attention in recent decades, both within medical circles and broader social discourse. The symptoms, which may include mood swings, irritability, fatigue, breast tenderness, bloating, and food cravings, vary widely in their severity and impact. While nearly 90% of menstruating women report experiencing at least one PMS symptom, about 20–40% describe these symptoms as significantly disruptive (Negriff & Susman, 2016). In more severe cases, some women experience Premenstrual Dysphoric Disorder (PMDD), a mood-related condition recognized as a clinical mental health disorder in the DSM-5. Women with PMDD often face intense emotional shifts that interfere with daily life, relationships, and work.

Historically, PMS was either trivialized as a natural part of womanhood or dismissed altogether, leading to confusion around diagnosis and treatment. However, recent scholarship reflects a more holistic approach that considers the interaction of biological, psychological, and social factors. Researchers now emphasize that while hormonal changes play a role, how a woman thinks about her symptoms and the context of her social life also shape the severity and meaning of her experiences (Hantsoo & Epperson, 2015). This evolving understanding of PMS invites a shift away from looking it as a strictly medical issue, and toward a more comprehensive framework that integrates lived experience and societal context.

Although early medical discussions around what was then termed "premenstrual tension" began in the 1930s (Frank, 1931), PMS only gained widespread recognition in the 1980s. This period marked a turning point due to a combination of cultural, legal, and media-driven factors. For example, high-profile criminal cases in the United Kingdom used PMS as a legal defense, propelling the issue into public consciousness and prompting intense debate over women's biology, behavior, and accountability (Rittenhouse, 1989). These events sparked greater medical interest and triggered separated reactions in feminist and popular media, with some looking at PMS as a genuine health issue, while others warned of its potential misuse to stereotype women as emotionally unstable.

Sociologist C. Amanda Rittenhouse (1989) argues that the emergence of PMS as a recognized "women's health problem" must be understood through a social constructionist lens — a theoretical approach that examines how societal forces shape the ways we define and respond to health conditions. Her content analysis of medical literature, feminist writings, and popular media reveals that each discourse frames PMS differently, ranging from a disorder requiring treatment to a cultural narrative that reinforces traditional gender norms. While medical professionals debated potential causes and treatments, feminist scholars questioned whether the medicalization of PMS served to pathologize normal female experiences and limit women's roles in public life.

This article builds on Rittenhouse's foundational work while incorporating recent biopsychosocial research to examine how PMS and PMDD are experienced, defined, and managed in both clinical and everyday settings. It seeks to address questions such as: Why did PMS gain heightened visibility in the 1980s? What roles did medical institutions, media, and feminist voices play in shaping its meaning? And how do women themselves interpret their symptoms — with acceptance, resistance, or uncertainty?

Ultimately, PMS offers a compelling case study of how medical science, culture, and gender politics intersect in the construction of women's health issues. Understanding PMS not just as a biological condition but as a socially shaped experience helps ensure that women's voices remain central in shaping both the knowledge and care surrounding their bodies. Through this lens, we can better grasp the nuanced realities of PMS and PMDD, advocating for approaches that are not only evidence-based but also empowering and inclusive**.**

A. Psychological and Sociocultural Perspectives on PMS and PMDD: A Biopsychosocial Framework

PMS has been investigated at different levels: biological, psychological, and sociocultural. The biological basis of PMS is most closely associated with cyclical changes in hormones, particularly with reference to the fluctuation of estrogen and progesterone. The interaction of these hormones with neurotransmitters such as serotonin can change one's mood and behavior (JFMPC, 2018). Bąk and colleagues (2023) found some evidence that hormonal susceptibility is responsible for the varied intensity of the emotional reaction to "normal" changes occurring during a menstrual cycle within individuals.

Considering premenstrual syndrome as a psychological disorder is directly related to the patient's history of depression or anxiety. The way an individual copes with a change in body image, previous mental health, and individual mechanisms affect how a person psychologically reacts to these changes (Ussher and Perz, 2019). The association of PMDD with mood disorders has prompted some researchers to push for it to be classified rather as a mood disorder than an aspect of reproduction.

Within a sociocultural framework, cultural attitudes towards menstruation affect symptom perception and reporting. Women are more likely to feel emotionally stressed premenstrually in societies where menstruation is stigmatized or viewed negatively (King, 2020). Recent research has shown a significant association between sociocultural norms and severity of PMS symptoms in a cross-sectional study in Gujarat, India (Kabir et al., 2025).

Existing literature, thus, emphasizes the multifactorial viewpoint. The biopsychosocial model, which assimilates hormonal, psychological, and cultural aspects, provides the most inclusive condition for understanding PMS and PMDD, according to existing literature on this topic.

II. METHODOLOGY

This study utilizes a qualitative research approach through a comprehensive literature review to explore the underlying causes of Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD) using a biopsychosocial framework. This model acknowledges the complex interplay between biological, psychological, and sociocultural factors in influencing symptom expression, diagnosis, and treatment.

A. Search Strategy and Data Sources

The literature review was conducted between January and March 2025 using Google Scholar as the primary search engine to access relevant, peer-reviewed literature. Google Scholar was chosen due to its broad indexing capabilities, which include a wide range of academic databases and publishers. The initial search yielded 1,480 articles, drawing from reputable sources including:

- PubMed
- ScienceDirect
- SpringerLink
- MDPI

The search was restricted to works published between 2015 and 2024 to ensure both contemporary relevance and alignment with current diagnostic criteria and treatment practices.

Search terms and Boolean combinations included:

- "Premenstrual Syndrome" OR "PMS" AND "biological" OR "hormonal"
- "Premenstrual Dysphoric Disorder" OR "PMDD" AND "psychological factors"
- "sociocultural influences" AND "menstrual health"
- "PMS treatment approaches" AND "biopsychosocial model"
- "PMDD diagnosis" AND "gendered health stigma"

Filters were applied to limit results to full-text, peer-reviewed studies in English.

B. Inclusion and Exclusion Criteria

Articles were selected based on the following inclusion criteria:

- Published between 2015 and 2024
- Focused on PMS and/or PMDD in relation to biological, psychological, or sociocultural dimensions
- Included both empirical studies (qualitative, quantitative, or mixed methods) and theoretical or conceptual analyses
- Clearly described methodologies and sample demographics
- Relevant to a biopsychosocial interpretation of premenstrual disorders

Exclusion criteria included:

- Articles focused solely on general menstrual health without direct relevance to PMS or PMDD
- Non-peer-reviewed literature, opinion pieces, or studies lacking methodological transparency
- Studies with limited scope (e.g., case reports with no broader applicability) unless offering unique theoretical insight

C. Screening and Selection Process

All search results were initially screened by title and abstract to assess relevance to the research objectives. After duplicate removal and eligibility filtering, a final sample of 98 articles was selected for full-text review and thematic analysis.

III. DATA ANALYSIS AND THEMATIC ORGANIZATION

Selected articles were organized according to the **three components of the biopsychosocial model**:

1) Biological: Investigations into hormonal fluctuations, neurotransmitter activity, neuroendocrine changes, and genetic predispositions.

2) Psychological: Focus on mood disorders, cognitive-behavioral patterns, emotional regulation, and individual coping mechanisms.

3) Sociocultural: Analysis of stigma, cultural perceptions of menstruation, gender-based healthcare disparities, and socioeconomic influences.

Within each thematic area, studies were further categorized based on:

- Diagnostic approaches (e.g., DSM-5, ICD-11)
- Assessment tools and symptom rating scales
- Intervention strategies (e.g., pharmacological, psychotherapeutic, lifestyle-based)

A. Synthesis and Critical Appraisal

Using a narrative synthesis approach, data from the selected studies were compared, contrasted, and synthesized to identify common patterns, theoretical perspectives, and gaps in the literature. Special emphasis was placed on studies that adopted interdisciplinary perspectives or demonstrated methodological rigor, such as large sample sizes, longitudinal designs, or culturally diverse populations.This integrative method allowed for a holistic understanding of PMS and PMDD, not as isolated medical conditions, but as multifaceted phenomena shaped by the interplay of body, mind, and society.

IV. RESULTS

Premenstrual Syndrome (PMS) is clinically defined as a group of recurring symptoms—physical, psychological, and behavioral—that emerge exclusively during the luteal phase of the menstrual cycle, typically about one week before menstruation. These symptoms must significantly disrupt a woman's daily functioning and cannot be better explained by another medical or psychological condition.

Table-1 (10) outlines the range of symptoms commonly associated with PMS. When these symptoms become more intense and disabling, affecting emotional stability, relationships, work performance, and social life, the condition may be classified as Premenstrual Dysphoric Disorder (PMDD).On average, symptoms last for about six days each cycle, with the highest intensity occurring two days before the onset of menstruation and usually subsiding by the first day of bleeding. Both PMS and PMDD can recur with every ovulatory cycle until menopause, although their severity and presentation may vary from month to month. The impact of these conditions goes beyond discomfort, influencing relationship satisfaction, work productivity, absenteeism, and increased healthcare usage.

Table 1. Symptoms Associated with Premenstrual Syndrome and Premenstrual Dysphoric Disorder

Physical	Psychological and Behavioral
• Abdominal bloating	• Anger, irritability
• Body aches	• Anxiety
• Breast tenderness and/or fullness	• Changes in appetite (overeating or food cravings)
• Cramps, abdominal pain	• Changes in libido
• Fatigue	• Decreased concentration
• Headaches	• Depressed mood
• Nausea	• Feeling out of control
• Swelling of extremities	• Mood swings
• Weight gain	• Poor sleep or increased need for sleep
	• Tension
	• Withdrawal from usual activities

Graph illustrating the correlation between physical and psychological and behavioral symptoms.
https://www.aafp.org/pubs/afp/issues/2011/1015/p918.html#afp20111015p918-b2

Although PMS has been recognized in medical literature since 1931 under the term “Premenstrual Tension,” a clear and unified definition remains elusive even after decades of research. This lack of consensus continues to provoke debate over whether PMS should be viewed through the lens of reproductive medicine or psychiatry. However, this scientific uncertainty is not simply a result of inadequate research. It is also deeply rooted in enduring cultural beliefs about women’s emotional expression and rationality—particularly within Western contexts. These cultural assumptions influence how symptoms are interpreted by both women and healthcare providers and shape the broader medical system's response to them. The historical controversy has been further complicated by the inclusion of Late Luteal Phase Dysphoric Disorder—now more widely known as PMDD—in psychiatric diagnostic manuals, which blurs the line between biological and psychological categorization.

Recent research advocates for a more comprehensive biopsychosocial approach to understanding PMS and PMDD. From a biological standpoint, fluctuations in estrogen and progesterone influence neurotransmitters such as serotonin and GABA, which are crucial for mood regulation. Women who are biologically sensitive to these hormonal shifts may experience more intense emotional and physical symptoms. On the psychological side, a woman's mental health history—particularly with anxiety or depression—combined with factors such as low emotional resilience and negative thinking patterns, can amplify the severity of PMS or PMDD. Social and cultural influences also play a vital role. In many parts of the world, menstrual stigma creates additional emotional stress and can prevent women from openly discussing their symptoms or seeking proper care. For example, a 2025 study by Kabir et al. found that urban women in India reported more severe PMS symptoms than their rural counterparts, likely due to increased stress, socio-economic pressures, and limited community support in urban environments. This demonstrates how socio-cultural context, access to education, and healthcare infrastructure all contribute to how PMS and PMDD are experienced and managed.

Given this complex interplay of biological, psychological, and social factors, effective treatment for PMS and PMDD must be multidimensional. Pharmacological interventions such as selective serotonin reuptake inhibitors (SSRIs) and hormonal contraceptives can provide relief, but non-pharmacological strategies like cognitive behavioral therapy (CBT), regular exercise, and dietary changes have also proven beneficial. Ultimately, the most successful treatment outcomes occur when care is tailored to a woman's unique physiological and psychosocial background. This article argues for an interdisciplinary framework that blends insights from clinical medicine, psychology, sociology, and anthropology. By doing so, it aims to shift the conversation away from a rigid biomedical or psychiatric model and toward a more inclusive understanding—one that recognizes not only the clinical symptoms but also the lived experiences of women navigating PMS and PMDD.

V. DISCUSSION

An understanding of PMS and PMDD demands a multifactorial approach, as neither pure biological nor pure psychological explanation would account for the experience of those affected. The biopsychosocial model allows for a more integrated analysis by understanding how hormones interact with the mind and sociocultural expectations.

Biological Factors: Hormonal fluctuations-instead more about estrogen and progesterone-take the center stage in mediating serotonin and GABA neurotransmission, which eventually leads to mood instabilities and irritability. Some women may experience pain due to these hormonal fluctuations and, therefore, tend to show intense emotional reactions (Bąk et al., 2023).

A. Psychological Factors

Those individuals who have a mental health issue, especially depression or anxiety, are predisposed to PMS and especially PMDD. This stress, with accompanying negative thought patterns and absence of coping strategies, can heighten emotional and behavioral symptoms in PMS/PMDD. This emphasizes the need for a mental health assessment during gynecological consultation (Ussher & Perz, 2019).

B. Sociocultural Factors

Menstruation is still considered taboo in many cultures, where silence and shame regarding anything related to the menstrual cycle can discourage individuals from seeking assistance or even acknowledging their symptoms. Furthermore, it is often expected culturally that women always stay demurely in control of their feelings; this results in women carrying guilt and, therefore, in symptoms during the premenstrual phase (King, 2020).

C. Global Outlook

They also examined the changing profile of PMS in light of a study in Gujarat, India, where demographic influences such as education status, rural vs. urban, and employment affected the perception and reporting of PMS. These findings reinforce the notion that PMS is not just a hormonal issue but rather one deeply colored by context.

D. Treatments and Suggestions

Treatments for PMS and PMDD must correspondingly be complex. SSRIs, hormonal contraceptives, cognitive-behavioral therapy, and lifestyle changes including exercise and diet have all been reported to be beneficial to varying extents. However, treatment protocols are believed to be at their best when physically and psychosocially focused on the individual's needs.

VI. CONCLUSION

In conclusion, Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD) are multifaceted conditions that cannot be understood through a singular lens, as they are shaped by biological, psychological, and sociocultural influences. The biopsychosocial model provides a comprehensive framework for examining these disorders, highlighting the crucial role of hormonal fluctuations, mental health factors, and societal context in both the expression and perception of symptoms. Biological factors, particularly the interplay between estrogen, progesterone, and neurotransmitters such as serotonin, play a significant role in the onset of mood and physical symptoms. Psychological factors, including pre-existing mental health conditions like anxiety and depression, can exacerbate these symptoms, making them more disruptive to daily functioning. Sociocultural influences, such as menstrual stigma and societal expectations of emotional control, further complicate the experience and reporting of PMS and PMDD.

Treatment approaches must, therefore, be multidimensional and tailored to the individual. Pharmacological interventions such as SSRIs and hormonal contraceptives can provide symptom relief, but non-pharmacological strategies like cognitive-behavioral therapy (CBT), lifestyle changes, and support systems are equally important. A holistic, interdisciplinary approach that integrates clinical, psychological, and cultural considerations is essential for effectively managing PMS and PMDD, ensuring more personalized and comprehensive care for affected women.

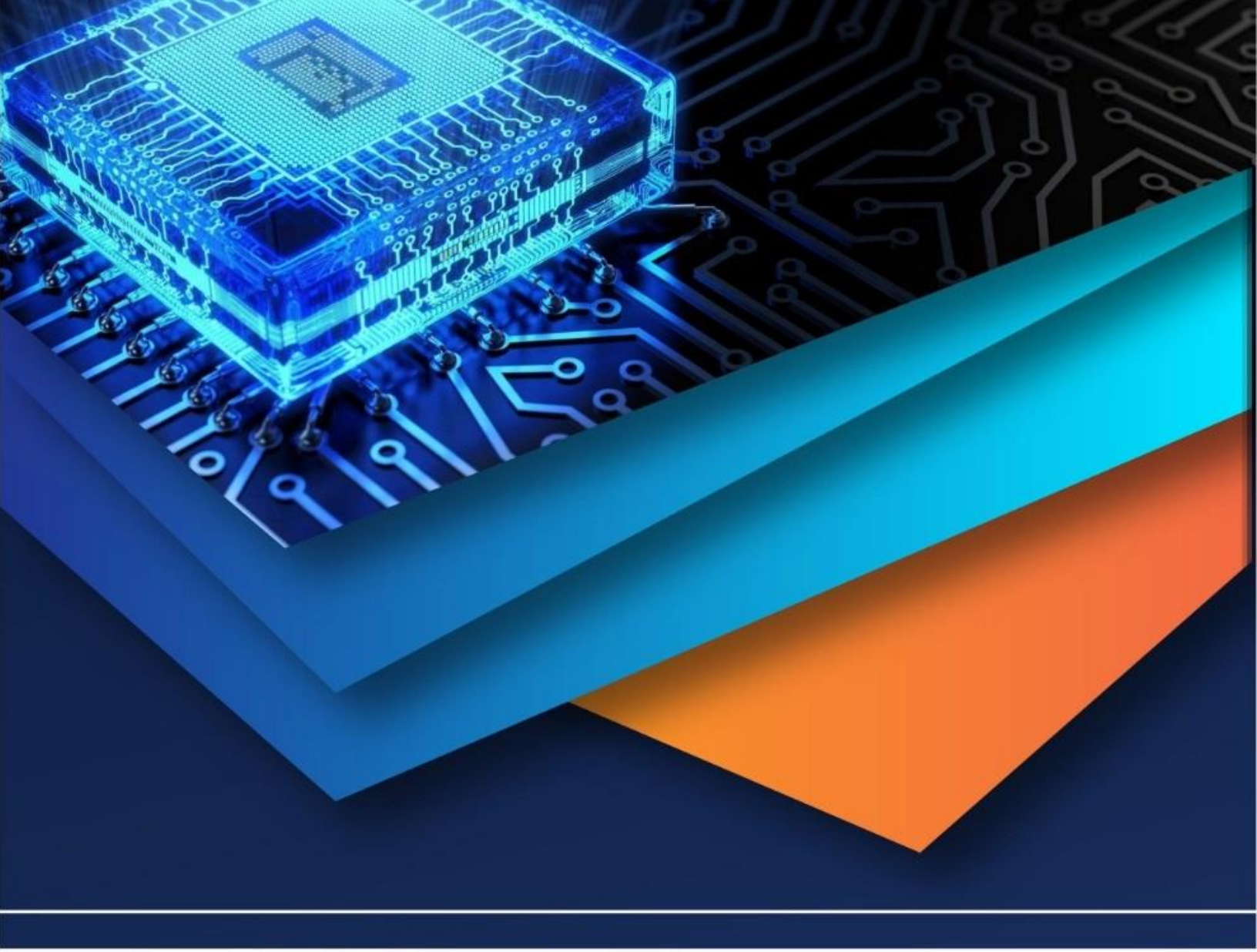
REFERENCES

[1] Bąk, A., Pawłowski, M., & Szewczyk, A. (2023). Premenstrual syndrome—Current status of knowledge. *Medicina*, 59(11), 2044. https://doi.org/10.3390/medicina59112044
[2] Hantsoo, L., & Epperson, C. N. (2015). Premenstrual dysphoric disorder: Epidemiology and treatment. *Current Psychiatry Reports*, 17(11), 87. https://doi.org/10.1007/s11920-015-0628-3
[3] Kabir, R., Khan, R., & Tripathi, M. (2025). Demographics and its association with premenstrual syndrome and health issues experienced during menstruation: A cross-sectional study of women of Gujarat, India. *Asian Research Journal of Gynaecology and Obstetrics*, 8(1), 1–15. https://www.researchgate.net/publication/389875625
[4] King, S. (2020). Premenstrual syndrome (PMS) and the myth of the irrational female. In C. Bobel et al. (Eds.), *The Palgrave handbook of critical menstruation studies* (pp. 287–302). Springer. https://doi.org/10.1007/978-981-15-0614-7_23
[5] Negriff, S., & Susman, E. J. (2016). Pubertal timing, depression, and externalizing problems: A framework, review, and examination of gender differences. *Journal of Research on Adolescence*, 26(4), 749–768. https://doi.org/10.1111/jora.12209
[6] Ussher, J. M., & Perz, J. (2019). Premenstrual mood disorders: A feminist psychological perspective. In J. M. Ussher & J. Perz (Eds.), *Premenstrual disorders* (pp. 105–125). Routledge. https://doi.org/10.4324/9781351035620-6
[7] Frank, R. T. (1931). The hormonal causes of premenstrual tension. *Archives of Neurology and Psychiatry*, 26(5), 1053–1057.
[8] Rittenhouse, C. A. (1989). The emergence of premenstrual syndrome: The social history of a women's health "problem" (Doctoral dissertation, University of California, San Francisco). *eScholarship*. https://escholarship.org/uc/item/11r5d9vv
[9] ScienceDirect. (n.d.). Retrieved April 17, 2025, from https://www.sciencedirect.com/science/article/pii/027795369290118A
[10] American Academy of Family Physicians. (2011, October 15). Premenstrual syndrome. *American Family Physician*. https://www.aafp.org/pubs/afp/issues/2011/1015/p918.html#afp20111015p918-b2

Conflict of Interest

The author declares no conflict of interest related to the publication of this article.

Contact:
studentscientificsociety.asmi@gmail.com



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY