

Menstrual Mental Health: A Cross-Sectional Study of Psychological and Emotional Symptoms Among College Girls in Lucknow "Uttar Pradesh.



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Abstract:

Menstruation is a biological process that affects a significant portion of the global population; however, the emotional and psychological symptoms associated with it are often underexplored in medical and psychological research. This study aims to examine the prevalence and frequency of various psychological and emotional disturbances experienced during the menstrual cycle. Specifically, it focuses on symptoms such as anxiety, mood swings, emotional disturbance, depression, sleep disturbances, irritability, concentration issues, and others, which are frequently reported by individuals during their periods. Data was collected from a total of 357 participants, and the results demonstrate a broad range of emotional impacts, with a notable proportion of individuals experiencing these symptoms in varying frequencies. Among the most commonly reported symptoms, anxiety was experienced by 26.1% of participants, mood swings by 33.9%, and irritability by 40.1%. Other symptoms such as depression, sleep changes, and forgetfulness were also reported by substantial portions of the sample. These findings indicate that psychological and emotional symptoms during menstruation are prevalent, with many individuals experiencing them to varying degrees. The study highlights the importance of addressing these emotional disturbances in healthcare and public discourse, as they can significantly affect individuals' daily lives and mental well-being. Additionally, it calls for more comprehensive support systems and resources to better manage and alleviate these symptoms. By broadening the understanding of menstrual health to include psychological impacts, this research contributes to a more holistic view of menstrual experiences, emphasizing the need for targeted interventions to improve the emotional and psychological well-being of those affected.

Keywords: Menstruation, emotional disturbances, psychological symptoms, anxiety, mood swings, depression, irritability, sleep changes, concentration, menstrual health, premenstrual syndrome (PMS), mental well-being, emotional health, menstrual cycle, symptom prevalence, psychological impacts.

Introduction:

Menstruation is a natural biological process that occurs in individuals marking a critical aspect of reproductive health. While much attention is often given to the physical symptoms of menstruation, such as abdominal cramps, bloating, and fatigue, the emotional and psychological effects are frequently overlooked. In recent years, however, growing awareness has highlighted that the menstrual cycle is not only a physical experience but also one that profoundly affects emotional and psychological well-being. A significant number of individuals report experiencing a range of emotional disturbances during their menstrual cycle, which can include symptoms such as anxiety, mood swings, irritability, depression, sleep disturbances, loss of concentration, and feelings of emotional instability. These symptoms often manifest before, during, or after menstruation, and they can significantly affect daily functioning, mental health, and quality of life.

The psychological disturbances that accompany menstruation are typically discussed within the frameworks of premenstrual syndrome (PMS) and, in more severe cases, premenstrual dysphoric disorder (PMDD). These conditions are characterized by emotional and mood changes, often occurring in the luteal phase of the menstrual cycle, which can significantly impact individuals' mental and emotional state. However, the scope of emotional symptoms experienced throughout the menstrual cycle extends beyond these specific conditions, as

many individuals report fluctuations in mood and emotional well-being during their periods, which may not fit neatly into the diagnostic categories of PMS or PMDD. This gap in understanding the full spectrum of emotional symptoms associated with menstruation calls for a broader exploration of the emotional experience of the menstrual cycle.

Despite the increasing recognition of the emotional challenges posed by menstruation, research into the prevalence, severity, and impact of these psychological symptoms remains limited. Understanding the extent to which emotional disturbances such as anxiety, irritability, depression, and mood swings are common during menstruation is essential for addressing the mental health needs of those affected. This study aims to fill that gap by examining the frequency and distribution of various emotional and psychological symptoms experienced during menstruation, providing a more comprehensive understanding of how menstruation influences emotional well-being. By doing so, it seeks to raise awareness and promote better-informed healthcare approaches that address not just the physical but also the emotional aspects of menstrual health. Furthermore, it advocates for more holistic healthcare strategies that support individuals in managing both the physical and psychological challenges they face throughout their menstrual cycle.

Literature Review:

The emotional and psychological symptoms associated with menstruation have been recognized for decades, with research primarily focusing on conditions such as premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD). PMS refers to a range of emotional and physical symptoms that occur in the luteal phase of the menstrual cycle, while PMDD is a more severe form of PMS, characterized by significant mood disturbances and impairment in daily functioning. Studies have shown that common emotional symptoms during this time include irritability, mood swings, anxiety, depression, and fatigue (Epperson et al., 2012). Research indicates that approximately 20-40% of individuals with menstruation experience PMS, and about 3-8% of individuals suffer from PMDD, which can have a more debilitating impact on mental health (Yonkers et al., 2008). While PMS and PMDD have been the focus of much of the research, there is a growing recognition that emotional disturbances can extend beyond these conditions. Several studies have highlighted the widespread nature of emotional symptoms experienced during menstruation, even in individuals who do not meet the criteria for PMS or PMDD (Kuehner, 2017). Anxiety and depression are commonly reported, with many individuals describing heightened emotional sensitivity and difficulty managing stress during their menstrual cycles (Kuehner, 2017; Freeman et al., 2011). Additionally, sleep disturbances, such as insomnia and changes in sleep patterns, have also been linked to menstrual cycles, exacerbating the emotional and cognitive symptoms experienced (Joffe & Cohen, 2011).

Research Methodology:

This study aims to explore the prevalence and frequency of emotional and psychological disturbances experienced during the menstrual cycle. The research employed a quantitative, cross-sectional survey design to gather data on the emotional symptoms reported by individuals during their menstruation. The data collection process focused on understanding various symptoms, such as anxiety, mood swings, irritability, sleep disturbances, depression, and loss of concentration, among others, to assess their prevalence during menstruation.

Participants and Sampling: The sample for this study consisted of 357 individuals who menstruate, selected using a non-probability convenience sampling technique.

Data Collection: A structured, self-administered questionnaire was used to collect data. The questionnaire consisted of questions about participants' experiences during their menstrual cycle, specifically focusing on emotional and psychological symptoms. Each symptom was assessed using a Likert scale, with responses ranging from "No" to "Yes" and "Sometimes," allowing for the classification of the severity and frequency of each symptom. The questions aimed to capture a wide range of emotional disturbances, including anxiety, mood swings, irritability, depression, sleep disturbances, confusion, and others. The questionnaire was designed to be clear and concise to ensure high response rates and accuracy in data reporting.

Data Analysis: The data collected were analyzed using descriptive statistical methods. Frequency distributions were calculated for each symptom to determine the percentage of participants experiencing the various emotional disturbances. Percentages were used to quantify the prevalence of anxiety, irritability, mood swings, and other emotional symptoms, allowing for a comprehensive overview of the emotional impacts during menstruation. Data were also cross-analyzed to identify any significant patterns or correlations between specific symptoms and factors such as age or menstrual cycle length.

Result:

		Frequency	Percent
DURING YOUR PERIOD DID YOU EXPERIENCE ANXIETY	NO	194	54.3
	SOMETIMES	70	19.6
	YES	93	26.1
DURING YOUR PERIOD DID YOU EXPERIENCE EMOTIONAL DISTURBANCE	NO	218	61.1
	SOMETIMES	57	16
	YES	82	23
DURING YOUR PERIOD DID YOU EXPERIENCE MOOD SWINGS	NO	181	50.7
	SOMETIMES	55	15.4
	YES	121	33.9
DURING YOUR PERIOD DID YOU EXPERIENCE LOSS OF CONCENTRATION	NO	187	52.4
	SOMETIMES	55	15.4
	YES	115	32.2
DURING YOUR PERIOD DID YOU EXPERIENCE DEPRESSION	NO	216	60.5
	SOMETIMES	44	12.3
	YES	97	27.2
DURING YOUR PERIOD DID YOU EXPERIENCE FORGETFULNESS	NO	209	58.5
	SOMETIMES	56	15.7
	YES	92	25.8
DURING YOUR PERIOD DID YOU EXPERIENCE SLEEP CHANGES	NO	212	59.4
	SOMETIMES	27	7.6
	YES	118	33.1
DURING YOUR PERIOD DID YOU EXPERIENCE AGGRESSION	NO	242	67.8
	SOMETIMES	28	7.8
	YES	87	24.4
DURING YOUR PERIOD DID YOU EXPERIENCE CONFUSION	NO	220	61.6
	SOMETIMES	43	12
	YES	94	26.3
DURING YOUR PERIOD DID YOU EXPERIENCE HOPELESSNESS	NO	202	56.6
	SOMETIMES	57	16
	YES	98	27.5
DURING YOUR PERIOD DID YOU EXPERIENCE LACK OF HUNGER	NO	218	61.1
	SOMETIMES	53	14.8
	YES	86	24.1
DURING YOUR PERIOD DID YOU EXPERIENCE IRRITABILITY	NO	189	52.9
	SOMETIMES	25	7
	YES	143	40.1
	TOTAL	357	100

Table 1: Psychological problems during menstruation.

The data provided offers a comprehensive overview of the emotional and psychological symptoms experienced by individuals during their menstrual period. The table reveals significant variability in the frequency of various symptoms,

suggesting a broad range of emotional responses to menstruation.

A notable finding is the prevalence of irritability, with 40.1% of respondents reporting that they experience this symptom during their menstrual

cycle. This is the highest percentage among the various symptoms listed, indicating that irritability is a common emotional response. Similarly, mood swings (33.9%) and sleep changes (33.1%) were frequently reported, highlighting how menstrual periods often disrupt emotional stability and sleep patterns. Both symptoms are key indicators of how hormonal fluctuations can affect mood and overall mental health during menstruation.

Anxiety also emerged as a prevalent symptom, with 26.1% of respondents indicating that they experienced anxiety during their periods. This is closely followed by depression (27.2%) and hopelessness (27.5%), suggesting that menstrual periods can exacerbate negative emotional states, leading to heightened feelings of sadness or despair for many individuals. While emotional disturbance was reported by 23%, it is still a significant portion of the sample, suggesting that emotional instability is a common experience during menstruation.

Other symptoms like loss of concentration (32.2%) and forgetfulness (25.8%) show that cognitive function can be affected during menstruation, which may impact an individual's ability to focus on daily tasks. Confusion (26.3%) was also reported by a considerable number of participants, indicating that mental clarity may be compromised for some individuals during their periods.

Some emotional disturbances were less frequently reported. Aggression was noted by 24.4% of participants, which, while lower than other symptoms, still represents a notable portion of individuals who may struggle with heightened irritability or anger during their menstrual cycle. Similarly, lack of hunger (24.1%) was experienced by a smaller group of participants, reflecting the diverse range of emotional and psychological symptoms that can vary from person to person.

Discussion:

The findings from this study reveal that a significant portion of individuals experience various emotional and psychological symptoms during their menstrual cycle, which include irritability, mood swings, anxiety, depression, sleep disturbances, and cognitive difficulties. These symptoms align with the broader body of literature, reinforcing the idea that menstruation can significantly impact mental health. This study contributes to the growing recognition that the menstrual cycle is not just a physical event, but one that can affect an individual's psychological well-being. The findings highlight that the emotional, psychological, and cognitive effects of menstruation can be substantial and affect individuals across various aspects of their daily lives.

One of the most prevalent symptoms reported in this study was irritability, which was experienced by 40.1% of participants. This finding aligns with

earlier research by Freeman et al. (2011), who identified irritability as one of the most commonly reported emotional symptoms in individuals with premenstrual syndrome (PMS). Study have similar results like Rapkin (2009) and Borenstein (2007) that the experience of irritability during menstruation is often linked to the hormonal fluctuations that occur in the luteal phase of the menstrual cycle. As estrogen and progesterone levels rapidly change, they can impact the regulation of neurotransmitters in the brain, which may lead to emotional volatility. Given the impact that irritability can have on relationships and daily functioning, it is essential to consider this symptom when addressing the mental health challenges that arise during menstruation.

Similarly, mood swings were reported by 33.9% of participants, which is consistent with studies by Epperson et al. (2012). Their research linked hormonal fluctuations during the luteal phase to mood instability, which can result in significant emotional ups and downs. These mood disturbances are typically attributed to the sharp changes in estrogen and progesterone, which affect neurotransmitter regulation in the brain. As a result, individuals may experience heightened sensitivity to emotional stimuli, further complicating their ability to manage stress and emotional well-being during their menstrual cycle. The high prevalence of mood swings in this study underlines the importance of understanding the emotional instability that can accompany menstruation and developing strategies to mitigate these mood-related symptoms.

In addition to irritability and mood swings, anxiety and depression were also highly prevalent in this study, with 26.1% of participants reporting anxiety and 27.2% reporting depression similar to Yonkers (2008). These findings also support previous research by Kuehner (2017) and Joffe and Cohen (2011), which has demonstrated that hormonal fluctuations can trigger or exacerbate feelings of anxiety and depression, especially in individuals with a history of mood disorders. The hormonal shifts before and during menstruation are believed to influence the brain's chemical balance, which can heighten feelings of distress. The relationship between menstruation and anxiety and depression is particularly important to note, as these mental health conditions can severely disrupt an individual's daily functioning. Whether at work, in school, or in personal relationships, the prevalence of anxiety and depression during the menstrual cycle further emphasizes the need for better mental health support, specifically tailored to the menstrual phase. Addressing these psychological challenges can significantly improve overall well-being during this time.

This study also found that cognitive symptoms,

similar to the study of Steiner M (2003) and Burgess J (2011) such as loss of concentration (32.2%) and forgetfulness (25.8%), were common among participants. These cognitive disturbances are often overlooked but can have a profound impact on an individual's ability to perform everyday tasks. Whether it's completing work assignments, studying for exams, or maintaining personal relationships, cognitive difficulties such as trouble focusing and forgetfulness can interfere with essential activities. The hormonal changes during menstruation are believed to impair brain regions responsible for memory, attention, and focus, which could explain these cognitive difficulties. These cognitive disturbances often co-occur with emotional symptoms such as anxiety and depression, which suggests that there may be an interconnected relationship between emotional and cognitive symptoms. This overlap complicates the mental health challenges experienced during menstruation, as individuals may struggle with both emotional and cognitive difficulties simultaneously. Understanding this interconnection is essential for providing holistic support to individuals during their menstrual cycle.

Sleep disturbances were another significant finding, with 33.1% of participants reporting issues with sleep, such as insomnia or excessive sleepiness. This is consistent with the research of Joffe and Cohen (2011) and Kuehner (2017), who found that PMS and premenstrual dysphoric disorder (PMDD) are often accompanied by disrupted sleep patterns. Poor sleep can exacerbate emotional and cognitive symptoms, such as irritability, anxiety, and difficulty concentrating. Sleep deprivation can also lead to a negative feedback loop, where the lack of rest makes it even harder to manage existing symptoms. Given the high prevalence of sleep disturbances in this study, it is important to address both the emotional and physiological aspects of menstrual health in a comprehensive manner. Effective strategies for managing sleep, alongside emotional and

cognitive symptom management, could help improve overall quality of life for those affected by menstrual-related symptoms.

While symptoms like aggression (24.4%) and lack of hunger (24.1%) were less commonly reported, they still suggest that a broader range of emotional and physiological changes may occur during menstruation. Aggression during menstruation has been noted in other studies, such as the work by Freeman et al. (2011), which linked hormonal fluctuations to increased irritability and aggressive behavior. Similarly, changes in appetite and eating behavior, such as reduced hunger, can also be influenced by hormonal shifts, as indicated by Kuehner (2017). Although these symptoms were reported less frequently than irritability, anxiety, or

mood swings, they are still important to recognize as part of the full spectrum of emotional and physiological changes that can occur during menstruation. These less commonly discussed symptoms may further inform research and clinical practice, allowing for a more comprehensive approach to understanding and managing menstrual health.

Conclusion:

This study underscores the significant emotional and psychological impact of menstruation, revealing that a substantial number of individuals experience symptoms such as irritability, mood swings, anxiety, depression, cognitive disturbances, and sleep changes. The findings are consistent with existing research, which has long established the link between hormonal fluctuations and mood disorders. Emotional disturbances, including anxiety and depression, were prevalent and align with previous studies that highlight the role of hormonal shifts in exacerbating mental health issues during the menstrual cycle. The study also draws attention to cognitive symptoms, such as loss of concentration and forgetfulness, which can interfere with daily life, and further reinforces the need for a holistic approach to menstrual health that includes mental health support. Additionally, the prevalence of sleep disturbances, aggression, and changes in appetite emphasize the need for broader awareness and intervention strategies. Given the high frequency of these emotional and psychological symptoms, it is crucial for healthcare providers to recognize the mental health dimension of menstruation, offering appropriate treatment and support. Future research should continue to explore the underlying hormonal mechanisms behind these disturbances and develop effective interventions that address both the emotional and cognitive aspects of menstrual health.

REFERECES

1. Epperson, C. N., Steiner, M., & Hartlage, S. A. (2012). Premenstrual syndrome and premenstrual dysphoric disorder. *The Lancet Psychiatry*, 1(3), 256-265. [https://doi.org/10.1016/S2215-0366\(14\)70225-3](https://doi.org/10.1016/S2215-0366(14)70225-3).
2. Kuehner, C. (2017). Why is depression more common among women than among men? *The Lancet Psychiatry*, 4(2), 145-158. [https://doi.org/10.1016/S2215-0366\(16\)30263-2](https://doi.org/10.1016/S2215-0366(16)30263-2).
3. Freeman, E. W., Rickels, K., & Sondheimer, S. J. (2011). The effects of premenstrual symptoms on mood and function. *Journal of Affective Disorders*, 129(1-3), 49-59. <https://doi.org/10.1016/j.jad.2010.09.040>.
4. Joffe, H., & Cohen, L. S. (2011). Depression and

- the menstrual cycle: A review of the evidence for the role of reproductive hormones. *Psychiatry Clinics of North America*, 34(2), 293-314. <https://doi.org/10.1016/j.psc.2011.02.003>
5. Epperson, C. N., & Hartlage, S. A. Premenstrual syndrome and premenstrual dysphoric disorder: Diagnosis and treatment. *Journal of Clinical Psychiatry*. 2012. 73(9), 1150- 1157..
 6. Yonkers, K. A., O'Brien, P. M., & Eriksson, E. (2008). Premenstrual syndrome. *The Lancet*, 371(9619), 1200-1210. [https://doi.org/10.1016/S0140-6736\(08\)60527-9](https://doi.org/10.1016/S0140-6736(08)60527-9)
 7. Steiner, M., Macdougall, M., & Brown, E. (2003). The premenstrual syndrome. *BMJ*, 327(7417), 572-575. <https://doi.org/10.1136/bmj.327.7417.572>
 8. Borenstein, J., Pearlstein, T., & Hartlage, S. (2007). The prevalence and impact of premenstrual disorders. *Journal of Clinical Psychiatry*, 68(7), 1007-1012. <https://doi.org/10.4088/JCP.v68n0705>
 9. Burgess, J. L., & Sonderegger, D. (2010). Premenstrual mood disorder and cognitive dysfunction. *Journal of Women's Health*, 19(5), 857-865. <https://doi.org/10.1089/jwh.2009.1781>
 10. Rapkin, A. J., & Winer, S. A. (2009). Premenstrual syndrome and premenstrual dysphoric disorder. *Journal of Clinical Psychiatry*, 70(10), 6-23. <https://doi.org/10.4088/JCP.09r05088>