

The Burden of Menstrual Cycle-Related Mental Health Problems among Tripuri Tribal Women

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ARTICLE DETAILS	ABSTRACT
Research Paper	Recognizing that menstruation often brings mental health challenges
Accepted: 22-04-2025	that disrupt women's lives and hinder global health and development,
Published: 10-05-2025	this cross-sectional study explored the prevalence and characteristics of
Keywords: Menstrual cycle, Mental health, Tripuri tribal women, Women's health.	menstrual cycle-related mental health problems within a sample of 310 Tripuri tribal women, aged 16-40 yrs. The study also assessed the participants' knowledge and attitudes towards menstruation, as well as their overall psychological well-being. The findings indicated a high prevalence rate of 73.87% for premenstrual syndrome (PMS) and 15.48% for the premenstrual dysphoric disorder (PMDD). Symptomology encompassed emotional (e.g., anger, depression), physical (e.g., cravings, breast tenderness), and behavioral (e.g., social withdrawal, changes in activity levels) domains. The study also suggested that factors such as stress, existing gynecological conditions, and a history of PCOD/PCOS may contribute to these mental health challenges. Severe pain was identified as a primary reason for seeking treatment, with common analgesics being the typical intervention.
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Introduction

Menstrual health is a critical aspect of women's overall well-being, encompassing physical, mental, and social dimensions. While the physiological experiences associated with the menstrual cycle are well-documented, the impact on mental health, particularly among marginalized populations,

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remains an area requiring greater attention (Al-harbi, 2019). This study focuses on the prevalence and nature of mental health problems experienced by Tripuri tribal women during their menstrual cycles in the state of Tripura, Northeast India.

Tribal communities in India often face unique socio-economic challenges, limited access to healthcare, and cultural practices that can influence their health experiences, including those related to menstruation. These factors may exacerbate the emotional and psychological fluctuations that can occur throughout the menstrual cycle (Steiner, 2000, Rezende et. al., 2022). Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD) are recognized conditions characterized by a range of psychological and physical symptoms in the luteal phase of the cycle, significantly impacting daily life (Handy, 2022; Landen, 2003). While the severity and specific symptoms vary widely among individuals, common complaints include mood swings, irritability, fatigue, bloating, breast tenderness, and difficulty concentrating (Halbreich, 2003). A more severe form of PMS, Premenstrual Dysphoric Disorder (PMDD), affects a smaller percentage of women and is characterized by prominent and disabling psychological symptoms such as marked depressed mood, anxiety, lability, and anger, significantly impacting daily functioning (American Psychiatric Association, 2013). However, the manifestation and prevalence of these mental health concerns related to menstruation may differ across diverse cultural and socio-economic contexts.

Tripura, a state with a significant tribal population, presents a unique setting to investigate this issue. Tripuri tribals are the largest tribal communities of Tripura state (Sarkar, 2024). While general health indicators for women in Tripura have been documented (Sarkar et. al., 2012), there is a lack of specific research addressing the mental health experiences of tribal women in relation to their menstrual cycles. Understanding the unique experiences and challenges faced by tribal women in Tripura during their menstrual cycles is crucial for developing targeted and culturally appropriate interventions. This research aims to contribute to the limited existing literature by exploring the prevalence and types of mental health problems experienced by this specific population. By focusing on this under-researched group, this study seeks to provide valuable insights that can improve the overall well-being of Tripuri tribal women in Tripura.

Materials and methods

Women between the ages of 16 and 40, encompassing various professions and life stages, participated in this study. Specifically, the study included medical professionals, working women, stayat-home mothers, and college and school students. Women with specific health conditions, including

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amenorrhea, recent illness, psychological disorders, or who were using contraception, were excluded. A random sampling method was adopted. The sample size of this study was 310 women within the reproductive age 16 to 40 years. Prior to their voluntary participation, the study's method, objectives and significance were explained to the individuals and their written consent was then secured. The geographical scope of the study encompassed a number of schools, colleges and workplace situated in the West Tripura district of the Tripura state.

This study used a confidential questionnaire to investigate premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) in women, focusing on mood changes, contributing factors, and how they manage their menstrual health. The questionnaire was divided into four sections. First, it collected basic demographic information like age, marital status, education, and occupation. Second, it explored participants' reproductive health history, specifically asking about conditions such as endometriosis, ovarian cysts, and PCOS/PCOD. The third section focused on premenstrual pain and how women addressed it through healthcare. This study uses used MS EXCEL to analyze the data that have been collected. The data is represented in the form of a table. All the data is represented in terms of percentage (%).





Results

This study, involving 310 women aged 16-40 years, examined during menstruation. Results indicated a high prevalence of premenstrual symptoms (PMS), with 73.87% of participants experiencing



them, and a significant percentage (15.48%) experiencing the more severe premenstrual dysphoric disorder (PMDD) (figure-1).



Figure-1: The overall percentage prevalence of PMS & PMDD in Tripuri tribal women.

Table 1: The prevalence of Premenstrual Symptoms (PMS) and Premenstrual Dysphoric Disorders(PMDD) in Tripuri tribal women (n=310) of Tripura.

	Mean frequency n (%)				Total n (%)			
Overall	Psycho-emotional		Physical		Behavioral		Vag	No
symptoms	Yes	No	Yes	No	Yes	No	168	INU
PMS	265 (85.48)	45 (14.52)	220 (70.97)	90 (29.03)	161 (51.94)	149 (48.06)	229 (73.87)	81 (26.13)
PMDD	30 (9.68)	280 (90.32)	51 (16.45)	259 (83.55)	93 (30.0)	217 (70.0)	48 (15.48)	262 (84.52)

Psycho-emotional symptoms include: panicky, confused, depressed, feeling sad, annoyed, exhausted, sleepy, anxious. It was analyzed that 85.48% (265) women have psycho emotional these symptoms (Table 1). Physical symptoms include muscle stiffness, headache, backache, migraine, cramps, weight gain, tender breasts, swelling, nausea, insomnia. 70.97% (220) women out of 310 women experience physical symptoms. During the period of stress, 33 women reported issues such as

diarrhea, constipation or other digestive changes, and 49 women noted that their premenstrual symptoms became more severe. Women exhibiting behavioral symptoms, which include daytime social withdrawal coupled with nighttime social engagement, absence or poor performance at work or school, and irrational behavior, constituted 51.94% (161) of the participants (table 1).

Gynecological conditions	Likert scale	Frequency (%)	
	Yes	23 (7.42)	
Endomotriosis	No	163 (52.58)	
Endometriosis	Not sure	79 (25.48)	
	Not applicable	45 (14.52)	
	Yes	5 (1.61)	
Utanina fibraid	No	243 (78.39)	
Oterine indroid	Not sure	36 (11.61)	
	Not applicable	26 (8.39)	
	Yes	70 (22.58)	
Overion exet	No	90 (29.03)	
Ovarian cyst	Not sure	64 (20.65)	
	Not applicable	86 (27.74)	
	Yes	133 (42.90)	
Polycystic ovarian	No	47 (15.16)	
syndrome	Not sure	97 (31.29)	
	Not applicable	33 (10.65)	

 Table 2: Gynecological Health Related Conditions in Study Subjects (n=310).

Results in table 2 showed that gynecological conditions ranged from endometriosis 7.42% (23); uterine fibroid 1.61% (5); ovarian cyst 22.58% (70); and polycystic ovarian syndrome 42.90% (133).



Symptoms	Likert scale	Frequency (%)	Total n (%)
	Always	71 (37.17)	
	Occasionally	53 (27.75)	191 (61.61)
Overall premenstrual pain experience	Rarely	67 (35.08)	
	Never	119 (38.39)	

 Table 3: Overall Premenstrual Pain.

Results in Table 3 showed the overall pain prevalence was 61.61% (191) experienced at different threshold, where 37.17% (71) were regular, 27.75% (53) occasional, 35.08% (67) rare while 38.39% (119) never experienced pain. A dragging or downward sensation in the abdomen was reported by 44.19% (137) of the subjects. Sharp pain often accompanied by nausea or intense pelvic cramping, was experienced by 24.84% (77) of the subjects. Additionally, 48.71% (151) found that warmth and pressure provided relief from their pain, stabbing pain that only subsides when lying down, 76.45% (237); mild or moderate pain accompanied with diarrhea or lose stool, 13.55% (42); severe pain accompanied with fainting or vomiting, 1.29% (4); pain which subside when not under stress, 68.06% (211).

Treatment behavior	Likert scale	Frequency (%)
	Always	43 (22.51)
Used drug during menstruation	Occasionally	61 (31.94)
	Rarely	42 (21.99)
	Never	45 (23.56)
	Always	60 (31.41)
Pain relieved after taking pain medication	Occasionally	51 (26.70)
	Rarely	70 (36.65)
	Never	10 (5.24)

Table 4: The treatment behavior of women during PMS (n=191).

As shown in Table 4, 191 women used medications for pain relief; 22.51% (43) were regular users, 31.94% (61) occasional users, 21.99% (42) rarely use drugs while 23.56% (45) never used drugs. Among those that used medications, 31.41% (60) were always relieved, 26.70% (51) sometimes got relieved, 36.65% (70) rarely got relieved, while 5.24% (10) were never relieved of pain.



	Name of pain reliever	Frequency (%)
Choice of pain medication	Paracetamol	97 (50.79)
	Aspirin	17 (8.90)
	Ibuprofen	13 (6.81)
	others	64 (33.50)

Table 5: Choice of medication	during PMS and reason	for taking them $(n=191)$.

Table 5 showed the choice of medication used by these women. It was found that 50.79% (97) used Paracetamol; 8.90% (17) used Aspirin; 6.81% (13) used Ibuprofen; while 33.50% (64) used other pain medications.

Discussion

This cross-sectional study provides valuable insights into the knowledge, attitudes, psychological well-being, and the prevalence of premenstrual symptoms (PMS) and premenstrual dysphoric disorder (PMDD) among Tripuri tribal women of Tripura aged 16 to 40 yrs. The high prevalence of PMS (73.87%) observed in this population is a significant finding, indicating that a substantial majority of these women experience cyclical physical, emotional, and behavioral symptoms. Furthermore, the considerable proportion (15.48%) meeting the criteria for PMDD highlights the significant burden of more severe premenstrual distress within this community. These figures are within the range of PMS and PMDD as reported by studies from India (Dutta et. all., 2021). Here lies the need for greater attention to menstrual health and its impact on the daily lives and overall well-being of tribal women in Tripura.

The spectrum of symptoms reported by the participants, encompassing emotional (anger, depression), physical (cravings, tenderness), and behavioral (withdrawal, altered activity) domains, aligns with the established understanding of PMS and PMDD (Ojezele et. al., 2022; Bowen et. al., 2011; Matsuura et. al., 2020). This broad range of manifestations emphasizes the multifaceted nature of these conditions and their potential to affect various aspects of a woman's life, including social interactions, work productivity, and overall quality of life. Our investigation into contributing factors revealed the complex interplay of various elements influencing the experience of premenstrual symptoms. The reported association of stress, gynecological conditions, and a history of PCOS with the severity of PMS and PMDD suggests the need for a holistic approach to understanding and managing these conditions. Stress, a known modulator of hormonal balance and emotional well-being, likely exacerbates

premenstrual vulnerabilities. Similarly, underlying gynecological issues and hormonal imbalances associated with conditions like PCOS may contribute to the heightened experience of premenstrual distress.

Interestingly, the study indicates that severe pain was a primary driver for treatment-seeking behavior, with common pain relievers being the reported method of self-management. This finding suggests a potential gap in awareness and access to comprehensive management strategies for the broader range of PMS and PMDD symptoms, particularly the psychological and behavioral ones (Sepede et. al., 2020). Relying solely on pain relievers may not adequately address the emotional and functional impairments associated with these conditions, potentially leading to prolonged suffering and reduced quality of life.

The findings of this study have important implications for healthcare provision and public health initiatives targeting Tripuri tribal women in Tripura. The high prevalence of PMS and PMDD necessitates the development and implementation of culturally sensitive educational programs to raise awareness about menstrual health, the spectrum of premenstrual symptoms, and available management options beyond pain relief. Healthcare providers need to be equipped with the knowledge and resources to accurately diagnose and manage PMS and PMDD, considering the potential influence of stress, gynecological conditions, and hormonal factors. Future research could explore the specific cultural beliefs and practices surrounding menstruation within this tribal community and their potential impact on symptom perception and coping mechanisms. Additionally, investigating the effectiveness of different intervention strategies, including lifestyle modifications, psychological therapies, and pharmacological treatments tailored to this specific population, would be a valuable next step.

Conclusion

This cross-sectional study provides valuable insights into the knowledge, attitudes, psychological well-being, and the prevalence of menstrual cycle-related mental health challenges among Tripuri tribal women in Tripura. The findings reveal a high prevalence of premenstrual symptoms (PMS 73.87%, PMDD 15.48%), encompassing emotional, physical, and behavioral domains. Furthermore, the study underscores the complex interplay of various contributing factors. Stress, gynecological conditions, and PCOS history appear to worsen menstrual cycle-related distress, with severe pain driving treatment-seeking, often managed with pain relievers. The findings underscore the need for culturally sensitive interventions and accessible healthcare to improve menstrual health and psychological well-being in this



population. Future research should explore cultural/socioeconomic factors and evaluate tailored interventions.

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