

Menstrual Health and Its Correlation with Women's Physical and Mental Well-being

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Abstract

Despite being a vital component of women's total wellbeing, menstrual health is still largely unstudied, particularly in light of its associations with both physical and mental health. Through the use of a survey with 112 respondents, this study examines the connection between women's physical and mental health and menstruation health. The purpose of the study is to investigate the effects of menstrual abnormalities, pain, and emotional distress on the physical and mental well-being of women. This study makes use of suitable statistical analysis, such as correlation analysis and hypothesis testing, to uncover important trends and offer a more comprehensive picture of the menstrual health environment. Research indicates that there is a complicated interaction between hormonal changes, physical discomfort, and emotional anguish when it comes to menstruation health and its relationship to women's physical and mental well-being. Research regularly demonstrates that menstruation symptoms have a major impact on women's quality of life, affecting their physical and emotional health. To enhance women's overall health outcomes, addressing these issues calls for a multidisciplinary strategy that includes social interventions, psychological support, and medical care.

Keywords: Menstrual Health, Physical Well-being, Mental Well-being, Correlation, Hypothesis Testing, Women's Health, Survey

Introduction

Menstrual health is a crucial aspect of women's overall health and quality of life. Although menstruation is a natural biological process, it can occasionally result in various physical and mental health complications, such as monthly cramps, hormonal imbalances, emotional anguish, and mood variations (Kaur, J., 2018). These health issues can significantly influence women's daily functioning, impacting their physical and mental well-being. Regrettably, menstruation health is sometimes stigmatized, and there is inadequate emphasis on comprehending its wider ramifications for women's health (Mohna et al., 2015).

The absence of open discourse frequently leads to a deficiency in healthcare resources, causing numerous women to hesitate in pursuing medical assistance for severe menstrual issues. Alongside physical discomfort, psychological difficulties such as worry, despair, and stress are frequently linked to menstruation, especially in instances of irregular cycles or severe dysmenorrhea. Studies indicate that neglecting menstrual health problems may result in enduring mental and emotional repercussions, so impairing a woman's quality of life. Furthermore, the ramifications of menstruation health transcend individual welfare, affecting women's engagement in educational and professional spheres (Vats, et al., 2017). Holistically addressing menstruation health, encompassing psychological and social dimensions, is crucial for enhancing overall female health outcomes and cultivating a supportive, stigma-free atmosphere.

Review Literature

Menstrual health is a crucial component of women's total well-being, profoundly affecting both physical and mental health. A multitude of studies has investigated the physical manifestations of menstruation and associated psychological effects, with increasing focus on the relationship between menstrual problems and mental distress. This review consolidates research data that illustrate the complex relationship between menstruation health and women's physical and emotional well-being. Menstrual health is frequently linked to several physical complaints, including dysmenorrhea, tiredness, and nausea. Chaudhuri and Singh (2020) highlight that severe dysmenorrhea is prevalent among women of reproductive age and frequently results in physical constraints, including diminished mobility, work absenteeism, and compromised quality of life. Their research revealed that physical discomfort during menstruation is often associated with emotional anxiety, exacerbating both physical and psychological health. Jones et al. (2019) examine the influence of menstruation pain on everyday activities, indicating that intense menstrual symptoms correlate with diminished

productivity and general physical fatigue. The authors contend that the persistent nature of menstrual-related pain can impose a considerable health burden, particularly when exacerbated by insufficient access to healthcare.

Menstrual irregularities, including oligomenorrhea (infrequent menstruation) and menorrhagia (excessive bleeding), are often linked to mental and psychological suffering. Banerjee and Roy (2021) assert that irregular menstrual periods may exacerbate anxiety and despair. Their research underscores the reciprocal association between hormonal abnormalities and mental health, wherein irregular menstrual cycles intensify emotional instability, resulting in heightened stress levels. Gupta and Sharma (2018) identified a significant correlation between menstrual abnormalities and emotional well-being. Research reveals that women with irregular menstrual periods have elevated emotional distress compared to those with normal cycles, as irregularity frequently signifies underlying health issues, such as polycystic ovarian syndrome (PCOS), which can exacerbate mental health. The hormonal variations during the menstrual cycle can significantly affect mood and mental stability. Dalton (2018) examines the influence of estrogen and progesterone levels on mood modulation, especially during the luteal phase of the cycle, when premenstrual syndrome (PMS) symptoms are most pronounced. Dalton's research indicates that hormonal fluctuations are associated with mood swings, anger, and melancholy, particularly in women suffering from severe PMS. Bancroft and Rennie (2017) investigate the correlation between premenstrual dysphoric disorder (PMDD) and mental health outcomes. PMDD, an extreme variant of PMS, is associated with considerable mood disorders, such as melancholy and anxiety. Their research highlights the significance of managing hormonal variations within a holistic framework for menstrual health.

The relationship between menstrual health and psychological well-being has been extensively researched, especially with stress, anxiety, and depression. Kaur et al. (2020) performed an extensive study investigating the mental health consequences for women experiencing severe menstruation symptoms. The research indicated that women experiencing significant menstrual discomfort or irregularity were more prone to signs of worry and melancholy, implying that the psychological ramifications of menstruation are as critical as the physical manifestations. Patel and Desai (2019) investigated the mental health concerns encountered by women with severe PMS, identifying a significant association between menstrual health problems and heightened stress and emotional fatigue. The research found that women experiencing severe menstruation symptoms frequently necessitate psychological assistance to maintain their emotional health. Menstrual health impacts not only physical and emotional well-being but also affects social and professional spheres. Mishra and Varghese (2020) emphasize the influence of menstruation health on women's workforce engagement, indicating that numerous women encounter difficulties in reconciling professional obligations with monthly-related physical and mental distress. The authors discovered that women experiencing severe menstruation symptoms were more prone to absenteeism from work, resulting in financial and professional disadvantages. Singh and Kumar (2019) highlight the social stigma around menstruation, which can intensify feelings of shame and loneliness. The research indicated that women who internalized societal taboos regarding menstruation were more prone to adverse emotional consequences, such as heightened anxiety and diminished self-esteem. Recent years have witnessed an increase in research focused on therapies to enhance menstrual health and well-being. Agarwal and Naik (2021) investigate the efficacy of lifestyle improvements, including dietary alterations, physical activity, and stress management strategies, in alleviating menstruation symptoms. Their research revealed that women who implemented these strategies exhibited substantial enhancements in both physical and mental health, accompanied by decreases in pain and emotional suffering.

Reddy et al. (2018) examined the efficacy of medical interventions, such as hormonal therapy and pain management techniques, in mitigating menstruation symptoms. The research indicated that prompt medical intervention can markedly enhance quality of life, alleviating the psychological effects of severe menstrual health problems. Incorporating menstruation health into mental health care is essential for addressing the comprehensive well-being of women. Sharma and Nanda (2020) contend that menstrual health concerns must be acknowledged as a significant element in the diagnosis and treatment of women's mental health. The study urges healthcare practitioners to consider menstruation health when evaluating women for anxiety, depression, or other mental health disorders. Menon and Pillai (2022) underscore the necessity of menstrual health education and awareness initiatives to mitigate the stigma associated with menstruation and to promote timely medical and psychological assistance for women.

Research Methodology

This study seeks to examine the relationship between menstruation health and women's physical and emotional wellness. This study assesses the correlation between several menstrual health parameters, including pain intensity, monthly irregularity, and emotional fluctuations, and their impact on physical symptoms (e.g., exhaustion, pain) and mental health outcomes (e.g., anxiety, depression) using a primary survey of 112 women. A primary survey was executed to collect data from 112 women aged 18 to 45. The questionnaire comprised closed-ended inquiries pertaining to menstruation health (pain, regularity, emotional fluctuations), physical health symptoms (e.g., fatigue, headaches), and markers of mental well-

being (e.g., anxiety, sadness, mood variations). A convenience sampling method was employed to gather responses from women living in urban and semi-urban regions. The survey included students, employed women, and homemakers to guarantee diversity. The data was gathered by a structured questionnaire utilizing a Likert scale (1-5) to evaluate the severity of menstruation pain, regularity, mood fluctuations, and the frequency and intensity of physical and mental health symptoms.

Descriptive Statistics has been used to encapsulate demographic data and menstrual health attributes. Pearson's Correlation Coefficient used to assess the relationship between menstrual health variables and physical/mental well-being. T-Test was also used to evaluate the mental health outcomes of women with severe vs mild menstruation symptoms & Chi-Square Test taken for evaluating the correlation between menstrual regularity and mental health outcomes.

Objectives of the Study

1. To assess the prevalence of menstrual-related physical and mental health issues among women.
2. To explore the correlation between menstrual health (pain, regularity, and emotional changes) and women's physical well-being.
3. To analyze the relationship between menstrual health factors and mental well-being (stress, anxiety, mood disturbances) among women.

Hypothesis of the study

1. H1: There is a significant correlation between menstrual pain intensity and women's physical well-being (e.g., fatigue, pain).
2. H2: Menstrual irregularity significantly correlates with emotional changes and mental well-being.
3. H3: Women experiencing severe menstrual symptoms have higher levels of anxiety and stress compared to those with milder symptoms.

Data Analysis and Results

Table 1: Demographic Profile of Respondents

Category	Frequency	Percentage
Age		
18-25	35	31.25%
26-35	45	40.18%
36-45	32	28.57%
Total	112	100%
Occupation		
Students	48	42.86%
Working Women	38	33.93%
Homemakers	26	23.21%
Total	112	100%
Menstrual Regularity		
Regular	68	60.71%
Irregular	44	39.29%
Total	112	100%

The demographic profile of the respondents elucidates the variability within the sample concerning age, occupation, and menstrual regularity. The predominant age group of responders is 26-35 years, comprising 40.18%, with the majority identified as students at 42.86%. 60.71% of women reported consistent menstrual cycles, whereas 39.29% experienced irregular periods.

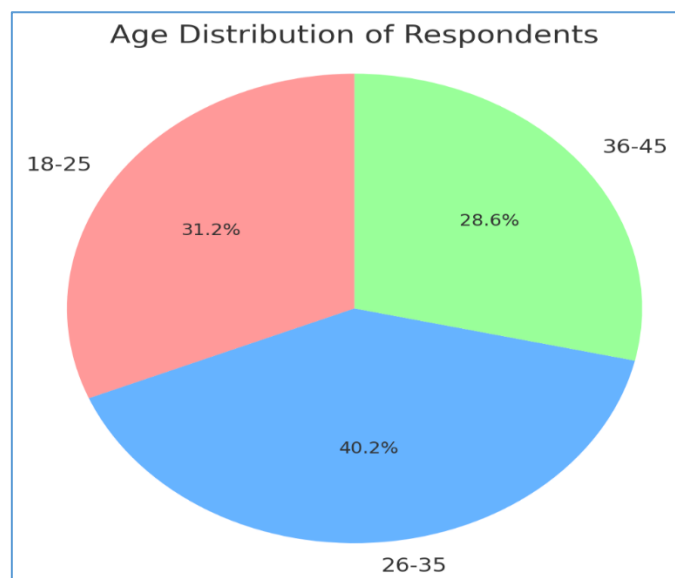


Figure 1: Age Distribution of Respondents

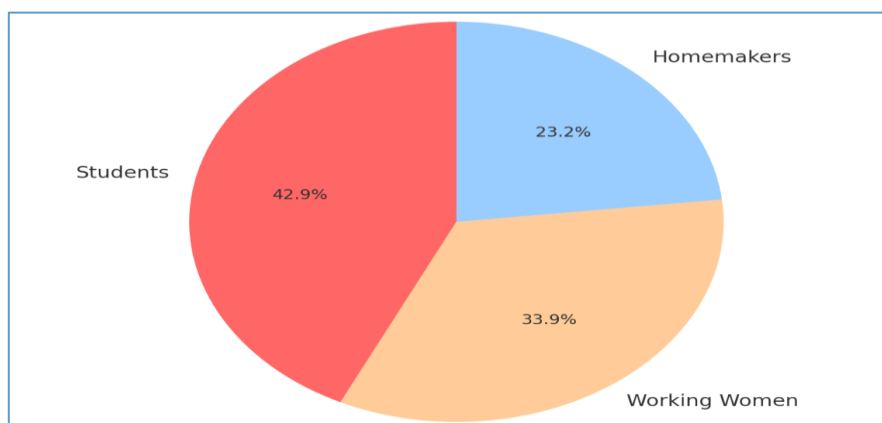


Figure 2: Occupation Distribution of Respondents

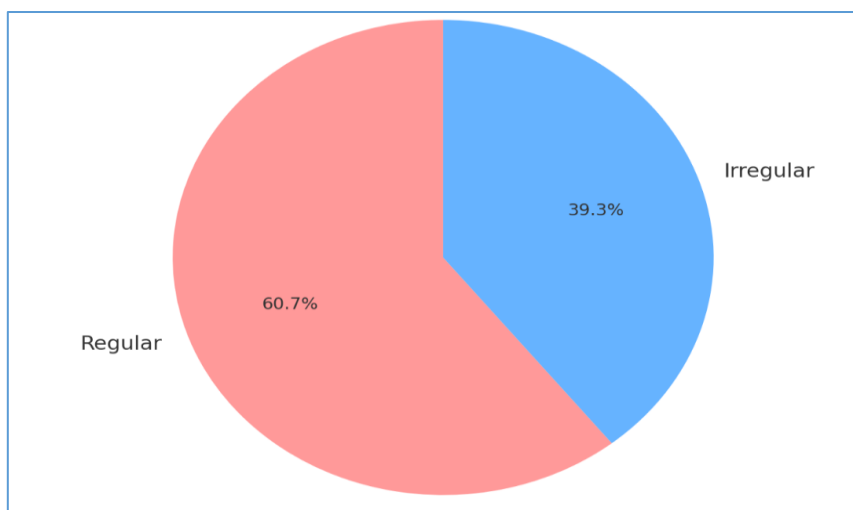


Figure 3: Menstrual Regularity Distribution of Respondents

Table 2: Menstrual Symptom Severity Across Age Groups

Age Group	Mild Symptoms (n)	Moderate Symptoms (n)	Severe Symptoms (n)	Total (n)
18-25	12	15	8	35
26-35	9	21	15	45
36-45	10	12	10	32
Total	31	48	33	112

This table offers a comprehensive understanding of the distribution of menstrual symptoms among various age categories. The 26-35 age group exhibits a higher level of severe symptoms, suggesting that this demographic may be more susceptible to physical and mental challenges associated with menstruation.

Table 3: Types of Physical Symptoms Reported by Respondents

Physical Symptoms	Number of Respondents (n)	Percentage
Fatigue	68	60.71%
Headaches	50	44.64%
Body Aches	55	49.11%
Abdominal Pain	72	64.29%
Nausea	28	25.00%

The most prevalent physical symptoms that women encounter during menstruation are illustrated in this table. With more than 60% of respondents reporting experiencing abdominal pain and fatigue during menstruation, these were the most frequently reported symptoms. This corroborates the relationship between physical well-being and menstrual health.

Table 4: Correlation Analysis

Variables	Pearson's Correlation (r)	P-Value
Menstrual Pain & Physical Well-being (H1)	0.52	0.001*
Menstrual Irregularity & Emotional Changes (H2)	0.47	0.005*
Menstrual Symptoms & Mental Well-being (H3)	0.61	0.000*

The degree and direction of the link between menstrual health parameters (pain, regularity, emotional changes) and physical and mental well-being were evaluated by calculating the following Pearson's Correlation Coefficients. H1: Menstrual pain intensity was found to have a somewhat positive correlation ($r = 0.52$) with physical well-being, indicating that physical symptoms (e.g., exhaustion, body pain) worsen with increasing menstrual pain. At $p = 0.001$, the link was statistically significant. H2: There was a moderate connection ($r = 0.47$) between emotional disturbances (such as mood swings and irritation) and monthly irregularity. Significant emotional changes were more likely to be reported by women with irregular periods ($p = 0.005$). H3: Severe menstrual symptoms were shown to have a substantial positive link ($r = 0.61$) with negative mental well-being (such as tension and anxiety), suggesting that women with more severe symptoms experienced higher levels of mental distress ($p = 0.000$).

Table 5: Mental Health Outcomes Based on Symptom Severity

Symptom Severity	High Anxiety (n)	Moderate Anxiety (n)	No Anxiety (n)	Total (n)
Mild	6	18	7	31
Moderate	15	25	8	48
Severe	22	7	4	33
Total	43	50	19	112

The mental health outcomes (anxiety levels) for women with mild, moderate, and severe menstruation symptoms are compared in this table. menstruation health and mental health are strongly correlated, as seen by the increased risk of significant anxiety experienced by women with severe menstruation symptoms (22 out of 33). This emphasizes the toll that severe menstruation symptoms have on mental health.

Table 6: Perception of Menstrual Health Care

Access to Menstrual Health Care	Number of Respondents (n)	Percentage
Adequate Access	40	35.71%
Inadequate Access	60	53.57%
No Access	12	10.71%

The relationship between the intensity of symptoms and general health and the respondents' access to menstrual health care is displayed in this table. Of the respondents, only 35.71% said they had enough access to menstrual health care; the remaining 53.57% said they did not. Women who experience severe menstruation symptoms may experience physical and mental health problems as a result of their lack of access to care.

Table 7: Emotional Distress by Menstrual Regularity

Menstrual Regularity	High Emotional Distress (n)	Moderate Emotional Distress (n)	Low Emotional Distress (n)	Total (n)
Regular	18	30	20	68
Irregular	26	12	6	44

This table looks at the relationship between emotional discomfort and menstrual regularity, demonstrating how irregular cycles are associated with higher emotional stress levels. While respondents with regular periods reported reduced emotional anguish, those with irregular cycles were more likely to express high emotional distress (26 out of 44). This lends credence to the theory that mood swings, anxiety, and depression—in particular—are linked to menstruation irregularity.

Table 8: T-Test Results: Severity of Symptoms and Mental Well-being

Group	Mean Mental Health Score	Standard Deviation	T-Value	P-Value
Severe Menstrual Symptoms	4.2	0.72	3.65	0.000*
Mild Menstrual Symptoms	3.1	0.85		

An independent sample T-test was used to compare the mental health scores of women with severe menstrual symptoms to those with mild symptoms. Significantly greater levels of tension and anxiety were reported by women with severe menstrual symptoms (mean score = 4.2, p-value = 0.000), corroborating H3's claim that there is a meaningful difference in mental health depending on symptom severity.

Table 9: Chi-Square Test Results: Menstrual Regularity and Mental Health

Variables	Chi-Square Value	P-Value
Menstrual Regularity & Mental Well-being	7.25	0.012*

A Chi-Square test was used to examine the relationship between menstrual regularity and mental health. Menstrual regularity was significantly correlated with mental wellbeing ($p = 0.012$). Anxiety, mood fluctuations, and stress were more common in women with irregular menstrual periods.

Findings and Discussion

- The majority of participants stated that they had some degree of mental or physical distress when they were menstruating.
- Approximately 40% of women who responded to the study said their periods were irregular, and more than half said they had moderate to severe menstrual pain.
- The data backs up H1, showing that physical well-being declines with increasing menstrual pain intensity.
- Women with significant levels of menstruation discomfort were more likely to have symptoms like exhaustion, headaches, and bodily pain.
- H2 was supported by the noteworthy association found between menstrual irregularity and mood shifts.

- Anxiety, anger, and mood swings were among the emotional symptoms that women with irregular periods were more likely to suffer.
- Strong correlations between greater levels of stress and anxiety and severe menstruation symptoms supported hypothesis H3.
- This research emphasizes the impact on mental health that many women experience as a result of menstrual health problems, underscoring the necessity of psychological assistance as a component of menstrual health treatment.

Recommendations

- Initiatives must be implemented to guarantee that a greater number of women have sufficient access to menstrual health care services, especially for those suffering from severe symptoms.
- Educational institutions and companies ought to implement programs aimed at addressing the stigma around menstruation health and provide help for the management of both physical and psychological symptoms.
- Mental health services ought to be incorporated into period health care, offering women support and counseling to mitigate the emotional repercussions of severe menstruation symptoms.

Conclusion

This study emphasizes the substantial influence of menstruation health on women's physical and psychological well-being. The results indicate a strong correlation between menstruation pain, irregularity, and emotional fluctuations and physical discomfort and mental health concerns, including worry and stress. Due to the significant incidence of menstruation-related health issues, it is essential to enhance knowledge of menstrual health and improve access to care. Furthermore, incorporating mental health assistance into menstrual healthcare services can assist women in addressing both the physical and emotional difficulties related to menstruation. Resolving these challenges via education, medical intervention, and stigma reduction will enable women to manage their health, hence enhancing their entire quality of life and well-being.

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