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Research Paper

A Psycho-biological Inquiry: The Role of Five-Factor Personality Traits in Shaping the Menstrual Experience of Young Adults

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ABSTRACT

Menstruation is a significant concept in today's world, primarily due to cognitive and emotional complications and irregularities in the menstrual cycle caused by drastic lifestyle changes and excessive use of medications. In addition to these changes, social stigma continues to exist in the modern era, serving as a fundamental cause of menstrual distress that can exacerbate these complications. Previous studies identify medications like hormonal tablets as potentially contributing to such complications (Sabban, 2023). These medications, along with lifestyle changes, contributed a shift in the age of menarche among Indian adolescents, which decreased by approximately four months every decade. (Pathak et al., 2014). This study investigates the role of personality in shaping the menstrual experience in young adults. It primarily explores the differences in menstrual experiences among individuals with varying personality traits. The sample for this study consists of 100 female participants. Data were collected using the Big Five Inventory-2-Short Form (BFI-2-S) and Menstrual Impact Scale (MIS). The analysis of the data includes the use of various statistical tools, including descriptive statistical measures such as mean, standard deviation, correlation analysis and independent sample t-test. The results reveal a significant weak negative relationship between personality traits; agreeableness, extraversion and conscientiousness and the effects of menstruation with no significant mean differences taking into account both regular and irregular menstrual cycles in young adults.

Keywords: *Menstruation, Personality, Menstrual impact, Young Adults*

Menstruation is a natural biological process, yet it remains surrounded by unhealthy perspectives and cultural stigma even today that affect every woman's personal, social, and occupational life (Graeve et al., 2025). Scientifically, menstruation is the monthly shedding of the uterine lining, and the discharge of blood and mucosal tissue. Beyond this, the mood fluctuations, cognitive distortions, and role impairments women experience, are often perceived as dramatic rather than as natural consequences of the process. Studies indicate that women themselves, sometimes contribute to normalizing these sufferings, thereby perpetuating them. While approximately 1.9 billion people menstruate, millions of women, adolescent girls, and transgender individuals, struggle to manage their cycles healthily due to stigma, isolation, and limited access to basic sanitary products (Babbar, 2022).

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Adolescents and young adults are the central age group subject to these difficulties. During this phase, their mood swings are overshadowed as normal by the older generations but today, psychological factors, facilities, and pressures are different. Studies on adolescents' menstrual experiences show that many do not carry menstrual pads at school or home for fear of harm that might occur at that place. A girl sees the world through her parents, and when the parents themselves isolate her for the sake of religious rituals, she experiences emotional loneliness rather than social loneliness. Due to menstrual shame and perceived loneliness, absenteeism and poor performance are increasing. This makes them feel depressed and frustrated when others are unavailable in their important phases of life (Townsend et.al, 2025).

Adolescents can have high adjustment abilities in the pre-menstrual phase by time. Yet, the perceived emotional and social support from their family diminishes their sense of security especially from the female members. This reveals the fact that menstrual health is not just a personal concern but a threat to the dignity, equality and opportunities of women (Anapana, 2025).

Regarding personality, every woman, during menstruation, reacts differently on the grounds of their biological and psychological constitutions. With the influence of varied socio-cultural aspects, every woman exhibits different characteristics of their personality of which neuroticism and extraversion are the well discussed ones in previous researches. With the application of oral contraceptives, a change in these traits of the person is visible (Stern et al., 2025). As residual changes; cognitive distortions like rumination, depression is expressed especially during the premenstrual phase. Most researches focus on such negative effects of periods, yet women may prioritize their own feminine interests, due to a shift in motivational priorities focusing on self-realization, transformation. This helps in the fostering of one's psychological well-being and collaborative feminine relationships.

The present study addresses the gaps in each of the areas mentioned, examining the role of personality on shaping the menstrual experience in young adults, where most studies have focused on menstrual symptoms rather than its impact on women. The main objective of the study is to investigate how different personality types react during menstruation. The study presents menstruation not only as a physiological process but also in terms of personality variations, aiming to discern the complex psychological aspects of menstruation. Other literature reviews that focus mostly on PMDD samples and generalize findings using scales like EPQ, limits the diversity of the researches conducted in this niche. The famous feminine psychologist Karen Horney (1931) stated premenstrual tension as a psychological response to subconscious fantasies and anxieties surrounded by motherhood alongside the frustration from cultural restrictions of women. Considering premenstrual tension as a normal phenomenon, also provides clear insights for the general public, and specifically for men and women who may feel confused about why they or their partners with different personality combinations experience emotional and cognitive changes in the psychosocial contexts of menstruation. These insights are also applicable in occupational and educational settings to foster empathy towards women's menstrual issues, the provision of proper care and significance of menstrual hygiene among them. This study can serve as a reference in occupational, familial, and societal settings on how women with different personalities interact with their acquaintances and close ones. Moreover, it contributes to personality psychology, feminine psychology, and biopsychology by addressing the core relevance of social and psychological issues related to a natural physiological process.

METHOD

Objectives

1. To explore relationship among menstrual impact, personality and its dimensions (extraversion, agreeableness, conscientiousness, neuroticism, openness) in the total sample.

Hypotheses

- **H_{01}:** There is no significant relationship between personality and its dimensions (extraversion, agreeableness, conscientiousness, neuroticism and openness) and menstrual impact in the total sample.
- **H_{02}:** There is no significant difference in menstrual impact based on the regularity of periods in the sample.

Sample

The study targeted the population of young adults using convenient sampling, with a sample size of 100 who are mostly pursuing graduation, post-graduation or are graduates and postgraduates, mostly from Kerala and a few from other states of India, willing to be a part of the study.

Inclusion Criteria

Participants aged 18-26 years who are unmarried, from different parts of Kerala and some other states in India, are willing to provide informed consent.

Exclusion Criteria

Participants who are married and pregnant of that age group, or who are also engaged in living together relationships, are excluded from the study.

Tools

1. **Personal Datasheet**: Personal details like name, age, family type education qualification, course, currently taking any medications and information about currently whether their periods are regular or not
2. **Big Five Inventory-2-Short Form (BFI-2-S)**: Developed by John and Sotto (2017), which is a 5-point Likert scale with good alpha reliabilities ($\alpha \approx 0.73$-0.83) and good external validity.
3. **Menstrual Impact Scale (MIS):** Developed by Kakasci and Potur (2022), which is a 5-point Likert scale with subscales: physical impact ($\alpha \approx 0.89$), psychosocial impact ($\alpha \approx 0.80$), and the overall MIS reliability is $\alpha \approx 0.87$ with strong content and construct validity.

Procedure

The study aims to investigate whether personality traits in a person can shape the menstrual experience. The study was quantitative in nature with standardized tools like BFI-2-S and MIS, conducted by taking prior consent from the participants aged 18-26 years who are unmarried and not pregnant. Data was collected from different parts of Kerala and some other states of India as well. All the responses of the participants were kept confidential, and the anonymity of the participants was ensured. Unanswered responses were not considered, and participation was purely based on the participants' free will.

Statistical Analysis

The data collected was analyzed using the SPSS version 32.0. Descriptive statistics were used to summarize the data; Karl Pearson Correlation was run to find the relationship between the variables and Independent Sample t-test ran to evaluate the mean differences between the participants' menstrual impact based on the regularity of their periods. The level of significance was set at the 0.05 level.

RESULTS AND DISCUSSION

Table 1: Correlation between the Five-Factor Personality Traits and Menstrual Impact. (N=100)

Variables	Physical Impact	Psychosocial Impact	Total Impact
Extraversion	-.081	-.028	-.053
Agreeableness	-.246*	-.004	-.186
Conscientiousness	-.242*	-.078	-.240*
Neuroticism	.028	.075	.077
Openness	.048	-.016	.001

**Correlation is significant at the 0.05 level (2-tailed)*

Table 1 indicates the Correlation between the five-factor personality traits and menstrual impact, evaluated using Karl Pearson's Correlation Coefficient.

Agreeableness shows significant weak-negative correlations: -.246 with the physical dimension of menstruation. This suggests that agreeable individuals reported lower levels of physical impact. One possible explanation is that agreeableness is directly linked to the application of adaptive coping strategies and interpersonal connections. On the contrary, agreeableness has really weak-negative correlation and no statistically significant associations with psychosocial and total menstrual impact. This suggests that those who are highly agreeable may not have meaningful associations with psychosocial impact and total menstrual impact.

Conscientiousness shows significant weak-negative correlations: -.242 and -.240, respectively, with the physical and total dimension of menstruation. This suggests that highly conscientious people physical reflect lesser difficulties in physical dimension and total dimension of menstruation. One possible explanation is that conscientious people may adopt goal directed and routine-based behaviors routines to distract themselves from the challenges of menses. On the contrary, conscientiousness has weak-negative correlation and no significant associations with psychosocial impact. This shows these two variables function independently with no meaningful connections.

In contrast, extraversion, neuroticism and openness were found to have a weak as well as positive correlation and no significant relationship with any dimension of menstrual impact, except for psychosocial impact in the case of openness. This conveys that highly extraverted, neurotic and open-minded people associates with an increase in physical and total dimension of menstrual impact. These findings support previous research that neuroticism and extraversion might increase PMS severity and openness is linked to reliability and novelty that decreases the impact of menses that shows its connection to cope with it in a psychosocial dimension.

In summary, the findings show the negative associations conscientiousness and agreeableness to experiencing menses with less intensity; on helping to cope with the physical and overall challenges of it and even the non-linear effect of openness, extraversion and neuroticism on all dimensions of menstrual experience. However, the relationship of the recently mentioned traits are less significant, environmental factors can influence the relationship. This presents how certain personality traits can vary one's experience of menstruation.

Table 2: Mean, Standard Deviation and t-values of different dimensions of menstrual impact based on the regularity of periods. (N=100)

	Regular Periods (N=50)		**Irregular Periods (N=50)**		
Variables	**M**	**SD**	**M**	**SD**	**t**
Physical Impact	21.72	6.48	22.68	5.09	0.823
Psychosocial Impact	16.76	5.52	16.74	5.43	0.018
Total Impact	38.48	8.73	39.62	7.65	0.694

Table 2 indicates the mean differences in physical, psychosocial and total impact based on the regularity of periods in young adults. As the dimensions of menstrual impact are normally distributed, the mean differences are evaluated using independent sample t-test.

The results show that none of the mean differences achieved statistical significance. This suggests there exists no statistically significant difference among any dimension of menstrual impact based on the regularity of periods. The descriptive statistic also supports this finding whether regular or irregular, both groups show no notable peculiarities in experiencing periods in different dimensions. This is evident from the almost similar means and standard deviations though slightly higher in physical impact and psychosocial impact for the women with regular periods and in total impact for whom with irregular periods.

The findings, suggesting that traits like agreeableness and conscientiousness play greater roles as the same as neuroticism and extraversion, which are highly discussed traits. Individuals high in agreeableness and conscientiousness appear to manage the physical and psychosocial challenges related to menstruation better. Regardless of menstrual regularity, those with chronic physical or mental conditions or hormonal imbalances, tend to experience similar perceptions of menses. The findings emphasize the need for empathy towards women during menstruation, acknowledging that while some who are agreeable and conscientious may cope adaptively with the challenges with their traits but they may still experience significant discomfort, and individuals need to provide support and care to help them alleviate the challenges they face in balancing work and personal life in this busy world.

Major Findings

- There is a weak-negative correlation between agreeableness and physical impact which implies highly agreeable people reported lower levels of physical impact.
- There is a weak-negative correlation between conscientiousness and the menstrual impact (physical dimension and total dimension) which implies highly conscientious people reflect lesser difficulties in physical dimension and total dimension of menstruation.
- There appears no significant correlation with psychosocial dimension of menstrual impact with any personality trait under the Five Factor Model.

- There are a weak-negative correlation and no statistically significant associations between agreeableness and psychosocial and total menstrual impact, suggesting agreeable people may not have meaningful associations with psychosocial impact and total menstrual impact.
- There appear no significant correlations with any dimension of menstrual impact by the personality traits such as openness, extraversion and neuroticism.
- There appears no significant difference in any dimension of menstrual impact in young adults based on the regularity of their periods.

CONCLUSION

The research concluded that there is a weak and negative correlation between a few personality traits: agreeableness and conscientiousness, and the dimensions of menstrual impact specifically, physical impact and total impact. However, it is found no significant correlation with the psychosocial dimension of menstrual impact and any personality trait. Also, there appears no significant correlation with any dimension of menstrual impact between the personality traits: openness, extraversion, neuroticism. The mean differences between the young adults with regular and irregular periods are not significant. This led to the conclusion that there is no larger variation in mean and standard deviation to showcase a statistically significant difference. Here, some hypotheses are accepted and others are rejected. Big Five Personality traits in connection with menstrual experience is considered relevant due to the lack of quantitative research on these two variables. The study put forward a psychological experience-based approach on menstruation rather than just symptoms be consulted in a clinical setting. Also, personal sanitary needs should be met in accordance with the different personalities having different menstrual experiences. Addressing cultural taboos through education and policy changes can improve access to psychological intervention where more than symptoms psychological menstrual experiences are considered. The study also addresses the limitations of using EPQ in such research topics and addressing the correlations of less discussed personality traits like agreeableness, conscientiousness, openness comparing to neuroticism and extraversion conducting the study in non-clinical population. These factors strongly influence a women's emotion regulation, cognitions, body self-image, mental well-being and how they interact in their social and occupational life. In our study, we include a limited number of unmarried young adults of age 18 to 26 across Kerala and the findings give us a different deeper perspective on the experiences, women with different personalities traverse at the time of menstruation.

REFERENCES

Anapana, Gopal. (2025). Menstrual hygiene awareness, practices, and cultural influences among college-going women in Vizianagaram, Andhra Pradesh: A cross-sectional survey. International Journal of Zoology and Applied Biosciences. 10. 109-118. 10.55126/ijzab.2025.v10.i05.014.

Babbar, Karan & Martin, Jennifer & Ruiz, Josephine & Parray, Ateeb Ahmad & Sommer, Marni. (2021). Menstrual health is a public health and human rights issue. The Lancet Public Health. 7. 10.1016/S2468-2667(21)00212-7.

Dr. Hussein Talal Sabban, Dr. Hoda Jehad Abousada, Dr. Mohammed Majed Abualshamat, Dr.Razan Elgaili Hassan, Dr. Alaa Abdullah Alrebh, Dr. Aws Hisham Aldajani, Dr. Sarah Ibrahem Almarwani, Dr. Dalia Abdullah Binafif, Dr. Sara Abdullah Maqboli, Dr. Abeer Zaal Albalawi, Dr. Budur Hani Alsayed, Dr. Abdulaziz Mohammed Allugmani, Dr. Maha Zaal Albalawi and Dr. Ayan Adel Alghamdi. (2023). Delayed

Or Irregular Menstruation-Related to Medication. https://doi.org/10.5281/zenodo.7539118

Graeve, Catherine & Stephenson, Vera & Gao, Grace. (2025). Using an Interpretive Phenomenological Approach to Understand the Menstrual Experience of Young Adults. Nursing Reports. 15. 65. 10.3390/nursrep15020065.

HORNEY, K. (1967). Die pramenstruellen verstimmungen. In K. Homey (Ed.), Feminine psychology (pp. 99-106). London: Norton. (Reprinted from Zeitscher furpsychoanalytische Padagogik, 5, 1-7, by K. Homey, 1931)

Kakasci, G. C., & Potur, C. D. (2022). Menstruation Impact Scale development. Medical Records, 4(3), 454–461.

Pathak P. K., Tripathi N., & Subramanian S. V. (2014). Secular trends in menarcheal age in India: Evidence from the Indian human development survey. *PLoS One*, 9(11), e111027.

Soto, C. J., & John, O. P. (2017). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. Journal of Research in Personality, 68, 69–81.

Stern, J., Koval, P., & Blake, K. (2025). Patterns in affect and personality states across the menstrual cycle. Journal of Personality and Social Psychology, 128(3), 670–699.

Townsend, h., kaylor, s., & johnson, d. (2023). exploration of rural adolescent female's experiences with menstrual health education and knowledge. online journal of rural nursing and health care, 23(1), 173-192. doi: https://doi.org/10.14574/ojrnhc.v23i1.735

Vegni E, Borghi L. Psyche and menopause: embracing the (positive) flip side of the coin. Climacteric. 2025 Oct;28(5):626-629. doi: 10.1080/13697137.2025.2509854. Epub 2025 Jun 11. PMID: 40497362.

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Conflict of Interest

The author(s) declared no conflict of interest.

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