

Menstrual Pain, Depression, Anxiety and Stress Among Women

Naw J Jacquelyn^{1*}, Dr. Anjana Sinha²

ABSTRACT

The study focused on the relationship between menstrual pain, depression, anxiety, and stress among women. Data from an online survey of 201 women was used to conduct descriptive research. The data were gathered using the MSQ Menstrual Symptom Questionnaire (Margaret Chesney) and the DASS Depression, Anxiety, and Stress Scales (Sydney H. Lovibond and Peter F. Lovibond). The relationship between menstrual pain, depression, anxiety, and stress was examined using a Pearson correlation test. The findings suggest that there is a significant negative correlation between menstrual pain and depression. The findings suggest that there is a significant negative correlation between menstrual pain and anxiety. The findings also suggest that there is a significant negative correlation between menstrual pain and stress.

Keywords: *Menstrual Pain, Depression, Anxiety, Stress*

Women start having menstrual pain at various ages. When they are menstruating, many women experience challenges and excruciating pain. It might be difficult enough to deal with the physical effects of your menstrual cycle. Your daily routine can be substantially disrupted by bleeding, breast pain, cramping, and bloating. However, keeping an eye on your mental health may help you to understand variations in your period because your menstrual cycle and your mental health are inextricably intertwined. During their menstrual cycle, some people can experience more severe symptoms like despair and irritability. During their period, people may experience nausea due to hormones. Hormonal changes might cause an increase in anxiety. Your body enters the fight-or-flight response when under stress. Your hormones are affected when you're in this mode, as a result, an in-depth study is required to shed light on the issues that women face during the time of their menstrual cycle. The study aims to identify the relationship between menstrual pain, depression, anxiety and stress among Women.

Menstrual Pain

A few days prior to, during, or following a menstrual period, lower abdominal (pelvic) symptoms known as menstruation pains might develop. Usually, the discomfort starts to lessen two to three days following the start of a period and peaks about 24 hours later. However, it can also be a subtle, ongoing aching. The pain is typically crampy or severe and

¹MSc. Clinical Psychology Student, Kristu Jayanti College (Autonomous), Bangalore, India

²Assistant Professor, Kristu Jayanti College, Autonomous, Bengaluru, Karnataka, India

*Corresponding Author

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comes and goes. It can occasionally spread to the legs and lower back. For many women, menstrual pain is a regular occurrence, although the intensity and length of the discomfort can vary substantially. In actuality, some women have little to no pain during their periods, while others experience intense cramping.

Depression

Depression is a mental condition that can affect your feelings, thoughts, and actions. It is a prevalent and significant condition that can have an effect on a person's career, relationships, and physical health, among other aspects of their life. Depression is characterized by ongoing melancholy and a lack of interest in formerly satisfying or enjoyable activities. Additionally, it may impair appetite and sleep. Concentration problems and fatigue are frequent.

Anxiety

Anxiety is an emotion that is common and frequently helpful when faced with stress or danger. It's the body's approach of responding to a perceived threat or challenge by stepping up awareness, focus, and physical readiness. Anxiety can interfere with daily living and develop into a mental health condition when it persists or is excessive compared to the real threat. A category of mental health diseases known as anxiety disorders are characterized by excessive concern, fear, or apprehension in relation to the actual threat or scenario.

Stress

The process by which the body's coping mechanism adjusts to outside stimuli and changes in the environment is known as stress. Frank Morelli is an M.A. Stress is a typical physiological and psychological reaction to a feared or difficult situation. It is the body's method of stepping up attention, focus, and physical preparation in order to get ready to handle a potentially hazardous or challenging circumstance. Stress can be helpful in inspiring and energizing us to act and accomplish our goals when it is brief or infrequent.

The study conducted by Soheila Mohamadirizi et al. (2011–2012) on Menstruation symptoms with stress, depression, and anxiety among Mashhad schoolgirls. The purpose of this study was to determine the relationship between menstruation symptoms and anxiety, depression, and stress in schoolgirls in Mashhad in 2011-2012. The results showed that premenstrual symptoms were reported by 74% of the patients, bleeding symptoms by 94%, and postmenstrual symptoms by 40.8% of the subjects. Anxiety affected 44.3% of the subjects, depression affected 45.5%, and stress affected 47.2%. Furthermore, the Pearson correlation coefficient test revealed a significant positive correlation between menstrual symptoms and depression, anxiety, and stress. In terms of the relationship between menstruation signs and psycho-cognitive variables, prevention and treatment of these disorders by educational and training authorities as well as the Ministry of Health are critical.

The study conducted by Alaettin Unsal et al. (2012) on the relationship between depression and dysmenorrhea in a cohort of female students at a Turkish high school. The goal was to determine the prevalence of dysmenorrhea and the relationship between dysmenorrhea and depression among female students. From March 1st to April 30th, 2010, this study was conducted at two vocational high schools in a province in western Turkey. The Beck Depression Scale (BDS) and the Visual Analogue Scale (VAS) were used to assess the presence of depression. Chi square and Student's t tests were used to analyse the data, with p values less than 0.05 considered significant. The prevalence of dysmenorrhea was found to

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be 71.5%. It was higher in those who had menstrual irregularities, had a positive family history of dysmenorrhea, and drank coffee. Depression was more common in girls who had dysmenorrhea than in those who did not. The average BDS scores and the level of uncomfortable menstruation were correlated. Consideration should be given to educational programmes when making recommendations to lessen dysmenorrhea.

The study conducted by Shazia Iqbal et al. (2021) on Menstrual cycle relation with anxiety and other psychological symptoms in women. The main objective of this study is to emphasise the part played by menstrual cycle phase in Saudi women's worry. Anxiety and stress have a negative impact on the menstrual cycle. According to the findings, 56.4% of women experience anxiety before or during menstruation. Women reported feeling anxious 70.6% of the time previous to menstruation, 27.8% of the time during menstruation, and only 16% of the time following. 42.1% of respondents said they experience anxiety on a monthly basis, 46.6% said it prevents menstruation, and 23.7% said it shortens menstrual periods. 14% get panic attacks while menstruating, 14.3% experience depression before their period, and 38.4% have sleep issues. Anxiety significantly correlated with the length of the menstrual cycle, the severity of the bleeding, and menstruation avoidance. Health practitioners should promote proper self-care in order to enhance the quality of life for women who are of reproductive age.

METHODOLOGY

The study of Menstrual Pain, Depression, Anxiety and Stress among women is a quantitative study. The study investigates the correlation between Menstrual Pain, Depression, Anxiety and Stress among women.

Aim: To determine the relationship between menstrual pain, depression, anxiety and stress among women.

Hypothesis

H01: There is no significance relationship between menstrual pain and depression among women.

H02: There is no significance relationship between menstrual pain and anxiety among women.

H03: There is no significance relationship between menstrual pain and stress among women.

Sample

A sample size of 201 women between the age range of 18-35. The data were gathered using a method known as non-Probability purposive sampling.

Measures

Menstrual Symptom Questionnaire (MSQ) developed by Margaret Chesney. This 25-item test is intended to assess two types of monthly pain: spasmodic, which starts on the first day of period and manifests as spasms, and congestive, which is felt as a tightening in the abdominal region. It affects the abdomen, breasts, and ankles and is felt as heaviness or aching, dull aches during the premenstrual cycle.

Depression Anxiety and Stress Scales (DASS) developed by Sydney H. Lovibond and Peter F. Lovibond. This 42-item test evaluates sadness, anxiety, and stress, three unfavourable emotional states that are frequently observed in clinical settings. Each scale is made up of 7

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primary symptoms when using the DASS-21, or 14 primary symptoms otherwise (see below). The severity of each item during the previous week is assessed.

Procedure

The study used Google Forms to collect data from participants online, after obtaining their informed consent. Participants were given a briefing about the study's nature and purpose through the Google Form to establish a rapport and were reassured that their information would be kept confidential. Informed consent was obtained individually.

RESULTS AND DISCUSSION

The data collected was analyzed using SPSS. It was further tested for Pearson's correlation test.

Table 1: Age distribution of the participants

	Age	Frequency	Percentage
Valid	18-21	56	27.7%
	22-26	84	41.6%
	27-31	41	20.3%
	32-35	20	10.4%

According to the data presented in Table 1, the selected sample consisted of 201 participants. Of these participants, 56 individuals (27.7%) were between the ages of 18 and 21, 84 individuals (41.6%) were between the ages of 22 and 26, 41 individuals (20.3%) were between the ages of 27 and 31 and, 20 individuals (10.4%) were between the ages of 32 and 35.

Table 2: Education distribution of the participants

	Education	Frequency	Age
Valid	High School	33	16.3%
	Undergraduate	66	32.7%
	Postgraduate	102	51%

According to the data presented in Table 2, the selected sample consisted of 201 participants. Of these participants, 33 individuals (16.3%) were High school, 66 individuals (32.7%) were Undergraduate students, and 102 individuals (51%) were Postgraduate students.

Table 3: Correlation between menstrual pain, depression, anxiety and stress

	N	M	SD	1	2	3	4
Menstrual Pain	201	73.96	4.81	-	-.221**	-.175**	-.181*
Depression	201	10.54	10.11	-.221**	-	.903**	.866**
Anxiety	201	9.79	8.68	-.175**	.903**	-	.853**
Stress	201	14.35	9.65	-.181*	.866**	.853**	-

***. Correlation is significant at the 0.01 level (2-tailed)*

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

The correlation calculated for variables, Menstrual pain and Depression with N=201 which is significant at (p<0.01) level as shown in Table 3. The correlation coefficient results showed that there was a significantly negative correlation between Menstrual Pain and Depression (r= -.221, p<0.00), that is, as Menstrual pain increases Depression decreases.

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Therefore, the null hypothesis was rejected which states that there is no significant relationship between menstrual pain and depression among women.

The endorphins released in response to pain may be one explanation for this behavior. Endorphins are substances that the body produces naturally and which serve as sedatives and mood enhancers. The body may release more endorphins during periods of elevated menstrual pain to help manage the discomfort, which may eventually result in a reduction in depressed symptoms.

The correlation calculated for variables, Menstrual Pain and Anxiety with $N=201$ which is significant at ($p<0.01$) level as shown in Table 3. The correlation coefficient results showed that there was a significantly negative correlation between Menstrual Pain and Anxiety ($r= -.175$, $p<0.01$), that is, as Menstrual Pain increases Anxiety decreases. Therefore, the null hypothesis was rejected which states that there is no significant relationship between menstrual pain and anxiety among women.

The fact that feeling pain might serve as a diversion from worrisome thoughts and sensations is one reason for this phenomenon. The likelihood of experiencing and dwelling on anxious thoughts and sensations may be reduced when the body is concentrating on controlling physical discomfort. In addition, similar to how endorphins are released in response to pain, the body may also release other organic chemicals in response to pain, such as cortisol and adrenaline, which can aid in reducing anxiety.

The correlation calculated for variables, Menstrual pain and stress with $N=201$ which is significant at ($p<0.05$) level as shown in Table 3. The correlation coefficient results showed that there was a significantly negative correlation between Menstrual Pain and Stress ($r= -.181$, $p<0.05$), that is, as Menstrual pain increases Stress decreases. Therefore, the null hypothesis was rejected which states that there is no significant relationship between menstrual pain and stress among women.

This phenomenon may be explained by the fact that the body's concentration on controlling physical discomfort can divert attention from other stressors, such problems at work or in personal relationships. In addition, the body may release stress-relieving hormones like oxytocin and progesterone in response to menstruation discomfort, just like endorphins and other naturally occurring chemicals are released in response to pain.

CONCLUSION

The study found that there was a negative correlation between Menstrual Pain and Depression among Women. As the level of menstrual pain increased, the level of depression decreased. The study was also found a negative correlation between Menstrual pain and Anxiety among Women. As the level of menstrual pain increased, the level of anxiety also decreased. Furthermore, the study also found a significant negative correlation between Menstrual Pain and Stress among Women. In other words, if menstrual pain increased, then the level of stress decreased.

Implication

Knowing that experiencing some level of pain, mood changes, and stress during menstruation is normal can help women feel reassured. Many women experience physical and emotional symptoms during their menstrual cycle, and being aware of this connection can alleviate concerns about abnormality or underlying health issues. Women can take

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proactive steps to manage these symptoms. It will encourage them to prioritize self-care, engage in stress-reducing activities, and seek appropriate support when needed. They can adopt strategies like exercise, relaxation techniques, healthy eating, and proper sleep to manage these symptoms effectively. Recognizing the cyclical nature of the symptoms can help women identify patterns and predict when they are most likely to experience heightened pain, mood changes, or stress.

Limitations of the Study

The study had some limitations which need to be taken into account when interpreting the findings. One major limitation of the study was that the study only focused on women between the ages of 18 to 35, so the findings may not be applicable to women of other age groups. The study also had a very few demographic variables which could have included occupation and residing area to see the significant difference. Participants are required to complete the questionnaire online. This may impair participant concentration, resulting in incorrect responses. These limitations suggest that further research is needed to explore the relationship between menstrual pain, depression and anxiety among women.

REFERENCES

- Agarwal, A., & Agarwal, A. (2010). A study of dysmenorrhea during menstruation in adolescent girls. *Indian Journal of Community Medicine*, 35(1), 159. <https://doi.org/10.4103/0970-0218.62586>
- Alateeq, D., Binsuwaidan, L., Alazwari, L., Algarni, M., Hussain, M. A., Alzahrani, R. R., & Aljohani, R. (2022). Dysmenorrhea and depressive symptoms among female university students: a descriptive study from Saudi Arabia. *The Egyptian Journal of Neurology, Psychiatry and Neurosurgery*, 58(1). <https://doi.org/10.1186/s41983-022-00542-1>
- Andersch, B., & Milsom, I. (1982). An epidemiologic study of young women with dysmenorrhea. *American Journal of Obstetrics and Gynecology*, 144(6), 655-660. [https://doi.org/10.1016/0002-9378\(82\)90433-1](https://doi.org/10.1016/0002-9378(82)90433-1)
- Anthropological and clinical characteristics in adolescent women with dysmenorrhea. (2003, December 1). PubMed. <https://pubmed.ncbi.nlm.nih.gov/14746162/>
- Association between menstruation signs and anxiety, depression, and stress in school girls in Mashhad in 2011-2012. (2013, September 1). PubMed. <https://pubmed.ncbi.nlm.nih.gov/24403944/>
- Azurah, A. G. N., Sancu, L., Moore, E. E., & Grover, S. (2013). The Quality of Life of Adolescents with Menstrual Problems. *Journal of Pediatric and Adolescent Gynecology*, 26(2), 102–108. <https://doi.org/10.1016/j.jpag.2012.11.004>
- Beck, A. T. (1961). An Inventory for Measuring Depression. *Archives of General Psychiatry*, 4(6), 561. <https://doi.org/10.1001/archpsyc.1961.01710120031004>
- Burnett, M., Antao, V., Black, A., Feldman, K., Grenville, A., Lea, R. W., Lefebvre, G., Pinsonneault, O., & Robert, M. (2005). Prevalence of Primary Dysmenorrhea in Canada. *Journal of Obstetrics and Gynaecology Canada*, 27(8), 765–770. [https://doi.org/10.1016/s1701-2163\(16\)30728-9](https://doi.org/10.1016/s1701-2163(16)30728-9)
- Dysmenorrhea. (2023, January 1). PubMed. <https://pubmed.ncbi.nlm.nih.gov/32809669/>
- Ibrahim, N. K., AlGhamdi, M. S., Al-Shaibani, A. N., AlAmri, F. A., Alharbi, H. A., Aljadani, A., & Alfaidi, R. A. (2015). Dysmenorrhea among female medical students in King Abdulaziz University: Prevalence, predictors and outcome. *Pakistan Journal of Medical Sciences*, 31(6). <https://doi.org/10.12669/pjms.316.8752>
- Iqbal, S., Aljanoubi, F., Alzarah, S. A., Alrashedi, H. B., Algaw, R. K., Alqeshtaini, S. S., & Ali, S. G. (2021). Menstrual cycle relation with anxiety and other psychological

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- symptoms in women. Zenodo (CERN European Organization for Nuclear Research). <https://doi.org/10.5281/zenodo.4543209>
- Kordi, M. (2013, August 1). The relationship between occupational stress and dysmenorrhea in midwives employed at public and private hospitals and health care centers in Iran (Mashhad) in the years 2010 and 2011. PubMed Central (PMC). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3872868/>
- Larroy, C. (2002). Comparing Visual-Analog and Numeric Scales for Assessing Menstrual Pain. *Behavioral Medicine*, 27(4), 179-181. <https://doi.org/10.1080/08964280209596043>
- Maryam, M. (2016, November 28). Relationship between Menstrual Profile and Psychological Stress with Dysmenorrhea. *Maryam Althea Medical Journal*. <https://journal.fk.unpad.ac.id/index.php/amj/article/view/884>
- Rafique, N., & AlSheikh, M. H. (2018). Prevalence of menstrual problems and their association with psychological stress in young female students studying health sciences. *Saudi Medical Journal*, 39(1), 67–73. <https://doi.org/10.15537/smj.2018.1.21438>
- Tabassum, A., Ahmed, S., & Noushad, S. (2015). Physical Stress during Menstrual Cycle; A Study on Pain, Discomfort & Exhaustion. *International Journal of Women Empowerment*, 1(1), 38–42. <https://doi.org/10.29052/2413-4252.v1.i1.2015.38-42>
- Unsal, A., Tozun, M., Ayranci, U., & Örsal, Ö. (2012). Connection between dysmenorrhea and depression among a group of Turkish high school female students. ResearchGate. https://www.researchgate.net/publication/287918634_Connection_between_dysmenorrhea_and_depression_among_a_group_of_Turkish_high_school_female_students
- Wong, L. P., & Khoo, E. M. (2010). Dysmenorrhea in a multiethnic population of adolescent Asian girls. *International Journal of Gynaecology and Obstetrics*, 108(2), 139–142. <https://doi.org/10.1016/j.ijgo.2009.09.018>
- World Health Organization. (2000). Obesity: preventing and managing the global epidemic: report of a WHO consultation. <https://apps.who.int/iris/handle/10665/42330>
- Yilmaz, T. (2008). Characteristics of dysmenorrhea situations of midwifery and nursing students. <https://www.semanticscholar.org/paper/CHARACTERISTICS-OF-DYSMENORRHEA-SITUATIONS-OF-AND-YilmazYazici/661c60bcc3c012c5059549a8bb501687723382c9>

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Conflict of Interest

There are no declared conflicts of interest by the author.

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