



A Cross Sectional Study On Menstrual Problems And The Association With Psychological Stress In Female Adults

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ABSTRACT: Menstruation is one aspect of sexual maturity that first occurs during puberty in a woman. Menstruation that occurs regularly every month will form a menstrual cycle. Menstrual problems are common among adolescent girls, with a prevalence rate of approximately 50%. Psychological changes in adolescence can affect adolescent emotions that can cause stress. Stress in adolescent one of which can disrupt the menstrual cycle.

The purpose of this study was to determine the relationship of stress levels with the menstrual cycle in adolescents. These deserve careful evaluation as uncorrected menstrual problems may adversely affect the daily routine and quality of life.

A cross-sectional study was conducted among 100 students in different colleges in India, by administering a questionnaire consisting of premenstrual symptoms and psychosocial stress Assessment scale. Psychosocial stress was assessed using Perceived Stress Scale (PSS10).

This study found a strong link between stress levels and menstrual cycle abnormalities in adult female students who experienced premenstrual symptoms such anxiety, mood swings, irritability, headaches, and dysmenorrhea. This suggests that measures to lessen stress can enhance the menstrual health of adult females, lowering future health risks and enhancing quality of life.

KEY WORD: Menstruation, premenstrual syndrome, perceived stress scale

INTRODUCTION

Menstrual health is a critical aspect of women's overall well-being, influencing their physical, emotional, and psychological states throughout their reproductive years. Menstrual problems, such as dysmenorrhea, irregular cycles, menorrhagia, and premenstrual syndrome (PMS), are prevalent issues that affect millions of women worldwide. These conditions not only disrupt daily life but also impact academic, professional, and social functioning, often leading to diminished quality of life.

Psychological stress has emerged as a significant factor influencing menstrual health. Stress can disrupt the hypothalamic-pituitary-ovarian (HPO) axis, leading to alterations in hormonal regulation and menstrual patterns. Conversely, menstrual problems themselves can serve as sources of stress, creating a bidirectional relationship between these two variables. For instance, chronic pain or unpredictability associated with menstrual irregularities may heighten anxiety and depressive symptoms, perpetuating a cycle of stress and physical discomfort.

Studies indicate that young adult women, particularly those in their late teens and early twenties, are highly susceptible to this interplay between menstrual problems and psychological stress. This period often coincides with academic and career pressures, lifestyle changes, and the establishment of independence, all of which can exacerbate stress levels.

Despite growing awareness, there remains a lack of comprehensive data on the prevalence and nature of menstrual problems in adult women and their association with psychological stress in various sociocultural contexts. Understanding these dynamics is essential for developing targeted interventions aimed at improving menstrual health and mental well-being.

This study aims to examine the prevalence of menstrual problems among female adults and explore their association with psychological stress. By identifying key patterns and correlations, the findings will contribute to a better understanding of this public health issue, enabling healthcare providers to devise effective strategies for prevention and management.

NEED OF THE STUDY.

Menstrual problems are a significant public health concern that can affect women's physical health, emotional well-being, and social functioning. Understanding the factors associated with these issues is essential for effective management and intervention. Psychological stress has been recognized as a potential contributor to menstrual irregularities, with stress-induced dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis affecting hormonal balance. Conversely, menstrual problems can exacerbate stress, creating a vicious cycle that negatively impacts mental health. This interplay between psychological stress and menstrual health is a critical yet underexplored area in public health research, particularly in diverse sociocultural settings. Psychological stress is a modifiable factor that can be addressed through targeted interventions. By exploring its association with menstrual problems, this study can help identify opportunities for preventive care and stress management strategies. By investigating the relationship between menstrual problems and psychological stress, this study aims to provide insights that can guide healthcare providers and educators in creating comprehensive strategies to promote women's reproductive and mental health.

RESEARCH METHODOLOGY

STUDY SETTING:

A sample of 100 students were selected for the study

SELECTION OF SAMPLES:

Sample size – 100

Sampling technique – purposive sampling

METHODOLOGY

This was a cross sectional study of one month duration in which 100 students from the various colleges in India, there are Sarada Krishna homeopathic medical collage Tamil nadu, St. Ann's college mangalore, Athena Nursing College mangalore, carmelgiri college kerala were invited to participate. Age group are categorised into 18 to 21 years, 22 to 24 years, 25 to 27 years. Active consent from students will be done for study to reduce the sampling bias.

INCLUSION CRITERIA

- Young female students (aged between 18 and 28 years), who were willing to participate in the study.
- The subjects were asked to complete a menstrual problem identification questionnaire anonymously.

EXCLUSION CRITERIA

Females with chronic health problems, psychiatric problems, any type of diagnosed pelvic pathology (fibroids, pelvic inflammatory disease), a positive pregnancy test, and lactating mothers were excluded from the study.

STUDY DESIGN:

Research design: descriptive design

Cross sectional study

SELECTION OF TOOLS:

The questionnaire was designed by the authors, based on some previous similar studies.⁵ The questionnaires were copied in to google form, included items relating to the participant's age, history of dysmenorrhea, and premenstrual symptoms. In order to measure individual stress levels, PSS10 was used, which is found to be very reliable for determining the role of stress in the aetiology of disease and behavioral disorders. Based on PSS 10, Scores ranging from 0-13 were considered to indicate low perceived stress, 14-26 moderate perceived stress, and 27-40 high perceived stress (HPS).⁵

A short, 10-minutes briefing was carried out to explain to participants the terminologies used in the questionnaires. As the students are understood and completed the questionnaires very well, reducing the opportunities for error.

DATA ANALYSIS

The data so collected were compiled in MS Excel and analyzed into tabular and graphical form.

IV. RESULTS AND DISCUSSION

OBSERVATION AND RESULTS

This section includes tables and charts detailing the observations and outcomes of response of Hundred participants on the pre structured questionnaire perceiving the relationship between the menstrual problems and the psychological stress.

Table 1: According To Distribution of Age

Sl.No	Age Group	No .Of Responses
1	18 -21	29
2	21-24	35
3	24 -27	36

Chart 1: According To Distribution of Age

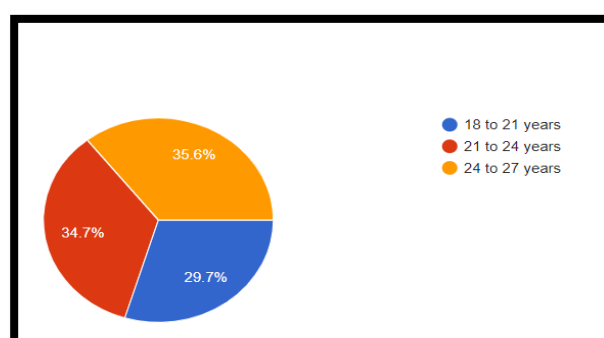


Table 2: Premenstrual Symptoms

Sl.no.	Premenstrual syndrome	Mild(%)	Moderate(%)	severe(%)	Week before period(%)	Week after period(%)	Others (%)
1.	Anxiety	34	23	14	32	18	16
2.	Irritability	30	23	24	28	17	14
3.	Mood swings	26	24	29	33	15	13
4.	Head ache	33	18	17	36	15	12
5.	Fatigue	29	19	22	28	20	15
6.	Dizziness /fainting	41	9	12	22	17	16
7.	Palpitations	33	9	11	20	18	14
8.	Crying	33	16	25	25	15	15
9.	Forgetfulness	36	16	10	21	16	13
10.	Confusion	31	26	9	21	15	14
11.	Insomnia	34	16	9	18	19	16
12.	Breast tenderness	35	16	14	25	16	15
13.	Abdomen bloating	22	27	18	21	21	15
14.	Acne	31	15	19	24	18	13
15.	Constipation	34	13	9	20	16	12
16.	Diarrhea	27	18	10	19	15	14
17.	dysmenorrhea	27	18	21	33	16	12
18.	Weight gain	39	13	9	27	15	14
19.	Menstrual cramps	20	19	40	20	18	22
20.	Menstrual backache	19	27	34	22	17	21

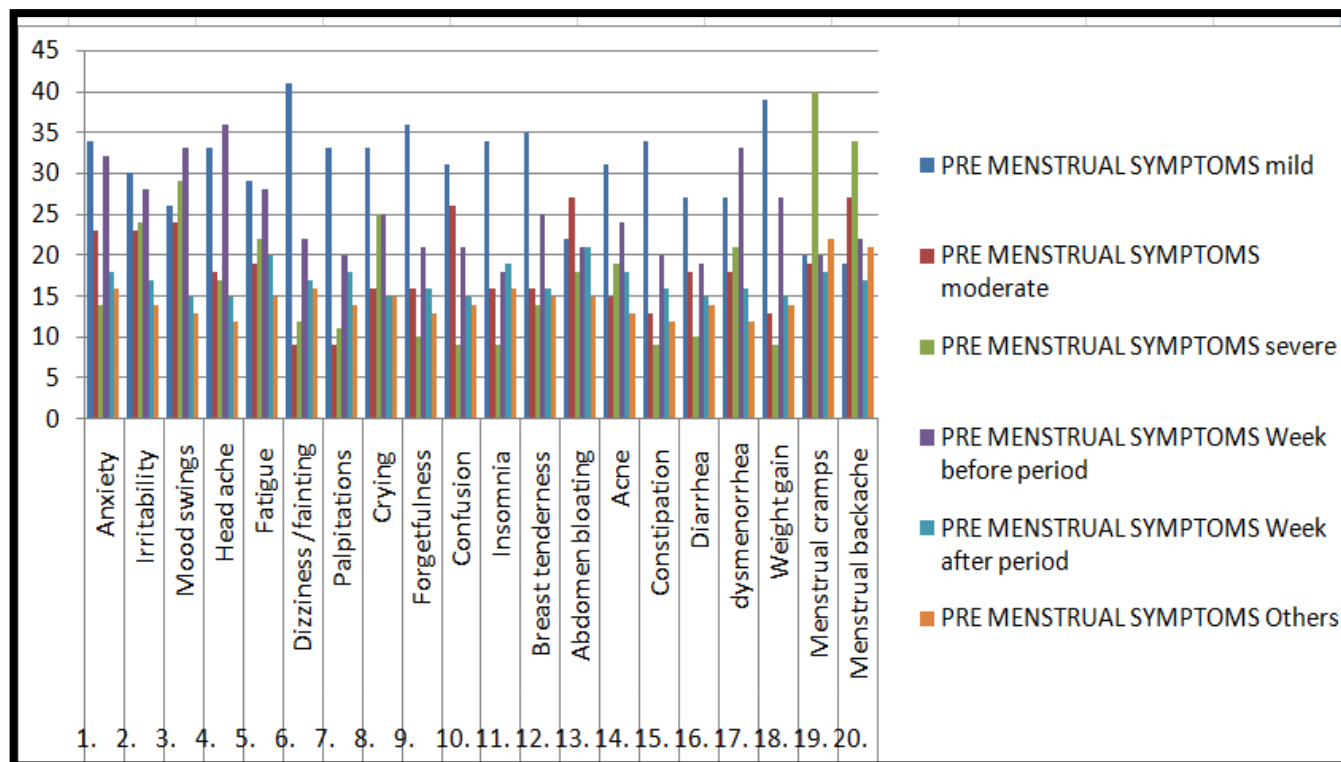
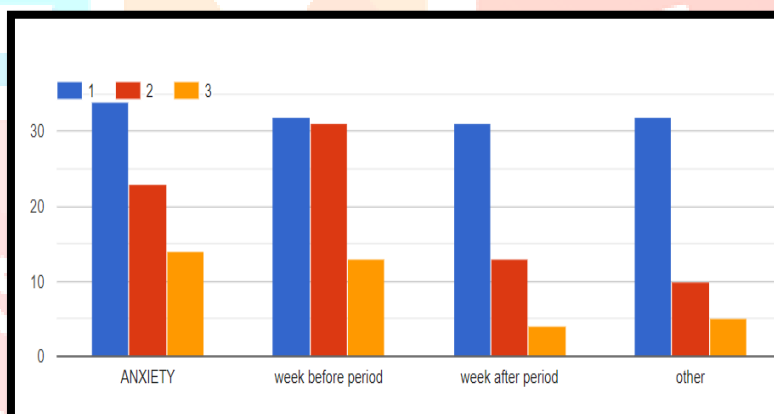
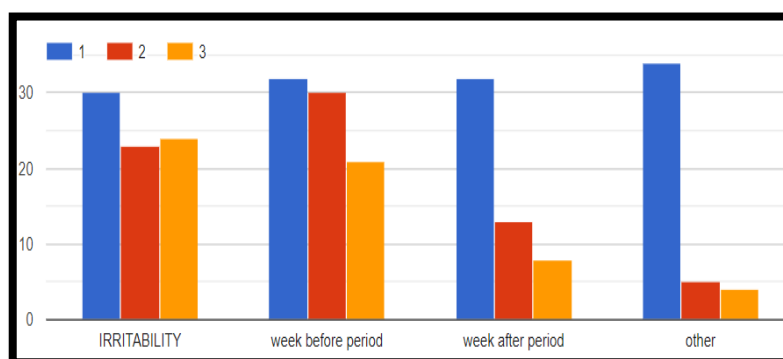
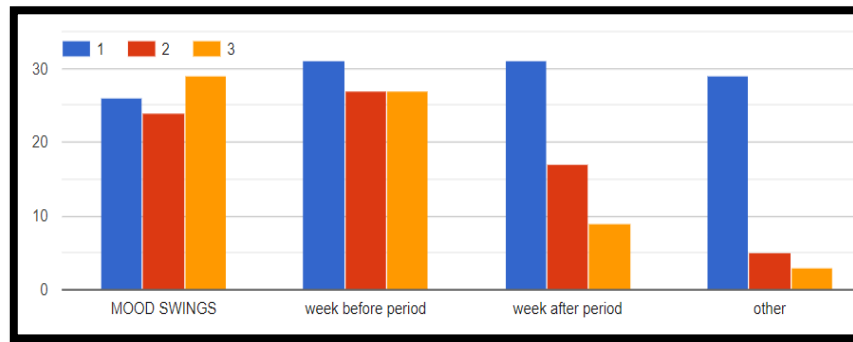
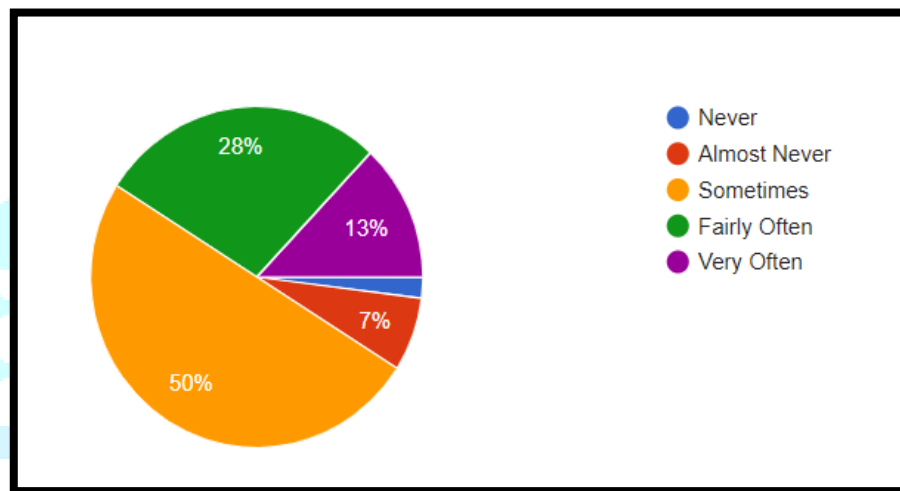
Chart 2: Premenstrual Symptoms**Chart 3 : Anxiety****Chart 4 : Irritability**

Chart 5 :Mood Swings**Chart 6 : Stress and Daily Life**

DISCUSSION

Stress and menstrual issues are two of the most prevalent health issues among young adult females. According to this study, each section of age groups (18 to 21, 22 to 24, 25 to 27) are equally responded (34.7%, 35.6%, 29.7%) respectively. The study found that most of the participants had severe mood swings (29%), irritability in moderate to severe level (24%), anxiety in moderate level (19%). All the premenstrual symptoms more on before the periods. Premenstrual symptoms and dysmenorrhea were strongly and favorably correlated with stress. Dysmenorrhea was the highest prevalence among study participants (21%), with menstrual cramps (40%), menstrual backache (34%) of those affected having severe dysmenorrhea that precluded them from working in any capacity and having dysmenorrhea that just slightly interfered with everyday activities.

Another notable finding of this study was that 40.7% of the participants were suffering from premenstrual symptoms. The most prevalent premenstrual symptoms reported by participants were mood swings, anger, irritability (28%), and tiredness (29%). Varying prevalence of premenstrual symptoms have been reported in various studies. the most commonly reported symptoms in their subjects were fatigue (28%), followed by mood swings, anxiety, irritability.

Based on PSS 10, Scores ranging from 0-13 were considered to indicate low perceived stress, 14-26 moderate perceived stress, and 27-40 high perceived stress (HPS)⁶ Another noteworthy result of this study was that the students with a PSS of >27 showed a strong positive correlation with premenstrual symptoms. Premenstrual symptoms can be caused by abnormal functioning of the hypothalamic-pituitary-adrenal axis (HPA), hormonal imbalance, nutritional defects, and environmental factors. The cause of the high prevalence of premenstrual symptoms, especially the anger and irritability in the current study's participants, may be related to stress-related premenstrual decline in brain serotonin function, resulting in the worsening of cardinal mood symptoms.

CONCLUSION

Premenstrual symptoms and stress are extremely common in young female adults. Additionally, a considerable positive correlation between psychological stress, dysmenorrhea, and premenstrual symptoms was found. These deserve careful evaluation as uncorrected menstrual problems may adversely affect the daily routine and quality of life. This suggests that measures to lessen stress can enhance the menstrual health of adult females, lowering future health risks and enhancing quality of life.

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