THE RELATIONSHIP BETWEEN PREMENSTRUAL SYNDROME, PSYCHOEMOTIONAL STATE, AND DEPRESSIVE SYMPTOMS IN ADOLESCENT GIRLS

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Annotation

Premenstrua

l syndrome (PMS) is one of the most common cyclical disorders observed among adolescent girls and is characterized by a combination of physical, emotional, behavioral, and cognitive symptoms appearing during the luteal phase of the menstrual cycle and disappearing shortly after menstruation begins. During adolescence, when hormonal balance and emotional regulation are still developing, PMS may negatively influence psychological well-being, school performance, social interaction, and quality of life. This study aimed to investigate the relationship between PMS and psychoemotional disturbances, with particular attention to depressive symptoms among adolescent girls. A cross-sectional analytical study was conducted among girls aged 13–19 years using validated clinical questionnaires for PMS severity, emotional state, anxiety, stress, and depression. The results demonstrated that adolescents with moderate and severe PMS showed significantly higher levels of irritability, anxiety, emotional instability, sleep disturbances, and depressive symptoms compared with participants without PMS. The severity of PMS was positively associated with the intensity of depressive manifestations. These findings emphasize that PMS in adolescence should be considered not only a gynecological condition but also an important psychosocial and mental health issue requiring early identification and multidisciplinary management.

Keywords

Premenstrual syndrome, adolescents, depressive symptoms, psychoemotional state, menstrual health, emotional instability, anxiety, adolescent girls, reproductive health, mental well-being.

Introduction

Adolescence represents a sensitive transitional stage between childhood and adulthood accompanied by major endocrine, neurological, psychological, and social changes. In girls, the establishment of regular ovulatory menstrual cycles often requires several years after menarche, making this age group especially vulnerable to menstrual-related disorders. Among these conditions, premenstrual syndrome occupies a leading place due to its high prevalence and significant impact on daily functioning. Premenstrual syndrome refers to a recurrent set of symptoms occurring in the days preceding menstruation. These manifestations may include abdominal discomfort, fatigue, breast tenderness, headache, food cravings, mood swings, irritability, sadness, anxiety, poor concentration, and sleep disorders. While mild symptoms are common, moderate and severe PMS can interfere with educational achievement, family relationships, peer communication, and self-esteem. Recent evidence suggests that PMS is strongly associated with psychoemotional instability and depressive tendencies. Hormonal fluctuations involving estrogen and progesterone may influence serotoninergic and GABAergic neurotransmission, thereby affecting mood regulation. Adolescents are particularly susceptible because emotional coping mechanisms are still maturing and stress resilience is often limited. Depressive symptoms during adolescence are of major public health concern because they may lead to academic decline, social isolation, substance misuse, and suicidal behavior if left untreated. Therefore, identifying potentially modifiable contributors such as PMS is clinically relevant. The aim of the present study was to evaluate the association between premenstrual syndrome severity, psychoemotional condition, and depressive symptoms in adolescent girls.

Materials and Methods

A cross-sectional analytical investigation was carried out among 240 adolescent girls aged 13 to 19 years recruited from secondary schools, colleges, and adolescent outpatient clinics.

Inclusion criteria

Participants were included if they had experienced menarche at least one year previously, reported menstrual cycles ranging from 21 to 35 days during the last six months, and agreed to participate in the study.

Exclusion criteria

Girls with diagnosed endocrine disease, chronic gynecological pathology, severe neurological illness, previously confirmed psychiatric disorders under active treatment, or recent use of hormonal medication were excluded.

Study instruments

Assessment of PMS was performed using the Premenstrual Symptoms Screening Tool (PSST). Psychoemotional condition was evaluated through structured questionnaires covering irritability, mood lability, stress perception, social withdrawal, and sleep quality. Depressive symptoms were measured using the Beck Depression Inventory-II (BDI-II). Additional demographic and menstrual history data were obtained through standardized interviews.

Statistical analysis

Collected data were processed using SPSS software version 26.0. Means and standard deviations were calculated for continuous variables, while frequencies and percentages were used for categorical variables. Group comparisons were performed using chi-square and Student's t-test. Correlation between PMS severity and depressive symptoms was assessed using Pearson's coefficient. A value of $p < 0.05$ was considered statistically significant.

Results and Discussion

Among the 240 participants, symptoms consistent with PMS were identified in 69.6% of respondents. Mild PMS was observed in 36.7%, moderate PMS in 23.8%, and severe PMS in 9.1% of the study population.

Adolescents with PMS reported substantially higher rates of emotional disturbances compared with girls without PMS. Irritability was present in 64.2% of affected participants, emotional lability in 59.8%, anxiety manifestations in 48.5%, sleep problems in 41.3%, concentration difficulties in 46.7%, and social withdrawal in 32.4%. Depressive symptoms showed a clear progressive increase according to PMS severity. Clinically meaningful depressive manifestations were found in 13.9% of participants without PMS, 28.4% with mild PMS, 47.6% with moderate PMS, and 66.1% with severe PMS. Statistical analysis demonstrated a strong positive correlation between PMS score and depression score ($r = 0.63$, $p < 0.001$).

These findings indicate that PMS significantly contributes to psychoemotional burden during adolescence. Several mechanisms may explain this relationship. Cyclical hormonal changes may alter neurotransmitter systems responsible for emotional regulation. Recurrent pain, fatigue, bloating, and sleep disruption may worsen psychological resilience. In addition, adolescents often have insufficient awareness regarding menstrual health and may interpret symptoms as personal weakness, thereby intensifying emotional distress. The results correspond with international literature indicating that moderate and severe PMS are associated with anxiety, depressive mood, reduced self-confidence, absenteeism from school, and impaired social functioning. Since adolescence is a formative period for identity development and mental health, persistent untreated PMS may have long-term psychosocial consequences. The study supports the need for integrated reproductive and psychological screening programs for adolescent girls.

Conclusion and Recommendations

Premenstrual syndrome is highly prevalent among adolescent girls and demonstrates a significant relationship with psychoemotional disturbances and depressive symptoms. As PMS severity increases, emotional instability, anxiety, irritability, fatigue, sleep impairment, and depressive manifestations become more pronounced. PMS should therefore be recognized not only as a menstrual disorder but also as an important adolescent mental health concern. Early diagnosis and timely supportive interventions may substantially improve emotional well-being, educational performance, and quality of life. It is recommended to introduce menstrual health education programs in schools, promote healthy lifestyle measures including regular exercise and balanced nutrition, encourage adequate sleep hygiene, and provide psychological counseling for girls with moderate or severe symptoms. Cooperation between gynecologists, pediatricians, psychologists, parents, and school health specialists is essential. Further longitudinal studies are necessary to clarify biological mechanisms and evaluate long-term outcomes.

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