

Dysmenorrhea and Its Physical, Psychological, and Academic Impact among Adolescent Girls: A Descriptive Cross-Sectional Survey

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Abstract: ***Background:** Dysmenorrhea is common among adolescents and may affect physical comfort, psychological wellbeing, education, and daily activities. **Objective:** To describe menstrual pain severity and duration and examine its physical, psychological, academic, and daily-life impact among adolescent girls. **Methods:** A descriptive cross-sectional survey was conducted using an anonymous online questionnaire. Data from 60 adolescents aged 13–19 years were analysed using frequencies and percentages. Multiple-response items were analysed independently. No inferential statistical tests were performed. **Results:** Moderate pain was reported by 32 participants (53.3%) and severe pain by 14 (23.3%). Lower abdominal cramps (76.7%) and back pain (65.0%) were the most common physical symptoms. Common psychological experiences included mood changes (58.3%), sadness/low mood (53.3%), irritability (46.7%), and anger (46.7%). Menstrual pain affected studies either sometimes or yes for 49 participants (81.7%), and 34 (56.7%) reported missing school or college because of pain. Rest/sleep was the most common coping practice (83.3%), followed by heat application (43.3%). **Conclusion:** Participants reported considerable physical, psychological, academic, and daily-life disruption associated with menstrual pain. Menstrual-health education, supportive educational environments, and access to professional assessment for severe or persistent pain are important. Due to the small, non-probability sample and cross-sectional design, the findings cannot be generalized as population prevalence estimates or interpreted causally.*

Keywords: dysmenorrhea; adolescent girls; menstrual pain; menstrual health; psychological wellbeing; academic impact

1. Introduction

Dysmenorrhea refers to painful menstruation. Primary dysmenorrhea occurs without pelvic pathology, whereas secondary dysmenorrhea is associated with an underlying condition. Among adolescents, menstrual pain may affect physical comfort, emotional wellbeing, concentration, school attendance, and daily activities.

Previous research has reported that dysmenorrhea is common among young women, although estimates vary according to population and measurement methods. Associated symptoms may include abdominal cramps, back pain, fatigue, headache, nausea, dizziness, and emotional changes.

Academic disruption is an important aspect of menstrual health. Pain may contribute to absence from school or college, reduced concentration, and difficulty completing academic activities. However, attendance and academic performance are distinct outcomes.

This study describes the physical, psychological, academic, and daily-life experiences associated with menstrual pain among adolescent girls who completed an anonymous questionnaire

2. Review of Literature

Overall, the available literature indicates that dysmenorrhea in adolescents can involve physical symptoms as well as psychological and academic consequences. Previous studies have examined prevalence, academic disruption, and psychological distress, but the extent and pattern of these experiences may vary according to the population and

measurement methods used. The present study therefore describes the self-reported physical, psychological, academic, and daily-life impact of menstrual pain among adolescent girls aged 13–19 years.

Pramanik and Pramanik (2023) examined the association between psychological distress and primary dysmenorrhea among adolescents living in West Bengal, India. Their work draws attention to the psychological dimension of dysmenorrhea and the possible relationship between menstrual pain and psychological distress. This is particularly relevant to adolescent girls because emotional experiences may occur alongside physical menstrual symptoms and may influence daily functioning.

Evans and Knill (2020) discussed dysmenorrhea in adolescents and emphasized that menstrual pain is a common problem during adolescence. Dysmenorrhea may be accompanied by symptoms such as abdominal pain, back pain, fatigue, headache, nausea, and other discomforts. The adolescent period is therefore an important stage for recognizing menstrual difficulties and providing appropriate menstrual-health education and professional assessment when symptoms are severe or persistent.

Armour et al. (2019) conducted a systematic review and meta-analysis examining the prevalence and academic impact of dysmenorrhea among 21,573 young women. The review highlighted that dysmenorrhea is common among young women and is associated with disruption of educational activities. The findings support the importance of considering menstrual pain not only as a physical complaint but also in relation to academic functioning and everyday life.

3. Aims and Objectives

Aim

- To describe the self-reported physical, psychological, academic, and daily-life impact of menstrual pain among adolescent girls.

Objectives

- To describe menstrual pain severity and duration.
- To identify commonly reported physical and psychological symptoms.
- To assess effects on studies, attendance, and daily activities.
- To describe coping practices used for menstrual pain.

4. Methods

Study Design and Participants

A descriptive cross-sectional survey was conducted using an anonymous online questionnaire. The analysis included 60 adolescent respondents aged 13–19 years. Participants were grouped into 13–14, 15–16, and 17–19 years. The available dataset did not document the recruitment setting or sampling frame; therefore, the sample is considered a non-probability convenience sample.

Study Instrument

The questionnaire collected information on age, age at menarche, menstrual regularity, bleeding duration, family history of painful menstruation, pain severity and duration, physical and psychological symptoms, academic and daily-life impact, and coping practices.

Data Analysis

Frequencies and percentages were calculated. Multiple-response questions were analysed independently, so percentages do not necessarily total 100%. No hypothesis tests or regression analyses were conducted.

Ethical Considerations

The dataset contained no participant names. Ethics approval, consent/assent procedures, institutional permission, and data-security arrangements should be verified and documented before publication.

5. Results

1) Participant Characteristics

Characteristic	n	%
Age 13–14 years	20	33.3
Age 15–16 years	17	28.3
Age 17–19 years	23	38.3
Menarche 11–12 years	37	61.7
Regular menstrual cycle	41	68.3
Bleeding 4–7 days	39	65
Family history of painful menstruation	36	60

2) Pain Severity and Duration

Pain characteristic	n	%
Mild	14	23.3
Moderate	32	53.3
Severe	14	23.3
Pain for 1 day	23	38.3
Pain for 2 days	23	38.3
Pain ≥ 3 days	14	23.3

Overall, 76.7% reported moderate or severe pain.

• Physical Symptoms

The most common symptoms were lower abdominal cramps (76.7%), back pain (65.0%), leg pain (38.3%), fatigue/weakness (31.7%), and headache (30.0%).

• Psychological Experiences

Mood changes were reported by 58.3%, sadness/low mood by 53.3%, irritability and anger by 46.7% each, and anxiety/stress and difficulty concentrating by 25.0% each.

• Academic and Daily-Life Impact

81.7% reported that menstrual pain affected their studies either sometimes or yes.

56.7% reported missing school or college because of pain.

80.0% reported that pain affected daily activities either sometimes or yes.

43.3% described the overall life impact as moderate.

Among those with severe pain, 11 of 14 reported effects on studies and 12 of 14 reported missing school or college. These findings are descriptive and do not establish causation.

• Coping Practices

Rest/sleep was reported by 83.3%, heat application by 43.3%, home remedies by 30.0%, pain medication by 8.3%, and exercise/stretching by 3.3%. The study did not assess the effectiveness or safety of these practices.

6. Discussion

The study found that moderate or severe menstrual pain was common among participants. Lower abdominal cramps and back pain were the predominant physical symptoms. Several psychological experiences, particularly mood changes and low mood, were also reported.

Academic and daily-life disruption was notable, with most participants reporting some effect on studies and many reporting school or college absence. Severe pain was also associated descriptively with greater reported disruption, although the small cross-sectional sample does not permit causal conclusions.

Rest, heat application, and home remedies were the most frequently reported coping practices. Their effectiveness and clinical appropriateness were not assessed.

The findings highlight the importance of menstrual-health education and access to professional assessment for adolescents experiencing severe, persistent, worsening, or functionally disabling menstrual pain.

7. Strengths

- Examined physical, psychological, academic, and daily-life effects.
- Included all 60 available responses.
- Used direct self-reported experiences.
- Clearly distinguished descriptive findings from clinical diagnosis and causal conclusions.

- [2] Evans RH, Knill C. *Dysmenorrhea in the adolescent*. 2020.
- [3] Pramanik P, Pramanik P. *Association of psychological distress with primary dysmenorrhea among adolescents living in West Bengal, India*. 2023.
- [4] Anonymous questionnaire dataset supplied by the investigator.
- [5] Research synopsis supplied by the investigator.

8. Limitations

- Small sample size (n = 60).
- Non-probability sampling and undocumented recruitment setting.
- Self-reported, non-validated measures.
- No clinical examination or diagnostic assessment.
- Cross-sectional design prevents causal conclusions.
- No objective academic or attendance records.
- Ethics and consent procedures require verification.

9. Recommendations

- Provide age-appropriate menstrual-health education in schools and colleges.
- Ensure access to professional assessment for severe or persistent pain.
- Develop supportive and non-stigmatizing approaches to menstrual-related absence.
- Use validated pain and psychological wellbeing measures in future research.
- Recruit larger and clearly defined samples.
- Include objective attendance or academic indicators where feasible.
- Conduct longitudinal studies across multiple menstrual cycles.

10. Conclusion

This survey of 60 adolescent respondents identified substantial self-reported physical, psychological, academic, and daily-life impact associated with menstrual pain. Moderate or severe pain was reported by 76.7% of participants, while lower abdominal cramps and back pain were the most common physical symptoms. Mood changes and low mood were common psychological experiences, and 81.7% reported that pain affected their studies either sometimes or yes. More than half reported missing school or college because of pain.

The findings support the need for menstrual-health education, supportive educational environments, and appropriate professional assessment. However, the small non-probability sample, self-reported measures, and cross-sectional design limit generalizability and prevent causal interpretation.

References

- [1] Armour M, et al. *The prevalence and academic impact of dysmenorrhea in 21,573 young women: A systematic review and meta-analysis*. 2019.