

IMPACT OF PRIMARY DYSMENORRHEA ON DAILY LIFE IN MEDICAL STUDENTS
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ABSTRACT

Background: Primary dysmenorrhea, characterized by menstrual pain without an underlying medical condition, is a prevalent issue among young adults, particularly medical students. Despite its high occurrence, its impact on daily life remains underexplored, especially in academic settings. **Objective:** This study aims to assess the prevalence, severity, and consequences of primary dysmenorrhea among medical students at KIMS RF. It evaluates the physical, emotional, academic, and social effects of dysmenorrhea, along with coping strategies employed by affected individuals. **Methodology:** A cross-sectional study was conducted among medical students at KIMS RF. Participants were selected using a convenience sampling method. Data were collected through face-to-face interviews using a semi-structured questionnaire. Statistical analysis was performed using IBM SPSS version 20, employing descriptive statistics and chi-square tests for significance testing. **Results:** The study found that 96% of students experienced dysmenorrhea, with 88% reporting moderate to severe pain. Among them, 47% faced difficulty performing daily activities, while 72% struggled with academic concentration, potentially affecting their academic performance. Additionally, menstrual pain contributed to absenteeism, reduced participation in social activities, and emotional distress. **Discussion:** The findings align with previous studies, highlighting the significant negative impact of dysmenorrhea on students' quality of life. Common coping mechanisms included medication, heat therapy, dietary modifications, exercise, and relaxation techniques. Psychological distress was also prevalent, underscoring the need for mental health support. **Conclusion:** Primary dysmenorrhea considerably affects students' academic performance, social interactions, and emotional well-being. Raising awareness, improving management strategies, and integrating mental health support into healthcare services are essential for mitigating its impact. Future research should focus on long-term effects and culturally sensitive treatment approaches to better address the needs of individuals experiencing dysmenorrhea.

KEYWORDS: Primary dysmenorrhea, menstrual pain, medical students, academic performance, quality of life, coping strategies.

1. AIM AND OBJECTIVES

Aim

To investigate how primary dysmenorrhea affects the daily lives of young adults, with a focus on its impact on physical, emotional, academic, and social well-being.

Objectives

1. To determine the prevalence and severity of primary dysmenorrhea among medical students.
2. To assess the physical effects of dysmenorrhea, such as pain, fatigue, and discomfort, on daily activities.
3. To explore the emotional and psychological consequences, including stress, anxiety, and mood fluctuations.
4. To evaluate the impact on academic performance and productivity, including absenteeism and difficulties with concentration.

5. To examine the social effects, such as participation in social activities and relationships.
6. To offer recommendations for improved management and awareness of dysmenorrhea to enhance quality of life.

2. INTRODUCTION

Primary dysmenorrhea, or menstrual cramps, is a common condition that numerous youthful grown-ups experience, especially those in their reproductive times. It involves pain in the lower tummy and is frequently accompanied by symptoms like headaches, nausea, fatigue, and mood changes. Generally, this condition occurs without any beginning health problems and is linked to hormonal changes and uterine condensation.

Although it's a wide issue, primary dysmenorrhea can have a significant impact on everyday life, affecting academic performance, work productivity, social relations, and emotional well-being. Numerous people find it hard to concentrate, miss academy or work, or struggle to engage in physical and social conditioning due to the pain. The inflexibility of the symptoms can vary, but for some, it can be so violent that it disrupts their overall quality of life.

It's important to understand how primary dysmenorrhea affects diurnal conditioning so that we can raise mindfulness, ameliorate operation ways, and support better health issues. This exploration will look at the physical, emotional, academic, and social challenges faced by those with this condition, as well as how they manage with it. The thing is to gather perceptivity that can help develop better strategies and support systems to minimize the impact of menstrual cramps on people's lives.

3. REVIEW OF LITERATURE

Primary dysmenorrhea is a common condition that significantly impacts a large proportion of young adults, especially females, with varying effects on their daily lives. Numerous studies have examined its consequences, spanning physical, psychological, academic, and social domains. This review compares key studies to identify similarities, differences, and research gaps on the subject.

Prevalence and Severity

The prevalence of primary dysmenorrhea varies across studies, although most report high rates among young adults. Ju et al. (2014) found that up to 80% of adolescent girls experience menstrual pain, a figure that aligns with Ortiz et al. (2009), who reported a prevalence of 85% among high school students in Mexico. However, Schoep et al. (2019), in a global survey of 42,879 women, noted that while dysmenorrhea is common, its severity differs considerably based on geographic, socioeconomic, and lifestyle factors. These differences suggest that more research is needed to understand how cultural and environmental factors influence the experience of menstrual pain.

Physical and Psychological Impact

All studies agree that dysmenorrhea has significant physical and psychological effects. Harel (2006) and Dawood (2006) describe primary dysmenorrhea as a leading cause of recurrent pelvic pain, fatigue, nausea, and headaches, which disrupt daily activities. Similarly, Bajalan et al. (2019) link menstrual pain to higher levels of stress, anxiety, and depression, which is consistent with findings by De Sanctis et al. (2015), who emphasize the emotional toll of severe menstrual pain. Although most research highlights these effects, some studies, like Schoep et al. (2019), suggest that education on menstrual health could help reduce the psychological impact of dysmenorrhea.

Impact on Academic and Work Performance

Several studies emphasize the academic difficulties caused by dysmenorrhea. Ortiz et al. (2009) and Schoep et al. (2019) report high absenteeism rates and reduced concentration among students due to menstrual pain. Ju et al. (2014) further supports these findings, noting that menstrual discomfort often leads to poorer academic performance. However, while many studies focus on students, few examine the impact on young professionals. Schoep et al. (2019) mention workplace absenteeism but do not explore the long-term effects on career progression and job performance, suggesting a gap in research regarding the effects of dysmenorrhea on professional life.

Social and Lifestyle Implications

Research consistently shows that primary dysmenorrhea affects social life, with many young adults withdrawing from activities due to pain. Ortiz et al. (2009) found that participation in sports and recreational activities significantly declines among those with severe dysmenorrhea. Bajalan et al. (2019) also note that menstrual pain leads to social isolation and emotional distress. However, De Sanctis et al. (2015) point out that the social impact of dysmenorrhea varies by culture. In societies where menstruation is openly discussed, individuals may receive better support, while in more conservative environments, stigma and lack of awareness can exacerbate the social consequences. This highlights the need for further research into cultural perspectives on dysmenorrhea.

Coping strategies

There is a wide range of coping mechanisms reported, with most studies acknowledging the common use of medication and lifestyle changes. Dawood (2006) and Harel (2006) agree that NSAIDs are the most effective pharmacological treatment. Meanwhile, Bajalan et al. (2019) and De Sanctis et al. (2015) emphasize the benefits of non-pharmacological approaches, such as exercise, dietary adjustments, and stress management. Schoep et al. (2019) also suggest that menstrual health education can empower individuals to manage their symptoms more effectively. This points to the growing recognition of holistic approaches in managing dysmenorrhea.

4. MATERIALS AND METHODOLOGY

Study design: This study employed a community-based cross-sectional design.

Study participants: The participants of the study were medical students.

Study setting: The study was conducted at KIMS RF.

Sample size: All medical students enrolled at KIMS RF were included in the study.

Sampling technique: Convenience sampling was used to select participants.

Inclusion criteria

- All medical students aged between 18 and 30 years currently enrolled at KIMS RF.

Exclusion criteria

1. Students who did not provide consent for participation.
2. Students who were mentally incapacitated and unable to communicate effectively.
3. Students with pre-existing gynecological conditions.

Data collection procedure: Data was collected through face-to-face interviews using a pre-designed, semi-structured questionnaire. Prior to data collection, informed consent was obtained from all participants.

Confidentiality: All participant details were kept confidential throughout the study. Only summarized data was used when reporting results.

Ethical considerations: Approval for the study was obtained from the Institutional Ethics Committee. Informed consent was acquired from all participants prior to their involvement in the study.

Data Analysis and Interpretation: Data was entered into a Microsoft Excel spreadsheet. Statistical analysis and summarization were performed using IBM SPSS Software version 20 (licensed). Descriptive statistics, including frequency, percentage, mean, standard deviation, and chi-square tests, were used for data analysis.

5. RESULTS**Age distribution of participants**

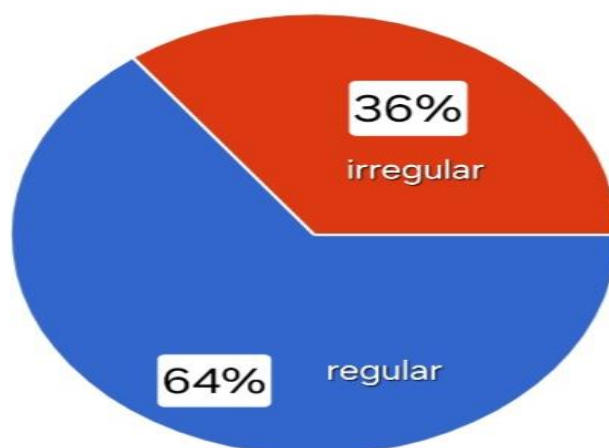
age				
	Frequency	Percent	Valid Percent	Cumulative Percent
<20	8	8.0	8.0	8.0
20-22	11	11.0	11.0	19.0
Valid 22-24	63	63.0	63.0	82.0
>24	18	18.0	18.0	100.0
Total	100	100.0	100.0	

Out of 100 students, the majority (63) belong to the age group of 22 to 24 years, while the least number of students (8) are under 20 years of age. The mean age of

the students is 23 years, with the median age and mode being 24 years. The standard deviation of the students' ages is 1.8722.

Menstrual cycle regularity by age

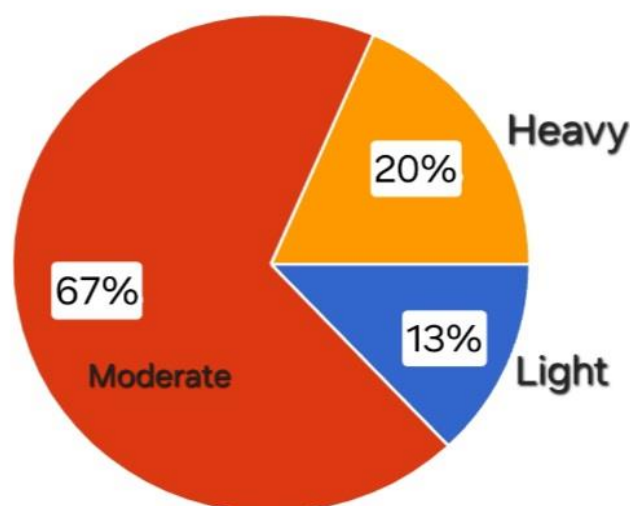
		Frequency of periods	
		1) regular.	2) Irregular
		1.0	2.0
		Count	Count
age	<20	4	4
	20-22	5	6
	22-24	43	20
	>24	12	6



Most students (64%) have regular menstrual cycles, with the majority falling within the 22 to 24-year age group.

In contrast, 36% of students experience irregular cycles. The chi square value for this is 2.87 and $p = 0.41$.

Menstrual flow



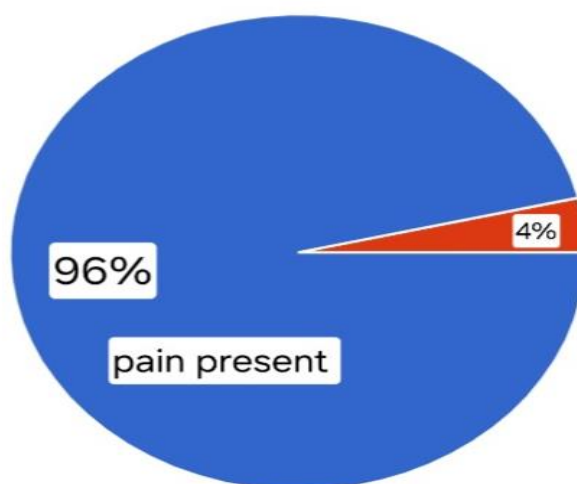
Age	Bleeding during periods		
	1) light.	2) Moderate.	3) heavy
	1.0	2.0	3.0
	Count	Count	Count
<20	2	6	0
20-22	0	9	2
22-24	9	38	16
>24	2	14	2

In our study we observe that During menstruation, the majority of students (67%) experience moderate flow, while fewer students (13%) have light flow. 20% of

students report heavy flow. The chi square value for this is 6.86 and $p = 0.33$.

Dysmenorrhea (Pain during periods)

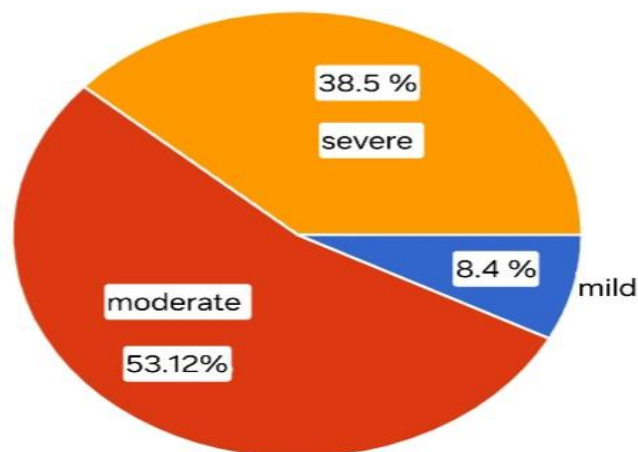
Age		Pain during periods	
		1) yes. 2) no	
		1.0	2.0
		Count	Count
a	<20	8	0
	20-22	11	0
	22-24	59	4
	>24	18	0



Dysmenorrhea is common among most students, with 96% experiencing pain during menstruation. The chi square value for this is 2.44 and $p = 0.48$.

Pain severity

		If present , severity of pain		
		1)Mild. 2) Moderate. 3) heavy		
		1.0	2.0	3.0
		Count	Count	Count
age	<20	0	4	4
	20-22	0	7	4
	22-24	2	36	21
	>24	6	4	8

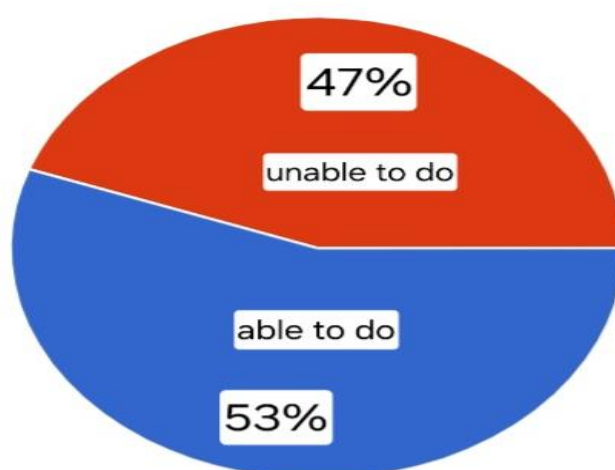


Out of 96 students, 37 students report severe pain, 51 report moderate pain, and 8 report mild pain. The chi

square value for this is 21.56 and p value is 0.001 which states significant as the p value is less than 0.005.

Impact on daily routines

Age	Are you able to do your daily routines	
	1) yes.	2) no
	1.0	2.0
	Count	Count
<20	2	6
20-22	5	6
22-24	36	27
>24	10	8

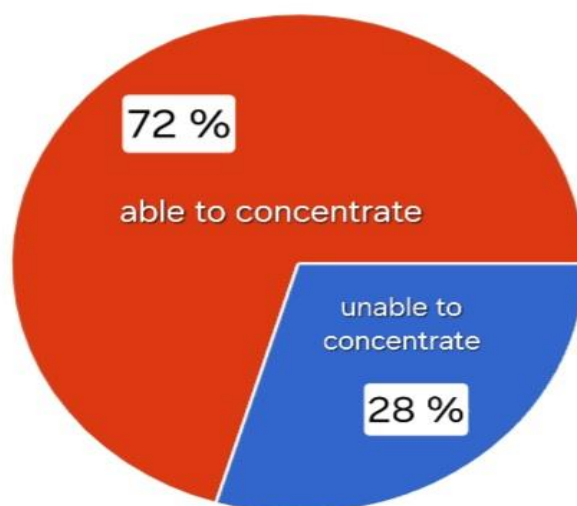


Nearly half of the participants (47%) report being unable to carry out their daily activities due to menstrual symptoms, possibly caused by pain, psychological

symptoms, or societal factors. The chi square value for this is 3.25 and p value is 0.35.

Concentration on studies

Age	Are you able to do your daily routines	
	1) yes.	2) no
	1.0	2.0
	Count	Count
<20	2	6
20-22	5	6
22-24	36	27
>24	10	8



A significant portion of students (72%) report being unable to concentrate on their studies, which may negatively affect their academic performance and there also maybe absenteeism for lectures or academic sessions. The chi square value for this is 2.72 and the p value is 0.43.

The majority of the students (63%) are in the age group of 22-24 years. Regular menstrual cycles are more common than irregular cycles, with 64% of students reporting regular cycles. Moderate menstrual flow is the most common, experienced by 67% of students. Dysmenorrhea is widespread, with 96% of students experiencing pain, and the pain is mostly moderate or severe. Many students (47%) report being unable to perform their daily activities during their menstrual period, and 72% of students struggle to concentrate on their studies, which could affect their academic performance.

6. DISCUSSION

This study aimed to explore the impact of dysmenorrhea on the quality of life in young adult women. The findings indicate a high prevalence of dysmenorrhea among young adult women, with 96% of students reporting symptoms. This prevalence is consistent with a similar study conducted in Madhya Pradesh, where 84.2% of girls experienced dysmenorrhea. Another study among Spanish female university students found 76.5% of participants reported symptoms of dysmenorrhea.

In our study, 64% of students reported having regular menstrual cycles, while 36% had irregular cycles. A similar study in Japan showed that 78.5% of females had regular menstrual cycles with moderate flow.

Several studies have suggested that the amount of blood loss during menstrual cycles can influence the severity of dysmenorrhea. Our study found that 20% of students

experienced heavy menstrual flow, while 67% had moderate flow. Prostaglandins, which are associated with both menstrual flow and dysmenorrhea, can disrupt the endometrial homeostasis, leading to heavier flow. These prostaglandins may also affect platelet aggregation and coagulation factors, contributing to increased menstrual flow.

The study also observed that 96% of students reported experiencing pain during their menstrual cycle, with 88% of them experiencing moderate to severe pain. This aligns with a study by A. Unsal, which found that 66.2% of female university students reported moderate to severe pain. To cope with this pain, many students resort to various strategies, including:

1. Pain relief

- **Heat therapy:** Using a heating pad or warm water bottle on the abdomen to relax muscles and ease cramps.
- **Pain relievers:** Over-the-counter medications like ibuprofen or naproxen can alleviate pain.
- **Massage:** Gentle massage with essential oils (e.g., lavender or clary sage) can help relieve cramps.

2. Diet & Hydration

- **Staying hydrated:** Drinking warm herbal teas (e.g., ginger or chamomile) or plain water can reduce bloating.
- **Eating anti-inflammatory foods:** Foods such as bananas, dark chocolate, nuts, and leafy greens are helpful.
- **Avoiding caffeine and processed foods:** These can worsen bloating and mood swings.

3. Exercise & Movement

- **Light exercise:** Activities such as yoga, stretching, or walking improve circulation and relieve cramps.
- **Breathing exercises:** Deep breathing or meditation techniques promote relaxation and enhance pain tolerance.

4. Emotional Well-being

- **Self-care:** Activities like taking warm baths, reading, or listening to music can help with relaxation.
- **Social support:** Sharing feelings with friends, family, or support groups can reduce stress and provide comfort.

5. Sleep & Rest

- **Prioritizing sleep:** Ensuring sufficient rest can help mitigate mood swings and cramps.
- **Finding a comfortable sleeping position:** Lying on one's side with a pillow between the legs may reduce discomfort.

6. Herbal & Natural remedies

- **Ginger or turmeric tea:** Known for their anti-inflammatory and pain-relieving properties.
- **Peppermint tea:** Aids in alleviating bloating and digestive discomfort.

During menstruation, women often find it difficult to carry out their daily activities due to pain, psychological symptoms, or myths surrounding menstruation. In our study, 47% of students reported difficulty completing their daily activities during menstruation, while 53% were able to manage. Similarly, a study by Komal Atta and colleagues found that 64% of girls had difficulty performing daily activities during their periods. Another study by Nayesha Mahwish and colleagues at a medical and health science university found that 14.7% of students experienced severe restrictions on their daily activities due to menstrual pain, with others using various coping strategies.

Dysmenorrhea is a significant public health issue, particularly among female university students, as it affects their social lives and academic attendance. In our study, 72% of students reported difficulty concentrating on their academic work during their menstrual periods, which can result in lower academic performance. Similarly, a study at a medical and health science university revealed that more than 50% of female students missed classes or academic sessions due to menstrual pain, with 85.7% experiencing difficulty concentrating, 75% unable to participate actively in class, and 75% struggling with their study plans.

Research at Umm Al-Qura University in Saudi Arabia found that 83.7% of female students experienced primary dysmenorrhea, with 75.5% reporting decreased productivity during menstruation, and 76.3% experiencing emotional distress. Similarly, a study conducted at Haramaya University in Ethiopia reported that 74.7% of students with dysmenorrhea experienced negative effects on their academic performance. This included difficulty studying (92.1%), loss of concentration in class (86.1%), inability to complete homework (80.8%), reduced participation in class (54.9%), and absenteeism (27.1%). Dysmenorrhea also impacted students' personal and social lives, contributing to mood disorders, sleep disturbances, and limitations in daily activities.

7. CONCLUSION

Research consistently highlights the wide-ranging effects of primary dysmenorrhea on various aspects of life, including physical functioning, emotional well-being, and academic performance. Our study found that pain intensity, along with psychological factors such as depression, anxiety, and irritability, significantly contribute to the severity of symptoms. These factors collectively lead to a considerable negative impact on students' educational outcomes, daily activities, social interactions, and overall physical and psychological health.

This underscores the need for heightened attention to the condition, especially in educational and healthcare settings. It is essential to prioritize training for primary care physicians in the effective management of primary

dysmenorrhea. Additionally, the strong correlation between primary dysmenorrhea and elevated rates of depression calls for the integration of mental health support into the treatment and care of those affected. Implementing mental health screenings for individuals with dysmenorrhea should be considered, ensuring comprehensive care in primary healthcare settings.

Future research should focus on longitudinal studies to explore the long-term academic, social, and emotional impacts of dysmenorrhea. Furthermore, developing culturally sensitive and effective treatment protocols is essential to better address the diverse needs of individuals experiencing this condition.

8. LIMITATIONS

Our study was conducted at a single university with a limited number of participants, so the findings may not accurately reflect the entire district or province. Collecting statistical data from a larger group would provide a more comprehensive understanding of the factors contributing to dysmenorrhea. Another limitation is that, since this was a cross-sectional survey, we could not establish cause-and-effect relationships between variables, requiring further research. Additionally, self-reporting may have led to bias, as some participants might have underreported their symptoms.

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