

Frequency and Severity of Premenstrual Syndrome among Undergraduate Medical Students

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Abstract

Objective: To find out the frequency and to assess the degree of severity of premenstrual syndrome among undergraduate medical students

Methods: Methods: It is a Cross-Sectional Study conducted in 161 female Students of Allama Iqbal Medical College of 1st year to final year who voluntarily consented for participation. PMS and its severity was diagnosed on the basis of a modified DRSP scale: mild if the score is 50-85, moderate if the score is 86- 120 and severe if the score is >120. Females having irregular periods or any organic pathology and those using hormonal contraception or any medication were excluded. Data was analyzed by SPSS version 23. Frequency, percentage charting was expressed for variables like presence of PMS and severity of PMS. Quantitative variables like age and BMI were expressed by Mean±S.D. Data was stratified for age, BMI, year of study, living status and marital status to deal with effect modifiers. Test of significance was applied i.e chi-square. A p-value ≤0.05 was considered significant.

Results: Subjects ranged between 18-25 years with mean age of 19.9±2.1 years. Majority of the students were between 18-20 years. Mean BMI was 19.9±1.9 kg/m². Mean year of study was 2.4±1.3 year. Out of 161 subjects, 53 (32.9%) were living with parents while remaining 108 (67.1%) were far from parents. Married students were 10 (6.2%). Premenstrual syndrome was found to be in 31 females (19.2%), mild 4.3%, moderate 8.1% and severe 6.8%, and severity was more in 4-5 years students, p-value was found significant with variable years of study (p-value= 0.095).

Conclusion: PMS was found in 19.2% of undergraduate medical students. Early recognition and timely management can improve the quality of performance among undergraduates.

Key Words: DRSP scale, Premenstrual syndrome, Undergraduates

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Introduction

Definition of PMS varies over the years because of its unknown etiology and its related symptoms complex. Globally Physicians are having different opinions about this malady.¹ Reproductive age women often experience repeated psychological, physical and behavioral complexities occurring in second half of cycle and vanish by the end of menstruation.² These symptoms really interfere with

household, social, and workplace activities, interpersonal and even the sexual functioning of a woman, which are not related to any organic or functional ailment.³ Some degrees of premenstrual problems are experienced by even younger girls in initial years following menarche. Many Studies depicts that around 80% of women may experience some of premenstrual symptoms in their reproductive age.⁴ When it is very severe, premenstrual syndrome is called as premenstrual dysphoric disorder (PMDD). The psychological symptoms are anger, frustration, emotional liability, depression and apprehension. Physical symptoms include weight gain, swelling, breast pain, headache, dizziness, and tingling sensations, so that psychiatric and endocrinal disorders must be checked before labelling a women PMS. Symptomatology which is triggered by ovulation, appears about one week before the start of periods and

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vanishes immediately after the start of periods.⁵ Due to the severity of symptoms and its prolonged history it is associated with long term effects on the emotional health, relationships and impairment in work. Women suffering PMS report significant family disharmony, inability to perform at workplace along with frequent absence from work, school, or college. Very few Data is available on PMDD in young girls.⁶ In a study, it was concluded that, the prevalence of premenstrual syndrome was 39.6%. The distribution of severity of symptoms was minimal 2.5%, mild 27.5%, moderate 42.5%, severe 25% and extreme 2.5%.⁷ In another study, prevalence of PMS was found around 18.4% and moderate to severe PMS was found in 14.7%.⁸

Results

Subjects ranged between 18-25 years with mean age of 19.9±2.1 years. Majority of the students were between 18-20 years. Mean BMI was 19.9±1.9 kg/m².

Table 1: Demographic Profile of Subjects

Variables n = 161	Frequency	Percentage %	
Age Mean = 19.9±2.1	18 – 20	109	67.7
	21—25	52	32.3
BMI Mean = 19.9±1.9	≤18	26	16.1
	≥18. 1	135	83.9
Year of study	1-3 Years	125	77.6
	4-5 Years	36	22.4
Living Status	Parental House	53	32.9
	Independent/Boarding	108	67.1
Marital Status	Single	151	93.8
	Married	10	6.2
Pre Menstrual Syndrome	Yes	31	19.2
	No	130	80.8
Severity of Pre Menstrual Syndrome	Normal	130	80.8
	Mild	7	4.3
	Moderate	13	8.1
	Severe	11	6.8

Mean year of study was 2.4±1.3 year. Out of 161 subjects, 53(32.9%) were living with parents while remaining 108(67.1%) were far from parents. Married students were (6.2%) n=10. **(Table -1)** Premenstrual syndrome was found in 31 females (19.2%), mild 4.3%, moderate 8.1% and severe 6.8% **(Table-2)**. Stratification for age, BMI, year of study and marital status was also done **(Table-2)** and p-value was found significant in 4-5 years of study (p-value= 0.095).out of total 125 students of 1-3 years

Table 2: Pre Menstrual Syndrome & Independent Variables Cross Tabulation

Variables	Pre Menstrual Syndrome			Total	P Value	
	Mild	Moderate	Severe			
Age	18-20	6	8	6	20	0.386
	21-25	1	5	5	11	
	Total	7	13	11	31	
BMI (Kg/m ²)	≤18	1	1	1	3	0.890
	≥18. 1	6	12	10	28	
	Total	7	13	11	31	
Year Of Study	1-3	7	10	6	23	0.095*
	4-5	0	3	5	8	
	Total	7	13	11	31	
Marital Status	Single	7	10	11	28	1.00
	Married	0	3	0	3	
	Total	7	13	11	31	

PMS was found I 23 students (18.4%) and out of 36 students of 4-5 years it was found in 8 students (22.2%). Out of those 8 students In 4-5 years 5 had severe and 3 had moderate PMS. **(Table-2)**

Discussion

Many women in their reproductive age may experience physical or emotional symptoms before the start of periods. Amongst these, some are so badly affected that it impairs their mental and physical health, relationships, and quality education.⁹ It is also observed that premenstrual syndrome (PMS) exists more among single women, between 35-44 years, and in women of low income groups living in deprived areas.^{10,11} Multiple risk factors are revealed with PMS in several studies, including age, stress, marital status and body mass index. These risk factors were found to worsen the manifestations.¹² A significant number of women in Pakistan experience PMS but they don't come up with this idea of suffering a disorder.¹³ In our country, menstruation and related feminine issues are taken as taboos and women are forced to accept that PMS is not a significant issue to be talked about or to seek advice for, even if it adversely affect their lives.¹³ PMS is a symptom complex of physical and psychological symptoms appearing prior to the onset of periods and resolves with the onset of menstruation or within few days of menstruation.¹⁴ Our sample is comparable with past similar studies, and the mean age of all participants is 19.9±1.6 years and the majority of them are urban resident and single. The participants from previous studies were also from similar age group college students, had urban residence, and were unmarried.¹⁵⁻¹⁸ In current study,

the frequency of PMS is 19.2% (14.9% for moderate to severe PMS and 4.3% for mild) among undergraduate medical students. It is in agreement with the study done by Rapkin and Mikacich¹⁹ and other studies from Asian countries among this population.²⁰ This finding is also consistent with two other studies BY lentz & parry.^{21,22} The prevalence of severe and mild PMS in this study is not in agreement with the study by Steiner et al who reported 21.3% and 8.3%, respectively, and also differs from study by Chayachinda et al²³ who reported 25.1% PMS among Thai nurses. The lower prevalence in our study can be explained by influence of cultural norms, social factors, peer experiences, local practices and life stresses about menstruation in Pakistani context which affects both experiencing and reporting of the premenstrual symptoms.

In present study no statistically significant relationship was established amongst subjects in relation to age, BMI, marital status and living conditions, which is in consistent with study of Nour Bkhashani et al,¹⁶ except age which showed higher prevalence in younger 18-20 years, which may be because in present study sample size smaller for that study.

Limitations and Challenges

This study only reflects one medical institute and such more studies should be conducted in other educational systems to better understand the true picture of existing data for this disorder and to establish the triggering factors and available management options. Another limitation of present study is use of subject's self-reported data due to which there is possibility of higher expression of disorder amongst subjects.

Conclusion

In conclusion, PMS was found in 19.2% of undergraduate medical students of government medical college of Pakistan. Frequency and severity of PMS was more in 4th and final year students. Worldwide it is a common problem and awareness about the existence of this medical problem and early recognition along with timely management, among undergraduates the quality of their performance can be improved.

Conflict of Interest: None

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Authors Contribution

YS: Data Compilation, Writing

BB: Data Analysis

FA: Data Collection

ZA: Expert Advice