

Pre menstrual Syndrome In Undergraduate Medical Students: Hostellers Versus Day-scholars

Sughra Abbasi, Amber Tufail, Jawaher Kalyar, Nikhat Ashraf Ahsan

ABSTRACT

Objective To find out frequency of pre menstrual syndrome (PMS) and its impact on undergraduate medical students living in hostels in comparison with day-scholars.

Study design Cross sectional study.

Place & Duration of study Baqai Medical University Karachi, from October 2014 to December 2014.

Methodology A group of 100 were selected for the study. Stratified random sampling technique was used to gather meaningful information from the students. Quantitative design was used to acquire data. Chi square and Fisher Exact tests were used for analysis.

Results The mean age of the selected females was $21.48 + 1.761$ year. Among a large array of variables, 24 were found significant in the study. This included dysmenorrhea, muscle pain, bloated sensation, breast swelling and joint pain.

Conclusion The hostellers were more likely to develop PMS related symptoms in comparison with day-scholars.

Key words Premenstrual syndrome, Hostellers, Medical students, Menstrual disorders.

INTRODUCTION:

Premenstrual syndrome is a multi-symptomatic disorder characterized by the cyclic recurrence of symptoms during the luteal phase of menstrual cycle and resolves quickly at or during few days (7-14 days) of the onset of menstruation.¹⁻³ Menstruation is a normal phenomenon which is an important indicator of women's health. Up to 85% of menstruating women report having one or more symptoms. Premenstrual dysphoric disorder (PMDD) is a severe psycho-affective variant of PMS with a prevalence of 3% to 8% in fertile women.⁴

PMS has been variably defined by various organizations. WHO's International Classification of

Disease (ICD-10) requires one symptom to be present from a range of physical and emotional symptoms for its diagnosis. The DSM-IV criteria defines PMS as a separate entity. It must occur in the last week before the start of menstrual cycle and remits within a few days of the onset of menses; the symptoms must also be severe enough to interfere with work, family and social relationship. At least four symptoms, including at least one of the major dysphoric symptoms out of a list of eleven must be present.⁵⁻⁷ The American College of Obstetrics and Gynecology (ACOG) requires at least one of the six affective and one of the somatic symptoms reported five days prior to the onset of menses in prior three cycles and cease within four days of the onset of menses.⁸

Correspondence:

Dr. Sughra Abbasi
Baqai Medical University
Karachi
E mail: drsughra33@yahoo.com

Pathophysiology of PMS remains unknown and may be complex and multifactorial. The role of ovarian hormones is unclear given that circulating sex hormone levels are typically normal in women with

PMS. Changes in hormone levels may influence neurotransmitters such as serotonin. An enhanced sensitivity to progesterone combined with underlying serotonin deficiency may play a role in this condition.² Other researchers suggest that an infectious / inflammatory condition of the ovaries, uterus or other organs could be the origin of this clinical picture, as cell mediated immunity decays after ovulation to protect the implanting embryo. A recent study correlates the severity of some PMS symptoms with the level of certain inflammatory mediators.⁹

This disorder is particularly common in the younger age groups and, therefore represents a significant public health problem in young girls.¹⁰ It was found to be more prevalent in educated women due to increased degree of awareness. Medical students have more stressful life.⁹ This study was carried out to assess the frequency of PMS among medical students, to find out the PMS severity and impact of added stress like away from home on occurrence and degree of its severity.

METHODOLOGY:

This was a cross sectional study conducted at Baqai Medical University from October 2014 to December 2014. In it information was collected from the respondents only once, without altering the environment. Stratified sample of 100 MBBS students was selected. A survey technique was used. The study hypothesis was that hosteller students were more likely to develop pre menstrual symptoms as compared to day-scholars. Survey form included number of variables. Data was entered into SPSS software and analyzed. Chi square and Fisher Exact test were used to find out significance where applicable. The level of significance was set at p value <0.05.

Questionnaires gathered information about psychological symptoms and physical symptoms. During the research study, ethical code of conduct was strictly followed. Informed consent was taken. Privacy was maintained and data kept confidential.

RESULTS:

There were a total of 100 students included in the study. Among the sample, fifty two students lived in hostel, while 48 students lived with their families. The age range was from 18 year to 25 year with the mean age of 21.48 + 1.761 year. The mean age of menarche was 13 + 1.393 year. Most of the females in both the groups were unmarried. Most (86%) of the females of the sample experienced moderate menstrual flow. Family history of pain was present in 40 females. The frequency of symptoms and their

statistical significance is given in table I.

DISCUSSION:

Premenstrual syndrome is a common disorder. Earlier researches have indicated that almost 200 types of symptoms could be observed in females during this period. These usually affect their lives widely including daily activities. However, not every woman develop same type of symptoms during their menstrual periods.¹¹ Despite the prevalence of the disorder and availability of the treatment, many lay people and even professionals are not aware of it. This may have an impact on the individual and their family.^{12,13}

In this study pre menstrual symptoms were present in both the groups but 80% females of hostel group had more severe dysmenorrhea while in other group it was reported in 54%. Previous studies on the impact of menstrual symptoms on working women and housewives revealed that educated women were more prone to PMS due to awareness.¹⁴ However in current study both the groups were of same educational level. A study from India addressing frequency of menstrual disorders in young hostellers only, concluded that hostellers' lives are badly affected by the dysmenorrhea. It was reported in 47.02% of the study participants.¹⁵ The results of our study are similar to these findings. The difference in our study group was that students were not only hostellers but also undergraduate medical students. Due to increasing awareness dysmenorrhea was more common in both the groups.

Among the respondents from present study depression has been reported frequently. In some it was exaggerated to the extent of suicidal intentions. Of these 71% belonged to the hostel group. This is a serious issue and demand provision of counseling services and treatment where indicated. This is detailed in table II.

Suicidal tendency was reported in extreme cases by other researchers as well.¹⁶ Among various variables, muscle pain and headache were more common in hostellers. In 45% females who lived with their families complaint of muscle pain (table III & IV). On the contrary, this figure was 71% for hostellers. In Indian research, only 39.22% females had this complaint. This may be attributed to the dietary status of the women living in hostels. Cyclic fluctuations of micronutrients, mainly calcium and vitamin D are suggested in previous studies as an explanation to PMS.^{17,18}

Out of various symptoms, depression, anger, rejection sensitivity, headache, muscle pain, joint

Table I: Frequency of Pre menstrual Symptoms

Variables	Hostellers (n - %)	Day-scholars (n - %)	p value
Menstruation Cycle (Infrequent)	3 (5%)	3 (6%)	0.13
Menstruation flow (severe)	4 (7%)	6 (12.7%)	0.533
Premenstrual Pain (Yes)	28 (52.8%)	29 (61.7%)	0.323
Pain Affecting life	26 (49.06%)	21 (44.7%)	0.336
Dysmenorrhea (Yes)	42 (79.24%)	26 (55.32%)	0.009*
Dysmenorrhea (Severe)	6 (11.32%)	5 (10.63%)	0.012*
Depressed (Yes)	48 (90.6%)	33 (70.21%)	0.017*
Anger (Yes)	47 (88.68%)	30 (63.83%)	0.044*
Irritable (Yes)	43 (81.13%)	32 (68.08s%)	0.492
Keyed up (Yes)	21 (60.38%)	23 (48.94%)	0.268
Mood Swings (Yes)	43 (81.13%)	36 (76.59%)	0.911
Anxious (Yes)	35 (66.04%)	32 (68.09%)	0.265
Sad (Yes)	30 (56.60%)	24 (51.06%)	0.211
Sensitive to Rejection (Yes)	38 (71.7%)	20 (42.55%)	
Lack of Concentration in Class (Yes)	25 (47.12%)	11 (23.40%)	0.011*
Lethargic (Yes)	26 (49.06%)	17 (36.17%)	0.033*
Crying (Yes)	36 (67.92%)	21 (44.68%)	0.031*
Out of Control (Yes)	8 (15.1%)	2 (4.2%)	0.041*
Decreased Alertness (Yes)	31 (58.49%)	15 (31.91.%)	0.007*
Trouble Concentration in Class (Yes)	29 (54.71%)	11 (23.40%)	0.001*
Inefficiency at work or home (Yes)	32 (60.38%)	22 (46.81%)	0.026*
Worthless feelings (Yes)	31 (58.5%)	16 (34.04%)	0.045*
Panic Attacks (Yes)	46 (86.8%)	22 (46.8%)	0.000*
Less interest in routine Activities (Yes)	53 (98.15%)	38 (80.85%)	0.000
Tearing (Yes)	37 (69.81%)	28 (59.57%)	0.387
Food Cravings (Yes)	40 (83.01%)	33 (70.21%)	0.684
Increase Appetite (Yes)	44 (83.02%)	33 (70.21%)	0.517
Tiered (Yes)	38 (31.7%)	27 (62.8%)	0.129
Fatigued (Yes)	29 (54.71%)	11 (23.40%)	0.194
Hypersomnia (Yes)	18 (33.96%)	5 (10.64%)	0.047*
Overwhelmed Unable to cope (Yes)	10 (18.87%)	24 (51.06%)	0.012*
Breast Swelling (Yes)	32 (60.38%)	12 (25.53%)	0.001*
Breast Tenderness (Yes)	35 (66.04%)	19 (40.42%)	0.02*

Variables	Hostellers (n - %)	Day-scholars (n - %)	p value
Bloated Sensation (Yes)	32 (60.38%)	14 (29.79%)	0.001*
Muscle Pain (Yes)	44 (83.01%)	22 (46.80%)	0.000*
Headache (Yes)	31 (58.5%)	11 (23.4%)	0.004*
Joint Pain (Yes)	42 (79.24%)	21 (44.68%)	0.004*
Weight gain (Yes)	10 (18.86%)	6 (12.77%)	0.537
Insomnia (Yes)	31 (54.39%)	39 (90.7%)	0.908

Table II: Frequency of Depression

		Depressed (n)				Total
		Mild	Moderate	No	Severe	
Living Status	Hostellers	25	13	5	10	53
	Day-scholars	19	12	14	2	47
Total		44	25	19	12	100

Table III: Frequency of Headache

		Headache (n)				Total
		Mild	Moderate	No	Severe	
Living Status	Hostellers	14	13	22	4	53
	Day-scholars	6	4	36	1	47
Total		20	17	58	5	100

Table IV: Frequency of Muscle Pain

		Muscle Pain (n)					Total
		Mild	Moderate	No	Severe	Yes	
Living Status	Hostellers	25	15	9	4	0	53
	Day-scholars	8	10	25	3	1	47
Total		33	25	34	7	1	100

pains, hypersomnia, bloated sensation, breast pain and swelling were common among the hostellers. Previous studies also supported the results of our research and hence it appeared that hostellers were more prone to PMS including psychological manifestations. This may be an outcome of stressful life.

CONCLUSIONS:

PMS is a common problem among undergraduate medical students. Added stress like living away from home in hostel makes the problem more worse. This affect their quality of life.

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