



Premenstrual Syndrome and Its Effects

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Abstract

Background: The premenstrual syndrome (PMS) is particularly common in the younger age groups and, therefore represents a significant public health problem in young girls. This study aims to estimate the prevalence of PMS, and its effects.

Materials and Methods: Unmarried medical students aged 18-25 years with regular menstrual period for the last 06 months were recruited by convenience sampling. The study employed a pretested, self-administered questionnaire. The questionnaire included four sections; demographic data, menstrual features, a section on symptoms and another section dealing with the effects of PMS.

Results: Prevalence of premenstrual syndrome was found to be 47%. Among the somatic symptoms breast tenderness was the common symptom in 26% subjects and among the behavioural symptoms irritability is the commonest symptom in 26.5%. PMS was significantly associated with dysmenorrheal ($P=0.000$) and positive family history ($P=0.01$). Stastical significant differences was found between students with PMS and those without PMS regarding effect of premenstrual period on student's overall academic life ($p=0.000$), daily activities ($p=0.000$) and sleep rhythm ($p=0.001$). Data was analysed using percentages, Chi-squares.

Conclusion: Premenstrual syndrome is a common problem in young girls which adversely affects their educational performance and emotional well-being.

Keywords: pms, medical students, effects.

Introduction

Millions of women during their reproductive years are affected by premenstrual syndrome (PMS)¹. Premenstrual disorders are characterized by the cyclical recurrence of a variable constellation of physical, psychological, and behavioural symptoms which appears in the luteal phase and subsides with the onset of menstrual flow. It is a debilitating condition, causing social and occupational impairment in the lives of affected

women comparable to that associated with major depressive disorder and with a burden of disease and disability adjusted life years lost on a par with major recognized disorders. Hence, the quality of life as well as economic implications of PMS should not be overlooked².

The common symptoms of PMS include breast tenderness, body aches, headache, bloating, sleep disturbances, appetite change, poor concentration, decreased interest, social withdrawal, irritability,

mood swings, anxiety/tension, depression, and feeling out of control. Of these, six symptoms identified as core symptoms suggesting that clinical diagnosis of PMS can be developed around a core symptom group. The identified core symptoms are: anxiety/tension, mood swings, aches, appetite/food cravings, cramps, and decreased interest in activities. Although these symptoms are diverse and may be unrelated, their common factor is the consistency in which they appear during each menstrual cycle and the way they speedily resolve with the onset of menses³. The morbidity associated with PMS is because of severity of symptoms, chronicity, the resulting emotional distress or impairment in work, relationships, and activities⁴. The level of impairment of PMS is significantly higher than community norms on assessment by standard measures. Women with PMS report significant impairment in personal relationships, compromised work levels and increased absence from work, school, or college⁵.

Materials and Methods

A cross-sectional study designed to assess the Premenstrual syndrome and its effects was carried out over 200 nursing and medical students July 2017 to Dec 2017. Participants were asked to indicate (yes' or 'no) whether a premenstrual symptoms interfere with work, relationships with co-workers, family members, friends, social and academic life. unmarried medical students at the college of Medicine aged 18-25 years old , after menarche by at least one year, with regular menstrual period for the last 6 months who agreed to participate in the study were the target group. Students with irregular menstrual cycle, current major medical and psychological problems, those receiving hormonal therapy and experiencing a catastrophe shortly before or during the study were excluded from the study. The students who met the inclusion criteria were explained about the study objectives and participants obligations to fill the self-administered questionnaires for at least three consecutive menstrual cycles. If they did not

experience any symptoms during the first three months, the students were allowed to record for another three month. The questionnaire included four sections; demographic data, menstrual features, a section on symptoms and another section dealing with the effects of Premenstrual syndrome. Premenstrual syndrome was diagnosed according to American college of obstetricians and gynecologists which diagnose PMS as having physical and emotional symptoms 5 days before the menstrual period for at least 3 successive cycles and within 4 days after the beginning of the menstrual period that interfere with normal daily activity. Full consent was obtained from all of the participants prior to their participation.

Results

The prevalence of PMS among the studied group was 47% (Table 1). Among those with PMS, the mean aged was 20.33 ± 1.57 , where the age at menarche was 11-15 years in 31% and 16-19 years in 32%. The mean menstrual period duration was less than 5 days in 27% subjects and greater than 5 days in 25% subjects. Girls having PMS reported significant higher prevalence of dysmenorrhea (55.3%) and positive family history of PMS (57.4%) than those without PMS Table (2). PMS was not found to be statistically associated with age in years, age at menarche duration of cycle. PMS was significantly associated with dysmenorrheal ($P=0.000$) and positive family history of PMS ($P=0.01$). Among the the somatic symptoms breast tenderness was most common symptom in 26% of pms subjects and among the behavioural symptoms irritability was present in 26.5% (Table 3) subjects. Stastical significant differences was found between students with PMS and those without PMS regarding effect of premenstrual period on student's overall academic life ($p=0.000$), daily activities ($p =0.000$) and sleep rhythm($p =0.001$)(Table 4).

Table 1 Number and percentage distribution of PMS among the studied sample

PMS	Number	Percentage
Present	094	047%
Absent	106	053%
Total	200	100%

Table 2 Comparison between students with and without PMS regarding demographic and menstrual characteristics

Parameter	With PMS		Without PMS		P value
Age in years	20.33 +_1.57		20.27 + 1.66		p= 0.83
Age at menarche					chi-square=2.19 p value=0.13
11-15years	62	65.9%	80	75.4%	
16-19 years	32	34.0%	26	24.5%	
Duration of cycle					chi square=8.7 p value=0.003
less than 5 days	54	57.4%	76	71.6%	
greater than 5 days	50	53.1%	30	28.3%	
Dysmenorrhoea (NO and %)					chi square=35.92 p value = 0.000
Yes	52	55.3%	16	15%	
No	42	44.6%	90	84%	
Family history of pms (No and %)	54	57.4%	30	27.5%	p= 0.01
	40	42.5%	76	71.6%	

Table 3 Symptoms of premenstrual syndrome

symptom			
Somatic symptoms	Abdominal bloating	25	26%
	Breast tenderness	22	23%
	Body aches	16	17%
	Back pain	20	21%
	Upper thigh pain	4	4.2%
	Headache	5	5.3%
BEHAVIORAL symptoms	Swelling of extremities	2	2.1%
	Anxiety	15	15.9 %
	Mood changes	15	15.9%
	Angry outbursts	5	5.3%
	Irritability	25	26.5%
	Confusion	3	3.1%
	Decreased concentration	5	5.3%
	Change in appetite	6	6.3%
	Withdrawal of social activities.	20	21%

Table 4 Effects of premenstrual period on students' academic and social life

variable	Students with pms		Students without pms		Chi-square	P value
	n	%	n	%		
Effect on overall academic life					62.17	0.000
Yes	60	11%	11	10 %		
No	34	95%	95	90%		
Effect on daily activites					47.88	0.000
Yes	70	59.3%	27	82.5%		
NO	24	40.6%	79	17.5%		
Effect on sleep					10.24	0.001
YES	13	83.7%	2	67.5%		
NO	81	16.2%	104	32.5%		

Discussion

Premenstrual syndrome is a common disorder of young and middle-aged women characterized by cyclic occurrence in the luteal phase of the menstrual cycle accompanied by distressing physical, psychological and behavioral changes of sufficient severity to result in deterioration of inter- personal relationships and interference with normal activities; which remit upon onset or immediately after menstruation⁷. In this study, a total of 200 students were enrolled with age 18-25 year. The prevalence of PMS among the participants was 47%. Majority of the PMS diagnosed students had their first menstrual flow between the ages of 11 to 15 years and had menstrual cycles ranging from 21-30 days. In a recently published meta-analysis, the PMS prevalence was reported as 47.8% for all studied groups which are similar to our results⁸. The Prevalance of 51% was found among medical students aged 18-25 years at insra University Hospital, Hyderabad, Sindh, Pakistan which is close to our range⁹. This study is inconsistent with the study conducted on 134 volunteer nurses in Turkey in which prevalence of pms was 38¹⁰. In the current study, the most frequently reported symptom was irritability (26.5%), which was also reported in previous studies¹¹. In terms of symptoms affecting social activities and relationships, women with PMS studied here showed significantly greater impairment than the non-PMS¹². Significant relationship of PMS with dysmenorrhea and family history of PMS was found similar to other studies¹³. The variations of results from various studies are due to limitations and differences in the definition of PMS, standards and methods of data collection, sampling technique and type of patient population studied.

Conclusion

The findings of this study suggest that frequency and morbidity of PMS is relatively common in young girls. As it adversely affects the educational, social and emotional well-being,

means should be adopted to reduce the incidence of this disorder

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