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Prevalence of Premenstrual Syndrome among Medical Students

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ABSTRACT

Introduction: Premenstrual syndrome (PMS) is the name given to a collection of physical and psychological symptoms that most women experience during the late luteal phase of each menstrual cycle , the symptoms of which fall into three domains: emotional, physical and behavioral. These symptoms may be of such severity that they can disrupt interpersonal relations, social activities, work performance or quality of life. Women are affected irrespective of socioeconomic status, race or cultural background.

Objectives: The study was conducted to know the prevalence of PMS and to study the factors associated with PMS among medical students.

Methodology: A cross sectional study was conducted among 270 medical students of Basaveshwara medical college, Chitradurga. Self-evaluating questionnaire covering socio-demographic factors like age, place of residence, weight, height and questions on PMS were analyzed.Data was analysed using SPSS version 20.

Results: The prevalence of PMS among the study participants was 31.1 %, among them 20%,7.4% ,3.7%,0% showed mild, moderate, severe and very severe form respecctively. BMI, Place of residence, year of MBBS and age of menarche were the factors significantly associated with premenstrual symptoms.

Conclusion: The prevalence of premenstrual syndrome is high among college students and it is increased increasing age.Premenstrual symptoms can be managed if diagnosed in right time with suitable pharmacological and non-pharmacological aids.

Key words: Pre Menstrual Symptoms, Body Mass Index, Menstruation

INTRODUCTION

Premenstrual syndrome (PMS) is the name given to a collection of physical and psychological symptoms that most women experience during the late luteal phase of each menstrual cycle (7 to 14 days prior to menstruation), the symptoms of which fall into three domains: physical, emotional and behavioural.[1] The most common emotional and mood-related symptoms of PMS include depression, irritability, tension, crying, over sensitivity (hypersensitivity) and mood swings with alternating sadness and anger.[1] Physical discomforts include abdominal cramps, fatigue, bloating, breast tenderness, acne and weight gain. Behavioural symptoms include food cravings, poor concentration, social withdrawal, forgetfulness and decreased motivation.[1] These symptoms may be of such severity that they can disrupt interpersonal relations, social activities, work performance or quality of life.[2] Women are affected irrespective of socioeconomic status, race or cultural background. Symptoms seem to worsen as menstruation approaches and subside at the on-

set or after several days of menstruation. A symptom-free phase usually occurs following menstruation.[3] Despite considerable research, causes of PMS remain enigmatic and the exact causes of PMS are not clearly understood but have been attributed to hormonal changes, neurotransmitters, prostaglandins, diet, drugs and lifestyle.[3, 4] PMS may vary in intensity, but does not resolve spontaneously, as many as 80% of women of reproductive age may experience premenstrual emotional and physical changes[5]. Upto 40% of women of reproductive age experience premenstrual sign and symptoms sufficient to affect their daily lives to some degree and 3-5% experience severe impair mental disease state known as premenstrual dysphoric disorder.[5]

PMS negatively affects the quality of life of millions of women[6,7] and global studies have shown the prevalence of PMS to range between 5% and 76%,[2,8,9,10,11]. In India the prevalence with PMS is 20% of which 8% suffer with severe symptoms. It has also been reported by the same group of authors that 10% of the sufferers were found to have suicidal ideas.[12] This study was taken up to know the prevalence of PMS and to study the factors associated with PMS among medical students as we observed increased absenteeism among female students than in males.

MATERIALS AND METHODS

A cross sectional study was conducted for a period of six months in 2015 to find the prevalence of PMS among all the Female medical students present on the day of survey of Basaveshwara medical college, Chitradurga. Brief information about PMS was given to the participants, following which objectives and procedure were explained to them. Participants who filled the informed consent form were enrolled for the study. Self-evaluating questionnaire covering socio demographic factors like age, place of residence, weight, height and questions on PMS were given. PMS was assessed using PMS self-evaluation questionnaire (PEQ) written by Allen Lawrence, M.D, then it was classified into mild, moderate, severe and disabling. The questionnaire was in English. Symptoms were analysed one week before periods, during periods and one week after periods[13]. The data was compiled in excel 2013 and analysed using the SPSS (20 version.).Percentage was calculated for descriptive variables. Chi square test was applied to find the significant associations, with p value <0.05 were considered to be significant at 95% CI.

RESULTS

Table 1, fig 1: shows that the prevalence of PMS among the study participants was 31.1 % , among them 20% showed mild form,7.4% showed moderate degree and 3.7% showed severe form. None of them had very severe form and majority 68.9% of the participants did not show any symptoms of PMS.

Table 1: prevalence of PMS among study participants

Symptoms	Frequency n = 270 (%)
No PMS	186 (68.9)
Mild PMS	54 (20)
Moderate PMS	20 (7.4)
Severe PMS	10 (3.7)

PMS=Pre menstrual symptoms

Table 2: Frequency, percentage and association of sociodemographic with PMS

Variables	PMS (%)		P value
	Present (n=84)	Absent (n=186)	
Age(years)			
<20	13 (15.5)	45 (24.2)	0.221
20-22	50 (59.5)	105 (56.5)	
23-25	21 (25)	36 (19.3)	
Year of MBBS			
First Year	5 (5.9)	33 (17.7)	**0.002**
Second Year	18 (21.4)	50 (26.8)	
Third Year	12 (14..3)	41 (22.2)	
Final Year	32 (38.1)	38 (20.4)	
Internship	17 (20.3)	24 (12.9)	
Residence			
Hostel	80 (95.3)	154 (82.8)	**0.005**
Outside	4 (4.7)	32 (17.2)	
Age at Menarche (years)			
<10	9 (10.7)	1 (0.5)	**<0.001**
10-13	51 (60.8)	108 (58.2)	
>13	24 (28.5)	77 (41.3)	
Diet			
Mixed	43 (51.2)	112 (60.2)	0.165
Veg	41 (48.8)	74 (39.8)	
Body Mass Index			
Normal	57 (67.8)	153 (82.3)	**0.000**
Obese	0 (0)	4 (2.1)	
Pre Obese	18 (21.4)	27 (14.5)	
Underweight	9 (10.8)	2 (1.1)	

Table 2 shows that among the study population 36.9% of students between the age of 23 -25 years and 45.8% of final year MBBS students showed more symptoms of PMS than others. Students residing in hostels (34.2%) and who consumed vegetarian diet (36.5%) suffered more symptoms of PMS. Females who had attained menarche at < 10 years of age and those who were underweight (81.9%) had experienced a greater extent of symptoms. On Chi Square analysis place of residence, age at menarche, body mass index and year of MBBS were found to be significantly associated with occurrence of PMS.with p value <0.05.

DISCUSSION

In the present study, the prevalence of PMS among the study group was 31.1%. Similarly an Indian study conducted by Raval C M et al, found a prevalence rate of 18.4% among college students of Bhavnagar [14]. A higher prevalence rate of 82.81% was found in a study conducted by Nafisa omer S A in Riyadh. [15] Dickerson et al have found in his study that the PMSprevalence ranges from 25 to 95 %.[16] The difference in the prevalence rate may be due to use of different scales used for assessment of PMS, women's age, marital status, occupation, education etc.[17]

Present study showed that the prevalence of PMS is higher among 20 - 22yrs old females compared to other age groups. These findings are inconsistent with other research studies where in it is found that, the women in their 20s to mid-30s are at highest risk for distressing symptoms of PMS[12, 8,4,15.]

The present study showed that there was an association between the prevalence of PMS and BMI (Body Mass index). The higher rate of prevalence of PMS was seen more among those students with normal BMI. The prevalence of PMS was 10.8% among underweight students, 21.4% among pre obese and 67.8% among the students with normal BMI,which was similar to the results of Nafisa Omer S A who got PMS more in normal weight 89.1%, it was about 78.3% in obese students [15] This difference may be because of social problems they face leadingto mental stress. This study finding was in accordance with research finding that the BMI was significantly associated with premenstrual syndrome.[18]

CONCLUSION

The prevalence of premenstrual syndrome is high among medical college students and is directly proportional to age and year of study. PMS was found to be more among students residing in hostels.

REFERENCES

1. Brahmbhatt S, et,al. A prospective survey study on premenstrual syndrome in young and middle aged women with an emphasis on its management, International Journal of Research in Medical Sciences 2013;1(2)
2. Zaafrane F, Faleh R, Melki W, Sakouhi M and Gah L. An overview of premenstrual syndrome. European Journal of Obstetrics, Gynecology and Reproductive Biology 2007; 36(7):642-52.
3. Myint TH, Edessa OG, Sawhsarkapaw. Premenstrual syndrome among female university students in Thailand. AU JT 2006;9:158-62.
4. Rasheed P, Al-sowielem LS. Prevalence and predictors of premenstrual syndrome among college-aged women in Saudi Arabia. Annals of Saudi Medicine 2003;6:381-7.
5. Nourjah P. Premenstrual syndrome among Teacher Training University Students in Iran J Obstet Gynecol India 2008;58(1): 49-52.
6. Barnard K, Frayne SM., Skinner KM, and Sullivan LM. Health status among women with menstrual symptoms. Journal of Womens Health. 2003;12(9):911-9.
7. Gianetto-Berruti, A. and Feyles, V. Premenstrual syndrome. Minerva Ginecologica.2002; 54(2):85-95.
8. Adigüzel LS, Taskin EO. and Danaci AE. The symptomatology and prevalence of symptoms of premenstrual syndrome in Manisa, Turkey. Turk Psikiyatri Dergisi, 2007;(18):215-22.
9. Derman O, Kanbur NÖ,Erdogan,Tokur T.and Kutluk T. Premenstrual syndrome and associated symptoms in adolescent girls. European Journal of Obstetrics, Gynecology and Reproductive Biology, 2004;116(2):201-6.
10. Deuster, PA., Adera T. and South P. Biological, social, and behavioral factors associated with premenstrual syndrome .Journal Archives of Family Medicine, 1999; 8(2):122-8.
11. Marvan ML. and Cortes-Iniestra S. Women's beliefs about the prevalence of premenstrual syndrome and biases in recall of premenstrual changes. Journal of Health Psychology 2001;20(4):276-80.
12. Joshi JV, Pandey SN, Galvankar P, Gogate JA Prevalence of premenstrual symptoms: preliminary analysis and brief review of management strategies. Journal of mid-life health 2010;1:30-4.
13. http://www.integrativemedicineusa.com/index.php/Premenstrual-Syndrome/pms-self-evaluation-questionnaire-peq.html last accessed on 04/10/2016
14. Raval C M, Panchal B N,Tiwari D S,Valu A U,Bhatt R B,Prevalance of premenstrual syndrome and premenstrual dysphoric disorder among college students of Bhavnagar, Gujrat,Indian J Psychiatry 2016:58:164-70.
15. Abdalla NOS, prevalence of premenstrual syndrome sign and symptoms among nursing college students, Asian academic research journal of multidisciplinary,2015;2 (2)
16. Dickerson, LM.; Mazych P J, Hunter M H.Premenstrual syndrome.Amer. Fam. Phys. 2003; 67:1743-54.
17. Oztruk S, Ternivrdi D, Ercel B Premenstrual syndrome management and behaviour in Turkey, Australian journal of advanced nursing, 2006;28 (3) 54 -60
18. Lakshmi AS, et al, Prevalence of Premenstrual Syndrome and Dysmenorrhoea among Female Medical Students and its Association with College Absenteeism. Int J Biol Med Res, 2011;1011 -6.