

PREVALENCE AND RISK FACTORS OF PREMENSTRUAL SYNDROME AMONG FEMALE POPULATION OF RAHIM YAR KHAN

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ABSTRACT

Background: Premenstrual syndrome (PMS) is one of the disorders associated with onset of menstruation causing physical, psychological and behavioral symptoms. **Objective:** To determine the prevalence and risk factors of premenstrual syndrome among female population of Rahim Yar Khan. **Methodology:** Study Design: Cross sectional study. Study subjects: Females of reproductive age from 16 to 40 years. Place and duration of study: Research was conducted from 16th to 29th March 2015 that was carried out in OPD and Gynecology ward of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. Performa was designed and pretested. Before commencing with the data collection, informed verbal consent was taken from all the 300 study subjects. The performa contained information on age, marital status, occupation, educational level of subjects and signs/symptoms of premenstrual syndrome among females. The data was entered on SPSS version 16 and results of various variables were presented as percentage and mean \pm standard deviation. **Results:** Study subjects has mean age of 22 ± 4.9 years. Age distribution of subjects was 16-20 years (47%), 21-25 years (38.3%), 26-30 years (7%), 31-35 years (4.3%) and 36-40 years (4.3%). In this study, 5.7% were illiterate, 3% primary, 3% middle, 7% secondary and 81% were highly educated. In this study, 74% were students, 14% housewives, 10% has government job and 2.3% has private job. In this study, 74.7% were unmarried. Out of 300 females 251 (83.7%) were found to have PMS. Frequency of PMS symptoms in study subjects were anxiety (57.7%), depression (57.7%), mood swing (71.7%), irritability (73.3%), pain (86.7%), fatigue (79.7%), discomfort (83.7%), abdominal cramps (47.7%), breast tenderness (25%), bloating (27.7%) and acne (32.3%). The frequency of most common risk factor was low cheese/butter intake (87.7%), high tea/coffee intake (74.7%), high salty / junk food intake (66.3%), Low yogurt intake (61%), daily exercise (48%), low milk intake (39%), low egg intake (35.5%), low vegetable intake (13.7%), sedentary life style (33.3%), stressed state (30.3%), and eating spicy/cold food (7.3%). **Conclusion:** Premenstrual syndrome was high in study subjects and high in young females. Majority of the women having PMS were unmarried, students and education level above bachelors and has low cheese/ butter intake, high tea/coffee and junk food intake.

Keywords: Risk factor, Premenstrual syndrome, Females

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INTRODUCTION

Premenstrual syndrome (PMS) is a combination of psychological and physical symptoms that recur regularly in the luteal phase of the menstrual cycle, remit for at least 1 week in the follicular phase, cause distress and functional impairment finally subsides when menstruation occurs. The PMS consists of low backache, fatigue, breast heaviness, abdominal bloating, increased weight, headache, irritability, skin disorders, aggressiveness, depression, gastrointestinal symptoms and loss of appetite.¹ Current estimates of the prevalence of clinically significant PMS

vary from 12.6% to 31% of menstruating women.² Epidemiologic studies have identified approximately 20% of reproductive age women as having moderate to severe PMS.³ Available data suggest that PMS occurs across cultures at essentially comparable rates.⁴ In a research conducted majority of women were unaware of premenstrual syndrome and premenstrual dysphoric disorder.⁵ Common symptoms during PMS were abdominal bloating, cramps, lack of energy, irritability and mood swings. The effect of PMS severity on activities of daily life was highly significant. Physician consultation increased with severity.⁵ As indicated in a research conducted on Chinese women who showed overlapping and distinct features when compared to west.⁶ A research conducted in Pakistan also showed different pattern of PMS in females as compared to west.⁷ Certain risk factors are involved such as genetic,⁸ nutritional and psychological. For its treatment, there are drugs, supplements, surgery, and non pharmacological approach in which life style modifications are involved. The objective of this study was to determine frequency of premenstrual syndrome

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among female population attending Sheikh Zayed Hospital Rahim Yar Khan, and to determine frequency of signs and symptoms and enlist its risk factors.

METHODOLOGY

This was a cross-sectional study, conducted at outdoor patient department and Gynecology ward of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. The duration of the study was from 16th to 29th March 2015. Total 300 females aged 16 to 40 were included in the study. An exclusion criterion followed was, those females who did not give their consent and those who were pregnant or lactating. The performa was designed which contained different variable like age, educational level, occupation, age at menarche, marital status, number of children, onset of symptoms with menstruation like pain, discomfort, moods swings, fatigue, irritability, bloating, abdominal cramps, anxiety, depression, duration of these symptoms, remedies done to control these symptoms, complain of acne with menstruation, exercise, intake of diet like milk, egg, yogurt, cheese/butter, vegetables, tea/coffee, junk food. Informed verbal consent was taken from all the study subjects before commencing with data collection. All the data collected was recorded on the performa and entered and analyzed by using SPSS version 16.

RESULTS

The prevalence of premenstrual syndrome in this study was found to be 84%. (Figure I). Most (84%) of the females having PMS were of 16 to 25 years of age, unmarried (74%) and has education above bachelors (81%). (Table I)

Figure I: Prevalence of PMS among study subjects

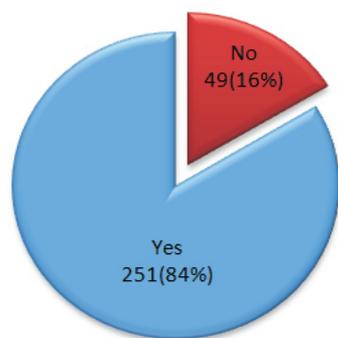


Table I. Demographic features of premenstrual syndrome study subjects (n=251).

Parameters	n(%)
Age in years	22.26 ± 4.93
Age in groups	
16-20	116(46%)
21-25	97(38%)
26-30	18(7%)
31-35	9(4%)
36-40	11(4.5%)
Marital Status	
Unmarried	185(74%)
Married	66(26%)
Educational Status	
Illiterate	15(6%)
Primary	8(3%)
Middle	8(3%)
Secondary	16(6.9%)
Higher	204(81%)
Occupation	
Students	185(74%)
House wives	36(14%)
Gov. Job	25(10%)
Private Job	5(2%)

The most common symptoms among PMS subjects were pain (86.7%), discomfort (83.7%), fatigue (79.7%), irritability (73.3%), mood swings (71.3%), depression (57.7%) and anxiety (57.7%). (Table II)

Table II: Frequency of Signs/Symptoms of PMS in study subjects.

Signs/Symptoms	Frequency	%age
Pain	217	86.7
Discomfort	210	83.7
Fatigue	200	79.7
Irritability	184	73.3
Mood swing	197	71.3
Depression	145	57.7
Anxiety	145	57.7
Abdominal cramps	120	47.7
Acne	81	32.3
Bloating	69	27.7
Breast tenderness	62	25

The frequency of most common risk factor was low cheese/butter intake (87.7%), high tea/coffee intake (74.7%), and high salty / junk food intake (66.3%). (Table III) It was noted that 8.7% of PMS subject

used home remedies for relief, 37.3% took medication while 54% did nothing for treatment.

Table III: Frequency of risk factors among PMS study subjects.

Diet	Frequency	%age
Low Cheese/butter intake	220	87.7
High Tea/coffee intake	187	74.7
High Salty/junk food intake	166	66.3
Low Yogurt intake	153	61
Daily Exercise	120	48
Low Milk intake	98	39
Low Egg intake	88	35.3
Low Vegetables intake	34	13.7

DISCUSSION

The mean, age of study subjects was 22 ± 4.9 years. Mean, age at menarche in study subjects was 13.04 ± 2 years. This study showed that frequency of premenstrual syndrome in women was 83.7%. In a study which was conducted by ISRA University Hyderabad, the frequency of premenstrual syndrome was 81.25% and the mean age \pm S.D in that study was 26.83 ± 6.32 .⁹ A study in Peshawar found 53% of the young college girls experience premenstrual syndrome.¹⁰ The results are comparable with our study. Two studies from France and China reported lower prevalence of upto 35%. In contrast a study reported 75% prevalence of premenstrual syndrome.¹¹ In age wise distribution of study subjects, percentage of PMS among 16-20 years was 46%, 21-25 years 38.4%, 26-30 years 7%, and 36-40 years was 4%. The frequency of premenstrual syndrome in females of age ranging 16 to 25 years was 85.3% which was quite higher as compared to the females of age above 25 years, which was 14.6%. According to marital status, 74% PMC women were unmarried. In Turkey, a study showed that frequency of PMS was 62.5% in unmarried and 37.5% in married, which were quite higher than this study.¹² The frequency of PMS in illiterate was 5% and in educated females it was 78.7%. In students PMS frequency was 61.6% which was higher than house wives (12%), females in government job (8.4%), and in private job (1.7%).

In another study, 38% housewives were affected by PMS while students, doctors, nurses and teachers showed a slightly lower incidence of 27-30%.¹³

The most commonly reported symptoms in this study were: pain (86.7%), discomfort (83.7%), fatigue (79.7%), irritability (73.3%), mood swings (71.3%), depression (57.7%), abdominal cramps (47.7%), bloating (27.7%), and breast tenderness (25%). A study done by University of Punjab showed frequency of physical 54.78%, psychological 43.97% and social symptoms 4.29%. That study showed the frequency of fatigue in 90% of women and breast tenderness and headache were occurring in more than 50% of cases. It also demonstrate mood swings in more than 80% other frequent behavioral complaints include irritability, tension depressed mood in 70% women.^{14,15} This is comparatively high than the frequency in current study. Most common symptoms reported for an Iranian study were feeling of lethargy (84%), depressed mood (72.3%), sudden feeling of sadness or tearfulness (70.3%), anxiety (70%), backache (60%), and sleep problems (66%).¹⁶ The results are comparable with present study. Risk factors of PMS were thought to be diet related like calcium rich food (milk, yogurt, cheese, butter, vegetables). In India, a double-blind, placebo-controlled study of 497 women showed that calcium has a link to the symptoms of PMS, i.e. 1,200 mg daily intake of calcium as calcium carbonate reduced PMS symptoms by half over a period of three menstrual cycles.¹⁷ Other risk factors for PMS include salty junk food, caffeine and exercise. Some aggravating factors of PMS in this study are, spicy and cold food, stressed state, and sedentary life style. In this study it was shown that PMS of many women is relieved by home remedies (8.7%) and by taking medication (37.3%) while 54% of females do nothing for their PMS relieve.

CONCLUSION

Premenstrual syndrome was high among females who participated in the study. Majority of females having PMS were, unmarried, and students in higher classes. Pain, discomfort, irritability and mood swings were found to be higher in study subjects. Low calcium diets, high caffeine intake, high salty diet, stress and spicy food were found to be the risk factors.

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