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ORIGINAL ARTICLE

Behavioral Symptoms of Premenstrual Syndrome Among Reproductive Age Group Women in a Rural Area of Tamil Nadu

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Abstract

Introduction: Seven to fourteen days before to the onset of menstruation, premenstrual syndrome is characterized by a recurring recurrence of severe physical and affective symptoms that ends when menstrual flow begins. A prevalent health issue among women in the reproductive age range is premenstrual syndrome. **Objective:** The purpose of this research was to determine the prevalence of premenstrual syndrome behavioral symptoms in the study population as well as the distribution of these symptoms. **Methodology:** 650 women of reproductive age participated in this descriptive cross-sectional survey, which was carried out in Parangipettai town, Cuddalore district. Data collection was done using a pretested proforma. Single-stage area-wise cluster sampling was the method of sampling that was employed. **Results:** Five hundred and nineteen of the 650 study participants experienced at least one premenstrual symptom. Confusion, difficulties concentrating, avoidance of social situations, and insomnia were the most prevalent behavioral symptoms. Two of the survey participants' top concerns were disorientation and insomnia. A score of two was assigned to each of the other behavioral abnormalities. **Conclusion:** Insomnia, confusion, avoid social activities and difficulty in concentrating are the most frequently occurring behavioural symptoms.

Keywords: Premenstrual syndrome, frequent, reproductive age group, behavioural symptom

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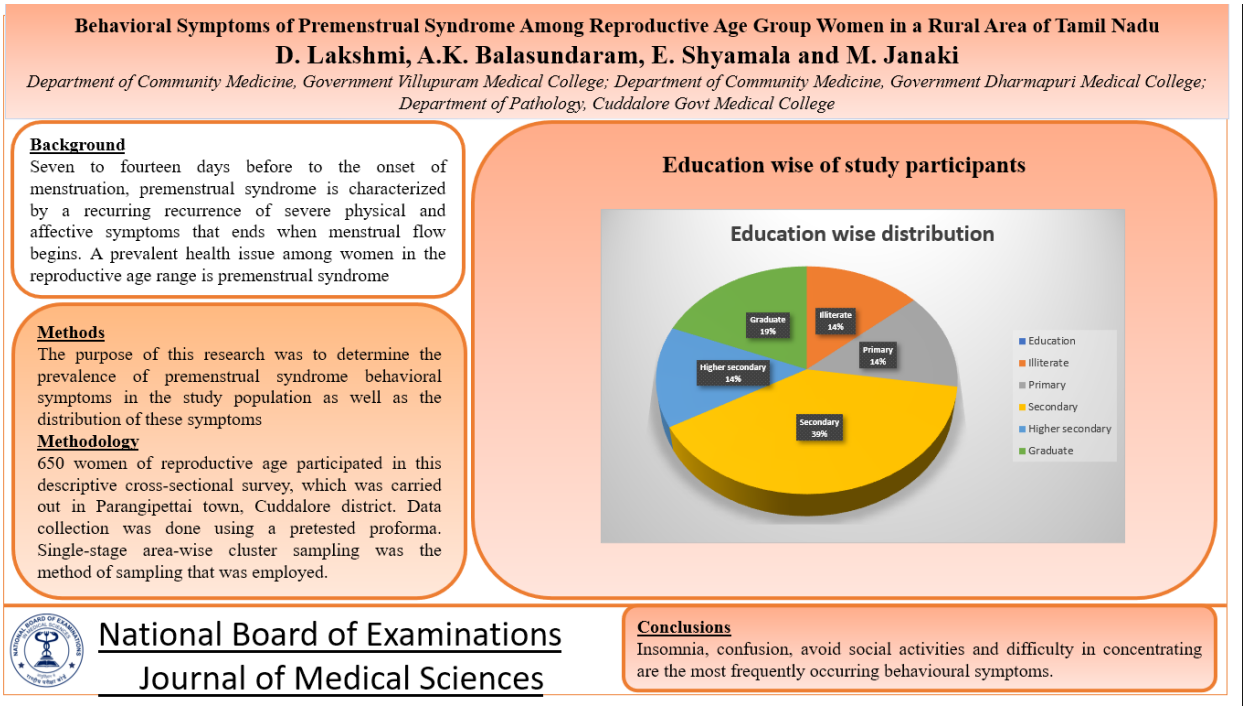
Graphical Abstract



Introduction

Millions of women from menarche through menopause suffer from premenstrual syndrome. A group of behavioral, psychological, and physical symptoms that appear during the leuteal phase of the menstrual cycle and go away after menstruation is known as PMS. PMS affects 90% of women during their reproductive years [1]. The severity of symptoms and their chronicity are the main causes of PMS morbidity, which can lead to emotional anguish or interfere with relationships and activities at work [2].

The etiopathogenesis of PMS is not known and till now there is no biochemical marker to confirm the diagnosis of PMS, but text book says Serotonin is an important neurotransmitter which place an important role in PMS. PMS-afflicted women exhibit reduced serotonin production during the luteal phase. The withdrawal of endorphins (neurotransmitters) from the central nervous system during the luteal phase is believed to be the cause of the PMS symptom complex. The brain's anxiety level is suppressed by y-aminobutyric acid (GABA). Changes in behavior may be caused by psychological and psychosocial causes [3]. GABA agonists are effective medications. Premenstrual Dysphoric Disorder (PMDD)4 was the term used to describe a severe type of PMS in the middle of the 1980s [4].

This context led to the study of PMS prevalence among reproductive-age women living in the rural field practice area under the rural health center of the Department of Community Medicine at Rajah Muthiah Medical College, Annamalai University.

This page discusses behavioral symptoms that are most commonly encountered.

Methods

The field practice area of Parangipettai, which is part of the rural health center of community medicine at Rajah Muthiah Medical College, Annamalai University, was the site of this descriptive cross-sectional study.

Sample size

According to a study by Enas H. Mohamed et al. on the prevalence of premenstrual syndrome and its contributing factors in the Algerian hamlet of Suez governorate, 80.8% of the sample population who were younger than childbearing age had PMS5. With this background knowledge in mind, the sample size was calculated with a 95% level of confidence and a 5% relative precision. In the field practice area of Parangipettai, there were 2934 women in the reproductive age group. It was determined that 325 was the necessary sample size. The clustering effect has been taken to be 2 since a house-to-house survey was conducted. As a result, 650 women were chosen as the study's sample.

Sampling technique

A survey of every household in the village was conducted from door to door. Six hundred and sixty women provided information for the first and second surveys. It was on the third visit that 650 samples were collected. The single-stage area-wise cluster sampling method was used for the sampling.

Data Collection

The study participants' social demographic information, menstruation history, housing details, and Moos menstrual distress questionnaire were gathered using a pretested proforma. There are two sections to the survey. Name, age, education, occupation, and other sociodemographic information were all asked about in the first section of the questionnaire. Other questions included physical activity, sleep disturbance, family history of premenstrual syndrome, number of children, nutrition history, and menstruation history. The second section contained the Moos Menstrual Distress Questionnaire, which was administered both before and after menstruation. It included 47 items, each of which was scored in the premenstrual phase10 and included descriptions of symptoms categorized into eight categories: pain (6), concentration (9), behavioral change (5), autonomic reaction (4), water retention (4), negative effect (8), arousal (5), and control (6). Participants can score the severity of their encounter using the MDQ's Never (0), Rare (1), Sometimes (2), Often (3), and Very often (4) options.

Interpretation and Scoring: Each item had five possible answers, each of which was assigned a score on the aforementioned 0–4 rating range. 188 was the final score. This was the spectrum of premenstrual syndrome levels.0: No symptoms are experienced. Mild (1–47), Moderate (48–94), Strong (95–144), and Severe (145–188). Operational Definition: Participants were classified as having premenstrual syndrome if their MOOS score was greater than 0. Data entry and statistical analysis were done using IBM SPSS version

21, a statistical program, after the collected data was loaded into an Excel spreadsheet. To analyze the Scoio demographic factors, descriptive statistics were employed. Both the Friedman's test and the multiple comparison test were used.

Results

The respondents' classification according to sociodemographic factors is displayed in Table 1. Of the study participants, 51.2% were under the 15–30 age range, while 43.5% were between the 31–45 age range. Seventy-seven percent of the study participants were married. The majority of research participants (43.2%) had completed secondary school. Fifty-six percent of the study participants were housewives. The majority of participants (41.3%) earned between Rs. 5001 and Rs. 30,000 per month. 519 of the 650 women had at least one of the behavioral signs listed below.

The most common behavioural symptoms are Insomnia, Confusion, Avoid social activities, Difficulty in concentrating, Take naps; stay in bed, Lowered school work or performance, Lowered motor coordination, Forgetfulness, Distractible, Accidents, etc. To determine whether there are any variances in the reported occurrence of behavioral symptoms, Friedman's test has been used. The Friedman's test's substantial p value shows that behavioral symptoms are statistically different. Therefore, the Friedman's multiple comparison test has been used to determine which behavioral symptoms are most commonly reported. Table 2 shows the most commonly occurring behavioral symptoms were Insomnia, confusion, avoid social activities and difficulty in concentrating. The other behavioral symptoms were occurring rarely. Among the study participants Insomnia and confusion was ranked as one. All the other behavioral symptoms were ranked as two (Table 3).

Table 1. Socio demographic characteristics of study participants

Socio demographic characteristics		**Frequency (n=350)**	**Percentage (%)**
Age group (in years)	30 – 39	128	36.6
	40 – 49	93	26.6
	50 – 59	66	18.8
	60 – 65	63	18
Marital status	Single	4	1.14
	Married	287	82
	Widow	59	16.86
Socio economic status	Class I	80	22.9%
	Class II	136	38.9%
	Class III	93	26.6%
	Class IV	34	9.7%
	Class V	7	1.9%

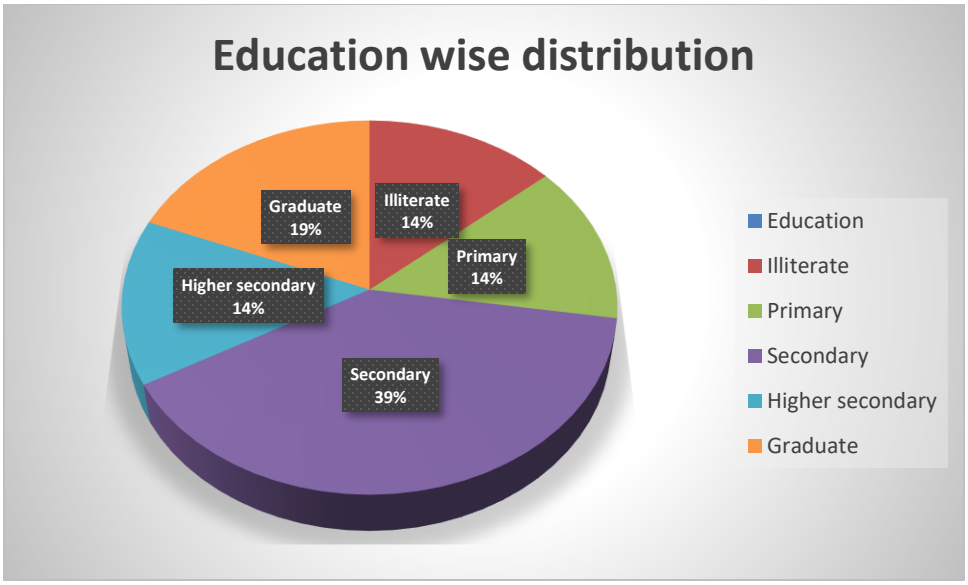


Figure 1. Education wise of study participants

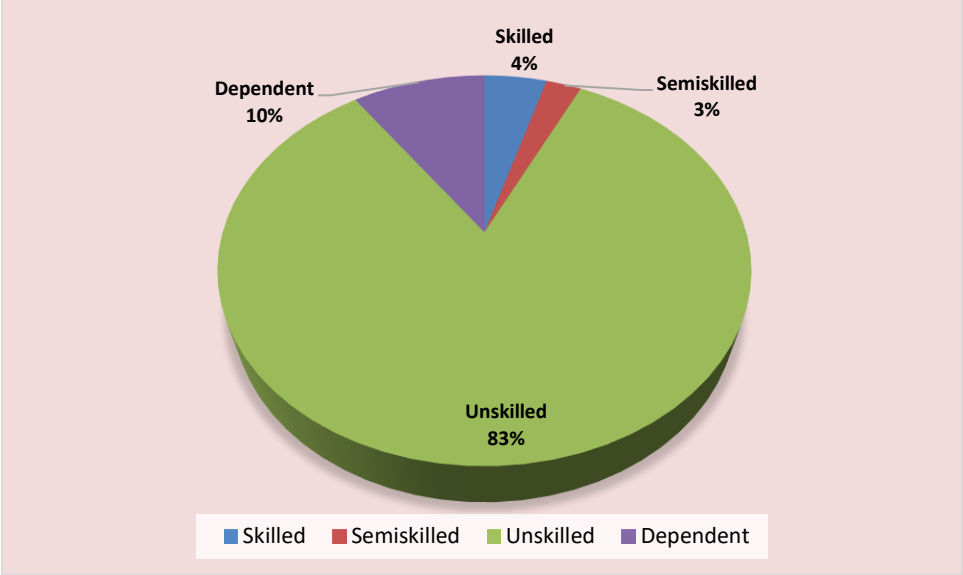


Figure 2. Occupation wise of study participants

Table 2. Distribution of Behavioural symptoms of the study participants

Symptoms	No. (n=519)	%
Insomnia	85	16.3
Confusion	67	12.9
Avoid social activities	40	7.7
Difficulty in concentrating	21	4
Take naps; stay in bed	4	0.8
Lowered school work or performance	3	0.6
Lowered motor coordination	3	0.6
Forgetfulness	1	0.2
Distractible	1	0.2
Accidents	1	0.2

Table 3. Most frequent Behavioural Symptoms of the study participants

Symptoms	Never		Rare		Sometimes		Often		Very often		Ranking after Friedman's multiple comparison tests
	N	%	N	%	N	%	N	%	N	%	
Lowered school work or performance	516	99.4	0	0	3	0.6	0	0	0	0	2
Take naps; stay in bed	515	99.2	0	0	4	0.8	0	0	0	0	2
Avoid social activities	479	92.3	13	2.5	24	4.6	1	0.2	2	0.4	2
Insomnia	434	83.6	21	4	63	12.1	0	0	1	0.2	1
Forgetfulness	518	99.8	0	0	1	0.2	0	0	0	0	2
Confusion	452	87.1	16	3.1	50	9.6	0	0	1	0.2	1
Difficulty in concentrating	498	96	0	0	21	4	0	0	0	0	2
Distractible	518	99.8	0	0	1	0.2	0	0	0	0	2
Accidents	518	99.8	0	0	1	0.2	0	0	0	0	2

Lowered motor coordination	516	99.4	1	0.2	2	0.4	0	0	0	0	2

Friedman's test value = 413.4; df=9; p value <0.001

Discussion

The Behavioural symptoms are Insomnia, Confusion, Avoid social activities, Difficulty in concentrating, Take naps; stay in bed, Lowered school work or performance, Lowered motor coordination, Forgetfulness, Distractible and Accidents.

In this study among the behavioral symptoms insomnia and confusion was ranked as one. All the other behavioral symptoms were ranked as two. The most commonly occurring symptoms were insomnia, confusion, avoid social activities and difficulty in concentrating in this study.

In contrast to this study a done by Aveen Fatah Haji et al reported behavioral symptoms such as social avoidance, poor concentration and confusion were commonly occurring among college of Nursing students [7].

Soo-Ho Chung et al., in (2014) from Korea, reported that among behavioural symptoms of PMS. Food cravings were reported by 44% of study participants reported followed by impaired concentration (20%), loss of interest (15%) and changes in sleep (15%) [8]. In a study done by Mahin Delera et al., (2013) in Iran, reported that the following behavioral symptoms were experienced by women with mild form of PMS, decreased interest (26.3%), concentration difficulty (23.4%), increased conflicts (21.9%) and no control on behaviour (22.3%) [9].

In contrast an observational study done by Nusrat Nisar et al. (2008) in Hydrabad, Sindh Pakistan, found out that in severe form of PMS lack of concentration was 12.1%, less participation in social activities was 14.1% and inefficiency to work at school and home was 11.1% [10].

Conclusion

Most frequent reported behavioral symptoms were Insomnia, Confusion, Avoid social activities and difficulty in concentrating. Health Education regarding Pre menstrual symptoms should be provided at adolescent age and school education. Higher level of awareness about Healthy life style which includes Balanced Diet, sleep, Exercises and yoga to be given as Community health care intervention to reduce the behavior symptoms of Premenstrual syndrome

Statements and Declarations

Conflicts of interest

The authors declare that they do not have conflict of interest.

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