

Prevalence of Premenstrual Syndrome and Coping Behavior among Higher Secondary School Girls

B. Jayabharathi*, Odinukwe Chinenye Esther**

Author's Affiliation:

*Associate Professor, Department of Obstetrics & Gynecology Nursing, SRM College of Nursing, SRM University, Chennai - 600089, Tamil Nadu. **B.Sc(N).

Reprint Request:

B. Jayabharathi, Associate Professor, Department of Obstetrics & Gynecology Nursing, SRM College of Nursing, SRM University, Chennai - 600089, Tamil Nadu.
E-mail: jayabharathimariyappan23@gmail.com

Received on 09 February 2017
Accepted on 22 February 2017

Abstract

Background: Premenstrual syndrome is a psychosomatic disorder of unknown etiology often noticed just prior to menstruation. Premenstrual symptoms are a group of symptoms linked to the menstrual cycle. Premenstrual symptoms occur 1 to 2 weeks before the period (menstruation or monthly bleeding) starts. *Aim:* The aim of the present study was to assess the prevalence of premenstrual syndrome and coping behavior among higher secondary school girls. *Methods:* The research design selected for this study was non experimental descriptive research design. The study was conducted in Government Higher Secondary School at Nellikupam, Kancheepuram district, Tamil Nadu. The study sample consisted of 110 higher secondary school girls, those who fulfilled the inclusion criteria. Standardized 5 point rating scale was used to assess the prevalence of premenstrual syndrome and 3 point rating scale was used to assess the coping behavior of the higher secondary school girls. *Results:* The analysis revealed that, majority 79 (71.8%) of higher secondary school girls had mild level of symptoms, 27 (24.6%) of girls had moderate level of symptoms, 4 (3.6%) of girls had no premenstrual symptoms and no one had severe level of premenstrual symptoms. Regarding the coping behavior, majority 103 (93.6%) of higher secondary school girls sometimes used coping behavior, 7 (6.4%) of higher secondary school girls always used coping behavior and no one never used any coping behavior for their premenstrual symptoms. *Conclusion:* Most women experience some form of premenstrual symptoms whether mild or severe at some time in their life. Many treatments have been tried in premenstrual syndrome. Reducing salt intake, caffeine and stress along with increasing exercise are some of the ways to manage premenstrual syndrome.

Keywords: Prevalence; Premenstrual Syndrome; Coping Behavior.

Introduction

The word puberty is derived from the Latin word pubertal, which means adulthood. Puberty is the period during which the onset of sexual maturity occurs. The pituitary gland secretes hormones that stimulate enlargement and development of the sex organs, which thus become capable of reproduction. In females the reproductive cycle of ovulation and menstruation begins, pubic hairs appear, and development of the breasts and other body contours

takes place [1].

The definition of the term "Premenstrual Syndrome" is a physical, cognitive affective and behavioral symptoms that occurs cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the onset of menstruation. The American College of Obstetrics and Gynecology (ACOG) published the diagnostic criteria for PMS. It was considered that if at least one of the 6 affective and one of the 4 somatic symptoms was reported five days prior to the onset of menses in the three prior menstrual cycles and ceased within four

days of onset of menses. There are numerous symptoms that may occur but the typical ones includes somatic symptoms like pelvic pain, headache, skin disorders and changes in bowel habits and the psychosocial symptoms like irritability, aggressiveness, depression, anxiety, inability to concentrate, hypersomnia or insomnia, changes in appetite, specific food craving, change in libido, and poor coordination [2].

Most women experience some form of premenstrual symptoms whether mild or severe at some time in their life. Premenstrual symptoms are a group of symptoms linked to the menstrual cycle. Premenstrual symptoms occur 1 to 2 weeks before the period (menstruation or monthly bleeding) starts. The symptoms usually go away after you start bleeding. Premenstrual symptoms can affect menstruating women of any age and the effect is different for each woman. Abraham in his study found that 54% of women who had experienced Menarche complained of irritability, 40% abdominal bloating as premenstrual symptom. The present study has been undertaken to find out the symptoms of objectives in view [3].

John.T.E.Richardson reports that PMS can be characterized as a group of psychological and somatic symptoms that are limited to the week preceding menstruation and relieved by the onset of menses. Women are often assumed to show variations in their intellectual performance through the menstrual cycle [4].

Menstruation does not stop just because there is an emergency. While 80% of menstruating women have experienced at least one symptom that could be attributed to PMS, estimate of prevalence range from as low as 3% to as high as 30%. The topic holds a paramount importance in the lifecycle of a woman, the time of acquiring the age of adolescence. The knowledge level of young girls at the age of 8 to 10 years is very meager to accept the myths and facts of the menstrual cycle and its associated problems. There is a need to be aware in the mind of all the girls regarding the process of menstruation [5].

Although premenstrual symptoms is an issue that every girl and a woman has to deal with in her life, there is lack of information on the process of menstruation and the physical and psychological changes associated with this and proper requirements for managing premenstrual symptoms. The taboo surrounding this issue in the society prevents girls and women from articulating their needs and the problems and the management have been ignored or misunderstood [6].

Praveen Rasheed conducted a research study of prevalence and predictors of premenstrual syndrome among college aged women in Saudi Arabia. At least one premenstrual symptom was experienced by 448 women (99.6%) and 176 (37.5%) had a high symptom severity score. They examined the association of PMS frequency with possible risk factors for the disease, recommended that women vulnerable to mental stress take advantage of relaxation techniques and psychotropic therapies. Moreover, women with PMS might eliminate sweet tasting food and caffeine containing beverages, particularly coffee from their diet [7].

Unfortunately these symptoms are often overlooked because of the individual's age and because of the mood swings, irritability and anxiety are attributed to teenage as opposed to a diagnosis of premenstrual syndromes. Teenage girls who experienced premenstrual syndrome will also find that their behavior affects their family. Parents of teens who have PMS report increased tension in the home and a deterioration of family relationships during the daughters weeks prior to menstruation. Other symptoms such as fatigue, insomnia and lack of concentration can also negatively impact educational and after school activities [8].

The present study aims to assess the prevalence of premenstrual syndrome and coping behavior among higher secondary school girls.

Methodology

The research design selected for this study was non experimental descriptive research design . The study was conducted in Government Higher Secondary School at Nellikupam, Kancheepuram district, Tamil Nadu. The setting was chosen on the basis of feasibility in terms of availability of adequate samples. The study sample consisted of 110 higher secondary school girls, those who fulfilled the inclusion criteria. The inclusion criteria include a. Higher secondary school girls who were in the age group of 14-17 years and above and b. girls who were available during data collection. Higher secondary school girls with menorrhagia, metrorrhagia and polycystic ovarian disease were excluded from the study.

Development and Description of the Tool

The tool for data collection consists of three sections. Section A consisted of demographic variables such as age, religion, place of residence,

family monthly income and type of family and clinical variables such as age at menarche, menstrual flow, menstrual cycle, duration of menstrual flow and habit of regular exercise. Section B pertains to assess the prevalence of premenstrual syndrome by Standardized 5 point rating scale. It consists of 18 premenstrual symptoms. The scores are interpreted as no symptoms, mild symptoms, moderate symptoms and severe symptoms.

Section C comprised of 3 point rating scale to assess the coping behavior of the higher secondary school girls which includes 11 questions. The scores are interpreted as never, always and sometimes. Reliability of the tool was established by test-retest method. The r value was 0.082 for premenstrual syndrome and 0.781 for coping behavior of the higher secondary school girls . The correlation coefficient was very high, hence the tool was considered reliable and feasible for proceeding with the main study.

Ethical Considerations

The research proposal was approved by research committee of SRM College of Nursing, SRM University, Kattankulathur, Kancheepuram District. Permission was obtained from the Dean, SRM College of Nursing and principal of Government Higher Secondary School. Informed consent was obtained from the study participants after explaining the nature and duration of the study. Assurance was given to the individual that report will be kept confidential.

Statistical Analysis

Frequency and percentage distribution were used to assess the demographic variables, premenstrual syndrome and coping behavior of higher secondary school girls. Chi square was used to associate the premenstrual syndrome and the coping behavior of higher secondary school girls with demographic variables.

Results

The demographic variables of higher secondary school girls reveal that, 54(49.1%) girls belonged to the age group between 16-17years and only 4(3.6%) were in the age group of 14-15 years. Regarding the religion, most of them 97(88.2%) belonged to Hindu religion and only 1(0.9%) belonged to Muslim religion. Considering the place of residence, majority 110 (100.0%) of them were in rural area and none of them were in urban area. Regarding the family monthly income, most of them 62(56.4%) were earning between Rs.1590 - Rs. 4726 and only 9(8.2%) were earning between Rs.7878 - Rs. 11,876. Considering the type of family, majority 90 (81.8%) were from nuclear family and only 4(3.6%) were from extended family. Regarding age at menarche, 70(63.6%) of them attained menarche at the age of 13 -15years while 7 (6.4%) of them attained menarche at the age of 15years and above. Considering their menstrual flow, 71 (64.5%) had normal menstrual flow while 18(16.4%) had heavy flow. Regarding their menstrual cycle, 90 (81.8%) of them had regular cycle, while 20(18.2%) had irregular cycle. Considering the duration of menstrual flow, 52(47.3%) had more than 3days, while 20(18.2%) had menstrual flow for the duration of 3-5 days. Regarding regular exercises, 79(71.8%) didn't engage in regular exercise while 31(28.2%) engaged in regular exercise (Table 1).

The analysis revealed that, majority 79(71.8%) of higher secondary school girls had mild level of symptoms, 27(24.6%) of girls had moderate level of symptoms, 4(3.6%) of girls had no premenstrual symptoms and no one had severe level of premenstrual symptoms (Table 2).

The analysis revealed that, majority 103(93.6%) of higher secondary school girls sometimes used coping behavior, 7(6.4%) of higher secondary school girls always used coping behavior and no one never used any coping behavior for their premenstrual symptoms (Table 3).

Table 1: Frequency and percentage distribution of demographic variables of higher secondary school girls N=110

S. No.	Demographic Variables	No. of respondents (n)	Percentage (%)	
1	Age	14 - 15 Years	4	3.6
		15 - 16 Years	52	47.3
		16 - 17 Years	54	49.1
2	Religion	Hindu	97	88.2
		Christian	12	10.9
		Muslim	1	0.9
3	Place of Residence	Urban	0	0.0
		Rural	110	100.0
4	Family monthly Income	Rs. 1590 - Rs. 4726	62	56.4
		Rs.4727 - Rs.7877	39	35.5
		Rs.7878 - Rs.11,876	9	8.2

5	Type of Family	Nuclear	90	81.8
		Joint	16	14.5
		Extended	4	3.6
6	Age at Menarche	11 - 13 Years	33	30.0
		13 - 15 Years	70	63.6
		> 15 Years	7	6.4
7	Menstrual Flow	Normal	71	64.5
		Scanty	21	19.1
		Heavy	18	16.4
8	Menstrual Cycle	Regular	90	81.8
		Irregular	20	18.2
9	Duration of Menstrual Flow	>5 Days	52	47.3
		3 - 5 Days	20	18.2
		<3 Days	38	34.5
10	Habit of Regular Exercise	Yes	31	28.2
		No	79	71.8

Table 2: Frequency and percentage distribution of level of premenstrual symptoms among higher secondary school girls
N=110

S. No.	Level of Premenstrual Symptoms	No. of Students (n)	Percentage distribution (%)
1	No Symptoms	4	3.6
2	Mild Symptoms	79	71.8
3	Moderate Symptoms	27	24.6
4	Severe Symptoms	0	0

Table 3: Frequency and percentage distribution of coping behavior among higher secondary school girls.
N=110

S. No.	Coping Behavior	No. of Students (n)	Percentage distribution (%)
1	Never	0	0.0
2	Sometimes	103	93.6
3	Always	7	6.4

Discussion

Menstruation is a normal physiological impact in each girl's life. Menstruation is a monthly uterine bleeding for 3-5 days after every 28 days from puberty till menopause. Many women experience changes in their body, mood, behavior, appearance before their menstrual flow begins. However if the woman has moderate or severe symptoms, that makes it hard for her to function she may have premenstrual syndrome (PMS) or a more severe condition known as premenstrual dysphoric disorder (PMDD). Natu says symptoms which occur during one week before menstruation is collectively known as Premenstrual Syndrome [9].

PMS symptoms may become severe enough to prevent women from functioning normally. Women with depression may have more severe symptoms during the second half of their cycle and may need to have their medication adjusted. The suicide rate in women with depression is much higher during the second half of the menstrual cycle [10].

The present study results revealed that, regarding the premenstrual symptoms, majority 79(71.8%) of

higher secondary school girls had mild level of symptoms, 27(24.6%) of girls had moderate level of symptoms, 4(3.6%) of girls had no premenstrual symptoms and no one had severe level of premenstrual symptoms. Regarding the coping behavior, majority 103(93.6%) of higher secondary school girls sometimes used coping behavior, 7(6.4%) of higher secondary school girls always used coping behavior and no one never used any coping behavior for their premenstrual symptoms.

The study findings are consistent with the study done by Zebra Sitwat (2013) conducted a research study on premenstrual syndrome and prevalence among university students in Karachi, Pakistan. The PMS and menstrual cycle data of 520 individual were collected from prism calendar and symptom thermal chart for three consecutive cycle. Based on the observation, all subjects were grouped as control (208) and PMS patient (312). The frequency (60%) with symptoms include irritability (71.05%), fatigue (86.84%), and bowel constipation (36.76%) and loose bowel (17.65%) appetite up (42.65%) and appetite down (51.47%), breast tenderness (67.65%) abdominal blotting (47.06%), aggressiveness (29.41%), depression (13.24%) and insomnia (14.71%), labial

mood (5.88%), and anger (7.35%). Irritability and breast tenderness were observed in the age group (19-24years) i.e. 92% and 82% respectively with $p < 0.001$ [11].

The present study result are consistent with the study done by Navdeep Kaur (2009) conducted a study to assess the premenstrual syndrome and coping behavior among nursing students, Nine, Pgimer, Chadigarh. A descriptive study was conducted among 248 nursing students from all classes were selected for collection of data. The questionnaire Part one is assessment of premenstrual syndrome and part two is for check list on coping behavior. The most commonly (79.43%) out of 248 students were having lower abdominal pain, (66.12%) were having backache, (52.01%) were having low efficacy of work performance. Majority of the students were using healthy coping strategies, (89.11%) do not blame themselves for this problem, (75.40%) accept it as nothing can be done, (98.11%) take hot or cold drinks [12].

There was a significant association found between the premenstrual syndrome among higher secondary school girls with type of family and habit of regular exercise where as, no significant association found with other demographic variables such as age, religion, family monthly income, age at menarche, menstrual flow, menstrual cycle, and duration of menstrual flow.

There was a significant association found between coping behavior among higher secondary school girls with age at menarche and habit of regular exercise. There was no significant association found with other demographic variables such as age, religion, place of residence, family monthly income, type of family, menstrual flow, menstrual cycle, and duration of menstrual flow.

Conclusion

The study results show that, majority 71.8% of higher secondary school girls had mild premenstrual symptoms and most of them (93.6%) sometimes used coping behaviour. Most women experience some form

of premenstrual symptoms whether mild or severe at some time in their life. Many treatments have been tried in premenstrual syndrome. Reducing salt intake, caffeine and stress along with increasing exercise are some of the ways to manage premenstrual syndrome.

References

1. ACOG Frequently asked questions, FAQ 057, Gynecological problems, <https://www.acog.org/>
2. American College of Obstetricians and Gynecologists. Premenstrual syndrome management guidelines for Obstetrics Gynecologists. ACOG Practice Bulletin. Washington (DC), 2000; 15:1-9.
3. Abraham conducted study on the premenstrual syndrome churchill Livingstone publication, 1998 .p.1-48.
4. John T.E.Richardson, Textbook of Gynecology 12th edition B.T.Churchill Livingstone publication, 1999.p. 226.
5. Vigod SN. Understanding and treating premenstrual dysphoric disorder: an update for the women's health practitioner. *Obstetrics Gynecology Clinical North Am.* 2009; 36:907-924,xii.
6. Yonkers KA, O'Brien PM, Erickson E. Premenstrual syndrome. *Lancet.* 2008; 371(9619):1200-1210.
7. Praveen Rasheed conducted a study related to prevalence and predictors of premenstrual syndrome among college-aged women in Saudi Arabia, 2013 February; 23(6):381-387.
8. *Journal of manipulative and physiological therapy* 1999; 22:582-589.
9. Menstruation and the menstrual cycle fact sheet. Office of Women's Health. December 23, 2014.
10. Lentz GM. Primary and secondary dysmenorrhea, premenstrual syndrome. *Comprehensive gynecology.* 6th edition. Philadelphia, PA: Elsevier Mosby; 2012: chapter 36.
11. Zebra Sitwat conducted a research study on premenstrual syndrome and prevalence among university students in Karachi, Pakistan, 2013 April 4; 4:113-116.
12. Navdeep Kaur conducted a study to assess the premenstrual syndrome and coping behavior among nursing students, nine pgimer, Chandigarh, 2009 January; 5(1):1-5.