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Research Article

A study to assess the pre menstrual symptoms experienced by college going students in selected areas of Pune

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Abstract

Premenstrual syndrome (PMS) is defined as the recurrence of psychological and physiological symptoms in the luteal phase, which remit in the follicular phase of the menstrual cycle. Symptoms of PMS fall in two domains: Physiological and Psychological. **Aim:** To conduct a survey study among 120 colleges going students from selected hostels of Bharti Vidyapeeth Campus, Dhankawadi, Pune to assess the incidence of premenstrual symptoms experienced by the college going students. **Methods:** The present study investigates the incidence of premenstrual symptoms by using convenient method from 120 participants of age group ranging from 16 years, and above with educational status ranging from graduation first year to graduation fourth year. **Results:** It was found that out of the 120 participants, 66.66% of the college going students are showing the premenstrual symptoms of tiredness or lethargy, 65% of the samples showed premenstrual symptoms of acne or pimples, 60% of the samples are showing premenstrual symptoms of backache, 55% of the samples showing irritability, 50.83% showed confusion before menstrual cycle and only 15.83% of college going students showed the pre menstrual symptoms such as cold sores and panic attack. With this study, it was observed that the most common symptoms are tiredness and feeling lethargic (66.66%) followed by acne (65%). It was also observed that the least common symptoms were cold sores (15.83%) and panic attacks (15.83%). **Conclusion:** As seen in this study the most common PMS observed was tiredness or lethargy, it is essential that awareness programmes need to be conducted to address the importance of managing the issue by pharmacological and non-pharmacological methods.

Keywords: Premenstrual Syndrome, Prevalence, Quality of life, Symptoms

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1. Introduction

For centuries, and still at present, the social history of premenstrual syndrome (PMS) and phenomena is entangled with the social history of gender relations [1]. In early 1980s PMS became a household term. Popular press articles told women how to “beat the Blues”, “overcome the menstrual uglies” and negotiate interpersonal relations during those times of month. Clinicians and researchers met at international conferences to discuss definition, etiology and possible treatment of a syndrome estimated by some to affect 80% of women. Feminist and legal scholars debated the validity of term and its use as a defense for criminal behavior. Since Premenstrual Tension (PMT), as PMS was first termed, has been in medical discourse since Frank (1931) associated it with hormonal imbalances [2].The premenstrual syndrome (PMS) was first described in 1931 by Frank and Horney, who speculated on the possible physic-pathological origins of the condition and on some forms of treatment [3].The World Health Organization’s (WHO) International Classification of Disease, 10th edition includes premenstrual tension syndrome in its section of gynecologic disorders, as a disorder of the female genital organs [4]. Magnesium deficiency has been implicated as a possible contributing factor to some symptoms of PMS [5]. Women with PMS differ from those without PMS in measures of personality. [6]. One of the most relevant

criteria is the induced impairment, such as avoidance of social activities or search for medical care Life time prevalence is thus estimated between 75 and 85% .If considering the report of one or several symptoms between 10 and 15% in case of medical care request and between 2 and 5% in case of social activities interruption [7]. Premenstrual syndrome (PMS), occurs 7–14 days before the onset of menstruation and subsides with the commencement of menstrual flow, affects women during their reproductive age, and is associated with physical, psychological and behavioral changes [8]. Premenstrual syndrome (PMS) is a cyclic recurrence of distressing somatic and affective symptoms in the luteal phase of menstrual cycle and in the few days (1-3days) of the next follicular phase [9]. If the mental symptoms predominate, are very severe, and are associated with impairment, then the patient is classified as having premenstrual dysphonic disorder (PMDD) which may be viewed as a severe subtype of PMS [10]. Premenstrual syndrome (PMS) can be defined as a recurrent disorder that occurs every month in the luteal phase of the menstrual cycle, and remits with the onset of menstruation. PMS is characterized by a complex set of symptoms which include physical, psychological and behavioral changes of varying severity. This can interfere with the lives of the affected, as well as their interpersonal relationships [11].It has been estimated from retrospective community surveys that nearly 90% of women have experienced at least one premenstrual syndrome. Epidemiological surveys have estimated that as many as 75% of reproductive age women experience some symptoms attributed to the premenstrual phase of menstrual cycle. One study on adolescent sample (N=78) showed that 100% of the participants reported at least one premenstrual symptom of minimal severity [12, 13].As the reviewed literature indicates, significant group of women of child bearing age experience some cyclic menstrual related symptoms of various degrees. These PMS symptoms can have debilitating effects on women's quality of life and work production. However, race, ethnicity and culture may influence expression of premenstrual symptoms and their severity.

Aim

To study and assess the pre-menstrual symptoms experienced by college going students in selected hostels of Bharti Vidyapeeth Campus, Dhankawadi, Pune using descriptive univariant research.

2. Materials and Methods

A sample size of 120 students of age group 16 and above from hostels of Bharti Vidyapeeth Campus, Dhankawadi, Pune were selected by using convenient method data [4]. By using the questionnaire method, the data were collected students living in selected hostels of Bharti Vidyapeeth Campus, Dhankawadi, and Pune [5]. The data collected within the period of 1st October 2015 to 10th November 2015. The structured questionnaire were developed with the help of literatures like textbooks, internet, journals dissertation and also the investigators held discussion with nursing experts. Data collection comprises of first demographic data [7], such as age, educational qualification, age of menarche, duration of menstruation, regularity of menstrual cycle, amount of menstrual bleeding, and frequency of menstrual cycle [9]. Second contains 24 - Yes/No type questions, which includes some of the pre-menstrual symptoms, like physical emotional and behavioral [14]. In order to establish reliability of the tool, questionnaire method was used to assess the incidence of PMS experienced by the college going students. The tool was found to be valid and reliable with which it measures the attitude, it is suppose to measure. It refers to the extent to which same results are obtained on repeated administration of the instrument. Split-half method was used to assess the incidence of PMS experienced by the college going students [17]. The following formula was used to check the reliability of research tool:

$$r = \frac{k}{k-1}\left[1 - \frac{\varepsilon\, \sigma 1^2}{\sigma\ y^2}\right]$$

i.e., r = 0.7

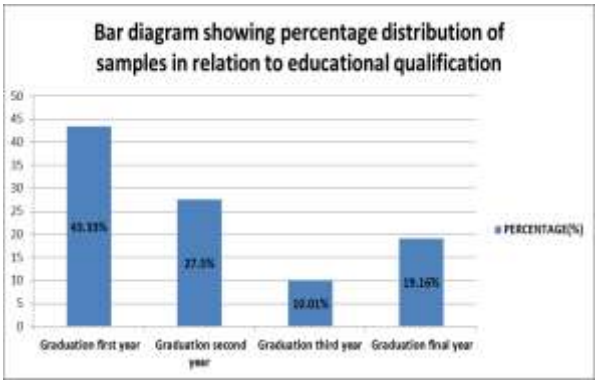
The reliability of the research tool was 0.7, so that the research tool was found to be valid and reliable. Pilot study was conducted on 29th August 2015 by using convenient method with 12 students from the first year B.sc nursing batch. Approximately it took 35-40 minutes for completion of the pilot study [18].The permissions were from the concerned authorities (Ms.Shailaja Sawant- College of Nursing Hostel Warden) of the hostel of Bharti Vidyapeeth Campus, Dhankawadi, Pune on 2nd October (Friday) 2015. Data analyses were calculated by using descriptive statistics i.e. by frequency and percentage, to know the incidence and the most common symptoms.

3. Results

Formulating frequency, percentage distribution in the form of bar and pie diagrams of the demographic characteristics of the students. Table 1 shows that out of 120 samples, majority of the samples (49.16%) are in the age group of 19-21 years. Table 2 shows that out of 120samples, majority of the samples (43.33%) are having educational qualification of graduation first year. Table 3 shows that out of 120samples, majority of the samples (51.66%) have attained their age of menarche at the age of 11-13 years. Table 4 shows that out of 120 samples, majority of the samples (60.01%) are having duration of menstrual cycle for 4-5 days. Table 5 shows that out of 120 samples, majority of the samples (82.5%) are having regular menstrual cycle. Table 6 shows that out of 120 samples, majority of the samples (70.83%) are having moderate amount of menstrual bleeding Table 7 shows that out of 120 samples, majority of the samples (53.33%) are having frequency of menstrual cycle for 27-29 days.

Figure 1.1 Out of 120 colleges going students of age group 17- 24 and above, living in hostels. 49.16% of sample represents the age group of 19-21 years. 29.16% of sample belongs to the age group of 16-18 years. 15.02% of sample belongs to the age group of 22-24 years. About 6.66% of sample belongs to above 25 years.

SN	Data	(f)	(%)
1	Age		
	a) 16-18 years	35	29.16
	b) 19- 21 years	59	49.16
	c) 22-24 years	18	15.02
	d) Above 24 years	8	6.66
2	Educational qualification		
	A) graduation first year	52	43.33
	B) graduation second year	33	27.5
	C) graduation third year	12	10.01
	D) graduation final year	23	19.16
3	Age of menarche		
	a) 8-10 years	3	2.52
	b) 11-13 years	62	51.66
	c) 14-16 years	50	41.66
	d) 16 years or above	5	4.16
4	Duration of menstruation		
	a) 2-3 days	27	22.5
	b) 4-5 days	72	60.01
	c) 6-7 days	20	16.66
	d) 8 days or above	1	0.83
5	Regularity of menstrual cycle		
	A)regular	99	82.5
	B)irregular	21	17.5
6	Amount of menstrual bleeding		
	A)mild	29	24.16
	B)moderate	85	70.83
	C)severe	6	5.01
7	Frequency of menstrual cycle		
	A)21-23 days	10	8.33
	B)24-26 days	21	17.51
	C)27-29 days	64	53.33
	D)30 days or above	25	20.83



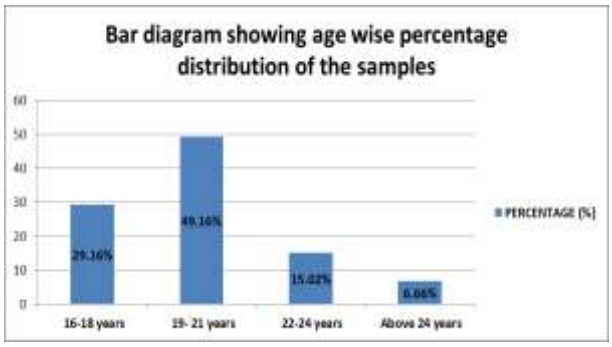


Figure 1.2 In relation to educational qualification, 43.33% of sample represents the educational qualification in graduation first year. 27.5% of sample represents the educational qualification in graduation second year. 10.01% of sample represents the educational qualification in graduation third year.19.16% of sample represents the educational qualification in graduation final year and about

Figure 1.3**:** According to age of menarche, 51.66% of samples attained menarche at the age of 11-13 years. 41.66% of samples attained menarche at the age of 14- 16 years. 4.16% of samples attained menarche at the age of 16 years or above. And about 2.52% of samples attained menarche at the age of 8- 10 years.

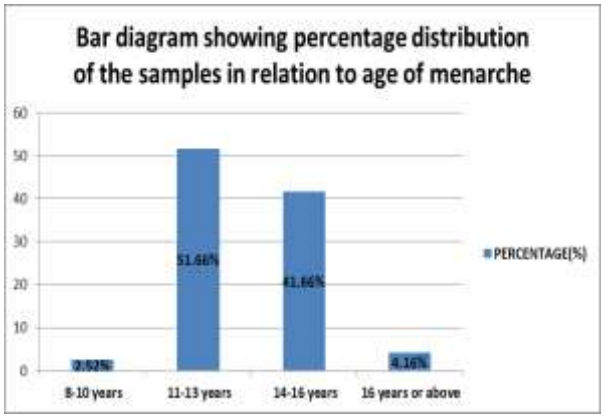


Figure 1.4 in relation to menstrual cycle, 60.01% of sample represents the group having duration of menstruation for 4-5 days. 22.5% of sample represents the group having duration of menstruation for 2-3 days. 16.66% of sample represents the group having duration of menstruation for 6-7 days. And about 0.83% of sample represents the group having duration of menstruation for 8 days or above.

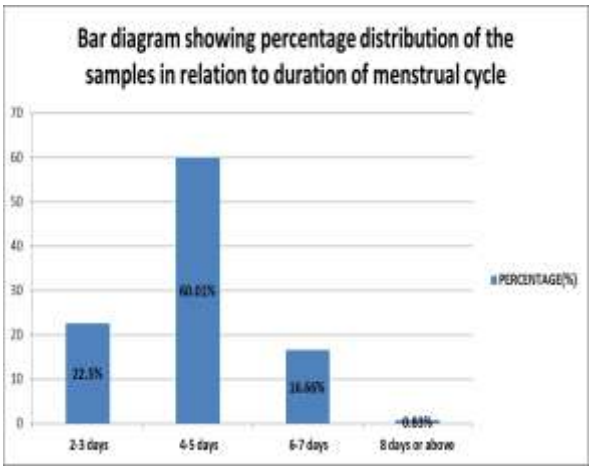
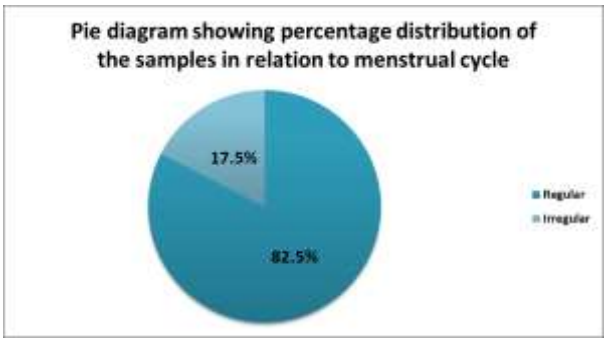


Figure-1.5



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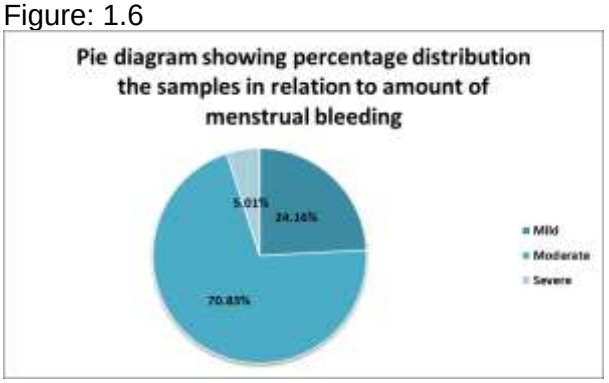
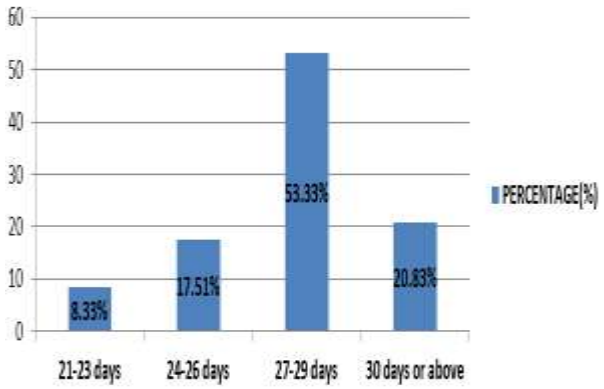


Formulating frequency, percentage distribution in the form of bar graphs showing the incidence of pre-menstrual symptoms experienced by college going students

Figure 1.7 Out of 120 samples, 53.33% of sample represents the frequency of menstrual cycle for 27-29 days. 20.83% of sample represents the frequency of menstrual cycle for 30 days or above. 17.51% of sample represents the frequency of menstrual cycle for 24-26 days. And about 8.33% of sample represents the frequency of menstrual cycle for 21-23 days.



Bar diagram showing percentage distribution of the samples in reletion to frequency of menstrual cycle.

SN	Categories	Item (PMS)	(f)	(%)
1	Physiological symptoms	Acne (pimples)	8	5
		Backache	72	60
		Headache or migraines	36	30
		Sinus problems or allergies	1	5.83
		Abdominal cramps	9	9.16
		Abdominal bloats	1	34.16
		Hyper hydration or fluid retention	31	25.83
		Breast tenderness or swelling	24	20
		Joint pain or muscle spasms	58	48.33
		Gastrointestinal complications	32	26.66
		Cold sores	9	5.83
		Increase in appetite	0	3.33
		Tired or lethargic	0	6.66
		Dizziness or fainting	2	5
2	Psychological symptoms	Sleep disturbance	0	1.66
		Anxiety	49	40.83
		Irritability	66	55
		Moods swings	61	50.83
		Confusion	45	7.5
		Depression, Feeling anger or Felt hostile	50	41.66
		Sadness, Crying spells	2	43.33
		Forgetfulness, Decreased alertness and concentration	8	0
		Decrease self-esteem	4	8.33
		Panic attack	9	5.83

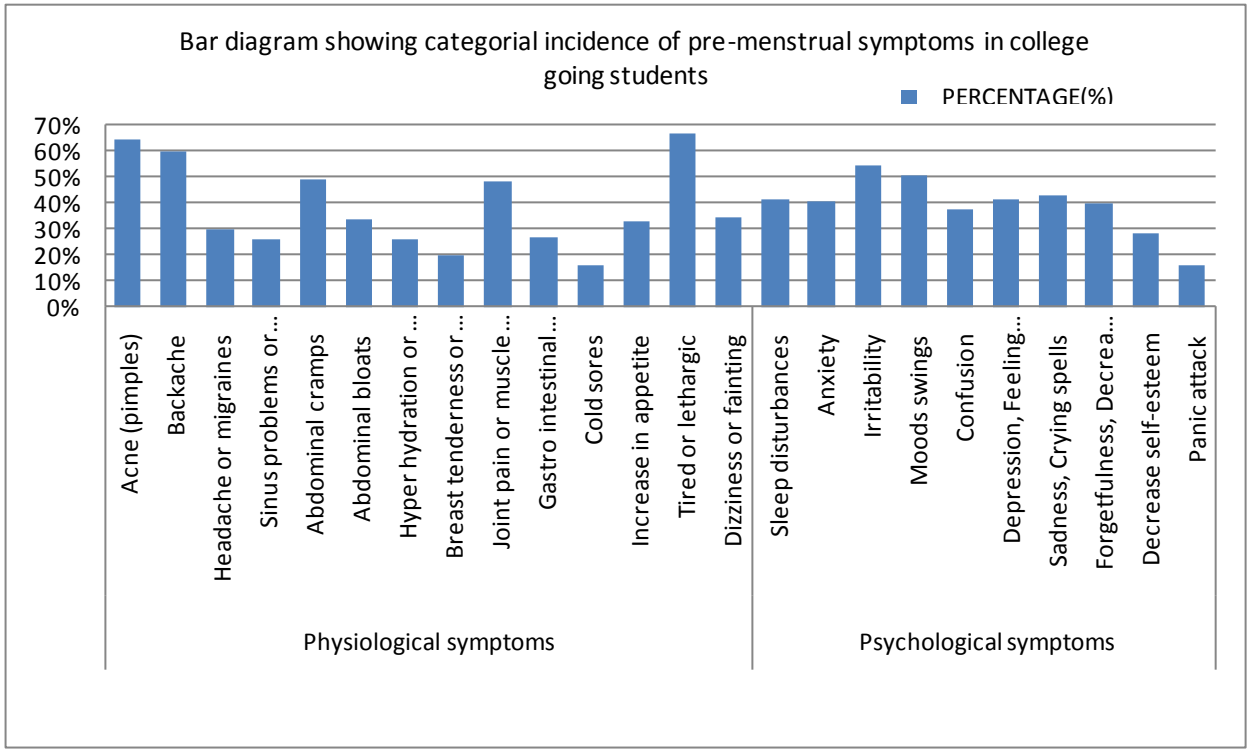
The above table shows that out of 120 samples, 66.66% of the college going students are showing the pre-menstrual symptoms of tiredness or lethargy and 15.83% of college going students are showing the pre-menstrual symptoms such as cold sores and panic attack

Figure-1.8 (Bar Diagram physiological and Psychological symptoms).

Out of 120 samples, 66.66% of the college going students are showing the premenstrual symptoms of tiredness or lethargy, 65% of the samples are showing the premenstrual symptoms acne or pimples, 60% of the samples are showing premenstrual symptoms of backache, 55% showing irritability, 50.83% are showing confusion before the menstrual cycle while 15.83% of college going students are showing the pre-menstrual symptoms such as cold sores and panic attack.

4. Discussion

Efficacy of an education program helped in increasing knowledge and decreasing the severity of symptoms of premenstrual syndrome (PMS). After the education program, the schoolgirls in the experimental group had significantly increased knowledge scores as measured by the Premenstrual Syndrome Knowledge Questionnaire. Three months following the education program, a significant reduction in total PMS scores and three of the subscale scores was measured by a translated version of Abraham's Menstrual Symptom Questionnaire, suggesting that the education program could have been the source of the reduction in PMS symptoms of the experimental group of young adolescent girls [8].The symptoms reappear monthly and last for an average of 6 days per month for the majority of the reproductive years. It has been calculated that affected women experience almost 3000 days of severe symptoms during the reproductive years [14]. More than 200 symptoms of PMS/PMDD have been described in literature, ranging from mild symptoms to those severe enough to interfere with normal activities [15]. It is estimated that up to 85% of premenopausal women experience at least one premenstrual symptom and 15-20% meet clinical criteria for premenstrual syndrome (PMS) [16]. The main symptoms of premenstrual syndrome include mood swing, anger, fatigue, abdominal cramp, abdominal bloating, and back ache [9, 17].



These symptoms should interfere with the normal activities of a woman including social, occupational, interpersonal and even the sexual functioning and are not related to any organic and functional disease [18]. Despite the bias however, these and other Asian studies report that a significant proportion of Asian women suffer from premenstrual symptoms, and therefore it is not a "western disease" as frequently perceived [19]. The present study revealed that out of 120 colleges going students of age group 17- 24 and above, living in hostels. 49.16% of sample represents the age group of 19-21 years. 29.16% of sample belongs to the age group of 16-18 years. 15.02% of sample belongs to the age group of 22-24 years. About 6.66% of sample belongs to above 25 years With regard to the educational qualification, 43.33% of sample represents the educational qualification in graduation first Year. 27.5% of sample represents the educational qualification in graduation second year. 19.16% of sample represents the educational qualification in graduation final year & about 10.01% of sample represents the educational qualification in graduation third year. With regard to the age of menarche, 51.66% of samples attained menarche at the age of 11-13 years. 41.66% of samples attained menarche at the age of 14- 16 years. 4.16% of samples attained menarche at the age of 16 years or above. And about 2.52% of samples attained menarche at the age of 8- 10 years. The study also revealed that 60.01% of sample represents the group having duration of menstruation for 4-5 days. 22.5% of sample represents the group having duration of menstruation for 2-3 days. 16.66% of sample represents the group having duration of menstruation for 6-7 days. And about 0.83% of sample represents the group having duration of menstruation for 8 days or above.

Out of 120 samples, 82.5% of sample shows regularity in menstrual cycle while the remaining 17.5% of sample shows irregularity in menstrual cycle. Out of 120 samples, 70.83% of sample shows moderate amount of menstrual bleeding. 24.16% of sample shows mild amount of menstrual bleeding. And about 5.01% of sample shows severe amount of menstrual bleeding. Out of 120 samples, 53.33% of sample represents the frequency of menstrual cycle for 27-29 days. 20.83% of sample represents the frequency of menstrual cycle for 30 days or above. 17.51% of sample represents the frequency of menstrual cycle for 24-26 days. And about 8.33% of sample represents the frequency of menstrual cycle for 21-23 days. The study revealed that out of 120 samples, 66.66% of the college going students are showing the premenstrual symptoms of tiredness or lethargy, 65% of the samples are

showing the premenstrual symptoms acne or pimples, 60% of the samples are showing premenstrual symptoms of backache, 55% showing irritability, 50.83% are showing confusion before the menstrual cycle while 15.83% of college going students are showing the pre-menstrual symptoms such as cold sores and panic attack.

Conclusion

Out of the 120 samples, 66.66% of the college going students is showing the premenstrual symptoms of tiredness or lethargy. 15.83% of college going students are showing the pre-menstrual symptoms such as cold sores and panic attack. As per our study, 120 samples are showing different premenstrual symptoms, so the incidence of PMS were seen common among the 120 college going students of age group 16 and above.

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