



YOGA AND DIET FOR MANAGING PREMENSTRUAL SYNDROME: AN EDUCATIONAL INTERVENTION STUDY AMONG NURSING STUDENTS IN BHOPAL

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ABSTRACT

Introduction: Premenstrual Syndrome (PMS) refers to physical, behavioural and emotional symptoms and signs that tend to occur in predictable pattern during menstrual period. The prevalence of PMS in women of reproductive age has been reported to be more than 47.8%. The frequency and severity of PMS varies from female to female and is affected by lifestyle, social factors as well as dietary factors. It is believed that yoga and dietary modification significantly relieves the symptoms of PMS. The present study aimed to assess the prevalence of pre-menstrual syndrome and its severity among girls of a selected college of Bhopal, to assess their perception and knowledge about measures to reduce PMS followed by an educational intervention session to promote yoga and healthy diet to reduce severity of PMS. **Methodology:** An educational intervention study done in the selected college of Bhopal. All female students present on the day of study were included in the study. The participants were asked to fill the shared google form was followed by an educational session consisting of presentation and video to promote healthy diet and yoga to reduce PMS symptoms. Collected data was analysed using MS excel. **Results:** Premenstrual syndrome is very common among young females (70%). 48.5% of the respondents had physiological symptoms majority having abdominal cramps (75%) and least being nausea and vomiting (18%). 38.25% of the respondents faced psychological and behavioural symptoms, maximum being restlessness (67%) and least being forgetfulness (10%). More than 40% of the students believed that Yogic practices could reduce PMS symptoms but only 26% among them practiced yoga regularly. **Conclusion:** There was a significant gap in knowledge and action about Yogic practices. The average PMS score of the girls doing yoga regularly was lower (88) compared to girls not doing yoga (100).

KEYWORDS : Yoga, Premenstrual syndrome, diet, educational intervention

INTRODUCTION

Premenstrual Syndrome refers to physical behavioural and emotional symptoms and sign that tend to occur in predictable pattern during menstrual periods. Emotional and behavioural signs include tension or anxiety, depression, crying spells, mood swings, irritability, anger, appetite changes and food cravings, trouble falling asleep, social withdrawal, poor concentration, change in libido. Physical sign and symptoms include Joint pain, muscle cramps, fatigue, weight gain related to fluid retention, abdominal bloating, breast tenderness, acne flare-ups, constipation or diarrhoea, alcohol intolerance. Prevalence of PMS is 14.3% to 74.4% in various studies.^(1,2,3,4,5) It affects day to day function, interferes with college/academics, work productivity, relationship with friends, family and colleagues. The frequency as well as severity of PMS varies from female to female and is affected by lifestyle, social and dietary factors.^(6,7,8) A study conducted in Iran found that yoga significantly relieves the symptoms of PMS⁽⁹⁾.

The present study aimed to assess the prevalence of premenstrual syndrome and its severity among girls of a selected college of Bhopal, to assess their perception and knowledge about measures to reduce PMS followed by an educational intervention session to promote yoga and healthy diet to reduce severity of PMS.

Methodology:

Study design: Educational intervention study

Study area: Government Nursing college, Bhopal

Study participants: 2nd and 3rd year nursing college girls

Study duration: 3 months

Sample size: Using the formula $4pq/d^2$

P = prevalence of PMS which is around 47.8% (1)

Q = 100-p

D = 10% (error)

Confidence interval taken as 95%

Putting the values in above formula, the sample size comes out to be 97.

To achieve this sample size, we included 2nd & 3rd year students of Nursing college. All the students present on the day of visit,

were included in the study. Thus, the total sample size was 125.

Inclusion Criteria: None. (All students present on the day of visit/responding to online questionnaire)

Exclusion Criteria: Girls taking treatment for PMS and/or PCOD were excluded from analysis of severity of PMS.

Study Tool: Questionnaire had 2 components:⁽¹⁰⁾

1. PMS scale: The premenstrual syndrome scale comprised 40 questions with three sub-scales (Physiological, Psychological and Behavioral symptoms). This 5-point Likert-type scale consisted of 40 items. The measurements on the scale were set according to the following scoring system: the response Never was scored as "1", rarely as "2", sometimes as "3", very often as "4" and always as "5" points. In addition, the total score obtained from the sub-scales established the "PMSS total score." The scale's lowest score was 40 and highest score was 200. If the scale's total score reached 80 points or above, this indicated the occurrence of PMS. Increase in the scores indicated an increase in PMS severity.

2. Knowledge, Perception and practices about PMS.

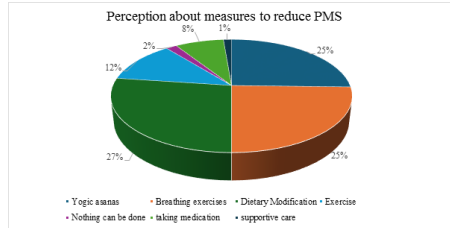
RESULTS:

Table 1: Frequency of students as per severity of PMS:

S. NO.	Severity of PMS (Score)	Frequency (n)	Percentage (%)
1	No PMS (01 to 40)	1	0.8
2	Mild (41 to 80)	40	32
3	Moderate (81 to 120)	61	48.8
4	Severe (121 to 160)	18	14.4
5	Very severe (161 to 200)	5	4
		200	100

Among the 125 respondents, majority of them had moderate symptoms of PMS (61, 48.8%). 5 (4%) of the respondents had very severe symptoms while only 1 respondent said that she had no symptoms of PMS.

Figure 1: Perception about measures to reduce PMS:



The above figure shows that majority of the respondents perceived Dietary modification as main modality to reduce PMS (63, 27%). Yogic asanas (59, 25%) and Breathing exercises (57, 24.8%) were next most common measures to reduce PMS.

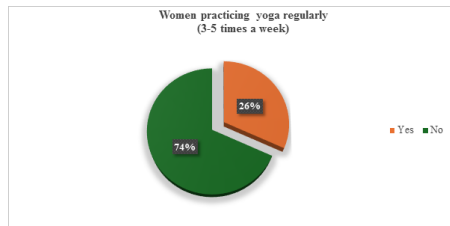


Figure 2: Frequency of respondents Practicing Yoga regularly:

The above figure shows only 26% of the respondents practiced yoga regularly.

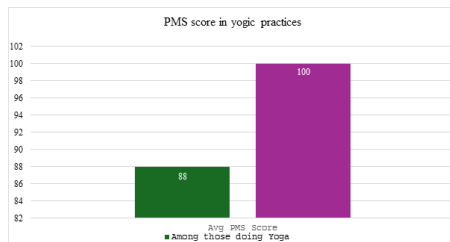


Figure 3: Frequency of PMS score among respondents practicing yoga regularly:

Among the respondents practicing Yoga, average PMS score was less (88) as compared to those not practicing yoga (100).

DISCUSSION:

Premenstrual Syndrome (PMS) is a prevalent condition that significantly impacts the quality of life and productivity of young women. In this study, 70% of nursing students reported experiencing PMS, with nearly half exhibiting moderate symptoms, emphasizing the burden of this condition in this population. The high prevalence aligns with previous research indicating that PMS affects 14.3% to 74.4% of women, depending on lifestyle and sociodemographic factors.

Our findings highlight the significant role of lifestyle interventions in managing PMS. While only 26% of participants practiced yoga regularly, those who did had a lower average PMS score (88) compared to non-practitioners (100). This supports evidence from other studies that yoga alleviates PMS symptoms by reducing stress, improving circulation and enhancing emotional well-being. Furthermore, dietary habits emerged as a critical factor, with 95% of participants consuming unhealthy foods despite acknowledging dietary modification as an effective measure. This gap between knowledge and practice underscores the need for sustained educational initiatives.

The intervention demonstrated that awareness sessions can effectively motivate behavioural changes. However, the short study duration and reliance on self-reported data limit the generalizability of results. Future research should focus on long-term interventions with objective measures to assess

sustained benefits of yoga and diet on PMS.

In conclusion, integrating yoga and healthy dietary practices into the daily routine of young women can significantly reduce PMS severity. Educational institutions should prioritize awareness programs to bridge the gap between knowledge and practice, fostering holistic health among students.

CONCLUSION:

Premenstrual syndrome is very common among young females (70%). More than 40% of the students believed that Yogic practices can reduce symptoms of PMS but only 26% of the students did yoga regularly. There is a significant gap in knowledge and action about Yogic practices. The average PMS score of the girls doing yoga regularly was lower (88) compared to girls not doing yoga (100).

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