



MENSTRUAL HYGIENIC PRACTICES AND PREVALENCE OF PREMENSTRUAL SYNDROME IN MEDICAL STUDENTS

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ABSTRACT Learning about menstrual hygiene forms a vital aspect of health education among menstruating women to avoid future long-term ill effects of poor menstrual hygiene practices leading to premature births, stillbirths, miscarriages, infertility problems, toxic shock syndrome and carcinoma cervix. Premenstrual syndrome (PMS) can be broadly defined as any constellation of psychological and physical symptoms that recur regularly in the luteal phase of the menstrual cycle, which remit for at least 1 week in the follicular phase and cause distress and functional impairment. The objective of the present study was to assess the menstrual hygienic practices and prevalence of PMS in female medical under graduate students. Premenstrual symptoms screening tool [PSST] was used for identifying the prevalence of PMS. In our study 30% of the study participants met the criteria for moderate to severe PMS and 5% of the participants met the criteria for Pre Menstrual Dysphoric Disorder. (PMDD)

KEYWORDS : Pre menstrual syndrome, Pre menstrual dysphoric disorder, menstrual hygiene

INTRODUCTION:

Menstruation is a milestone event in a girl's life and the beginning of reproductive life. Hence, all aspects of menstruation need to be understood by adolescent girls. Better understanding of the good menstrual hygiene is crucial for the education, health, and dignity of girls and women. Being an important sanitation issue which has long been in the closet, still there is a long-standing need to openly discuss it. Menstruation and menstrual practices are still shadowed by taboos and socio-cultural restrictions. Menstruation is linked with several misconceptions and false practices, which sometimes result into adverse health outcomes. [1] Learning about menstrual hygiene forms a vital aspect of health education among menstruating women to avoid future long-term ill effects of poor menstrual hygiene practices leading to premature births, stillbirths, miscarriages, infertility problems, toxic shock syndrome and carcinoma cervix as a complication of recurrent reproductive tract infections. [2]

Premenstrual syndrome can be broadly defined as any constellation of psychological and physical symptoms that recur regularly in the luteal phase of the menstrual cycle, which remit for at least 1 week in the follicular phase and cause distress and functional impairment. [3] 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 behavioural changes. [4] 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. [5] If the mental symptoms predominate, are very severe, and are associated with impairment, then the patient is classified as having premenstrual dysphoric disorder (PMDD) which may be viewed as a severe subtype of PMS. [6]

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. 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). [7] Evidence from the studies suggests that the disorder is the result of the interaction of cyclic changes in oestrogen and progesterone with specific neurotransmitters. The aetiology of Premenstrual syndrome remains unknown and may be complex and multifactorial. The role of ovarian hormones is unclear, but symptoms often improve when ovulation is suppressed. [8]

Medical students are at high risk for developing menstrual irregularities due to stressed lifestyle, irregular food and exercise habits. Medical students need to study harder and are vulnerable to

stress, which may lead to dysfunction of hypothalamo-pituitary ovarian axis causing menstrual abnormalities. More than 90% of menstrual problems are preventable just by early detection and appropriate treatment. With this background the present study was conducted to assess the menstrual hygienic practices and prevalence of PMS in female medical under graduate students.

AIMS & OBJECTIVES:

1. To assess menstrual hygienic practices among female medical undergraduates of 1st - 3rd semester of a private medical college.
2. To assess the prevalence of premenstrual syndrome among female undergraduates of 1st - 3rd semester of a private medical college.

MATERIALS AND METHODS:

Type of study: A Cross sectional study. **Study group:** Female under graduates (1-3) semesters of a private medical college. **Sample size:** 100

Selection Criteria:

Inclusion criteria: For Menstrual hygiene: All female under graduates (1-3) semesters; For PMS: Female undergraduates with regular cycles. **Exclusion criteria:** Female undergraduates with irregular cycles in case of PMS and those who could not participate in the research due to medical and gynaecological illnesses such as diabetes, hypothyroidism, asthma, migraine, epilepsy, pelvic inflammatory disease, endometriosis, and amenorrhea will be excluded.

Study design: Female undergraduate medical students of 1-3 semesters in a private medical college who satisfy inclusion & exclusion criteria were included in the study. Written informed consent was taken from the study participants. Pre validated & pre tested [9,10,11] self administered questionnaires were given individually, data was collected under the supervision of female investigator. Data from menstrual hygiene questionnaire was expressed as counts and percentages. Some questions had multiple options to choose from; therefore the sum total of percentage is not always 100%. The study was conducted after approval from the Institutional Ethical Committee. During the research study, ethical code of conduct was strictly followed. Informed consent was taken.

Premenstrual symptoms screening tool [PSST] developed by Steiner et al., [11] was used for identifying prevalence of PMS. It reflects and "translates" categorical DSM-IV-TR criteria [12] into a rating scale with degrees of severity. It includes 14 items assessing premenstrual symptoms of mood, anxiety, sleep, appetite, and physical symptoms. It also includes functional impairment items of five different domains. Participants rate their experience of each symptom and functional impairment item on four point Likert scale as "not at all", "mild," "moderate," or "severe" in last 12 months duration during most of the cycles. "PMDD," "moderate to severe PMS," and "no/mild PMS"

subjects were identified using PSST scoring criteria. ^[10]

STATISTICAL ANALYSIS

Data was analyzed statistically by simple proportions (Percentages).

Table-1: The premenstrual symptoms screening tool (PSST)

Symptom	Not at all	Mild	Moderate	Severe
1. Anger/irritability	31	46	20	3
2. Anxiety/tension	62	25	12	01
3. Tearful/Increased sensitivity to rejection	24	20	23	03
4. Depressed mood/hopelessness	48	25	23	04
5. Decreased interest in work activities	27	39	25	09
6. Decreased interest in home activities	33	33	24	10
7. Decreased interest in social activity	37	29	21	13

Table-2: The premenstrual symptoms screening tool (PSST)

Symptom	Not at all	Mild	Moderate	Severe
1. Difficulty concentrating	26	34	32	08
2. Fatigue /lack of energy	13	46	33	08
3. Overeating /food cravings	68	19	11	02
4. Insomnia	69	26	03	02
5. Hypersomnia (needing more sleep)	39	30	23	08
6. Feeling overwhelmed or out of control	67	20	12	01
7. Physical symptoms: breast tenderness, headaches, joint/muscle pain, bloating, weight gain	46	33	19	02

Table-3: The premenstrual symptoms screening tool (PSST)

Symptom	Not at all	Mild	Moderate	Severe
Your work efficiency or productivity	25	56	16	03
Your relationships with co-worker	54	29	15	02
Your relationships with your family	58	25	16	01
Your social life activities	43	38	19	0
Your home responsibilities	44	44	12	0

Table-4: MENSTRUAL HYGIENE

1. Knowledge about menstruation at the onset of puberty	Yes	55
	No	45
2. Menstrual habits introduced by:	Teacher	8
	Mother	88
	Sister	5
	Friends	12
	Magazine and News Paper	0
	TV	0
	Internet	1
	Other	1
3. Menstrual absorbent:	Sanitary towel	0
	Sanitary napkins	96
	Tampoons	3
	Any other	1
4. Frequency of undergarment changing:	Once a day	17
	Twice a Day	83
5. Washing of hands after changing the pad:	Yes	99
	No	1
6. Frequency of cleaning the pubic hair:	Daily	30
	Weekly	24
	Once a month	41
	Once in 3-4 months	5
7. Use of vaginal wash daily:	Yes	43
	No	57

Table-5: MENSTRUAL HYGIENE

1. Categorize menses:	Regular	76
	Irregular	24
2. Categorize menstrual flow:	Mild	4
	Moderate	88
	Heavy	8
	Only spotting	0
3. Change of pad during first two days of menstruation:	4hr	16
	6hr	45
	8hr	33
	once a day	6
4. Experience of pre menstrual syndrome symptoms:	Headache	21
	Backache	48
	Lower abdominal pain	60
	Fatigue & weakness	22
	Mood swings	29
	Any other	4
5. Disturbance to daily routine:	Yes	59
	No	41
6. Awareness of Myths related to menstruation:	Yes	36
	No	64
7. Practice of restrictions during menses:	Yes	15
	No	85

RESULTS:

55% of the study participants had prior knowledge about the menstruation before attainment of first menstruation at the onset of puberty. Menstrual habits practised by them were introduced to them by mainly Mothers (88%), friends (12%), Teachers (8%), sister (5%), rarely through internet (1%). Majority of the study participants (96%) used Sanitary napkin as menstrual absorbent (3% tampons). 83% of the study participants reported that they change their under garments twice a day (only 17% do this once daily) and 99% of them wash their hands after changing the pad. (Table-4)

Majority of the participants (41%) reported that they clean their pubic hair monthly (Daily 30%, weekly 24%, 5% once in 3-4 months). 76% of the participants categorized their menses as regular and regarding the menstrual flow, 88% reported moderate menstrual flow, 8% heavy and 4% mild menstrual flow. Majority of the participants (45%) reported that they change their pad 6 hourly, 33% 8 hourly, 16% four hourly and 6% once a day. (Table-4)

Regarding the experience of pre menstrual syndrome, majority of the participants reported to experience premenstrual symptoms. (Lower abdominal pain 60%, Backache 48%, Mood swings 29%, Fatigue and weakness 22%, head ache 21%). 59% of the study participants reported that menstruation disturb their daily routine. Only 36% were aware of the myths related to menstruation and 15% were forced to practise restrictions during menses. (Table-5)

In our study using the premenstrual symptoms screening tool PSST, 30% of the study participants met the criteria for moderate to severe PMS and 5% of the participants met the criteria for PMDD.

Majority of the study participants reported that they experience premenstrual symptoms as mild decreased interest in work and home activities (39%), mild to moderate difficulty in concentrating (65%) and 46% reported mild fatigue, 30% hypersomnia and physical symptoms like breast tenderness, headache etc. 56% of the participants reported that the pre menstrual symptoms had a mild interference with their work efficiency/productivity. Majority of the participants reported that the pre menstrual symptoms had no interference with their relation with co workers (54%), no interference with their family (58%). 43% of the study participants reported that they do not experience any interference between pre menstrual symptoms and social life activities. While considering the interference between pre menstrual symptoms and home responsibilities there was a mixed response i.e., 44% reported no interference and 56% reported mild to moderate interference. (Table-3)

DISCUSSION:

In India the prevalence with PMS is 20% of which 8% suffer with severe symptoms. Statistics of PMS prevalence vary across different studies. The American Physician family report prevalence from 3%-

30% in women of reproductive age with around 5% of incidence of the severe form of PMS, PMDD. ^[13] Iranian and Chinese studies reported prevalence rates ranging from 18-20%. ^[14,15] On the other hand, several other Asian studies have reported prevalence rates exceeding 59%. ^[16,17]

In the present study, the prevalence of PMS among the study group was 30%. Similarly an Indian study conducted by Raval CM et al, found a prevalence rate of 18.4% among college students of Bhavnagar. ^[18] A higher prevalence rate of 82.81% was found in a study conducted by Nafisa omer SA in Riyadh. ^[19] Dickerson et al have found that the PMS prevalence ranges from 25 to 95%. ^[20] The difference in the prevalence rate may be due to use of different scales used for assessment of PMS, women's age, marital status, occupation, education etc.

The prevalence of PMS in the present study (30%) was in accordance with the work of Serfaty et al ^[21] and Dean et al ^[22] who reported prevalence of 35%, and 19-30% respectively. Other Western investigators reported higher prevalence of 85%. ^[23] In Egypt, El-Defrawi et al ^[24], reported prevalence of 69.6% while Rasheed and Al-Sowielem ^[25] in Saudi Arabia, reported a prevalence of 96.6%. A cross cultural investigation conducted in 14 different cultural groups in 10 countries found a lower prevalence rate (23-34%) in non-western cultures, while a higher prevalence rate (71-73%) was reported in the western countries. ^[26]

In our study 55% of students had previous knowledge of menstrual practices before attaining menarche and this result is in accordance with other studies done in population other than medical students. ^[27] We found that inculcation of menstrual habits was mainly done by mothers to a greater proportion i.e., 88% of participants which is far beyond the results of Das gupta A et al in which mother was first informer in 37.5% of girls. ^[1]

96% medical students were using sanitary napkins as absorbent material, while 3% were using tampons during their menstrual cycle. The above observation from our study is in accordance with Juyal et al and Adhikari P et al. ^[27,28] 42% girls were doing vaginal wash daily which shows paucity in maintaining menstrual hygiene by medical students. 43% of medical students reported irregular menses. We observed that 34% of girls had to practice restrictions during menses like they had to sit separately, cannot go to religious places, not allowed to attend religious ceremonies, cannot enter kitchen and not allowed to make food and even going out in night time was restricted.

CONCLUSION:

Present study concludes that prevalence of moderate to severe premenstrual syndrome in medical students is found to be 30% and PMDD to be 5%. More epidemiological research for determining factors that affect prevalence of PMS seems to be essential.

SUMMARY:

Premenstrual symptoms in women adversely affect their performance and emotional status, so strategies should be developed for early detection and management of PMS. Students should receive professional support in order to overcome the problems associated with PMS and different coping strategies to overcome PMS.

Limitations of the study:

First, our study was done on selective sample comprising of medical students from one academic institute which limits the generalizability of the findings. Second, as the study is of cross-sectional design, we are unable to determine longitudinal relations between any of the studied predictors and outcome. Third, the study participants who were included in the study were not screened for other possible medical diagnoses when they reported PMS symptoms.

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Conflicts of Interest: Nil

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