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PHYSICAL, EMOTIONAL, BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF PREMENSTRUAL SYNDROME AND HOME MANAGEMENT AMONG YOUNG ADULTS

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ABSTRACT

Background: Most women of reproductive age have some physical discomfort or dysphoria in the weeks before menstruation. Symptoms are often mild, but can be severe enough to substantially affect daily activities. About 5–8% of women thus suffer from severe premenstrual syndrome. Most of these women also meet criteria for premenstrual dysphoric disorder **Objectives**: The main objective of the study was to assess the physical, psychological, behavioural and emotional symptoms of premenstrual syndrome and home management among young adults **Methodology**: A descriptive survey design was used for the study. Young adults aged between 18 to 25 years belonging to selected colleges in Bangalore participated in this study. Sample size was 207 students selected by convenient sampling technique. A questionnaire was used with items on demographic variables. A Likert scale with questions on premenstrual syndrome with five domains was used to collect data regarding premenstrual syndrome **Results:** In the present study abdominal pain was reported to be the most prevalent (84.23%) physical symptom followed by backache among 80.98%, muscle or joint pain (71.91%) and food craving was reported by 75% girls. With regard to emotional symptoms almost all the students (93.12%) had mood changes. Irritability was mentioned by 86% girls. Three fourth students mentioned behavioural symptoms of decreased interest in home and social activities. and psychological symptoms of mood fluctuations. The most common coping strategy adopted by young adults were sleeping, resting and listening to music (98%). Almost all the adolescents (97%) used phone as the common distraction method. **Conclusion**: The present study showed that all the young adults experienced some or the other physical, emotional, behavioral or psychological symptoms. Home remedies, education and guidance of adolescents and young adults is important for healthy coping strategies.

KEYWORDS: Physical, Psychological, Behavioural and Emotional symptoms, (PMS) premenstrual syndrome, Home Management Young Adults.

INTRODUCTION

In women of reproductive age, the menstrual cycle is a naturally occurring process. The average length of cycle is 28 days. Regular menstruation every month of a women's life is regarded as a sign of health. Pre - menstrual syndrome is described as a group of physical and psychological symptoms that occur frequently in the late luteal phase of the menstrual cycle just before the start of the following cycle. It usually starts 5-7 days before menstruation and resolves 2-4 days after menstruation.

Pre-menstrual syndrome (PMS) is one of the most common disorders of reproductive age. PMS is a set of physical and psychological symptoms that occurs during the luteal phase of menstrual cycle (14 days before menstrual period), resolved with the onset of

menstruation and with a symptom free interval afterwards.

The physical, emotional and cognitive symptoms have great potential to interfere with personal, social and occupational functions. These changes occurring during adolescence will impact their psychological development and make them vulnerable to more serious psychiatric disorders in the future.

PMS is common health problem, and women spend half their life with premenstrual problems and experience a reduction achievement with management of PMS, the quality of life can be improved. The first step in PMS management is to create awareness, to make women self-screen, adapt lifestyle changes, apply nutrition suggestion and use stress coping methods.

Most women of reproductive age have some physical discomfort or dysphoria in the weeks before menstruation. Symptoms are often mild, but can be severe enough to substantially affect daily activities. About 5–8% of women thus suffer from severe premenstrual syndrome (PMS); most of these women also meet criteria for premenstrual dysphoric disorder (PMDD). Mood and behavioural symptoms, including irritability, tension, depressed mood, tearfulness, and mood swings, are the most distressing, but somatic complaints, such as breast tenderness and bloating, can also be problematic.[1]

Tissues throughout the body are sensitive to hormone levels that change throughout a woman's menstrual cycle. Studies suggest that rising and falling levels of hormones i.e oestrogen and progesterone, may also influence chemicals in the brain, including a substance called serotonin, which affects mood. However, it is not clear why some women develop premenstrual syndrome (PMS) or premenstrual dysphoric disorder (PMDD) and others do not. Levels of estrogen and progesterone are similar in women with and without these conditions.[1]

The most common symptoms of premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) are fatigue, bloating, irritability, depression, and anxiety. Sadness, hopelessness, or feelings of worthlessness, tension, anxiety, or "edginess", variable moods with frequent tearfulness, persistent irritability, anger, and conflict with family, co-workers, or friends, decreased interest in usual activities, difficulty concentrating, fatigue, lethargy, or lack of energy, changes in appetite, which may include binge eating or craving certain foods, Excessive sleeping or difficulty sleeping, feelings of being overwhelmed or out of control, breast tenderness or swelling, headaches, joint or muscle pain, weight gain.[2]

The length of symptom expression varies between a few days and 2 weeks. Symptoms often worsen substantially 6 days before, and peak at about 2 days before, menses start. anger and irritability are the most severe complaints and start slightly earlier than other symptoms It is not uncommon for symptoms to linger into the next menstrual cycle, but, by definition, there must be a symptom-free interval before ovulation. Most of the times women have the same set of symptoms from one cycle to the next.[2]

A cross-sectional study aimed to investigate the prevalence of PMS symptoms and their relationship with psychosocial status and lifestyle of female students at An-Najah National University in Palestine was done on a sample of 398 female students selected randomly. Arabic Premenstrual Scale (A-PMS) was used for PMS assessment. Findings reported that 100% suffered from some kind of PMS symptoms; 100% had physical symptoms, 99.7% had psychological symptoms, and 85.2% had behavioural PMS symptoms. All PMS symptoms were significantly associated with student psychosocial status ($p < 0.01$). Preferring a certain type of food during menstruation was significantly related to psychological PMS symptoms and physical symptoms. Pattern of a diet was significantly related to physical symptoms and behavioural symptoms. Drinking herbal tea was significantly related to physical symptoms (and behavioural symptoms.[3]

A cross-sectional study was conducted among 130 female students of a Private University of Delhi NCR. India. A pretested, self-administered questionnaire was used to collect the information. The majority (80%) of female participants knew about PMS while only (43.8%) knew about PMDD. The most common affective and somatic symptoms among participants were irritability (74.6 %) and abdominal bloating (48.5%). More than half (53.8 %) of the female participants reported PMS impaired their college/work efficiency/ productivity and concentration and (49.2 %) reported PMS impaired their Social life activities. The majority (90%) of female participants think that PMS is an important issue that should be discussed but (40.8%) did nothing to relieve their premenstrual symptoms. The female participants of age group between 23 and 30 years showed higher proportion of knowledge of PMS when compared to female participants of age group between 17 and 22 years and this association was statistically significant.

The female participants who did exercise showed higher proportion of knowledge of PMS when compared to female students who did not exercise and this association was statistically significant.[4]

A cross-sectional study was conducted on 253 El-Minia University unmarried female students. A self-administered questionnaire inquiring about symptoms of PMS in the previous three months and risk factors related to it was used. PMS score was calculated. Life style modification counselling was done to prevent and control PMS. The study revealed that 80.2% of the participants experienced various degrees of PMS symptoms which

were significantly associated with a family history of PMS, physical inactivity, habitual excess consumption of coffee, BMI, frequent consumption of fast food, and smoking, Study recommended the introduction of a reproductive health component into school and college health education programs and encourage female adolescents and young adults to adopt a healthy behaviour.[5]

The present study was taken up to explore the physical, emotional, behavioural and psychological symptoms of premenstrual syndrome and home management strategies among young adults in a local setting in Bangalore Karnataka India.

METHODS

A descriptive survey design was used for the study. Young adults aged between 18 to 25 years belonging to selected colleges in Bangalore participated in this study. Sample size for the study was 207 students selected as convenient sampling technique. The data collection was performed at National College and Sri Shankara College of Nursing. The participants who met the requirement for inclusion were included. A questionnaire was used with items on demographic variables such as age, education, religion, diet, age of menarche, menstrual cycle and duration of cycle. Second part of the tool was a Likert scale with questions on premenstrual syndrome.

It included five domains. First domain was on physical symptoms consisting of 17 questions. Second domain had emotional symptoms with 10 questions. Third part had nine items on behavioural symptoms. Fourth domain included five questions on psychological symptoms and the fifth part consisted of 9 items regarding home remedies used for managing premenstrual symptoms.

Ethical consideration

Prior to data collection official permission was taken from the head of the institutes and consent was obtained from the young adults after explain the purpose of the study.

RESULTS

Physical Symptoms

In the present study abdominal pain was reported to be the most prevalent (84.23%) physical symptom followed by backache among 80.98% adolescents. Three fourth of the students (71.91%) mentioned muscle or joint pain symptom. Food craving was reported by 75% girls. Headache and acne was a concern among more than 60% adolescents. More than half (54.39 % and 56.43%) of the adolescents had sleeplessness and fatigue. 47% girls had abdominal bloating during menstruation. Breast tenderness and pain and dizziness was reported in little more than 40% girls. The bowel pattern changes were in terms of diarrhea and constipation was mentioned among 24.61 and 20% adolescents respectively. (Table 1)

Emotional Symptoms

Analysis of emotional symptoms shows that almost all the students (93.12%) had mood changes. Irritability was mentioned by 86% girls. More than 75% students experienced sadness and losing temper. Feeling of loneliness (67%) and confusion (63.17%) and crying without reason (63.68%) was mentioned by more than half the adolescents. Anger and feeling of hopelessness was reported by 55% adolescents. (Table 2)

Behavioral Symptoms

With regard to behavioural symptoms more than 75% adolescents reported decreased interest in home activities and social activities. Concentration difficulties was mentioned by 67.35% girls. Sleep problems like insomnia or hypersomnia was reported by around 35% adolescents. (Table 3)

Psychological Symptoms

Evaluation of psychological symptoms showed that 75% adolescents reported mood fluctuations, 63% nervousness or anxiety, 51% low self-esteem, 45% depression. (Table 4)

Home remedies

Present study showed that different home remedies were tried for coping with PMS. Almost all the adolescents (98%) adopted listening to music, sleeping, resting as remedial measures for PMS. Reading books 72.7%, physical exercise / jogging 31% and swimming 11% students. yoga 36% excessive eating was prevalent among 76% adolescents. Almost all the adolescents (97%) used phone distraction strategy. (Table 5)

DISCUSSION

The present study evaluated the frequency of physical, psychological, emotional and behavioural symptoms. experienced before or during the menstruation. All of the study participants suffered from some kind of PMS symptoms. The findings showed that abdominal pain was reported to be the most prevalent physical symptom (84.23%) whereas in a study done by K Bhuvaneswari et al[6] abdominal heaviness and discomfort was 64.3%. Manish upadhyay et al.[7] reported abdominal cramps (68.3%), which is less compared to our study. The frequency of musculoskeletal aches and joint pains (71.91%), is approximately similar (71.3%) to the studies conducted by K Bhuvaneshwari et al in Pondicherry, India. In the present study back ache was reported among 80% adolescents which is approximately same as reported by Manish Upadhyay et al back pain (77.8%).[7]

The other physical symptoms such as joint pain, headache, acne, sleeplessness, fatigue, food craving, abdominal bloating, breast tenderness, dizziness were also moderately present. On comparison these symptoms were less prevalent in other studies. In our study the bowel pattern changes in terms of diarrhea and constipation was mentioned. Many other studies did not analyse these physical symptoms.

The findings with regard to emotional symptoms showed that almost all the students (93.12%) had mood changes. Irritability was mentioned by 86% girls. More than 75% students experienced sadness and losing temper. Feeling of loneliness (67%) and confusion (63.17%) and crying without reason (63.68%) was mentioned by more than half the adolescents. Anger and feeling of hopelessness was reported by 55% adolescents. In a similar study by Geeta Shamnani,[8] mood swings (75.9%), loss of interest (64%), short temper (61.9%), anxiety (65.7%), anger (73%), uncontrollable anger (55.2%) was reported.

More than 70% girls reported decreased interest in home and social activities and concentration difficulties. Around 30% girls mentioned sleep problems like insomnia or hypersomnia, 47.5% girls skipped school, 42% had disturbed interpersonal relationship. A study done in Saudi Arabia by Abu Alwafa et al.[9] reported that PMS symptoms affected 85.2% of participants' behaviors, 29.1% had moderate behavioral symptoms and 13.6% had severe behavioural symptoms.

Analysis of psychological symptoms showed that majority (76%) girls expressed mood fluctuation and 49% mentioned feeling of low self-esteem. The study of Manish Upadhaya et al reported similar psychological symptoms among the subjects were irritability (76.9%), mood swings (75.9%), anger (73%), anxiety (65.7%), and loss of interest (64%).

Coping strategies and Home remedies

The most common coping strategy which the adolescent girls adopted were sleeping, resting and listening to music (98%). 72% adolescent girls engaged in reading books, physical exercise / Jogging 31% and Yoga 36%

Almost all the adolescents (97%) used Phone as the common distraction method and watching television and excessive eating was mentioned by 76% adolescents as distraction.

The variations of results and estimates of PMS from various studies[6,7,8,9,10,11] could be due to limitations and differences in the definition of PMS, standards and methods of data collection, sampling technique, type of patient population studied and differences in instruments, symptom's patterns, the number of symptoms reported and the use of prospective or retrospective protocol. The literature mentions different category and types of symptoms that must be present relevant to PMS. In spite of variations it is evident adolescents and young adults experience similar pattern of symptoms as premenstrual syndrome.

Table 1: Frequency and percentage of adolescent girls with physical symptoms of PMS.

Physical Symptoms	n (No. of girls who responded)	Always	Sometimes	Never
Abdominal pain	203	63 (31.03%)	108 (53.2%)	32(15.71%)
Dizziness	200	15 (7.5%)	75 (37.5%)	110 (55%)
Back ache	205	74 (36.09%)	91 (44.39%)	40 (19.51%)
Weight gain	198	16 (8.08%)	30 (15.15%)	152(76.76%)
Fatigue	193	29 (15.02%)	76 (39.37%)	88 (45.59%)
Swelling of extremities	197	6 (3.04%)	21 (10.65%)	170 (86.29%)
Breast tenderness	196	26 (13.26%)	61 (31.12%)	109 (55.61%)
Headache	202	36 (17.82%)	96 (47.52%)	70 (34.65%)
Diarrhoea	199	6 (3.01%)	43 (21.60%)	150 (75.37%)
Constipation	195	6 (3.07%)	34 (17.43%)	155 (79.48%)
Abdominal bloating	195	26 (13.33%)	66 (33.84%)	103 (52.82%)
Muscle or joint pain	203	45 (22.16%)	101 49.75%)	57 (28.07%)
Sleeplessness	202	40 (19.80%)	74 (36.63%)	88 (43.56%)
Nausea	201	13 (6.46%)	45 (22.38%)	143 (71.14%)
Breast pain	200	31 (15.5%)	55 (27.5%)	114 (57%)
Acne	199	61 (30.65%)	72 (36.18%)	66 (33.16%)
Food craving	201	74 (36.81%)	77 (38.30%)	50 (24.87%)

Table 2: Frequency and percentage of adolescent girls with emotional symptoms of PMS.

Emotional Symptoms	n (No. of girls who responded)	Always	Sometimes	Never
Mood changes	204	91 (44.60%)	99 (48.52%)	14 (6.86%)
Irritability	198	82 (41.41%)	89 (44.94%)	27 (13.63%)
Feeling of hopelessness	200	33 (16.5%)	76 (38%)	91 (45.5%)
Sadness	201	53 (26.36%)	103 (51.24%)	45 (22.38%)
Anger	191	45 (23.56%)	60 (31.41%)	86 (45.02%)
Crying without any reason	201	52 (25.87%)	76 (37.81%)	73 (36.31%)
Losing temper	202	56 (27.72%)	98 (48.51%)	48 (23.76%)

Loneliness	200	44 (22%)	90 (45%)	66 (33%)
Confusion	201	33 (16.41%)	94 (46.76%)	74 (36.81%)
Moodiness	199	45 (22.61%)	105 (24%)	49 (24.62%)

Table 3: Frequency and percentage of adolescent girls with behavioural symptoms of PMS.

Behavioural symptoms	Total attempted n	Always	Sometimes	Never
Insomnia	195	12 (6.15%)	59 (30.25%)	124 (63.58%)
Hypersomnia	193	18 (9.23%)	47 (24.35%)	128 (66.32%)
Concentration difficulties	193	26 (13.47%)	104 (53.88%)	63 (32.54%)
Decreased interest in social activities	202	38 (18.81%)	112 (55.44%)	52 (25.74%)
Decreased interest in home activities	202	46 (22.77%)	112 (55.47%)	44 (21.78%)

Table 4: Frequency and percentage of adolescent girls with Psychological symptoms of PMS.

Psychological symptoms	Total attempted n	Always	Sometimes	Never
1.Depression	203	20 (9.85%)	72 (35.46%)	111 (54.67%)
2.Mood fluctuation	202	52 (25.74%)	102 (50.49%)	48 (23.76%)
3.Nervousness	202	31 (15.34%)	96 (47.52%)	75 (37.12%)
4.Low self- esteem	197	23 (11.61)	77 (38.88%)	98 (49.49%)

Table 5: Frequency and percentage of adolescent girls using remedial measures for PMS.

Home Remedies	Always	Sometimes	Never	Total Attempted (n)
Yoga	5 (2.5%)	66 (33%)	129 (64.5%)	200
Jogging	9 (4.52%)	53 (26.63%)	137 (68.84%)	199
Physical exercise	20 (10%)	103 (51.5%)	77 (38.5%)	200
Swimming	1 (0.50%)	21 (10.65%)	175 (88.83%)	197
Listening to music	149 (73.03%)	51 (25%)	4 (1.96%)	204
Sleeping	138 (68.1%)	62 (30.69%)	2 (0.99%)	202
Resting	128 (63.05%)	70 (34.48%)	5 (2.46%)	203
Reading books	50 (24.75%)	97 (48.01%)	55 (27.22%)	202
Using Distraction				
Phone	149 (72.33%)	50 (24.27%)	7 (3.39%)	206
Television	74 (37.56%)	78 (39.59%)	45 (22.84 %)	197
Tab	18 (9.57%)	34 (18.08%)	136 (72.34%)	18
Eating excessive	77 (39.28%)	72 (36.73%)	47 (23.97 %)	196

CONCLUSION

Women deal with premenstrual symptoms throughout the majority of their lives. Current study attempted to explore the physical, emotional, behavioural and psychological symptom experience of PMS. In view of the current findings, it is recommended to put effort on promoting the benefits of education and guidance. The quality of life can be increased with the help of home remedies and positive coping strategies.

DECLARATIONS

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Conflict of interest: None
Ethical approval: The study was approved by the institution research ethics committee

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