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# PREVALENCE OF VARIOUS PREMENSTRUAL SYMPTOMS AMONG HEALTHY WOMEN

**D. ARUNA, C. SABITHA, T. P. SUDHAKAR**

Department of Psychiatry, S. V. Medical College, Tirupati

**Abstract:** The menstrual cycle is a normal physiological process unique to females, the experience of which results from a complex interaction of biological and behavioral factors. The distressing symptoms occur cyclically in women prior to menstruation has been recognized for centuries by clinicians. The various premenstrual physical, emotional or behavioral changes experienced by many women may reach such levels of severity that they may have substantial social impact upon the women herself, or associates, and her work. The sample consists of 100 medical students and 50 staff nurses selected randomly using random tables from the attendance registers of staff nurses in SVRRGGH & Women's hostel of S. V. Medical College. In the present study fifty women reported at least one affective symptom and they are followed up prospectively by daily symptom recordings for three menstrual cycles.

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**Corresponding Author: DR. D. ARUNA**

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## INTRODUCTION

The menstrual cycle is a normal physiological process unique to females, the experience of which results from a complex interaction of biological and behavioural factors. The distressing symptoms occur cyclically in women prior to menstruation has been recognized for centuries by clinicians. It has long been known that when women become irritable, tense, depressed in the premenstrual week, a temporary deterioration in their interpersonal relationships frequently develops. The various premenstrual physical, emotional or behavioural changes experienced by many women may reach such levels of severity that they may have substantial social impact upon the women herself, or associates, and her work.[1]

LLPDD was listed as an example under "unspecified mental disorders" in DSM-III-R. The term LLPDD is somewhat misleading. According to literature the symptoms are not related to endocrine changes alone that take place during the late luteal phase. Therefore in DSM-IV the term premenstrual dysphoric disorder (PMDD), was proposed and adopted to replace late luteal phase dysphoric disorder. In DSM-IV premenstrual dysphoric disorder is listed under "mood disorders, depression - not otherwise specified" in the main text of DSM-IV and still remains in the appendix of DSM-IV under criteria sets and axes provided for further study.

Indian studies are limited and there are no separate centers for treatment of premenstrual tension as in the west.[2] These cases are seen by gynaecologists, general practitioners and very rarely by psychiatrists. In this study an attempt is made to look at the prevalence of premenstrual symptoms in otherwise healthy individuals.

## MATERIALS AND METHODS

150 women are selected from staff of Sri Venkateswara Ramnaryan Ruia Government General Hospital, Tirupati and women's hostel of Sri Venkateswara Medical College, Tirupati for the study. The sample consists of 100 medical students and 50 staff nurses selected randomly using random tables from the attendance registers of staff nurses in SVRRGGH & Women's hostel of S.V.Medical College.

## INCLUSION CRITERIA

1.  Women of age group of 18 yrs to 40 yrs are taken up for the study.

2.  The women must not be pregnant.

3.  The women must not use any hormonal contraception.

4.  The women must not use any drugs for proceeding four weeks.

5. The women must not receive the following drugs during the period of study anxiolytics, diuretics, hormones, neuroleptics.

**EXCLUSION CRITERIA**

1. A Woman who has past history or currently suffering from any medical illness are excluded from the study.

2. A woman who has past history or currently suffering from any psychiatric illness is excluded from the study.

The subjects are requested to respond retrospectively on the basis of changes of which they have been aware for the past one year during premenstrual period, i.e., one week before the onset of menstruation.

The findings are described and analyzed using appropriate statistical methods and the results are discussed.

**RESULTS:**

The most common and least common reported symptom is easy fatiguability (72%) and distractability (0.6%) respectively. Backache and acne were reported by more than fifty per cent of the subjects. Among affective symptoms irritability was reported by 28.6% anxiety or tension was reported by 25.3%. Anger by 24% feeling of sadness by 5% & labile mood by 3.3%. The following symptoms are not reported by any one in the study group namely buzzing in ears, chest pain, paraesthesia, seizures, clumsiness, tremors, swelling of the face palpitations, blind spots, poor impulse control, indecision & paranoia (Suspiciousness).

As a group neurovegetative symptoms like easy fatiguability insomnia, hypersomnia, anorexia, craving for foods etc. occur most frequently (80.7%) and CNS symptoms (8%) occur least frequently. 33.3% of the individuals show affective symptoms.The frequency of symptoms in other symptom clustures is more than that in the affective clusture in the unmarried individuals and in those with regular menstrual cycles. The affective symptoms are more frequent in the married group and in those with irregular menstrual cycles. However, the differences are statistically significant only with respect to the regularity of the menstrual cycles.

**TABLE 1 ASSOCIATION BETWEEN AGE AND SYMPTOM CLUSTERS**

| S.No. | Variables | Subjects with below 30 yrs age | Subjects with above 30 yrs age | Chi square value |
|-------|-----------|-------------------------------|-------------------------------|------------------|
|       |           | n=104                         | n=46                          |                  |

| S.No. | Symptom | | | | | Chi square value |
|---|---|---|---|---|---|---|
| 1. | Affective | 32 | 30.13 | 18 | 39.13 | > 0.05 NS |
| 2. | Cognitive | 26 | 24.07 | 23 | 50.0 | < 0.01* |
| 3. | Pain | 70 | 68.2 | 38 | 82.6 | < 0.01 * |
| 4. | Neuro vegetative | 79 | 77.4 | 42 | 91.0 | < 0.05 * |
| 5. | Automatic | 19 | 17.8 | 12 | 20 | > 0.05 NS |
| 6. | CNS | 5 | 5.2 | 7 | 11.7 | > 0.05 NS |
| 7. | Fluid and electrolyte | 33 | 32.13 | 20 | 43.47 | < 0.05* |
| 8. | Dermatological | 61 | 59.2 | 17 | 36.7 | < 0.05* |
| 9. | Behavioural | 23 | 21.07 | 20 | 43.47 | < 0.05* |

NS = Nil significant at 5% level

* = Significant at 5% level.

Table shows that Cognitive, Pain, Neurovegetative, Fluid & Electrolyte, behavioural symptoms are found more in the above 30 yrs age group than below 30 yrs. Whereas dermatological symptoms are found more commonly in below 30 yrs age group and the differences are statistically significant.

**Table 2 Association between Educational Status and Symptom Clusters**

| S.No. | Symptoms | MBBS | | Nursing | | Chi square value |
|---|---|---|---|---|---|---|
| | | n=100 | | n=50 | | |
| 1. | Affective | 32 | 32% | 18 | 36% | > 0.05 NS |
| 2. | Cognitive | 25 | 25% | 24 | 48% | < 0.01* |
| 3. | Pain | 70 | 70% | 38 | 76% | < 0.10 NS |
| 4. | Neuro vegetative | 79 | 79% | 42 | 84% | < 0.05 NS |
| 5. | Automatic | 19 | 19% | 12 | 24% | > 0.05 NS |
| 6. | CNS | 5 | 5% | 7 | 14% | < 0.05 NS |
| 7. | Fluid and electrolyte | 31 | 31% | 22 | 44% | < 0.50* |
| 8. | Dermatological | 60 | 60% | 18 | 38% | < 0.001* |
| 9. | Behavioural | 23 | 23% | 20 | 40% | < 0.05* |

NS = Nil significant at 5% level

\* = Significant at 5% level.

\*\* = Significant at 1% level.

Cognitive, Pain, CNS, Fluid electrolyte & behavioural symptoms are more common in nurses & dermatological symptoms are common in medicos. The differences are statistically significant. Neurovegetative symptoms are more common in married women. Pain & dermatological symptoms are more common in unmarried women. The differences are statistically significant.

There are significant differences among the symptoms and the corresponding F value is highly significant at 1% level. There is significant difference between MBBS and Nursing Students and the corresponding F-value is significant at 5% level. There is no significant difference between Married and Unmarried people with respect to the symptoms and Educational status. The corresponding F-value is not significant at 5% level.

### Table 3 Association between Domicile and Symptom clusters

| S.No. | Symptoms | Subjects who hail from rural area | | Subjects who hail from urban area | | Chi square value |
|-------|----------|-----------|-------|-----------|-------|------------------|
| | | n=52% | | n=98% | | |
| 1. | Affective | 18 | 34.6 | 32 | 32.8 | > 0.05 NS |
| 2. | Cognitive | 15 | 28.8 | 34 | 34.7 | > 0.05 NS |
| 3. | Pain | 37 | 71.1 | 71 | 72.4 | < 0.05 NS |
| 4. | Neuro vegetative | 32 | 61.5 | 89 | 90.4 | < 0.01* |
| 5. | Automatic | 9 | 17.3 | 22 | 22.4 | > 0.05 NS |
| 6. | CNS | 3 | 5.8 | 9 | 9.2 | > 0.05 NS |
| 7. | Fluid and electrolyte | 23 | 44.2 | 30 | 30.6 | > 0.05* |
| 8. | Dermatological | 25 | 48.2 | 53 | 54.1 | < 0.005 NS |
| 9. | Behavioural | 19 | 36.5 | 24 | 24.4 | < 0.05 * |

NS = Nil significant at 5% level

\* = Significant at  5%  level.

Neurovegetative symptoms are more common in women from urban areas. Fluid and electrolyte and behavioural symptoms are common in women from rural areas. These differences are statistically significant. There is significant difference between MBBS and Nursing Students and the corresponding F-value is significant at 5% level. There is significant

difference between Rural and Urban areas with respect to symptoms and educational status. The corresponding F-value is highly significant.

It is observed that there are significant differences among the symptoms and the corresponding F-value is highly significant at 1% level. There is significant difference between regular and irregular cycles, whereas there is no significant difference between MBBS and Nursing students.

**DISCUSSION:**

It has been estimated that 95% of American women suffer from premenstrual symptoms at one time or another.[3] In the Indian Literature that has been scanned for last one and half decades the only study reported 71% of 666 college students studied at least one premenstrual symptom. In the present study 91% of women reported at least one of the premenstrual symptoms. The general consensus based on questionnaire is that 70-90% of the women will admit of having diverse premenstrual symptoms.

Most frequently reported symptoms were stomach pain, fatigue, muscle stiffness, restlessness and irritability. Least frequently reported symptoms were having more accidents, weight gain, crying spells, hot flushes and staying away from school or work. Depression was reported by 4.65% & irritability by 12.16% of the subjects.[4] In the present study most frequently reported symptoms are easily fatiguability, backache, acne, breast tenderness, decreased concentration & irritability. Least frequently reported symptoms are libido change, suicidal ideation, oliguria, constipation and distractability. Depression was reported by 5% of subjects, irritability by 28.6% and labile mood by 3.3%.

Women over 30 yrs age are thought to have greater premenstrual symptoms.[5] But however Freeman et. al., 1988 reported that severity of premenstrual syndrome is negatively associated with age. In the present study cognitive, pain, neurovegetative, fluid & electrolyte and behavioural symptoms were reported more commonly by subjects above 30 yrs age. Whereas dermatological symptoms were reported more commonly by subjects below 30 yrs age.

Premenstrual symptoms were found more frequently in subjects who are married.[6] The present study support this view that married women report premenstrual symptoms more frequently than unmarried. Women with irregular menstrual cycles reported premenstrual symptoms more frequently.[7] The present study also support this view point that women with irregular menstrual cycles report premenstrual symptoms more frequently than women with regular menstrual cycle.

Limited studies suggest that 3.5% of women suffer with premenstrual dysphoric disorder (DSM-IV text book, 1992) . The prevalence of late luteal phase dysphoric disorder ranged from 14% by absolute severity method[8] to 45% for trend analysi.[9] These studies were done on women

seeking treatment for premenstrual symptoms. To date we do not know how many women meet the diagnostic criteria for late luteal phase dysphoric disorder.[10]

**CONCLUSIONS**

In the present study fifty women reported at least one affective symptom and they are followed up prospectively by daily symptom recordings for three menstrual cycles. Analysis of these individuals revealed only one person among the fifty fulfilled the criteria for the diagnosis of the late luteal phase dysphoric disorder as per DSM III-R.

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