

## Prevalence of pre-menstrual Symptoms and Syndromes: Preliminary Observations

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### Reprints request

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### Abstract

Pre-menstrual experiences were studied in 100 non complaining women using the pre-menstrual Assessment Forms I (for general health), and PAF II (inventory for distressing Pre-menstrual experiences). The total distress scores on PAF I were comparable in the different phases of menstrual cycle. Number of subjects reporting distress on key PMS items were also not statistically different in different phases. More than ten specific Pre-menstrual symptoms on PAF II were reported by 29%, though only six women (11%) reported that the feelings were intolerable. None had a Late Luteal Phase Dysphoric Disorder. The findings indicate that Pre-menstrual experiences are generally mild and bearable in Indian women. There is also some indication that it is the menstrual distress rather than Pre-menstrual distress which may be important in our subjects.

### Key words -

**Pre-menstrual changes,**

**Distress,**

**Prevalence,**

**Menstrual cycle**

Recurrent fluctuations in mood and behaviour that are associated with the menstrual cycle are experienced and reported by many women. Though the descriptive nature of these fluctuations is not unique to women, but their temporal relationship to menstrual cycle is [1]. In some women, pre-menstrual changes consist of a multitude of diverse symptoms; in others only a single change may appear. In some reviews, more than 100 signs and symptoms have been reported [2], [3], [4], [5]. Also, although many women report negative changes premenstrually, some women have positive changes [3], [6], [7], [8], [9]. Many women have no symptoms correlated with the menstrual periodicity while some have physiological disturbances, but no accompanying psychological distress. Studies using more careful methodology, with more homogenous samples, have generally noted no psychological cyclical changes or only minimal fluctuation, which are not overly distressing or disruptive [10], [11]. 23% of women in one study [12] did not report experiencing any of the 34

symptoms of the modified menstrual distress questionnaire (MMDQ) to a moderate or severe extent. In another study, Van Den Akker and Steptoe [13] documented negligible fluctuations across phases in 37% of women.

In this study, we describe the feelings and experiences of women in an urban area with special emphasis on assessing the distress experienced during different phases of the menstrual cycle. Invariably, there is a bias in reporting when women are asked about distress during the pre-menstrual period. Also, there is a bias in recording distress by researchers with a tendency to highlight pre-menstrual distress.

To overcome these methodological problems our subjects were asked how they felt on the day of the interview and subsequently the phase of menstrual cycle in which they were. Thus, the subjects were unaware about the focus on pre-menstrual distress and the researchers were blind to the menstrual phase the subject was in at the time of the interview.

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## Methods

### Definition of pre-menstrual period

In this study, pre-menstrual period has been considered as the period from five days prior to the onset of menstrual flow.

### Subjects

This study was conducted on subjects residing in urban residential locality in Bangalore. A door-to-door survey was done of the locality to include all women in their reproductive age group (14 to 45 years). Women with major gynaecological or physical illness and pregnancy were excluded. Individual interviews were done giving the instructions about rating the items on the assessment forms. Other information tapped, was regarding physical health, regularity of periods, use of oral contraception, age at menarche, and date of their menstrual periods. Demographic details recorded; were age, religion, education, family type, birth order, and marital status. Informed consent was taken from each subject.

### Instruments<sup>a)</sup>

#### Pre-menstrual Assessment Form I - (PAF I):

This was a 20 item form which assessed cross-sectionally how the woman felt on the day of assessment. The subject was asked to rate her feelings and experiences on a numerical scale of 0 to 100. This form records unbiased rating on these items and it does not mention anywhere its relation to the menstrual cycle. The details of menstrual periods and the date of the last menstrual period is calculated later during analysis, based on questions at the end of the form pertaining to a woman's general health.

b)

#### Pre-menstrual Assessment Form II - (PAF II):

This form has 57 items and assesses the presence of various feelings and experiences which can possibly occur in relation to the pre-menstrual period. The women had to rate the presence or absence of each item during their pre-menstrual phase. When present, the severity, continuity and disability due to these experiences was assessed in the final section of the form.

#### The inclusion criteria for the subjects were:

- Women in the reproductive age group of 15-45 years
- Women who had been having menstrual periods in the last 6 months.

Exclusion criteria were:

- (i) Presence of major gynaecological illness in the last 1 year
- (ii) Presence of severe and acute or chronic physical illness
- (iii) Moderate or severe mental retardation

All the women included in the study were administered PAF I and many were also given PAF II. In case of illiterate women the data collection was done by reading out the items and noting the responses.

## **Analysis**

The ratings on the numerical scale (PAF I) was done from 0 to 100. The subjects were divided into four groups (menstrual, post-menstrual, inter menstrual, and premenstrual) depending on the menstrual, phase they were in. The mean and standard deviations of the total feelings score for each group were computed and the significance of differences tested by analysis of variance. Similarly, mean scores for the commonly occurring pre-menstrual symptoms were derived for all the groups. Number of women with severe distress in each menstrual phase were also computed.

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## **Results**

### **Subjects:**

The total number of women interviewed were 100 out of which 4 had to be excluded since two had undergone hysterectomy and two were pregnant. The age ranged from 15 to 45 years. 45% were younger than 25 years and 7% were between 41 to 45 years. 35% had age range form 26 to 35 years. 65% were married and 35% unmarried; 76% were educated upto high school or above.

### **Pre-menstrual changes**

The mean score of distress items was 59.6 for women in pre-menstrual period, 63.4 for subjects in the menstrual phase and 46.4 for subjects in the intermenstrual period (Table I). However, there was no significant difference in the mean scores between the groups of subjects in different phases.

*Table I - Scores on pre-menstrual assessment form-1*

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(ANOVA test between phases no significant)

Table II shows the number of distressing symptoms rated by the number of subjects in any phase as compared to those by the women who were in the pre-menstrual phase. Out of 15 women in pre-menstrual period 6 (40%) had scored more than 50 on the items. This was comparable to the women in other phases. 80% of women who were in pre-menstrual period had distress as compared to 62% of women in other phases but this difference was statistically not significant (Table III). Table IV shows the percentage frequency of subjects with severe distress for the symptoms during different phases of the menstrual cycle. More women reported severe distress like feeling sad, irritability, and feeling less efficient during the menstrual period and pre-menstrual period as compared to number of

subjects in the post menstrual or intermenstrual period. During intermenstrual period only 10% reported sadness and 20% reported feeling less efficient than usual as compared to 33% each during pre-menstrual period and 51% and 37% respectively during the menstrual period.

*Table II - Number of symptoms rated during Pre-menstrual and other phases*

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*Table III - Women with distress during pre-menstrual and other phases*

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P=NS.

The difference between the groups is statistically non-significant.

*Table IV - Subjects with severe distress (50 or >) on different items in different menstrual phases*

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Only minor variations regarding most of the other features in different menstrual phases can be noted. Feeling of tension was reported by 38% during the menstrual period which was much more than any of the other phases. However, the differences between different phases were not statistically significant. 56 subjects rated the pre-menstrual assessment form, PAF II. Distressful symptoms during pre-menstrual period were reported by 53 (95%) of the subjects. However, the number of distressful symptoms varied from 1 to 28 (average 9). 16 (29%) women had experienced more than 10 symptoms during their pre-menstrual period. However, only 6 (11%) women reported that the distress feelings were intolerable. The commonest pre-menstrual symptoms reported were stomach ache (50%), back ache (38%), joint and muscle pains (37%), headache (37%), acne (32%), lethargy (30%), increase in body weight (28%), lack of desire to do work (25%), restlessness (23%), irritability (23%), and weepiness (21%). Some women also reported making mistakes at work and feeling less efficient (19% each).

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## Discussion

It is evident from our findings that in general our subjects did not experience significant or disruptive fluctuations in mood and symptoms of psychological distress during the pre-menstrual phase. The mean ratings have also been quite low. In fact, more women reported distress during the menstrual period and more symptoms of moderate severity were reported by women who were menstruating at the time of the survey. This raises the issue of 'menstrual distress' rather than the pre-menstrual tension or distress or syndrome in our subjects. However, as compared to the intermenstrual period there was relatively higher distress reported by women who were in the pre-menstrual period. Further, the confirmation of a number of distressing symptoms during pre-menstrual period by the inventory of pre-menstrual symptoms (PAF II) indicates that some women do experience distressing pre-menstrual symptoms.

None of the subjects apparently could fulfill the criteria for late luteal phase dysphoric disorder of the

DSM III R [14]. This observation confirms previous observations in nursing students of an undergraduate college [15]. The present sample was however, older than the samples of these previous studies. Rouse [16] found that women over 30 years of age have a greater tendency to complain of pre-menstrual symptoms when compared with those under 30.

It is thus reasonable for us to conclude that our subjects reported only minor fluctuations during pre-menstrual periods and none had the pre-menstrual syndrome (Late luteal phase Dysphoric Disorder). This goes on to confirm observation of Johnson [17] that PMS is perhaps a western culture bound syndrome. Moreover, sadness, feeling angry or irritable and feeling less efficient than usual are more during pre-menstrual and menstrual period as compared to intermenstrual and postmenstrual phase. It is therefore reasonable to consider the occurrence of 'menstrual distress' rather than pre-menstrual distress in our subjects.

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