

# Premenstrual Dysphoric Disorder Symptoms In Some Selected Nigerian Communities

R Uwakwe, J E N Okonkwo

## SUMMARY

**Background:** Many childbearing women complain of various kinds of psychological symptoms associated with menstruation. Different workers have given different names to these symptoms as discrete entities. Studies of such disorder appear to be few in Nigeria.

**Aim:** To determine the rate of premenstrual symptoms/dysphoric disorders in selected community-dwelling women in parts of eastern Nigeria.

**Method:** The Composite International Diagnostic Interview schedule (CIDI 2000) was used to explore premenstrual symptoms in 129 community-dwelling Nigerian women of childbearing age.

**Results:** Eleven percent of the subjects had at least 2 premenstrual symptoms. Sadness, depression, anxiety, irritability feeling tense and sensitive were the commonest symptoms experienced by these subjects.

**Conclusion:** This is preliminary report and further studies are advocated.

*Niger Med. J, Vol 46, No.4, Oct.-Dec., 2005: 91 - 95*

**KEYWORDS:** Premenstrual, Symptom, Nigeria.

## INTRODUCTION

Many physical and psychological symptoms are associated with the menstrual cycle. It is estimated that over 75% of women of reproductive age experience some symptoms attributable to the menstrual phase of the menstrual cycle<sup>1</sup>. However there seems to be confusion as to the precise definition of the premenstrual syndrome. Some distinction has been made between premenstrual syndrome, premenstrual tension, premenstrual distress and premenstrual symptoms. Premenstrual tension is said to cover only the psychological symptoms of tension, depression irritability and lethargy, whereas premenstrual distress is the presence of intermittent or continuous symptoms throughout the menstrual cycle increasing in severity during the premenstruum or menstruation. Premenstrual symptoms, on the other hand, are ill-defined and

could imply any symptoms whatsoever associated with the menstrual cycle. Some of the premenstrual symptoms that occur after periods are thought to be ovulatory attacks (i.e. occurring 7 days after the end of menstruation<sup>2</sup>).

Although consensus definition of the premenstrual syndrome seems to be lacking, with different authors offering their views on the timing of the premenstrual phase, most workers agree that there is a tendency for certain symptoms to cluster premenstrually and menstrually<sup>3</sup>. Dalton<sup>2</sup> defines premenstrual syndrome as the recurrence of symptoms in the premenstruum with absence of symptoms in the postmenstruum. The premenstrual syndrome (PMS) is a broad term covering both psychological and bodily symptoms. The symptoms are infinite, over 150 different symptoms have been reported, with some authors listing symptoms involving nearly every organ and system<sup>4,5</sup>. Though nearly innumerable, the symptoms of PMS diagnostically rely heavily on timing in relation to menstruation. The fourth revision of the American Diagnostic Manual of Mental Disorders (DSM-IV)<sup>6</sup>, has added a new dimension to premenstrual disorders. The DSM-IV has listed a series of research diagnostic criteria for what it terms "Premenstrual Dysphonic Disorder" (PMDD) – which includes, among other symptoms: depressed mood or dysphoria, anxiety or tension, affective liability, irritability, decreased interest in usual activities, concentration difficulties, marked lack of energy, marked change in appetite, over eating or food craving, hypersomnia or insomnia, feeling overwhelmed, other physical symptoms like breast tenderness/bloating etc. Some regard premenstrual dysphoria (PMD) simply as a severe type of premenstrual syndrome<sup>7</sup>.

In view of the difficulties and variations in the definition of PMS, prevalence and incidence rate can hardly be comparable. Differences in methodology – including subject inclusion, retrospective/prospective symptom reports, daily charting objective (non-laboratory) psychological/physical examination etc compounds comparability of PMS prevalence rates. Tonks and Drummond<sup>3</sup> cited other workers to indicate that studies reporting questionnaire data or straight forward verbal complaint of premenstrual symptoms tend to give much higher prevalence rates than those obtained by the analysis of daily records of mood state. Copen and Kessel<sup>8</sup> reported that about 72% of 500 women interviewed by postal questionnaire had premenstrual swelling, 32% had moderate to severe premenstrual irritability and 32% had moderate – to – severe depression (or anxiety). Andersch and Hahn<sup>9</sup>, in a sample of 1083 Scandinavian women, reported that 50% - 70% had some kind of premenstrual symptoms, including irritability, breast/abdominal swelling etc.

\*Department of Mental Health, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, Nigeria and

\*Department of Obstetrics/Gynaecology, Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, Nigeria

Correspondence: \*Dr. R Uwakwe,  
E-mail: [ruwakwe2001@yahoo.com](mailto:ruwakwe2001@yahoo.com)

## PREMENSTRUAL DYSPHORIC DISORDER SYMPTOMS

Rees<sup>10</sup> reported a 21% prevalence rate of premenstrual symptoms in 61 normal women, and 62% of 84 women attending psychiatric clinics. Of 1395 gynaecological patients not on hormonal treatment, 50% reported some premenstrual symptoms on a menstrual symptoms questionnaire<sup>11</sup>. Among final year students, Sheldrake and Cormack<sup>12</sup> reported 32.5% menstrual irritability and 31% premenstrual depression.

Some workers have tried to link the rate of premenstrual symptoms with particular psychiatric disorders. For example, Copen<sup>13</sup> reported that premenstrual complaints were commoner in women with a neurotic disorder, intermediate in those with effective disorders and least in women with schizophrenia. A wide range of prevalence rates has been reported for premenstrual symptoms/features generally. The Committee on Gynaecologic Practice contends that up to 80% of women of reproductive age experience emotional and physical changes<sup>14</sup>. On the other hand, Eriksson et al<sup>15</sup> reported that severe premenstrual syndrome affects up to 5% - 10% of all fertile women. Angst et al<sup>16</sup> reported 8.1% and 13.6% for severe and moderate premenstrual symptoms, respectively. Premenopausal females with seasonal affective disorder have been reported to have high point prevalence of premenstrual dysphoric disorder, upwards of 46%<sup>17</sup>. In an Indian sample, Benerjee, Roy and Takkar<sup>18</sup> reported a prevalence of 6.4% premenstrual dysphoric disorder, using a prospective recording proforma in 62 volunteers. Sveindottir and Backstrom<sup>19</sup> using a checklist of 57 symptoms in 83 Icelandic women reported that 2% - 6% met the criteria for premenstrual dysphoric disorder.

Reports of premenstrual symptoms in Nigerian women seem to be few, and perhaps even rarer are specific reports of the premenstrual syndrome or premenstrual dysphoric disorder. We decided to investigate the rate of premenstrual dysphoric symptoms/disorder in a non-patient sample of some selected communities in Eastern Nigeria.

### MATERIALS AND METHODS

**The Setting:** The random table numbers was used to select 5 communities in Anambra and Ebonyi States. Each state is an Igbo speaking area, with a population of about 3 million. Only 5 communities were selected due to limitation of funds. In all, 3 communities were selected from Anambra and 2 from Ebonyi. Besides Ndiagu community in Abakaliki, all the other communities are typical rural Nigerian villages. Abakaliki is an urban area and serves as the state capital (of Ebonyi), with a university and 3 tertiary health care centers. Ndiagu is a small community within Abakaliki metropolis.

**The Instruments:** The World Mental Health paper 2000 (WMH 2000) and pencil questionnaire was the main instrument of study. This is the World Health Organization Questionnaire latest revision of the Composite International Diagnostic interview<sup>20</sup>. This revised CIDI, simply referred to as World Mental Health 2000 (WMH 2000) (or CIDI 2000) is comprehensive, fully structured and designed to make diagnosis of mental disorders on both the bases of the International

Classification of Diseases, (ICD-10)<sup>21</sup> and the diagnostic and statistical manual of mental Disorders, 4<sup>th</sup> revision<sup>(6)</sup>. The WMH 2000 is in a modular form such that any section of mental Disorders could be independently assessed, although the algorithm for the entire WMH 2000 is being developed to enable a total composition of "collapsing" it into a single whole. The present report is limited only to the premenstrual Dysphoric Disorder section of CIDI 2000, which is administered only to women. This section contains questions about physical and emotional problems associated with the menstrual cycle. Such problems must be of such severity and frequency as to cause significant interference in daily living or other impact on the subject's life. The Premenstrual Dysphoric Disorder section has 22 items; however, the interviewer may skip out those who have experienced frequent and severe problems for half of any year or less (i.e. 6 months or less) even though DSM-IV does not recommend this requirement.

**Procedure:** The general World Mental Health survey approach was employed but only women selected were administered the premenstrual Dysphoric Disorder (PR) section. Subjects were selected if only they were 18 years and above and understood Igbo language proficiently. Four non-medical translators, all Igbo speaking women (who were also knowledgeable in English language) first translated the instrument from English into Igbo language. Two of the translators were polytechnic graduates and the other two were school certificate holders. They were aged 27-22 years and three were married.

Thereafter, 7 persons: 3 nurses, 2 medical students, one experienced psychiatric research assistant and one school certificate seamstress reviewed and refined the final translated version used for the study. (Black translation was not done). Between May-July 2003, 5 communities were selected for the study. In each chosen community and compound (from Anambra and Ebonyi States), subjects were selected by a predetermined probability table selection technique (Kish table) where there were more than one female in a household. The interview was then conducted after explaining to and obtaining the subject's consent. The duration of each interview depended on the various sections of CIDI 2000 offered the respondent; and this could range from one to three and half hours. If only the PR section was administered the average length of interview was about 20 minutes. The Federal Ministry of Health (Abuja-Nigeria) approved and supported the larger aspect of the entire National Mental Health Survey; our Institutional Review Board retrospectively gave approval for our local use, which also covered the present report.

**Diagnosis:** Diagnoses were made directly from the CIDI 2000 module.

### Analysis:

Simple descriptive statistics was used to present the results. Analysis was done with the Statistical Package for the Social Sciences (SPSS, version 10.0).

**RESULTS:**

A total of 129 subjects were recruited (but some items of information were missing on 2 subjects so that they had to be excluded in some analysis). The subjects were aged 18-32 years with mean age of 24.8+6.7 SD. One hundred and six were single and 23 were married. Nineteen of the subjects had tertiary education (14.7%), 69 secondary (53.5%), 38 primary (29.5%) and 4 had no formal education (3.1%). One hundred and thirteen (87.6%) were not taking oral contraceptive pills and 14 (10.9%) were actively taking oral contraceptive pills (not specified). Only 110 could remember at what age they had their menarche which ranged from 8–20 years with a mean of 14.38 years + 1.75, and mode of 15 years.

Fourteen of the 129 subjects (10.9%) reported premenstrual symptoms. Each of the 14 subjects endorsed at least 2 of the symptoms explored by the CIDI. The table shows the CIDI symptoms, and the percentage of the subjects who reported them.

The major symptoms expressed were mainly psychological including feeling sad, depressed, sensitive, tense, and irritable. About 78% of the subjects could not remember at what age they started experiencing mood changes associated with their menstrual cycle.

In all, 14 of the subjects admitted being on active oral contraceptive pills (6 secondary school, 4 tertiary and 4 primary school leavers), no subject without formal education was taking any contraceptive pill. Only one of the 14 subjects (7.1%) taking contraceptive pills had premenstrual symptoms, thus of the 14 subjects with premenstrual symptoms, 13 (nearly 93%) were not on oral contraceptives.

The age range of those taking oral contraceptives pills was 18–31 years, with a mean of 22.72±6.34.

If the one subject taking oral contraceptives and also had premenstrual symptoms was excluded from the rest of the subjects who expressed premenstrual symptoms, this would leave 13 out of 129 subjects (i.e. 10.08%) with premenstrual symptoms. This single subject expressed feeling sad, anxious and tense.

**Table 1: CIDI Symptoms Expressed By Subjects Who Had Premenstrual Dysphoric Disorder Features.**

Symptom	Number (Percentage) expressing the symptom.
.Sadness	14(100)
.Depression	4(28.6)
.Feeling sensitive	6(42.9)
.Anxiety	11(78.6)
Feeling tense	8(57.1)
.Irritability	10(71.4)

Those with premenstrual symptoms were younger (mean age = 22.4 years) compared to the rest of the study sample (mean age = 23.2 years ( $t=14.6, P=0.05$ ) but marginally failed to reach statistical significance. Age at menarche did not distinguish those with and without premenstrual syndromes ( $t=9.32, P=0.15$ ). Education also failed to distinguish those with and without premenstrual symptoms: secondary school 8, tertiary 5, and primary 1 ( $t=4.89, P=0.086$ ). Also marital status was not associated with the presence or absence of premenstrual symptoms ( $t=0.26, P=0.61$ ;  $Mentel-Henzel=0.24, P=0.66$  Yates correction 0.06,  $P=0.79$ , Fishers exact 1 tailed  $P=0.55$ , 2 tailed = 1.000). None of the subjects has ever had oophorectomy, hysterectomy or hormone replacement therapy (for gynaecological symptoms).

**DISCUSSION**

We have stressed the difficulty of definition, which along, with study methodology makes comparisons of premenstrual disorders hard to interpret.

First, the CIDI 2000 section on premenstrual dysphoric disorder does not in reality represent DSM-IV premenstrual dysphoric disorder (PMDD). DSM-IV puts PMDD in the appendix under criteria sets provided for future study, and provided detailed guidelines in making a diagnosis. Ordinarily, these 11 symptom items of DSM-IV from which PMDD could be made, could be developed into an interview schedule. However, that is not the case in the CIDI 2000 PMDD section. In fact of the 22 PMDD question series of the CIDI 2000, only one (PR directly probes into the psychological symptoms that could be associated with the menstrual cycle. The ICD-10 does not contain PMDD but the authors of DSM-IV conclude that for now PMDD could be classified as “Depression, not elsewhere classified.”<sup>11</sup> The ICD-10<sup>21</sup> recognizes only premenstrual tension syndrome under the broad block of pain and other conditions associated with female genital organs and menstrual cycle (N94.3); this does not correspond to the DSM-IV PMDD. We cannot, therefore, claim that our rate of about 10% represents PMDD in the studied population. What we can conclude is that 10% of our subjects reported “symptoms” of PMDD.

Do these symptoms mean premenstrual syndrome (PMS)? Some argue that PMDD is a severe form of PMS, but it is still unclear whether PMDD is an entirely different disorder or at the severe spectrum of PMS. What is agreed is that PMDD is characterized by rapidly changing feelings, or persistent and marked anger, anxiety or tension, depressed mood with feelings of hopelessness or self deprecating thought, lethargy, difficulty in concentrating, over eating or food cravings, insomnia or hypersomnia, breast tenderness or swelling, headaches, weight gain, increased sensitivity to rejection, avoidance of social activities, increased interpersonal conflicts. The pattern of symptoms must have occurred most of the months for the previous 12 months but the CIDI 2000 requires that symptoms must have occurred for at least 6 months in the past 12 months. In conclusion therefore, the CIDI 2000 contains a variant of PMDD rather than the pure DSM-IV PMDD.

A second problem with our study is that it was an interview, fully and well structured though, but not patterned

## PREMENSTRUAL DYSPHORIC DISORDER SYMPTOMS

after DSM-IV. The current emphasis on making premenstrual disorder diagnosis is on prospective daily charting or records for at least 2 menstrual cycles such that within-cycle symptom changes could be measured. Many of such easy to administer self-monitoring instruments have been developed, including the Premenstrual Record of Impact and Severity of Menstruation (PRISM) and the Calendar Of Premenstrual Experiences (COPE) <sup>(22,23)</sup>. This objective recording, followed by an assessment (at least once during each cycle phase) to ensure that the subjects endorse the phase appropriate symptoms in line with their daily recording, is much preferable. One difficulty such daily self-rating instruments will present is the level of literacy of the population in question. In our study sample however, the literacy level was quite high (about 97%) but it will still require a lot of motivation for subjects to religiously chart their daily experiences for any reasonable length of time.

More surveys, using appropriate methodological approaches are needed. In a study of 479 women of different cultural backgrounds, Janiger and his colleagues reported high incidence of headaches among Nigerians presenting with premenstrual symptoms <sup>24</sup>. Our rate compares at least with those who have reported premenstrual symptoms of 5% - 10% <sup>15, 16</sup> whereas those who have extremely high rates may have used non-strict open-ended criteria. For example Elliot <sup>25</sup> reported that up to 75% of women have some premenstrual symptoms but that only less than 10% have symptoms severe enough to qualify for a diagnosis of PMDD <sup>25</sup>. Similarly, Frackiewicz and Shiovita <sup>26</sup> contend that only about 5% of women with PMS suffer from PMDD, which they think is a more disabling and severe form of PMS with predominant mood features. Kessel <sup>27</sup> opines that when research criteria or the strict definition of PMDD are used, the prevalence of PMS is thought to range from 3% - 5% among women of reproductive age. In a community sample of 513 women. Soares and his colleagues reported a PMDD rate of 6.3% <sup>28</sup>. Though the relationship between PMS and PMDD seems complex and yet remains ill-understood and ill-defined, it would appear that the rate of PMDD depends on that of PMS, which again is directly affected by definition (narrowness or wideness). In 1954, Dalton <sup>29</sup> surveyed 825 women in North London for PMS, restricting PMS as "those whose premenstrual symptoms have been present for three menstrual cycles as confirmed by a prospective calendar, and with symptoms severe enough to demand medical attention or loss of work in the past 3 months. He found the incidence to be 27% for controls and 86% among women who had previously suffered from pre-eclampsia. He postulated an incidence of 40% in the general British women, using less strict definition. What appears certain is that some women doubtlessly express a cluster of symptoms associated with their menstrual cycle. How to classify, name, set diagnostic criteria should remain subjects of further investigation.

We could not find any association between age at menarche, education and marital status, and premenstrual symptoms. It is possible that premenstrual symptoms probably start at any age and may have no respect for any social class, even as Janiger <sup>24</sup> has contended with his colleagues, in respect

of premenstrual symptoms and culture. Nature, severity and frequency may differ within and between individuals but the occurrence of premenstrual symptoms is perhaps universal irrespective of age when once menarche has been attained.

This preliminary report should lead to further works in Nigeria to enhance our understanding of the mental health of childbearing women.

### ACKNOWLEDGEMENT

This work was supported by Nnamdi Azikiwe University Awka, through the senate Research grant committee.

### REFERENCES

1. Johnson SR, McChesney C, Bean J. A. Epidemiology of premenstrual symptoms in a non-clinical sample. 1. Prevalence, Natural History & Help-seeking Behaviour. *Journal of Reproductive Medicine*. 1988; 33: 340-346.
2. Dalton, K. (1984). *The premenstrual syndrome and progesterone Therapy*. 2<sup>nd</sup> Edition. William Heinmann medical Books Ltd London.
3. Drummond LM: Tonks C.M. The premenstrual syndrome. In Priest R.G. (Ed). *Psychological disorder in Obstetrics and Gynaecology*, London. Butterworths, 1988.
4. Budeiri DJ; Liwan po A; Doman J.C. Clinical trials of treatment of premenstrual syndrome: entry criteria and scales for measuring treatment outcomes *British Journal of Obstetrics and Gynaecology*. 1994; 101: 689-695.
5. Dalton, K. *The premenstrual syndrome*. London Heinemann, 1964.
6. American Psychiatric Association. *Diagnostic & Statistical Manual of Mental Disorders*, 4<sup>th</sup> Edition. Washington DC. American psychiatric Association, 1994.
7. Elias, E; Bjorn A; Hoi-por, H; Mikael L; Charlotta, S. Diagnosis and treatment of premenstrual dysphoria. *Journal of clinical psychiatry* 2002; 63 (67): 16-23.
8. Coppen A; Kessel, N. Menstruation and Personality. *British Journal of psychiatry*. 1963; 109: 711-721.
9. Anderseh B; Hahn, L. Premenstrual complaints. II. Influence of oral contraceptives. *Acta obstetrica Gynaecologica Scandinavica*. 1981; 60: 579-583.
10. Rees, L. Premenstrual tension syndrome. *Journal of Mental Science*. 1953; 99: 62-73.
11. Hargrove, J. T; Abraham G. E. The incidence of Premenstrual tension in a gynaecologic clinic. *Journal of Reproductive Medicine*. 1983; 27: 721-724.
12. Sheldrake, P; Cormack, M. Variation in menstrual cycle symptom reporting. *Journal of psychosomatic Research*. 1976; 20: 169-177.
13. Coppen, A. The Prevalence of Premenstrual Disorders in Psychiatric Patients. *British Journal of psychiatry*. 1965; 111: 153-167.
14. Committee on Gynaecologic Practice: Premenstrual syndrome Committee Opinions. 1995; 155: 177-180.

## R. UWAKWE AND J. E. N OKONKWO

15. Eriksson, E; Andersch, B; Ho, Hoi- Por; Londen M; Sundblad, C. Diagnosis and treatment and premenstrual dysphoria.. *Journal of Clinical Psychiatry*. 2002; 63 supp 7: 16–23.
16. Angst S; Sellaro R; Merikangas K. R; Endicott, J. The Epidemiology of perimenstrual psychological symptoms. *Acta Psychiatrica Scandinavica*. 2001; 104: 110–116.
17. Preschak–Reider, N; Willeit, M, Neumeister A; Hilger E; Stastny J; Thierry N; Lenzinger E; Kasper, S. Prevalence of premenstrual dysphoric disorder in female patients with Seasonal Affective Disorder *Journal of Affective Disorders*. 2001; 63: 239–242.
18. Benerjee N; Roy K. K; Takkar, D. Premenstrual dysphoric disorder – a study from India. *International Journal of fertility and women’s medicine*. 2000; 45: 342–344.
19. Sveindottir H; Backstrom T. Prevalence of menstrual cycle symptom cyclicality and premenstrual dysphoric disorder in a random sample of women using and not using oral contraceptive *Acta Gynaecologica Scandinavica*. 2000; 79: 405–413.
20. World Health Organization (1992). *International Classification of Diseases, 10<sup>th</sup> Revision*. WHO, Geneva.
21. World Health Organization (1992). *International Classification of Diseases, 10<sup>th</sup> Revision*. WHO Geneva.
22. Reid R. L. Premenstrual syndrome. *Current problems in Obstetrics, Gynaecology and Fertility*. 1985; 8: 1 – 57.
23. Mortola J. F; Girton L; Beck L; Yen S. C. Diagnosis of premenstrual syndrome by a simple, prospective and reliable instrument; the Calendar of Premenstrual Experiences. *Obstetrics and Gynaecology*. 1990; 76: 302–307.
24. Janiger O; Riffenburgh R; Kench, R. Premenstrual symptoms in different cultures. *Psychosomatics*. 1972; 13: 226–235.
25. Elliot, Hal. *Premenstrual Dysphoric Disorder. A guide for the treating physician*. *New Canadian Medical Journal*. 2002; 63: 37–75.
26. Frackiewicz, E. J; Shiovitz T. M. Evaluation and management of premenstrual syndrome and premenstrual dysphoric disorder. *Journal of American pharmaceutical Association*. 2001; 41: 437–447.
27. Kessel, B. Premenstrual syndrome; *Advances in Syndrome: diagnosis and treatment*. *Obstetrics and Gynaecologic Clinics of North America*. 2002; 27: 625–639.
28. Soares C. N.; Cohen L. S; Otto M. W; Harbow B. L. Characteristics of women with premenstrual dysphoric disorder (PMDD) who did or did not report history of depression: a preliminary report from the Havard study of moods and Cycles. *Journal of women’s health and Gender –based medicine*. 2001; 10: 873–878.
29. Dalton, K. Premenstrual syndrome in North London. *British Medical Journal*. 1954; 2: 1071–1074.