

A Study to Assess Comorbid Depression as a Result of Premenstrual Syndrome among Paramedical Students at Chennai

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Abstract: *Objective:* Women is a wonderful gift by the God. As she is undergoing the reproductive period she needs to be so strengthened to take a challenge of Premenstrual syndrome (PMS) during Menstruation. Pre menstrual syndrome where there is a lot of changes happens in view of Physical and Emotional. During this PMS if the women are not taken care properly or not courageous to bera the sufferings, there may be a Co occurrence of Depression. In this cross sectional study, we found out there is a remarkable relation between the PMS and Depression. *Methods:* 150 paramedical students were available and assigned for research. They had been administered with demographic questionnaire and PMS questionnaire made through researchers based on Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Technical Revision; group with or without PMS diagnosis. Then, they completed Beck's Depression Inventory. *Results:* From 150 participants, 60% (n = 80) met the PMS standards and 40% had no PMS. In the PMS group 30% (n = 23) had no depression; 38% (n = 32) had slight depression; 23% (n = 26) had moderate depression; and 7% (n = 4) had extreme depression. In the group with no PMS 60% (n =35) had no depression; 21% (n = 20) had mild depression; 17% (n = 9) had moderate depression; 2% (n = 1) had extreme depression. The rate of depression was considerably greater in PMS group (p = 0.04). *Conclusion:* In this research, PMS had a high frequency in adolescent students. In students with PMS, the rate of depression was greater than students without PMS.

Keywords: Depression, Paramedical, Premenstrual Syndrome, Premenstrual, Dysphoric Disorder

1. Introduction

Being women is a boon. Women in the reproductive age group most commonly experience the physical, physiological, psychological sufferings due to Pre menstrual syndrome and Menstruation. It may result in sizable impairments (4-6). The symptoms commence 1-2 weeks before the menstrual (the luteal phase of the menstrual cycle) and subside hastily after the onset of menstruation (7). Although the prevalence of full-blown PMDD varies among studies, it is estimated that 3-8% of women suffer from it (8-10), and about 30-50% of menstruating ladies have some PMS signs and symptoms (7). Common problems that may co-occur with PMS are primary depression, dysthymic disorder, bipolar disorder, panic disorder, generalized nervousness disorder, and hypercholesterolemia (7, 11-13). The management of PMDD/PMS has to include assessment and paying constant interest to prevent suicide, additionally this syndrome have to keep in mind in regard to each and every female who attempted or have suicidal ideation (14).

Similar to most problems in psychiatry, PMDD/PMS and comorbid depression have bilateral terrible affects on the severity of each other. Skill that the severity of each depression and PMS can affect the presentation or the severity of the other (7), so recognizing coincident issues and subsequent treatment seems to be effective in reducing morbidity. In some studies, it has been shown that hormones and contraceptive tablets are effective for the therapy of PMS, especially in more severe forms (PMDD) (2, 15, 16).

This indicates that hormonal imbalance has an essential role in the patho physiology of the syndrome. On the other hand, except biologic (such as hormonal imbalance all through the menstrual cycle) and temperamental factors (17-19), social elements (20) and work stresses may additionally have a good sized position in producing the PMS/PMDD (18, 21, 22). Medical workers, Para Medical workers such as physicians, nurses and medical, paramedical students are amongst high-stress group (23-27). Therefore, it is redictable that depression and PMS have elevated frequencies in this population. In spite of various frequencies of PMS/PMDD in distinct studies, all surveys detected high occurrence of this syndrome among medical, para medical line students (28-30). The intention of this cross-sectional study was determine the frequency of PMS as properly as comorbid depression among paramedical students in selected college at Chennai.

2. Materials and Methods

It used to be a cross-sectional study, and participants had been female paramedical students. Participants were all female para medical students of selected college at Chennai in 2019. The informed consent was once bought from them. Exclusion criteria had been active non-psychiatric disorders, history of personality disorders, psychosis, polycystic ovarian disorder, endometriosis, pregnancy, and history of any mental disorders. If any of participants have premenstrual symptoms at the time of research, data series were postponed. Information about these medical and psychiatric illnesses was once accumulated via history taking from participant. Finally, one hundred and fifty persons entered the survey by way of accessible sampling.

After explaining the procedure, three questionnaires have been filled by way of researchers:

- 1) A demographic questionnaire which is contained personal information.
- 2) Checklist of PMS symptoms: It included 11 questions associated to PMS symptoms in accordance to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Technical Revision.

The emphasis of the questionnaire has been on the symptoms acting simply 1 week before the menstrual and disappearance of them after the onset of menstruation. If at least 5 answers of 11 questions were yes, subjects were eligible for PMS. Subjects had been eligible for PMS if at least five answers of eleven questions had been positive. Beck Depression Inventory-II: Including 21 multiple choice questions that are graded from 0 to 3 primarily based on the severity of symptoms. The lowest score is zero and the most 63. Scores between 0-9, 10-16, 17-29, and 30-63 indicate minimal, mild, moderate, and severe depression, respectively. Chi-square and Anova had been used for examining categorical and continuous variables, respectively. It made by means of using SPSS for Windows (version 19, SPSS Inc., Chicago, IL, USA).

3. Results

From 150 participants, 60% (n = 80) met the PMS criteria and 40% had no PMS. In the group with PMS 30% (n = 23) had no depression; 38% (n = 32) had slight depression; 23% (n = 26) had moderate depression; and 7% (n = 4) had extreme depression. In the group with no PMS 60% (n = 35) had no depression; 20% (n = 9) had mild depression; 17% (n = 8) had average depression; 2% (n = 1) had severe depression (Table 1). Any type of depression was extra frequent in PMS group than candidate with no PMS group. These difference had been significant (p = 0.04). Twenty-seven topics (27%) were married and 73 (73%) unmarried. About 48% of married people and 57% of single people fulfilled PMS criteria. The statistical difference between these two difficulty companies was once not significant (p = zero 40) (Table 1). There was once no significant distinction between despair in two corporations (56% of the married subjects versus 54% of single subjects) (p = 0.69).

PMS was once a discriminative one in regard to depression severity that is, the degree of beck inventory was notably higher in students with this syndrome than those without it (p = 0.04) (Table 2). About 56% of the married and 54% of singles had some degree of depression (Table 3). Married and single college students had not significant differences in regard to depression score (p = 0.69).

4. Discussion

According to this study, the whole frequency of PMS in students in the internship stage was once 55%, which was comparable to the Namavar et al. findings (21). Our finding was somehow specific from Nigeria study (36%) (28).. Why depression and its severity are positively correlated to the PMS. It can be defined through some hypothesis (1) Depressed persons might also have reduced tolerance of

functionally and psychological discomfort and reports extra physical symptoms (including PMS). (2) It may be a simple comorbidity. It seems like many other psychiatric disorders; by means of increasing the severity of depression, the likelihood of comorbidity will rise. (3) PMS could be a type of mood dys regulation due to hormonal changes throughout the menstrual cycle. It means depression may also commence or, if present, become more extreme in vulnerable women when hormonal stability disturbs (17, 33, 34).

Table 1: Severity of depression in college students with premenstrual syndrome and students without PMS

| Beck classification | With PMS | Without PMS | Total |
|---------------------|----------|-------------|-------|
| Minimal (0-9) | 23 | 35 | 058 |
| Mild (10-16) | 32 | 20 | 052 |
| Moderate (17-29) | 26 | 9 | 035 |
| Severe (30-63) | 4 | 01 | 005 |
| Total | 85 | 65 | 150 |

Table 2: Premenstrual syndrome Depression Severity in relation to certain Life Factors
Mean (standard deviation)
(n=85) (n=65)

| Life Factors Domain | With Pms | Without Pms | p value |
|------------------------|---------------|---------------|---------|
| Physical function | 82.05 (78.57) | 36.38 (24.1) | <0.001 |
| Physiological function | 82.44 (78.30) | 27.53 (20.87) | 0.022 |
| Emotional problems | 81.55 (76.05) | 32.28 (21.46) | <0.001 |
| Social functioning | 85.56 (80.01) | 37.89 (24.88) | 0.002 |
| General fitness | 71.67 (69.7) | 27.86 (20.96) | 0.001 |

According to Beck depression classification (Table1), students with PMS have more severity (04) than students Without PMS. Likewise students who had Moderate (26), Mild (32) depression with PMS is significantly higher than students who had Moderate (9), Mild (20) depression without PMS.

PMS depression also showed severity to certain Lifestyle Factors. Students with PMS showed relatively higher significant Mean (standard deviation) in aspects of Physical function 82.5 (78.57), Emotional problem 81.55 (76.5), Social function 85.56 (80.06) When compared to students without PMS in aspects of physical Function 36.38 (24.1), Emotional problem 32.28 (21.46), social function 37.89 (24.88). p value shows 0.001.

Our findings showed that psychiatrists have to be more aware that PMS may not be a lonely syndrome. If clinicians do no longer pay attention to comorbid disorder, it ought to lead to incomplete treatment and continues morbidity; hence, careful evaluation of other psychiatric disorders in this group can be relatively recommended.

To the best of our knowledge, our findings were regular with previous studies. The high prevalence of PMS/PMDD amongst paramedical students in their stressful stage of the educational programme must be a warning sign for policy makers of scientific education. They should be sensitive to symptoms and realize it as soon as possible. It can decrease the burden of a probably troublesome health problem this group. It is clear, depression and PMS affect each other that is, depression increases the severity of PMS and having PMS increases the probability of concurrent depression.

Nevertheless, Depression and PMS can work separately. For instance, sometimes antidepressant tablets are recommended for relieving symptoms of PMS impartial to their antidepressant factors. (12).

Hence PMS and depression should be worried as separate components, which need relatively independent, however interactive managements. Relation between bipolar disorder and PMS has been proposed (33-35). Also, depression in the context of bipolarity is more severe in evaluate to unipolar depression (36). Our study also showed that PMS is more observed in extreme form of depression. Hence, it can be viewed as a caution that every time a physician visits a affected person with PMS and coexists depression (especially severe forms) have to have in mind the likelihood of bipolar disorders. There is no need to emphasize that correct diagnosing of bipolarity as an alternative of wrong diagnosing of unipolar depression is critical because these two kinds of mood disorders have different treatment in spite of overlapping signs and symptoms that is, prescribing antidepressants can be at least counterproductive (if no longer contraindicated) for some of the bipolar patients. Some other variables have been proven to be related to PMS phenomenon in para medical students. These factors are residency, lower age at menarche, regularity of menses and family history (37). Some elements such as urban residency are social parameters and point to possible stressors. Similar to many other psychosocial factors, habitancy location probably is a wide-spread stressor that can aggravate the PMS. On the other hand, we can locate the hint of genetic problems in producing dysphoria before menstruation. It is not clear that which sorts of etiologies (environmental or genetic) are greater powerful for producing PMS.

5. Limitations

In this study, we did not asses all variables possibly associated to PMS, and it's severity. Because there is no consensus on these factors.

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