PREMENSTRUAL SYNDROME: MESSES WITH MY ACADEMIC PERFORMANCE

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ABSTRACT

Objective: This study aims to determine the educational impact of premenstrual syndrome (PMS) on various academic activities of undergraduate female medical students.

Study Design: Cross sectional study.

Place and Duration of Study: Army Medical College, National University of Sciences & Technology (NUST), Islamabad, Pakistan from June 2013 to November 2013

Material and Methods: This cross sectional study was conducted at Army Medical College, National University of Sciences & Technology (NUST) Islamabad. Data were collected from 224 undergraduate female medical students of all professional years. PMS was diagnosed according to WHO's ICD-10 criteria. Impact of premenstrual syndrome on academic activities of female medical students was assessed using a 22-itemed, structured questionnaire.

Results: Two hundred and twenty four female undergraduate medical students gave their written consent to participate in this study. PMS was present among 207 (92.4%) female students. Major PMS symptoms experienced by the female students were: backache (87.5%), fatigue (80.2%), depressed mood (78.2%), anxiety (76.8%), hypersomnia (71%) and poor emotional control (64.3%). The frequency of various PMS symptoms interfered with their academic activities (76.3%), with large group discussion sessions (79.2%), with small group discussion sessions (72.9%), written assessment (66.6%) and oral assessment (70.0%).

Conclusion: The study findings affirm the fact that premenstrual syndrome profoundly affects the academic activities of young female medical students. In the light of these pertinent findings we recommend that health education and counselling services are essential to be provided at medical college campuses for female undergraduates. This will not only help them alleviate the negative effects of PMS but also develop an understanding about their problems, enhancing their academic output and performance in early medical carrier.

Keywords: Educational activities, Medical students, Syndrome.

INTRODUCTION

Menstrual disorders like premenstrual syndrome (PMS) are more common in the young adolescent females and are considered as an important public health problem among college going females. PMS refers to a group of disturbing physical, cognitive and behavioural symptoms that are linked to the menstrual cycle[1].

According to the American College of Obstetricians and Gynaecologists (ACOG), diagnosis of PMS is made typically when a pattern of these symptoms appear a week before the onset of menstrual periods (during the late luteal phase, preceding the menstrual cycle), and abate within few days after the menstruation has started. These symptoms are absent in the early or follicular phase of the menstrual cycle[2].

The etiology of PMS is still uncertain, but several biosocial and psychological factors have been proposed, in addition to the hormonal imbalance as a cause of premenstrual symptoms[3]. Scientific literature search has noted that approximately 90% of the reproductive aged women experience various premenstrual symptoms including abdominal bloating, breast tenderness, weight gain, body aches, lack of concentration, sleep disorders, change in eating habits and mood swings[4,5]. It has become evident from previous studies that PMS symptoms hamper the work routine and have negative impact on school/college activities and

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performance that also hinder the inter-personal relationships[6,7].

During the past decade, in our national scenario the number of female students getting admission in medical colleges has been increasing every year. These undergraduate female medical students already face multiple stressors such as curriculum overload, shortage of time, and financial burden[8]. The medical profession is one of the most challenging among all professions hence the additional load of PMS could result in further mental stress and disturbed cognitive functions among these female students. Depending on the severity of PMS, the afflicted medical students can become handicapped leading to the disruption of their academic activities[9].

The prevalence and severity of PMS have been estimated globally through a myriad of studies[10-13] but scientific literature search showed only few studies related to PMS impact on the educational activities of undergraduate medical students[14,15]. In view of the above, this study was designed to determine the frequency of the PMS symptoms along with their impact on various academic activities among undergraduate female medical students in a public sector medical college.

METHODS

This cross sectional study was conducted from June 2013 to November 2013, at Army Medical College, National University of Sciences and Technology, Islamabad after departmental and institutional permission. Undergraduate female medical students, having regular menstrual cycle participated in this study while students with abnormal pattern of menstrual cycle or suffering from any pelvic disease were excluded out. Total 224 students were included in the study through non-probability consecutive sampling.

PMS was diagnosed according to the international statistical classification of diseases and related health problems-10th revision (ICD-10) criteria which describes that a female suffering from at least one premenstrual symptom could be diagnosed as having PMS. Impact of premenstrual syndrome on academic activities of female medical students was assessed using a 22-itemed, structured questionnaire. Additionally the demographic data were also collected. Statistical analysis was done by using SPSS version 17. Descriptive statistic were used to describe the results i.e: mean and standard deviation (sd) or quantitative variables while frequency along with percentage for qualitative variables.

RESULTS

Two hundred and twenty four students gave their written consent to participate in this study. The mean age of participants was 19.79 ± 1.63 years. PMS was present among 207 (92.4%) students. The severity of PMS among these students is shown in figure-1.

Major PMS symptoms experienced by the female students were backache in 181 (87.5%) students, fatigue in 166 (80.2%) students, depressed mood in 162 (78.2%) students, anxiety 159 (76.8%) students, decreased interest in 152 (73.4%) students, generalised body ache in 151 (72.9%) students, hypersomnia in 147 (71%) students ,difficulty in concentration in 146 (70.5%) students and poor emotional control in 133 (64.3%) students. The distribution of severity among these symptoms is shown in table-1.

Overall academic activities were affected in 158 (76.3%) students. Other academic activities affected by PMS symptoms were large group discussion sessions in 164 (79.2%) students, with small group discussion sessions 151 (72.9%) students performance during written and oral assessments were negatively affected in 138 (66.6%) and 145 (70.0%) female students respectively. Affect of severity of PMS on academic performance is given in figure-2.

DISCUSSION

The findings of the current study highlight the frequency of PMS, among 92.4% female undergraduate medical students. These results were in accordance with the work of Rasheed and

Al-Sowielem[16] and Bakar and Ez-Elarab[17], who reported the PMS prevalence of 96.6% and 89% respectively among the medical students. In a study from Iran, it is also found that 98.2% Iranian female university students suffer from PMS[10]. However, the frequency of PMS in our study is higher as reported previously by Pal et al[18], who found 79.9% prevalence of PMS among Pakistani women in a population based study. Stressful routine of medical students, better awareness of physical and mental well being could be a cause of higher frequency of PMS reported by the participants in our study.

Table-1: Frequency distribution of premenstrual syndrome's symptoms in relation to their severity among undergraduate female medical students.

No	Premenstrual syndrome symptoms	Mild (%)	Moderate (%)	Severe (%)
1	Anger	31.7	28.1	11.2
2	Anxiety	39.7	20.1	17.0
3	Poor emotional control	28.6	22.3	13.4
4	Depressed mood	28.1	32.1	17.9
5	Decreased interest	33.0	29.0	11.6
6	Poor concentration	32.1	19.2	19.2
7	Fatigue	28.6	34.4	17.0
8	Backache and discomfort	31.2	29.9	26.3
9	Abdominal bloating	25.4	23.7	19.6
10	Generalized body ache	33.5	23.2	16.1
11	Hypersomnia	26.3	24.6	20.1

Previous studies conducted on the medical students also noted variations in the frequency of PMS, as a study from Pakistan found PMS in 51% students[14] while 35.6% frequency was reported in a study conducted on Saudi medical students[19]. Such variations in PMS prevalence can be explained on the basis of differences in the data collection methods, sampling techniques, type of the population studied and most of all, the diagnostic criteria used to define the PMS. However the frequency distribution of PMS symptoms and their severity among undergraduate female medical students of this study was in accordance with the frequencies reported in the previous studies[13-17].

In this study, we found a higher impact of PMS on the academic activities of undergraduate medical students. PMS interfered with 76.3% students and negatively affected their academic activities. Bakr and Ez-Elarab[17] also reported that academic performance in 56% of their study population was affected by PMS symptoms. On the contrary, in another study from Pakistan conducted by Nisar et al[14], it was found that PMS hampered the work efficiency in only 23.2% students.

In the current study, 79% students revealed that PMS interfered with their various large group discussion sessions while small group discussion sessions were disrupted in 73% of the students. These findings were consistent with Balaha et al[19], who found that 46% of Saudi female medical students could not attend the academic discussion sessions due to the PMS symptoms.

The severity of impact of PMS on various academic activities of our undergraduate female medical students was in accordance to previous studies published that PMS disturbs the educational productivity of young female undergraduate students[14-16]. Tenkir et al. also reported that impaired academic achievements were significantly associated with college students suffering from the PMS symptoms[15].

One of the limitations of this study was that, it was conducted at only one public sector medical college, hence the findings of this study

cannot be generalised for the undergraduate female medical students of other medical colleges. The second limitation was, we used the ICD-10 criteria to identify the PMS, and our data was self-reported, so attention must be given to diagnostic criteria used for PMS, before we generalize the findings of this study.

CONCLUSION

The study findings affirm the fact that premenstrual syndrome negatively affects the academic activities and performances of young female medical students. In the light of these findings it is emphasized and recommended that health education and counselling services need to be provided at medical college campuses for female undergraduates to help them alleviate the

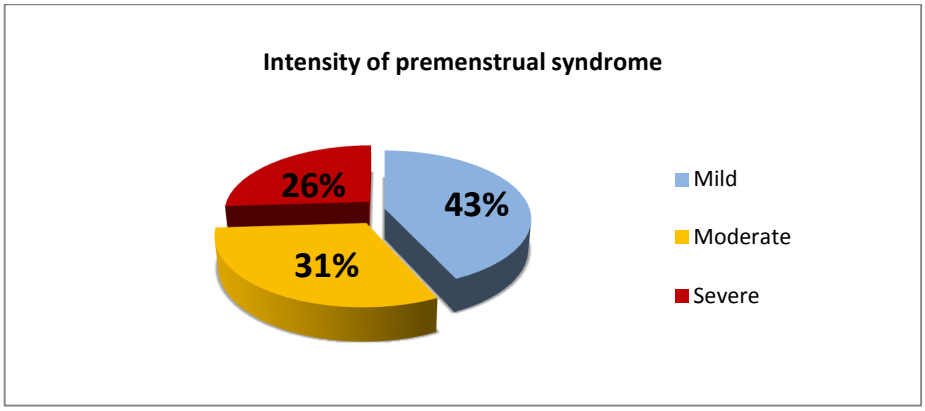

Figure 1: Frequency distribution of intensities of premenstrual syndrome (PMS) among undergraduate female medical students.

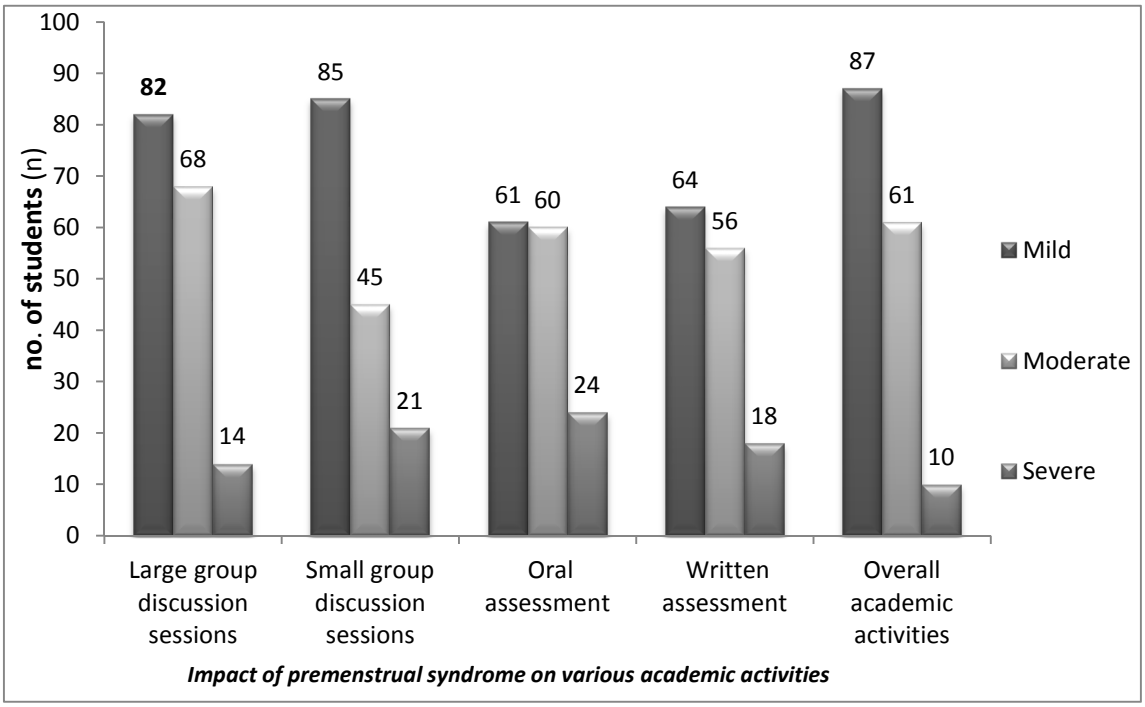

Figure 2: Impact of severity of premenstrual syndrome (PMS) on various academic activities of undergraduate female medical students.

problems specific to their gender and also facilitate them to enhance their actual academic potential during their undergraduate academic formative years.

Absence of such facilities will hamper the optimal academic achievements of female undergraduate medical students, especially under prevailing circumstances when their proportion in medical colleges is on the rise in each of the coming years. Faculty awareness shall be of great help to address this important but commonly ignored issue of the female workforce entering the health care industry.

Disclosure

This study has no conflict of interest to declare. Abstract and results of this study were accepted and presented in an oral presentation at the International conference on Medical Education, organised by Association for Excellence in Medical Education (AEME) and held on 07th - 09th March 2014 at University of Health Sciences (UHS) Lahore, Pakistan. No funding was received from any agency or institution.

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