

ORIGINAL ARTICLE

Frequency of Premenstrual Syndrome and Its Association with Quality of Life among University Students

ASMAH IRSHAD¹, SAJID MEHMOOD², RABIYA NOOR³, SARA MUMTAZ⁴, MAHAM SALEEM², TALHA LAIQUE^{5*}

¹Department of Physio-Therapy, KKT International spine centre, Lahore-Pakistan

²Department of Physio-Therapy, UHS, Lahore-Pakistan.

³Department of Physio-Therapy, Ripah University, Islamabad-Pakistan

⁴Department of Physio-Therapy, Avicenna Hospital, Lahore-Pakistan

⁵Department of Pharmacology, Allama Iqbal Medical College, Lahore-Pakistan*

Correspondence to: Talha Laique, Email: talhalaique51@gmail.com, Cell: +92-331-0346682

ABSTRACT

About 70% of the females are affected from premenstrual syndrome (PMS) and 45% are those who are severely affected that the symptoms affecting their daily life routine.

Objectives: To find the frequency of premenstrual syndrome among university students and the association of premenstrual syndrome with quality of life.

Study Design: Cross-sectional study.

Methodology: Data of 500 university students (UHS, AIMC, SIMS and FAST NU) was gathered through two questionnaires, one for diagnosis of premenstrual syndrome (PMS) and other was SF-36 Quality of Life Questionnaire to check association of premenstrual syndrome (PMS) with quality of life.

Statistical analysis: Data was analyzed using SPSS version 20. Percentages and graphs were given for the qualitative variables while Mean± SD were given for quantitative variables.

Results: 339 students were diagnosed with premenstrual syndrome (PMS) and then quality of life was assessed using SF-36 to find the association with premenstrual syndrome. 67.8% of the females in a given sample having premenstrual syndrome.

Conclusion: It was concluded that prevalence of premenstrual syndrome was high. Quality of life was majorly disturbed in several domains which emphasized that the premenstrual syndrome was directly associated with disturbed quality of life.

Keywords: Premenstrual Syndrome, Quality of Life and Short Form-36.

INTRODUCTION

Premenstrual syndrome is a term that is used to explain the physical, emotional, hormonal or behavioral imbalance that takes place during the luteal stage of menstrual cycle and escalates at a rapid pace with the onset of menstruation. The known symptoms associated with PMS are mood swings, cramps, anxiety, increased libido, and at times decreased interests in activities. These symptoms fall into three areas: emotional, physical, and social.^{1,2}

Every once a month, there is an occurrence of change in uterus and ovary which is essential for healthy reproduction. These changes are caused in the change of hormones like estrogen, luteinizing hormone, progesterone and follicle stimulating hormone. The menstrual cycle is accountable for the eggs production and it cause the uterus to be prepared for implantation. The usual span of the cycle is 28 days (ranges 21–35 days), and the cycle itself initiates between the ages of menarche (12 years' usually) till menopause (51 years' usually). Usually, the menstruation cycle is controlled by internal biological cycles. There are four stages of menstrual cycle, which begins from the day one of menstruation. This leads to the follicular stage that stays from day one till day thirteenth. On the fourteenth day, the ovulation stage takes place which is followed by luteal stage that stays from day fifteenth till the twenty eighth day. The symptoms of premenstrual syndrome starts appearing at the luteal stage and the severity increases with the later luteal stage but weakens with the end of menstruation.^{3,4}

Epidemiological studies have predicted that the incidence of PMS symptoms is fairly enormous around 80-

90%, and around 5% of women encounter unbearable symptoms that affect with their daily routine. Another study also described that at minimum 25% of all teenage girls aged 14–15 years encountered the occurrence of Premenstrual Syndromes (PMS).⁵ To examine PMS, a practitioner should check the sequence of symptoms. A woman's symptoms must (1) be present in the 5 days before her period for at least three menstrual cycles in a row, (2) terminate inside 4 days after her period begins, (3) affect with some of her usual routine. Complete history of symptoms regarding PMS can really help practitioner in diagnosing PMS. Observing symptoms every day for minimum 2–3 months and tracking the dates of menstruation as well.

PMS is responsible for some serious consequences like increased suicide and accident rates, elevated absence rate in schools and jobs, poor academic performances and more psychological problems. PMS is confounding factor that makes women more vulnerable than men to depression, mostly during periods of quick variation of gonadal hormones, for instance premenstrual, postpartum and the climacteric.⁶⁻⁸

The underline phenomena of PMS is still unidentified, complex and multifactorial and requires a better explanation in demonstrating the role of hormones like progesterone on neurotransmitters, elevation of prolactin levels, increased sensitivity towards prolactin, endogenous hormones, nutritional deficits, modification of glucose metabolism, and fluid and electrolyte disparity.^{9,10}

Objectives: To find the frequency of premenstrual syndrome among university students and the association of premenstrual syndrome with quality of life.

METHODOLOGY

Data of 500 university students (UHS, AIMC, SIMS and FAST NU) was gathered through two questionnaires, one for diagnosis of premenstrual syndrome (PMS) and other was SF-36 Quality of Life Questionnaire to check association of premenstrual syndrome (PMS) with quality of life. The students who had symptoms for 3 consecutive months were diagnosed by using PMS questionnaire. Quality of life questionnaire SF-36 was also given to be filled by all students having premenstrual syndrome. Level of education was asked as part of demographics. The questionnaire was collected back on spot. In case of less response, email and social media links was used for data collection. Pregnant females were excluded from study.

Statistical Analysis: Data was collected and entered by using SPSS 24. Frequencies and percentages were shown in tables. After that, spearman’s rho correlation test was used to find the association of the participants having premenstrual syndrome (PMS) with their quality of life.

RESULTS

Multiple variables associated with PMS were presented as frequency and percentage in table-1.

Table 1: Parameter Of All Subjects (n=500)

Variables	Groups	Frequency	Percentage (%)
Anxiety	Mild	119	23.8
	Moderate	212	42.4
	Severe	61	12.2
	Other	108	21.6
Mood Swings	Mild	252	50.4
	Moderate	117	23.4
	Severe	38	7.6
	Other	93	18.6
Fatigue	Mild	162	32.4
	Moderate	99	19.8
	Severe	114	22.8
	Other	125	25.0
Palpitations	Mild	114	22.8
	Moderate	168	33.6
	Severe	134	26.8
	Other	84	16.8
Breast Tenderness	Mild	169	33.8
	Moderate	140	28.0
	Severe	153	30.6
	Other	38	7.6
Backache	Mild	168	33.6
	Moderate	82	16.4
	Severe	143	28.6
	Other	107	21.4

Prevalence of PMS among enrolled students was shown in figure-1 as frequency.

Correlation of PMS with various parameters like general health, activity limitation and physical health was done by applying Spearman’s Correlation and its results were shown in table-2.

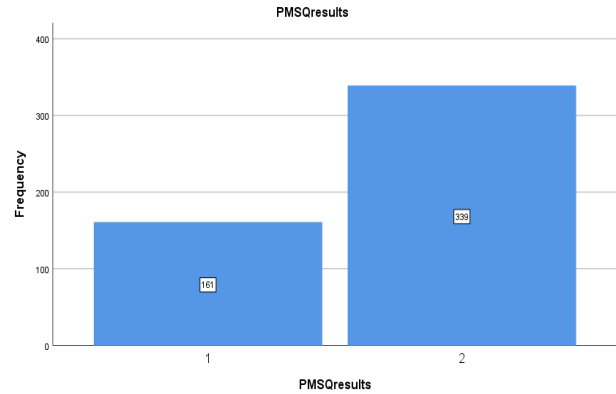


Figure 1: Demonstrates 1 as absence and 2 as presence of PMS.

Table 2: Correlation of PMS with Various Parameters (n=339)

Premenstrual Syndrome	Premenstrual Syndrome		General Health
	Spearman's Correlation (ρ)	1.000	0.589
Sig. (2-tailed)	.	0.02*	
Premenstrual Syndrome	Premenstrual Syndrome		Activity Limitation
	Spearman's Correlation (ρ)	1.000	0.635
Sig. (2-tailed)	.	0.021*	
Premenstrual Syndrome	Premenstrual Syndrome		Physical Health
	Spearman's Correlation (ρ)	1.000	0.154
Sig. (2-tailed)	.	0.034*	

*Statistically significant

DISCUSSION

Using the DSM-IV, we found that 51 percent of the population met the criteria of PMS and 5.8 percent met the criteria of PMDD. A significant limitation in schoolwork output and social life. The authors determined that PMS is a common disorder in young women that badly affects their educational and emotional component of life.¹¹ The finding of above-mentioned research correlated with this research as in this research 67.8% of the students met the criteria for PMS but as for QoL, we used complete SF-36 Questionnaire in which it was found that several domains of SF-36 were affected due to PMS.

According to the previous studies PMDD occurs due to the prolonged duration of a disorder, stressful and damaging household and work settings, and compromised social and professional relationships.

HRQoL measures are used for the identification of burden of illness on patient’s everyday lives and general well-being, as well as aid to assess therapies and normal clinical practice. Thus, HRQoL is a significant aspect of evaluating the burden of PMS/PMDD, yet it is problematic to record since it integrates personal views as well as scores of physical and psychological health, interpersonal and work functioning and a sense of well-being.¹¹

For the present study, SF-36 was used for the assessment of disturbance in daily routine. The results found were congruent with the findings of previously carried research which said that there are several domains of life

that are affected by PMS and if this prevails for a longer period, it can affect one's health too.

One researcher performed longitudinal study where they compared 30.5 percent PMDD patients with 7.5 percent non PMDD patients, they found an acute impairment in their professional and social activities. An average of 2 to 6 days per month were found as impaired days. A total of 28.3 percent population reported the use of psychological and psychotherapeutic aid for the past one year whereas 36.9 percent of PMDD patients contact their primary care practitioners more than four times in a year. The PMDD group had enormous contact rates with specialists than non-PMDD cases.¹²

Limitations: Our study had limitations like financial constraints, lack of resources and lack of genetic workup.

CONCLUSION

It was concluded that prevalence of premenstrual syndrome was high. Quality of life was majorly disturbed in several domains which emphasized that the premenstrual syndrome was directly associated with disturbed quality of life.

Author's contribution: AI&SM: Conceptualized the study, analyzed the data, and formulated the initial draft.

RN&SM: Contributed to the proof reading.

MS&TL: Collected data.

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