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Prevalence of premenstrual syndrome among the female nursing students of selected colleges of Mangaluru

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Abstract:

Background: The primary aim was to assess the prevalence of premenstrual syndrome among the female nursing students of selected colleges of Mangaluru and its effects on their life. **Methods**: The research design used in this study was an institutional based cross-sectional study and purposive sampling technique was used to draw the samples. The data was collected from 323 nursing students from Masood College of Nursing, M V Shetty College of Nursing and SCS College of Nursing, Mangaluru. The Premenstrual Rating Scale was used to collect the data from the samples regarding the prevalence of premenstrual syndrome. **Results**: The study revealed that the prevalence of premenstrual syndrome was 99.4%. Out of 323 participants, 321 had some kind of symptoms. 32.2% had mild symptoms, 42.7% had moderate, 22.0% had severe and 2.5% had very severe premenstrual symptoms. **Conclusions**: Overall, the study assesses the prevalence of premenstrual syndrome among the female nursing students of selected colleges of Mangaluru. It highlights the levels of premenstrual syndrome experienced by the students and this disorder is particularly common in young age groups and therefore represents a significant public health problem in young women. The degree of discomfort varies with each individual and every woman experiences one or other symptoms.

Keywords: Prevalence, Premenstrual syndrome, Nursing students

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Introduction:

"Menstrual disorders are common, and the lack of discussion of menstruation affects everyone, not just the menstruating person." -Dr. Elizabeth Stewart.

Menstruation is a normal physiological cycle or process which is experienced by all the females in the reproductive age group. However, among them some women feel or are affected by menstruation problems. Among those, one of the disorders is premenstrual Syndrome or PMS. The PMS was first described in 1931 by Frank and Horney and they explained that PMS mainly occurs due to hormonal imbalance.[1] These premenstrual disorders occur during the luteal phase of the menstrual cycle and resolve shortly after the menstruation. The duration of luteal phase is from ovulation to the start of menstruation.[2]

A person is said to have PMS if he has at least one of the six affective and one of the four somatic symptoms which are re-ported five days prior to onset of menses in prior three cycles and cease within four days of from the beginning of menses. There are several emotional and behavioural symptoms like depression, angry outbursts, irritation, crying spells, anxiety, confusion, social withdrawal, poor concentration, sleep disturbance, thirst, appetite changes so on. There are also physical symptoms, including breast tenderness, bloating, and weight gain, in addition to headache, swelling of hands or feet, and aches or pains. It is estimated that up to 85% of women who menstruate experience at least one premenstrual symptom, occurring within 2 weeks before menses and easing after menses begins.[3]

The etiology of premenstrual syndrome is not well understood. The goal of treatment is relief of symptoms, which involves a variety of strategies like lifestyle modifications (diet, exercise) cognitive-behavioural therapies, the use of medicines, such as Serotonergic Antidepressants. The epidemiological data indicate that approximately 86% of women of reproductive age experience some of the symptoms of PMS, and, of these, around 3% to 8% will experience an extreme change of mood, which interferes the way of living.[4]

The etiological mechanism of PMS is idiopathic, but it is known that its origin is multifactorial and may be related to endocrine, neurobiological and genetic factors, such as the susceptibility of some women to hormonal alterations that occur during ovarian cycle, because when there are ovulation inhibitors, such as in pregnancy or menopause, the symptoms of PMS improve.[5]

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Approximately 50 to 80% of women of reproductive age have some symptoms of PMS, and around 3 to 8% will experience an extreme mood swing, which interferes with their lifestyle and may be severe enough to decrease their self-esteem, as well affect their attendance at school and work.[6]

In developing countries like India there are many stigmas surrounding menstruation, these stigmas are big barrier for the women to seek help for their physical and mental discomfort. PMS is one of the common menstrual disorders, which is very common in college going girls affecting their relationships, activities of daily living, academics and cognitive functions.[7]

The reported prevalence estimates of PMS in India have ranged from 14.3%[9] to 74.4%. Similarly, the reported prevalence of PMDD in India has varied widely between 3.7%[11] to 65.7%.[8]

Because in the absence of successful interference at the right time, depressive symptoms of PMS are increasing day by day. Large number of adolescent and women committed suicide every year due to PMS.[9]

Materials and methods:

A descriptive research approach was employed to investigate premenstrual syndrome (PMS) among female nursing students. The research was designed as an institutional-based cross-sectional study, conducted at Masood College of Nursing, M V Shetty College of Nursing, and SCS College of Nursing in Mangaluru. The study population included GNM and BSc female students aged 18 to 24 years. Students absent on the day of data collection and those aged 25 years and above were excluded. The study was conducted over a period of one month.

The sample size was calculated based on a previous study's finding that 70% of nursing students experienced PMS. Using a 95% confidence interval and a 5% margin of error, the estimated sample size was 323. Purposive sampling technique was used to select participants.

Data was collected using a semi-structured validated questionnaire with two parts: Part A gathered socio-demographic information, while Part B contained the Premenstrual Rating Scale with 34 five-point Likert scale questions. The questionnaire was validated by 9 subject experts, and a pilot study with 40 nursing students demonstrated good internal consistency (Cronbach's alpha = 0.938).

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Data analysis was performed using Microsoft Excel and SPSS version 29. Categorical data were reported as frequency and percentage. The association between basic details and the level of premenstrual symptoms was assessed using the chi-square test, with a p-value <0.05 considered statistically significant.

Results:

Table 1: Basic details of study participants

Demographic Data		Frequency (n=323)	Percentage
Age (in years)	≤20	191	59.1
	>20	132	40.9
Religion	Hindu	137	42.4
	Muslim	60	18.6
	Christian	126	39.0
Course	General Nursing	46	14.2
	B.Sc. Nursing	277	85.8
Class	I year	98	30.3
	II year	80	24.8
	III year	60	18.6
	IV year	85	26.3
Place of stay	Day scholar	29	9.0
	Hostel	285	88.2
	Paying guest	9	2.8
BMI	Underweight	89	27.6
	Normal	199	61.6
	Overweight	26	8.0
	Obese	9	2.8
Type of family	Joint	26	8.0
	Nuclear	297	92.0
Diet	Vegetarian	8	2.5
	Non-Vegetarian	315	97.5

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Family history of PMS	Present	124	38.4
	Absent	199	61.6
Do you take medications for PMS	Yes	27	8.4
	No	296	91.6
Age of menarche (mean± SD)		13.124 ± 1.322 Minimum= 9 years maximum =19 years	

The mean age of menarche was 13.124 ± 1.322 years with minimum age being 9 years and maximum age being 19 years.

Table 1 represents the frequency and percentage distribution of demographic data of nursing students (n=323). Out of 323 study participants, majority of the females 59.1% were in the age group of ≤20 years and 40.9% were in the age group >20years. Out of them majority (85.8%) were from B.Sc. background, remaining 14.2 % from GNM background. Majority of them were hostilities (88.2%) with a background of nuclear family (92%). Fewer (2.5%) were vegetarian. It is observed that 38.4% had the family history of PMS and few (8.4%) take regular medications.

Table 2: Distribution of level of Premenstrual symptoms

Level of symptoms	Scores	Frequency	Percentage
No symptoms	34	2	0.6
Mild symptoms	35-68	104	32.2
Moderate symptoms	69-102	138	42.7
Severe	103-136	71	22.0
Very severe	137-170	8	2.5
Total		**323**	**100.0**

The prevalence of premenstrual syndrome was d 99.4%. Out of 323 participants, 321 had some kind of symptoms. 32.2% had mild symptoms, 42.7% had moderate, 22.0% had severe and 2.5% had very severe premenstrual symptoms.

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Table 3: Association of basic details with Level of Premenstrual symptoms

Demographic Data		Level of Premenstrual symptoms			Test statistic	P value	df
		No to Mild symptoms (n=106)	Moderate symptoms (n=138)	Severe to very severe symptoms (n=79)			
Age (in years)	≤20	54 (28.3)	85 (44.5)	52 (27.2)	4.751¥	0.09	2
	>20	52 (39.4)	53 (40.2)	27 (20.5)			
Religion	Hindu	43 (31.4)	66 (48.2)	28 (20.4)	4.243¥	0.37	4
	Muslim	18 (30.0)	26 (43.3)	16 (26.7)			
	Christian	45 (35.7)	46 (36.5)	35 (27.8)			
Course	General Nursing	93 (33.6)	114 (41.2)	70 (25.3)	1.985¥	0.37	2
	B.Sc. Nursing	13 (28.3)	24 (52.2)	9 (19.6)			
Class	I year	29 (29.6)	47 (48.0)	22 (22.4)	4.691¥	0.58	6
	II year	22 (27.5)	35 (43.8)	23 (28.7)			
	III year	21 (35.0)	25 (41.7)	14 (23.3)			
	IV year	34 (40.0)	31 (36.5)	20 (23.5)			
Place of stay	Day scholar	9 (31.0)	14 (48.3)	6 (20.7)	5.554¥	0.23	4
	Hostel	96 (33.7)	121 (42.5)	68 (23.9)			
	Paying guest	1 (11.1)	3 (33.3)	5 (55.6)			
BMI	Underweight	27 (30.3)	36 (40.4)	26 (29.2)	3.249¥	0.78	6

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	Normal	68 (34.2)	85 (42.7)	46 (23.1)			
	Overweight	7 (26.9)	14 (53.8)	5 (19.2)			
	Obese	4 (44.4)	3 (33.3)	2 (22.2)			
Type of family	Joint	8 (30.8)	11 (42.3)	7 (26.9)	0.108¥	0.95	2
	Nuclear	98 (33.0)	127 (42.8)	72 (24.2)			
Diet	Vegetarian	2 (25.0)	4 (50.0)	2 (25.0)	0.255¥	0.88	2
	Non-Vegetarian	104 (33.3)	134 (42.5)	77 (24.4)			
Family history of PMS	Present	27 (21.8)	57 (46.0)	40 (32.3)	12.981¥	**0.002***	**2**
	Absent	79 (39.7)	81 (40.7)	39 (19.6)			
Do you take medications for PMS	Yes	6 (22.2)	11 (40.7)	10 (37.0)	2.941¥	0.23	2
	No	100 (33.8)	127 (42.9)	69 (23.3)			
Age of menarche		13.22±1.16	13.02±1.49	13.15±1.19	0.673#	0.51	321

Statistical test used: ¥ Chi Square test; # ANOVA

***p value <0.05 is statistically significant**

In table 3, Severe to very severe symptoms were seen higher in age group less than and equal to 20 years and among underweight (29.2%) but the association was not statistically significant. Further it was observed that Study participants with family history of PSM had significant higher association with Severe to very severe Symptoms (p value =0.002)

Discussion:

The present study was conducted with an aim to assess the prevalence of premenstrual syndrome among the female nursing students of selected colleges of Mangaluru. The results revealed that majority of the females, 59.1% were in the age group of ≤20 years. The prevalence

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of premenstrual syndrome was d 99.4%. That is out of 323 participants, 321 had some kind of symptoms. 32.2% had mild symptoms, 42.7% had moderate, 22.0% had severe and 2.5% had very severe premenstrual symptoms. This is supported by the study conducted by Dr. Rhoda Pavitra et al. which reveal that 99% of the sample had symptoms of premenstrual syndrome of varying severity.[10] In another study by Tibin Joseph et al., it was seen that 100% had symptoms of PMS which was similar to our study findings. [(1)] the study conducted by Gauri Core et al. reveal the prevalence of premenstrual symptoms was found to be 85.6% amongst the participants.[11]

In the present study majority of the students were hostelites (88.2%), and 92% out of them were from the nuclear family. There were about 97.5% were non-vegetarians and 38.4% of them had a family history of PMS but very few of them (8.4%) were taking medication for PMS.

Conclusion:

The study concludes that the prevalence of premenstrual syndrome was 99.4% that is 321 participants out of 323 had some kind of symptoms from Masood College of Nursing, SCS College of Nursing and MV Shetty College of Nursing. 32.2% had mild symptoms, 42.7% had moderate, 22.0% had severe and 2.5% had very severe premenstrual symptoms. Majority of the females were in the age group of 19-21 years and attained menarche between 9-19 years. Many of them had a family history of PMS and every female in the study group has experienced some or the other symptoms of PMS. Data was entered using Microsoft and SPSS version 29. Categorical data was reported as Frequency and percentage. Chi-square test was used to find Association of basic details with Level of Premenstrual symptoms. P value <0.05 is considered statistically significant.

References:

1. Joseph, T., Nandini, M., & Sabira, K. (2016). Prevalence of Premenstrual Syndrome (PMS) Among Adolescent Girls. IOSR Journal of Nursing and Health Science, 5(1), 24-27.
2. Dutta, A., & Sharma, A. (2021). Prevalence of premenstrual syndrome and premenstrual dysphoric disorder in India: A systematic review and meta-analysis.

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Health Promotion Perspectives: An International Journal, 11(2), 161–170. doi: 10.34172/hpp.2021.20

3. Ahmed, S., & Saeed, A. (2019). Knowledge and self-care practices of adolescent students with pre-menstrual syndrome in Erbil city. Erbil Journal of Nursing and Midwifery, 2(1), 9-18.
4. Silva, M., Isis, M., Soares, E., & Leticia, I. (2014). Quality of life of women with premenstrual syndrome from the scale WHOQOL-BREF. Ciência, Cuidado e Saúde, 13(2), 236-244. DOI: 10.4025/cienccuidsaude.v13i2.15759
5. Fernandes, K., Almeida, L., & Arruda, E. (2024). Prevalence of premenstrual syndrome in female nursing students at a public university in Brazil. Brazilian Journal Of Pain, 7, 1-6. DOI: 10.5935/2595-0118.20240006-en
6. Figueira, F., Impieri, A., Danúbia, C., Lucas, J., & Anchielle, F. et al. (2019). Quality of Life among University Students with Premenstrual Syndrome. Revista Brasileira de Ginecologia e Obstetrícia, 41(05), 312-317. DOI: 10.1055/s-0039-1688709
7. Upadhyay, M., Mahishale, A., & Kari, A. (2023). Prevalence of premenstrual syndrome in college-going girls in Belagavi, Karnataka. Clinical Epidemiology and Global Health, 20(1), 1-5. DOI: https://doi.org/10.1016/j.cegh.2023.101234
8. Dutta, A., & Sharma, A. (2021). Prevalence of premenstrual syndrome and premenstrual dysphoric disorder in India: A systematic review and meta-analysis. Health Promotion Perspectives, 11(2), 161–170. doi: 10.34172/hpp.2021.20
9. Sarkar, B., & Bhattacharya, S. (2021). A cross-sectional study on the prevalence of premenstrual syndrome among nursing school and college students of Kalyani, Nadia, West Bengal, India. International Journal of Health and Clinical Research, 4(6), 132-139.
10. Pavitra, R., & Sireesha, S. (2022). Study of prevalence of PMS in female nursing students of a college in Telangana. DOI: https://doi.org/10.22271/27069567.2022.v4.i2a.403
11. Kore, G., Merchant, H., Narvel, H., Nayak, A., & De Sousa, A. (2019). A study on premenstrual syndrome symptoms and their association with sleep quality in nursing staff. DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20191204