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A study to assess the effect of premenstrual syndrome on quality of life among students at selected college, Hisar, Haryana.

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Abstract

Background: Premenstrual syndrome (PMS) is a common gynecological disorder that usually presents with physical and behavioral symptoms that appear a few days before menstruation and disappear after menstruation.[1] Considerable morbidities associated with PMS have been reported to affect daily life and quality of life, and this is particularly true for female students.[2, 3]

Aim: Assess the Effect of Premenstrual Syndrome on Quality of Life among Students.

Methods: A cross sectional study was conducted to assess the effect of premenstrual syndrome on quality of life among students. The study was conducted at Savitri Jindal Institute of Nursing, Hisar, Haryana after getting formal approval. The 30 students with PMS and 30 students without PMS were selected by using random sampling technique (lottery method). The data was collected by administering premenstrual syndrome scale and World health Organization BREF Quality of life tool among the students.

Results: The mean of quality of life among students with PMS was (M=42.13) was significantly low than without PMS (M=112.33). Calculated unpaired "t" test value was (21.92) and p value <0.0001 and found to be statistically significant at level of 0.05. It was show that the premenstrual syndrome effect the quality of life among students.

Conclusion: The study concluded that premenstrual syndrome affect the quality of life of students.

Keywords: Premenstrual syndrome, quality of life, Effect, Students

Introduction: In the period between ovulation and menstruation, the majority of women who menstruate regularly experience a variety of physical, psychological, and behavioral changes. Horney published one of the earliest report of such changes in 1931.[4] Frank published a key study around the same time as Horney's description, which is widely regarded as the earliest contemporary clinical description of premenstrual symptoms.[5] Similar to Horney, Frank also referred to the cyclical emotional disturbances which occurred in the latter half of the menstrual cycle as "premenstrual tension." Although these two researchers began to focus on menstruation and its associated symptoms during the same historical period, their perspectives on this condition were markedly different. The feminist psychoanalyst Karen Horney described “premenstrual tension” as a psychological response to anxieties and fantasies associated with pregnancy, as well as frustrations resulting from cultural restrictions on the expression of female sexuality, while Robert Frank, the gynecologist often credited with identifying premenstrual tension, attributed the symptoms to accumulations of the female sex hormone estrogen and advocated medical intervention. Frank considered premenstrual tension a dysfunction, Horney argued that it was not a pathological process because mood fluctuations, anxiety and irritability, occurred in otherwise healthy women. Frank’s focus shifted increasingly towards a substantial cohort of women facing diverse premenstrual disturbances. It is a well-known fact that ordinary women experience varying levels of discomfort before the onset of menstruation. These minor disruptions encompass heightened fatigue, irritability, diminished concentration, and episodes of pain. However, in a different subset of patients, the reported symptoms were serious enough to necessitate a day or two of bed rest. Among this group, pain takes center stage as the prevailing issue. Yet, another category of patients presented significant systemic disorders during the premenstrual phase. And it is precisely these latter two groups of patients that Frank aimed to shed light on, primarily from a hormonal and clinical perspective, thus laying the groundwork for an in-depth study of these disorders. However, in 1953, Greene and Dalton reasoned that emotional tension was just one of several components of this condition. They suggested that it should be more appropriately named “premenstrual syndrome”.[6]

The shift from “premenstrual tension” to “premenstrual syndrome” reflects a transformative evolution in the conceptualization and understanding of the cluster of symptoms experienced by menstruating women. Originally characterized as “premenstrual tension”, the term emphasized the emotional and psychological aspects of the disturbances occurring in the latter part of the menstrual cycle. However, as subsequent research expanded the scope and recognition of diverse physical, emotional, and behavioral changes during this phase, it became evident that the term “tension” inadequately captured the complexity of the condition. This shift allowed for a more inclusive and comprehensive understanding of the condition, recognizing its multifaceted nature. Furthermore, the transition from “premenstrual tension” to “premenstrual syndrome” not only reflects

the evolution in our understanding of women's experiences, but also underscores the ongoing importance of unravelling the complexities of these symptoms in the context of contemporary health and well-being. Recognizing the diverse nature of premenstrual challenges is not just a historical footnote, but a crucial step towards fostering a more inclusive approach to women's health in the present day.

Premenstrual disorders refer to psychiatric or physical symptoms that arise during the luteal phase of the menstrual cycle, affecting the individual's normal daily functioning, and typically subside shortly after menstruation begins. The luteal phase begins after ovulation and lasts until the onset of menstruation.[7] Between 50 and 80 percent of women feel menstrual discomfort during this time, while between 30 and 40 percent of women develop PMS. During the luteal phase of their menstrual cycle, almost 80% of women report at least one physical or psychological symptom.[8]

PMS and Quality of Life A study by Kathleen et al. performed in a sample of young women found that, compared to women with low PMS, women with high PMS reported much more stress and a lower quality of life.[9] According to these findings, various studies show that PMS severely lowers patients' quality of life and places a heavy load on their ability to do their regular daily responsibilities and activities.[10] One study that examined the efficacy of a psycho-educational PMS intervention found that while it reduced the intensity of PMS and its associated somatization, anxiety, and hostility, it had no effect on the degree of sadness or interpersonal sensitivity.[11] The literature provides many QoL definitions. One of the first definitions describes QoL as the sum of happiness and life satisfaction. Each subsequent term treated this issue more widely. In 1993, the World Health Organization (WHO) proposed a definition, based on which specific contributors to overall QoL can be identified. These include the environment, relationships with others, independence, physical and mental health.[12] In social and medical sciences, QoL is characterized at the population level. Both subjective indicators (sense of security, happiness, satisfaction with life, work, and family relations) and objective indicators (gross domestic income, unemployment rate, mortality and suicide rates, average life expectancy) are assessed.[13,14] In the era of modern healthcare, the focus is on the patient perceived in a holistic way. This holistic approach should involve QoL measurements and research in this field. This will allow the assessment of health, taking into account social and psychological factors, as well as the effectiveness of medical interventions, drugs applied, and actions that may contribute to the patient's life satisfaction.[15,16]

Objectives: To assess the level of quality of life among students with premenstrual syndrome and without premenstrual syndrome.

Hypothesis: The level of quality of life among students with premenstrual syndrome was low than the quality of life among students without premenstrual syndrome.

Methods: A cross sectional study was conducted to assess the effect of premenstrual syndrome on quality of life among students. The study was conducted at Savitri Jindal Institute of Nursing, Hisar, Haryana after

getting formal approval. The subject of the study includes nursing students in age group of 17 to 25 years. By using random sampling technique (lottery method) 30 students with PMS and 30 students without PMS were selected. After providing informed consent, the data was collected by administering premenstrual syndrome scale and World health Organization BREF Quality of life tool among the students. Statistical Analysis Statistical analysis was performed using the SPSS 24 software and the MS Excel 2016 package. The data was analyzed in terms of the objectives of the study by using descriptive statistics that wasfrequency, percentage, mean, standard deviation. The level of statistical significance was set at $p < 0.05$.

Results: Table No. 1 shows that students with premenstrual syndrome were in the age group of 17-19 years (60%) & 20-22 years (33.3%) and few in 23-25 years (6.7%). Duration of sleep for majority of students with premenstrual syndrome were found <6 hours (53.4%), 6-10 hours (33.3%) and >10 hours (13.3%). Most of the students with premenstrual syndrome attained menarche at the age of 13-15 years (93.3%), 10-12 years (6.7%). Duration of menstrual cycle of majority of students with premenstrual syndrome was 26-28 days (46.6%), 29-31 days (20%), <26 days (16.7%) and >31 days (16.7%). Majority of students with premenstrual syndrome taking fast foods daily (40%), frequently (36.7%), occasionally (23.3%). The majority of students with premenstrual syndrome were found to be taking fried foods daily (46.7%), frequently (40%), occasionally (13.3%). Most of students with premenstrual syndrome were drinking coffee/tea for 3-4 times per day (53.3%), 1-2 times per day (43.3%) and >4 times per day (3.4%).

Most of students without premenstrual syndrome were in the age group of 17-19 years (50%) & 20-22 years (43.3%) and few in 23-25 years (6.7%). Duration of sleep for majority of students without premenstrual syndrome were found 6-10 hours (53.4%) and >10 hours (46.6%).

Majority of the students without premenstrual syndrome attained menarche at the age of 13-15 years (90%), 10-12 years (10%). Duration of menstrual cycle of majority of students without premenstrual syndrome was 26-28 days (60%), 29-31 days (26.7%), <26 days (6.7%) and >31 days (6.7%). Majority of students without premenstrual syndrome were taking fast food occasionally (53.3%), frequently (26.7%), not at all (13.3%) and only few students without premenstrual syndrome were taking daily (6.7%). The majority of students without premenstrual syndrome were found to be taking fried foods frequently (33.3%), daily (26.7%), occasionally (20%)and (20%) not at all taking fried foods. Most of students without premenstrual syndrome were drinking coffee/tea for 1-2 times per day (80%), 3-4 times per day (20%).

Table 1. Socio demographic and menstrual details and lifestyle factors of the students with and without premenstrual syndrome. N=60

Socio demographic, menstrual details and lifestyle factors		PMS PRESENT (n=30)		PMS ABSENT (n=30)	
		F	%	F	%
Age	17 -19 years	18	60	15	50
	20-22 years	10	33.3	13	43.3
	23-25 years	02	6.7	02	6.7
Duration of sleep (hours)	<6	16	53.4	00	00
	6-10	10	33.3	16	53.4
	>10	04	13.3	14	46.6
Age at menarche is	10-12 years	02	6.7	03	10
	13-15 years	28	93.3	27	90
	16-18 years	00	00	00	00
Duration of menstrual cycle is	<26 days	05	16.7	02	6.7
	26-28 days	14	46.6	18	60
	29-31 days	06	20	08	26.7
	>31 days	05	16.7	02	6.7
	Any others	00	00	00	00
Intake of fast food	Daily	12	40	02	6.7
	Frequently	11	36.7	08	26.7
	Occasionally	07	23.3	16	53.3
	Not at all	00	00	04	13.3
Intake of fried food	Daily	14	46.7	08	26.7
	Frequently	12	40	10	33.3
	Occasionally	04	13.3	06	20
	Not at all	00	00	06	20
Intake of coffee/tea (Per Day)	1-2	13	43.3	24	80
	3-4	16	53.3	06	20
	>4	01	3.4	00	00

Table 2 Level of premenstrual syndrome among the students with and without premenstrual syndrome

Level of PMS	Premenstrual Syndrome			
	Present		Absent	
	f	%	f	%
No symptoms (<20%)	0	0	30	100
Mild symptoms (21-40%)	06	20	00	00
Moderate symptoms (41-60%)	10	33.4	00	00
Severe (61-80%)	12	40	00	00
Very severe >81%)	02	6.6	00	00
Total	30	100	30	100

Table 2 shows that the level of PMS among students with premenstrual syndrome, most of students were

having severe symptoms 12(40%), moderate symptoms 10(33.4%) had mild symptoms 06(20%) and very severe symptoms 02(6.6%).

Table 3 Level of quality of life among the students with and without premenstrual syndrome

Quality of life	Premenstrual syndrome			
	Present		Absent	
	f	%	f	%
Poor quality of life (<50 %)	24	80	00	00
Average quality of life (50%-75%)	06	20	00	00
Good quality of life (>75%)	00	00	30	100
Total	30	100	30	100

Table 3 the above table shows that the level of quality of life among students with premenstrual syndrome, most of students 24(80%) had poor quality of life, 06(20%) average quality of life and no one students with PMS had good quality of life. Where as the level of quality of life among students without PMS, all the students 30(100%) had good quality of life.

Table 4 Mean and Standard Deviation (SD), Mean Difference (MD) of quality of life among students with PMS and without PMS

	Premenstrual syndrome				Mean Difference	Unpaired t Value
	Present		Absent			
	Mean	SD	Mean	SD		
Quality of life	42.13	16.11	112.33	6.94	70.2	21.92 **P<0.0001***

Significance at 0.05

Table 4 shows that the mean and standard deviation (SD)) of quality of life among students with PMS was (M=42.13, SD=16.11) and without PMS (M=112.33, SD=6.94). The mean difference quality of life among students with PMS and without PMS was (70.2). The obtained unpaired "t" value (21.92), p value <0.0001 that was significant at significant level 0.05. Thus it shows that quality of life was poorer among students with PMS than without PMS.

Discussion: This study was cross-sectional and conducted among 30 students with PMS and 30 students without PMS. Students were selected by random sampling technique (lottery method). The data was collected from participants by using premenstrual syndrome scale and World health Organization BREF Quality of life tool. The mean of quality of life among students with PMS was (M=42.13) was significantly low than without PMS (M=112.33). Calculated unpaired “t” test value was (21.92) and p value <0.0001 and found to be

statistically significant at level of 0.05. It was show that the premenstrual syndrome affect the quality of life among students.

Correlation between premenstrual syndrome and quality of life among students

The correlation between the post test level of premenstrual syndrome and quality of life among students, the obtained "r" values of (-.351) shows a negative correlation between level of premenstrual syndrome and quality of life among students. It means when level of premenstrual syndrome increase then the quality of life score will decrease.

Conclusion- This cross sectional research study had shown that the quality of life was poor among students with premenstrual syndrome but quality of life was good among students without premenstrual syndrome. So study concluded that premenstrual syndrome affect the quality of life of students.

Recommendations- The recommendations provided lead to the design of a project-based intervention to support students. Students should also consider risk factor modifications. The college staff should also consider the particular situation of students and should provide academic and psychological support for their specific needs.

Abbreviations- QoL- quality of life, PMSS- Premenstrual Syndrome Scale, PMS- premenstrual syndrome

Limitation of the Study-

- The sample size is limited to 60.
- The study limited to GNM students of one institute only.

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