

Assessment of Knowledge and Attitude about Pre-Menstrual Syndrome
Among BS Nursing Students

Hajra Nasir*
BSN*, Rashid Latif Nursing College (RLNC), Rashid Latif Medical Complex (RLMC), Lahore.
Corresponding Author Email: hajranasir944@gmail.com

Sana Naeem
BSN*, Rashid Latif Nursing College (RLNC), Rashid Latif Medical Complex (RLMC), Lahore.
Email: sanabhatti238@gmail.com

Faisal Nadeem
Associate Professor, Rashid Latif Nursing College (RLNC), Rashid Latif Medical Complex (RLMC), Lahore. Email: faisal.nadeem@rlmc.edu.pk

Warda Tu Nisa
Assistant Professor, Rashid Latif Nursing College (RLNC), Rashid Latif Medical Complex (RLMC), Lahore. Email: wardatu.nisa@rlmc.edu.pk

Jerry Zahid
Senior Nursing Lecturer, Rashid Latif Nursing College (RLNC), Rashid Latif Medical Complex (RLMC), Lahore. Email: jerry.zahid@rlmc.edu.pk

Sadaf Younis
Assistant Professor, Armed Forces Post Graduate Medical Institute.
Email: sadafharoon3966@gmail.com

Author Details		
Keywords: Premenstrual Syndrome, Menstrual Health, Knowledge, Attitude, BS Nursing		
Received on 24 June 2025		
Accepted on 02 Aug 2025		
Published on 05 Aug 2025		
Corresponding Authors*:	E-mails	&
Hajra Nasir hajranasir944@gmail.com		

Abstract

Background: Premenstrual Syndrome (PMS) is a common condition among young women, involving physical, emotional, and behavioral symptoms. Awareness and understanding vary widely. This study assessed nursing students' knowledge, attitudes, and associated factors related to PMS. Methods A descriptive cross-sectional study of 103 BSN students used a structured questionnaire to assess demographics, knowledge, attitudes, symptoms, risk factors, and information sources. Data were analyzed using SPSS v25 with descriptive statistics, frequency distributions, and Pearson correlation tests. Results Most participants (99%) were aged 18–25, representing all BSN year levels. A majority (68.9%) had excellent knowledge of PMS, commonly identifying mood swings (75.7%), irritability (74.8%), and bloating (72.8%) as

symptoms. Key information sources included books (65%), family (64.1%), and health professionals (62.1%). Stress (78.6%), caffeine (68%), and alcohol (60.2%) were common risk factors, while dietary changes (83.5%) and physical activity (75.7%) were recognized relief methods. Knowledge showed positive correlations with attitude ($r = 0.552$, $p < 0.001$) and year level ($r = 0.228$, $p = 0.021$). Conclusion: The findings show high PMS knowledge and positive attitudes among nursing students, especially in higher years. However, gaps in understanding risk factors and traditional medicine highlight the need for targeted menstrual health education.

INTRODUCTION

Premenstrual syndrome (PMS) encompasses a range of physical and psychological symptoms that occur after ovulation and before menstruation, significantly affecting women’s daily functioning and well-being (Mohamed et al., 2022). Common symptoms include mood swings, anxiety, sleep disturbances, breast tenderness, weight fluctuations, and fatigue, which can impair work performance, studies, and personal relationships (Vieira et al., 2021; Minichil et al., 2020). Global studies reveal that up to 90% of women experience PMS symptoms, with prevalence rates varying by region—from 30% in Iran to over 90% in Lebanon and Ethiopia (Imai et al., 2021). Moreover, awareness about PMS remains limited; many women lack understanding of the condition’s severity or management options, highlighting the need for targeted education (Fatima et al., 2024). Adolescents and young women are particularly vulnerable, often experiencing absenteeism and stress, with many resorting to self-medication without proper guidance. Community pharmacists can aid in managing PMS by advising on appropriate treatment options. Overall, PMS significantly diminishes quality of life and increases risks of mental health issues, emphasizing the importance of awareness, early intervention, and accessible healthcare support (Kumudha et al., 2024).

OBJECTIVES

- To assess the level of knowledge about Pre-Menstrual Syndrome (PMS) among BS Nursing students.
- To evaluate the attitude adopted by BS Nursing students in managing PMS.
- To determine the relationship between knowledge level and attitude regarding PMS.

Alternative Hypothesis H₁: BS Nursing students' knowledge and attitude play a big role in understanding PMS.

Null Hypothesis H₀: No significant link exists between students' knowledge and attitude about PMS in my study.

MATERIAL AND METHODS

This study will employ a cross-sectional design to assess BS nursing students' knowledge and attitudes toward Premenstrual Syndrome (PMS). The independent variable is knowledge, while attitude is the dependent variable. PMS is defined as a combination of physical and emotional symptoms occurring after ovulation and before menstruation. Knowledge refers to understanding key facts, causes, symptoms, management, and health implications of PMS, assessed through a structured questionnaire, while attitude reflects students' feelings, beliefs, and willingness to support awareness on PMS. The research will be conducted at Rashid Latif Nursing College in Lahore over nine months post-approval. A sample of 103 students will be selected using simple random sampling, based on inclusion criteria such as enrollment in the BSN program, age between 18-30, and willingness to participate, excluding those with prior formal PMS education. Data will be collected via an adopted structured survey comprising sections on demographics, knowledge, and attitude, with reliability confirmed by a Cronbach's Alpha of 0.732. Data will be gathered through Google Forms after informing participants about the study's

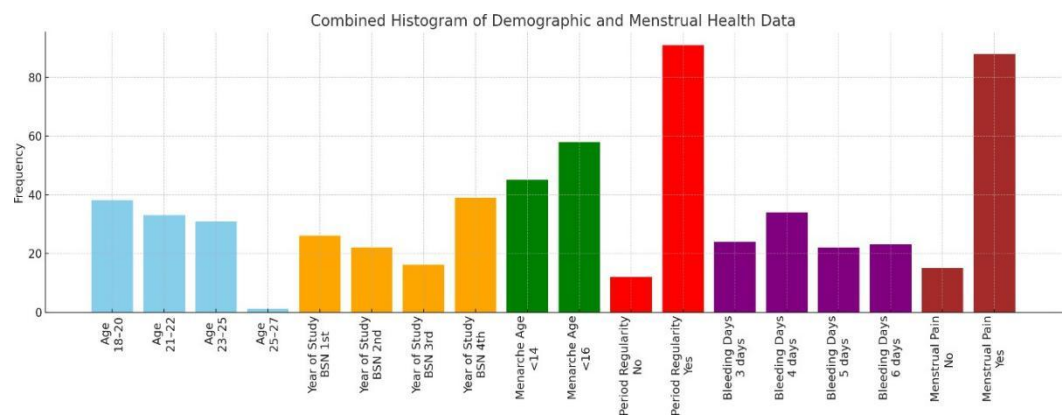
objectives. Ethical considerations include obtaining permission to use scales, ensuring confidentiality, voluntary participation, and ethical data sharing, with measures to avoid plagiarism and protect participants’ privacy.

RESULTS

TABLE 1: PMS CHARACTERISTICS AMONG BS NURSING STUDENTS

Variable	Frequency	Percent (%)
Age: 18–20	38	37%
Age: 21–22	33	32%
Age: 23–25	31	30%
Age: 25–27	1	1.0%
Current Year: BSN 1st Year	26	25%
Current Year: BSN 2nd Year	22	21%
Current Year: BSN 3rd Year	16	16%
Current Year: BSN 4th Year	39	38%
Age of Menarche: <14	45	44%
Age of Menarche: <16	58	56%
Period Regularity: No	12	12%
Period Regularity: Yes	91	88%
Days of Bleeding: 3 days	24	23%
Days of Bleeding: 4 days	34	33%

FIGURE 1: HISTOGRAM OF DEMOGRAPHIC AND MENSTRUAL HEALTH DATA



The study's participants are predominantly young adults, with 99% aged 18-25, mainly comprising college students or recent graduates a demographic often studied in education, mental health, and behavioral research. The age distribution shows 36.9% are aged 18–20, 32% are 21–22, and 30.1% are 23–25. Only 1% are aged 25–27, indicating limited age diversity which may restrict the applicability of findings to older populations. Regarding academic standing, the majority (37.9%) are in their fourth year of the BS Nursing program, followed by first-year (25.2%), second-year (21.4%), and third-year (15.5%) students, reflecting diverse knowledge levels across academic years. Histogram data on menarche reveals most women (20.4%) began menstruating at age 13, with similar numbers at ages 14-16, aligning with normal adolescent development. Early menarche before age 10 was rare (1.9%), suggesting typical hormonal and physical maturation. Most respondents (88.3%) reported regular menstrual cycles, indicating overall reproductive health; however, the remaining 11.7% with irregular cycles might experience health issues like stress or hormonal disorders (Figure 1).

Menstrual duration data shows most women experienced bleeding lasting 3 to 6 days, a typical cycle duration. The majority (over 80%) report experiencing menstrual pain (dysmenorrhea), highlighting the need for better pain management strategies to

improve daily functioning. Participants obtained PMS information mainly from family (64.1%) and books (65%), followed by healthcare providers (62.1%). The reliance on multiple information sources emphasizes the importance of community and educational interventions to enhance awareness and management of menstrual health among young women.

TABLE 2: PMS KNOWLEDGE SYMPTOMS RISK FACTORS AND RELIEF METHODS

Category	Frequency	Percent (%)
Knowledge of PMS		
End of menstrual cycles	1	1.0%
Physical/emotional symptoms	81	78.6%
Regular blood discharge	14	13.6%
Productive loss	7	6.8%
Signs & Symptoms		
Headache		
Don't Know	15	14.6%
No	29	28.2%
Yes	59	57.3%
Mood swings		
Don't Know	11	10.7%
No	14	13.6%
Yes	78	75.7%
Irritability		
Don't Know	15	14.6%
No	11	10.7%

Yes	77	74.8%
Aggression		
Don't Know	18	17.5%
No	20	19.4%
Yes	65	63.1%
Abdominal bloating		
Don't Know	20	19.4%
No	8	7.8%
Yes	75	72.8%
Risk Factors		
High caffeine intake		
Don't Know	18	17.5%
No	15	14.6%
Yes	70	68.0%
Alcohol abuse		
Don't Know	20	19.4%
No	21	20.4%
Yes	62	60.2%
Stress		
Don't Know	13	12.6%
No	9	8.7%
Yes	81	78.6%
Overweight		
Don't Know	21	20.4%

No	21	20.4%
Yes	61	59.2%
Relief Methods		
Dietary changes		
Don't Know	11	10.7%
No	6	5.8%
Yes	86	83.5%
Yoga / meditation		
Don't Know	11	10.7%
No	18	17.5%
Yes	74	71.8%
Physical exercise		
Don't Know	9	8.7%
No	16	15.5%
Yes	78	75.7%
Home remedies		
Don't Know	14	13.6%
No	16	15.5%
Yes	73	70.9%

The summary of Table 2 highlights participants’ knowledge, feelings, and actions regarding PMS. Most (78.6%) associate PMS with emotional or physical symptoms, such as mood swings and swelling, but fewer recognize it as linked to regular bleeding (13.6%) or reduced productivity (6.8%), indicating incomplete but strong understanding. Common symptoms cited include emotional instability (75.7%), irritability (74.8%), and

tummy swelling (72.8%), with some uncertainty about symptoms like violence (17.5%). Participants identified stress (78.6%) and caffeine intake (68%) as key risk factors, with moderate awareness of alcohol abuse and overweight as additional factors, though 20.4% were unsure about weight's role. For relief, most reported dietary changes (83.5%), exercise (75.7%), yoga (71.8%), and home remedies (70.9%), reflecting awareness of non-pharmacological treatments. While knowledge of symptoms and relief strategies is good, gaps remain in understanding specific risk factors and lesser-known symptoms, guiding future health education efforts.

FIGURE 1: ATTITUDE TOWARDS PMS

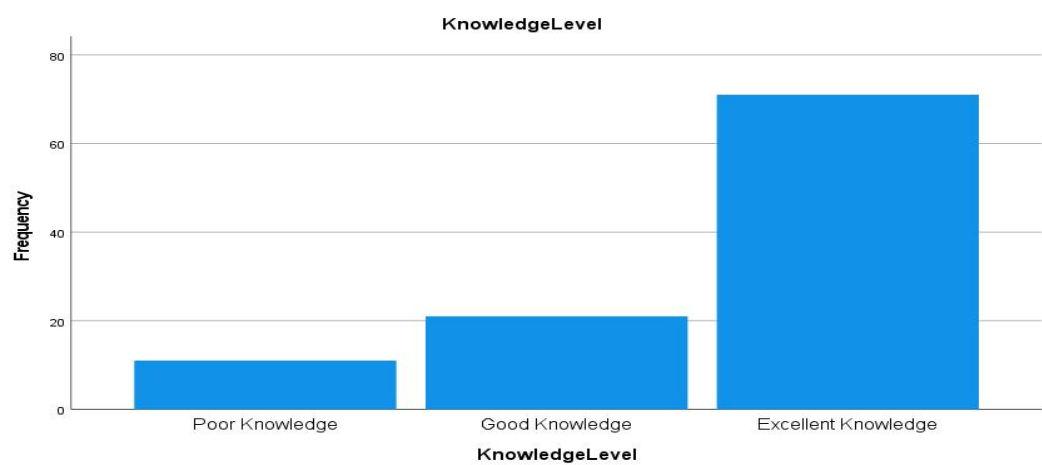


TABLE 3: ATTITUDE TOWARDS PMS

Attitudes toward PMS			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PMS disturbs routine	normal		0 (0.0%)	4 (3.9%)	11 (10.8%)	44 (43.1%)	43 (42.2%)
Missed school or work due to PMS			0 (0.0%)	8 (7.8%)	20 (19.6%)	43 (42.2%)	31 (30.4%)

Stress worsens PMS	0 (0.0%)	1 (1.0%)	8 (7.8%)	52 (51.0%)	41 (40.2%)
Traditional medicine is suitable to treat PMS	6 (5.9%)	17 (16.7%)	21 (20.6%)	29 (28.4%)	29 (28.4%)
Dietary change helps relieve PMS symptoms	3 (2.9%)	6 (5.9%)	19 (18.6%)	41 (40.2%)	33 (32.4%)
Medication relieves PMS	4 (3.9%)	9 (8.8%)	21 (20.6%)	41 (40.2%)	27 (26.5%)
PMS affects quality of life	3 (2.9%)	9 (8.8%)	12 (11.8%)	44 (43.1%)	34 (33.3%)
Negative aspect: loss of emotional control	3 (2.9%)	4 (3.9%)	19 (18.6%)	42 (41.2%)	34 (33.3%)

The (Table 3) express information regarding how PMS affects everyday life and how various treatments work. Most participants (85.3%) agree or strongly agree that PMS influences their regular schedules and 72.6% say they often miss school or work as a result of PMS. Many experts think that stress makes PMS worse and 91.2 percent of them strongly agree. Opinions on the use of traditional medicine for PMS treatment are not all the same, but the majority (56.8%) agrees or strongly agrees. 72.6% of the participants say changes in diet help and 66.9% think medication is useful in reducing symptoms. In addition, over 76% believe that PMS hampers daily life and almost 3 out of 4 women names feeling out of control emotionally as the top concern. All in all, these reports point out that PMS affects a person’s mood, tasks they do every day and their life quality and most agree that stress management, eating well and taking medicine work best for their symptoms.

TABLE 4: CORRELATIONS

Correlations			Knowledge Score	Attitude Score	Age	Current Year of Study
Knowledge Score (Pearson Correlation)		1		.552	.126	.228
Sig. (2-tailed)				.000	.206	.021
N			103	103	103	103
Attitude Score (Pearson Correlation)			.552**	1	.018	.042
Sig. (2-tailed)			.000		.859	.672
N			103	103	103	103
Age (Pearson Correlation)			.126	.018	1	.751
Sig. (2-tailed)			.206	.859		.000
N			103	103	103	103

The correlation (Table 4) analysis reveals several key relationships between Knowledge Score, Attitude Score, and Age. There is a strong positive correlation (0.552, $p < 0.01$) between Knowledge Score and Attitude Score, indicating that individuals with higher knowledge scores tend to have more positive attitudes. The relationship between Knowledge Score and Age is weak (0.126, $p = 0.206$) and not statistically significant, suggesting that age does not have a substantial impact on knowledge levels. In terms of Attitude Score, there is no significant correlation with either Age (0.018, $p = 0.859$) or Current year of study (0.042, $p = 0.672$), meaning attitudes do not significantly change

across age or academic years. Overall, the analysis suggests that while knowledge and attitudes are strongly related, age and the year of study have varying levels of influence on these factors.

DISCUSSION

The study indicates that BSN students possess a high level of knowledge about Premenstrual Syndrome (PMS), with 68.9% demonstrating excellent understanding and only 10.7% showing poor knowledge. This reflects the positive impact of formal nursing education, supported by a significant correlation between knowledge scores and year of study ($r = .228$, $p = .021$), implying that knowledge improves with academic progression. Participants were familiar with common PMS symptoms such as mood swings (75.7%), irritability (74.8%), and abdominal bloating (72.8%), though misconceptions remained, like 13.6% confusing PMS with menstrual blood flow. Awareness of risk factors was relatively high, especially stress (78.6%) and caffeine intake (68%), but some gaps persisted regarding alcohol and being overweight. Attitudinally, participants exhibited optimism and empathy toward PMS, with over 91% recognizing stress as a factor and 85.3% acknowledging its impact on daily activities. They also supported management strategies like dietary changes, exercise, and yoga, though views on traditional medicine were mixed. There was a moderate positive correlation between knowledge and attitude ($r = .552$, $p < .001$), suggesting that increased knowledge fosters more supportive attitudes, emphasizing the importance of education in improving PMS management and awareness.

CONCLUSION

The study underscores a high level of menstrual health literacy among nursing students, particularly those in later years of study. The strong relationship between knowledge

and attitude reflects the effectiveness of nursing curricula in shaping informed, empathetic, and proactive perspectives toward PMS. While most participants are aware of symptoms, risk factors, and management strategies, gaps in understanding particularly around definitions and risk factors like alcohol use persist.

These findings are valuable for educators and policymakers aiming to design interventions to further enhance menstrual health literacy, not just in nursing programs but also in broader youth education contexts.

STRENGTHS

Representative sample across all year levels: The inclusion of students from all four years of the BSN program offers insight into knowledge progression.

High response rate (N = 103): Provides robustness and enhances the reliability of the findings.

Use of multiple indicators (knowledge, attitude, symptoms, sources, etc.): Offers a comprehensive view of the issue.

Correlation Analysis: Adds statistical rigor and supports the theoretical framework regarding the relationship between knowledge and attitudes regarding PMS.

LIMITATIONS

Limited Age Diversity: With 99% of participants aged 18–25, findings may not generalize to older populations.

Cross-sectional design: Prevents causal inferences about the development of knowledge and attitudes over time.

Self-Reported Data: Responses may be subject to social desirability bias or inaccurate recall.

Single-Institution Sample: The study may not reflect broader trends across different educational settings or cultural contexts.

REFERENCE

- Acikgoz, A., Dayi, A., & Binbay, T. (2017). Prevalence of premenstrual syndrome and its relationship to depressive symptoms in first-year university students. *Saudi Medical Journal*, 38(11), 1125.
- Afzal, F., Adnan, S., Zahid, S., Majeed, M., Imtiaz, S., Ahmad, A., ... & Zeeshan, A. (2024). Impact of Premenstrual Syndrome and Premenstrual Dysphoric Disorder on Women's Health in Sialkot, Pakistan: Impact of PMS and PMDD on Women's Health. *Journal of Health and Rehabilitation Research*, 4(3), 1-5.
- Alharajin, R., Alhussain, R., Bohulaigah, Z., Alali, D., AlHumaidhan, M., & Najjar, R. (2024). Premenstrual syndrome and its impact on the quality of life among female medical students at King Faisal University, Al Ahsa, Saudi Arabia. *Saudi Medical Horizons Journal*, 4(3), 116-125.
- Gaur, R., & Versha. (2024). A pre-experimental study to assess the effectiveness of structured teaching programme on knowledge regarding premenstrual syndrome and its coping strategies among first year nursing students in selected college of nursing, Delhi. *International Journal of Advanced Research*, 12(7), 1395–1407.
- Kandasamy, G. (2021). Pre-menstrual syndrome among the general female population of Saudi Arabia: Are there any Opportunities for Pharmacist's involvement in patient's education? *Research Journal of Pharmacy and Technology*, 14(9), 4875-4880.
- Kharisma, B. U., Dwiningsih, S. R., & Al Farizi, S. (2023). The relationship between overweight and stress towards the premenstrual syndrome in undergraduate

- students of midwife education, Airlangga University. *Science Midwifery*, 11(5), 801-809.
- Kumudha, T. (2024). Effectiveness of Structured Teaching Programme on Premenstrual Syndrome and its Management among Nursing College Students. *International Journal of Advances in Nursing Management*, 12(4), 158-162.
- Maity, S., Wray, J., Coffin, T., Nath, R., Nauhria, S., Sah, R., ... & Nauhria, S. (2022). Academic and social impact of menstrual disturbances in female medical students: a systematic review and meta-analysis. *Frontiers in medicine*, 9, 821908.
- Mohamed, F. K., Shaban, H. E., & Ahmed, S. M. (2022). Impact of premenstrual syndrome on women's quality of life: A systematic review. *Journal of Women's Health and Reproductive Sciences*, 11(3), 150-162.
- Mohamed, F. K., Shaban, H. E., & Ahmed, S. M. (2022). Impact of premenstrual syndrome on women's quality of life: A systematic review. *Journal of Women's Health and Reproductive Sciences*, 11(3), 150-162.
- Pervaiz, G., Shahid, R., Sabir, S. A., Bilal, S., Sheikh, A. R., & Qureshi, M. (2021). Physical symptoms, behavioral effects and remedial associated with pre-menstrual syndrome among medical students of Rawalpindi medical university, Pakistan. *Pakistan Journal of Medical Research*, 60(4), 163-167.
- Poudel, E., Bist, A., & Amita, K. C. (2023). Knowledge, attitude, experience and management on premenstrual syndrome among secondary level adolescence girl students of Kirtipur Municipality, Kathmandu, Nepal. *International Journal*, 9(5), 137.

- Pujari, A., & Revankar, S. S. (2023). Knowledge regarding premenstrual syndrome among adolescent school girls in a view to develop an information booklet. *Indian Journal of Health Sciences and Biomedical Research* *kleu*, 16(3), 342-346.
- Qutishat, M., Shakman, L., & Alyaqoubi, S. (2024). Premenstrual Syndrome and the attitudes toward seeking Professional Psychological Help among College students in Oman. *Women's Health Reports*, 5(1), 744-754.
- Shi, Y., Shi, M., Liu, C., Sui, L., Zhao, Y., & Fan, X. (2023). Associations with physical activity, sedentary behavior, and premenstrual syndrome among Chinese female college students. *BMC Women's Health*, 23(1), 173.
- Sireesha, V., Fatima, F., Sultana, S., Kumar, M. S. S., ., S., & Tadikonda, R. R. (2023). A study on assessment of knowledge, attitude and practice of premenstrual syndrome among female in urban area. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 12(10), 3091–3095.
- Vieira, A. K., Nagumo, M. T., Kuba, G., Kurebayashi, L. F., & Turrini, R. N. (2021). Effect of foot reflexology protocol on premenstrual syndrome symptoms in nursing students: a pre–post pilot study. *International Journal of Therapeutic Massage & Bodywork*, 14(4), 1.