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# A Study to Assess Prevalence of Premenstrual Syndrome Among College Going Girls of Selected College of Ambala, Haryana

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## Abstract

Background: Every woman experiences menstruation on a regular basis, and it is essential for the uterine lining to regenerate in order to get ready for conception. A collection of physical, behavioral, and emotional symptoms that appear in the final week of the luteal phase—typically the week before the menstrual period—are collectively referred to as premenstrual syndrome (PMS). Usually, after the 13th day of the menstrual cycle, symptoms appear. The symptoms of PMS can appear at any point in the reproductive years. Women's daily lives can be disrupted by PMS for several days. Aim and Objectives The present study aims was to assess prevalence of premenstrual syndrome among college going girls. To determine the association of premenstrual syndrome with selected demographic variables. To find out the association of Premenstrual syndrome with menstrual, lifestyle characteristics of college going girls. Methodology: The present study was carried out in the village of Mullana, Ambala. A descriptive research design was used. 200 samples were selected for the study by convenient sampling technique. Data was collected through Google form; thus the data was incorporated by using SPSS 16 version. RESULT: This research assesses Premenstrual Syndrome (PMS) among college-going girls in Ambala, Haryana. Among participants, 56% are aged 20-22, 48.5% have a height of 154-157 cm, and 98.5% are unmarried. Most (75.5%) have a normal BMI, 55.5% are from rural areas, and 32% are B.Sc. Nursing 2nd-year students. Lifestyle factors show 69.5% lack physical activity, 98% don't smoke, and 70.5% have healthy eating habits. Menstrual data reveals 54.5% had menarche at 11-13 years, 86.5% have a 25-30 day cycle, and 38.55% experience severe pain. PMS severity varies, with 27.5% severe cases, 21% mild, and 3.5% very severe. Only associated with Age(X2=175.4,p=0.01),type of stay(X2=104.3,P=0.02),Year of study (X2=353.27,P=0.05).in menstrual characteristics No.of days bleeding last(X2=195.9,P=0.02), Dysmenorrhea (X2=103.5,P=0.04), nature of Dysmenorrhea pain(X2=119.5,P=0.034),Family history of Dysmenorrhea (X2=101.5,P=0.008),and use of medication and remedial measure for pain relieve (X2=88.27,P=0.005) and in lifestyle characteristics Smoking(X2=123.4,P=0.003), and sleep cycle(X2=96.6,P=0.05).).Conclusion: The present study's findings on The PMS among nursing students are consistent with some studies, but divergent from others. Further research is needed to explore the factors influencing PMS.

**Keywords:** Prevalence, Premenstrual syndrome, college going girls

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## Introduction

Every woman experiences menstruation on a regular basis, and it is essential for the uterine lining to regenerate in order to get ready for conception. A collection of physical, behavioral, and emotional symptoms that appear in the final week of the luteal phase—typically the week before the menstrual period—are collectively referred to as premenstrual syndrome (PMS). Usually, after the 13th day of the menstrual cycle, symptoms appear. The symptoms of PMS can appear at any point in the reproductive years. Women's daily lives can be disrupted by PMS for several days.1 Many women of reproductive age suffer from premenstrual syndrome, or

PMS. During the luteal phase of the menstrual cycle—the time between ovulation and the start of menstruation—it describes a group of emotional and physical symptoms that usually appear cyclically.6 A cyclical phenomenon known as premenstrual syndrome (PMS) happens in the late luteal phase of the menstrual cycle. A collection of variable-intensity physical, emotional, and psychological symptoms that begin one week prior to the onset of menstruation and conclude one week later are the hallmarks of PMS. Premenstrual Syndrome Dysphoric Disorder is the term for the severe type of PMS (PMDD).2
One of the prevalent menstruation illnesses that affects a lot of young women is PMS. An epidemiology survey found that 75% of people had PMS symptoms, and 3-8% had severe symptoms.1. Different nations have shown varying rates of PMS prevalence: 34% in China, 71% in Turkey, 80% in Pakistan, and 92% in Jordan. The estimated prevalence of PMS in India is estimated to be between 14.3% and 74.4%.14

Premenstrual syndrome has unclear etiology. Premenstrual syndrome symptoms have been linked to hormonal imbalances such as increased estrogen and progesterone deficit, which occur concurrently with the menstrual cycle. Serotonin is also linked to symptoms as a major etiological component.15

The three main hormones that make up estrogen are estriol, estradiol, and estrone, with estradiol being the most powerful. Women have mood swings due to fluctuations in their luteal phase estrogen levels. Serotonin precursors have been demonstrated in clinical trials to rise considerably between days 7–11 and 17–19 of the menstrual cycle. This suggests that PMS and mood problems are closely related due to the control of estrogen and serotonin.15

PMS primarily affects female university students. This population is thought to have a high prevalence of PMS, which negatively impacts both their quality of life and academic achievement. The following are the national prevalence rates of PMS among university students: 33.82% in China, 37% in Ethiopia, 39.9% in Taiwan, 65% in Egypt, 72.1% to 91.8% in Turkey, and 79% in Japan.17

High incidence of suicide and accidents, absenteeism from work and school, poor performance in school, and severe mental health issues are all associated with PMS. One of the things that makes women more prone to depression than males is PMS, especially during gonadal hormone fluctuations like the climacteric, postpartum, and premenstrual periods. Research from several nations has shown that women with higher levels of education had more frequent and severe PMS symptoms than women with lower levels of education, and there may be a link between stress and PMS. In addition, reports of family violence and disturbances involving children were made about the PMS patients' households. In this way, PMS may have an impact on the person, her family, and the community.18

At least five luteal-phase symptoms (panel) must be present for a person to be diagnosed with PMDD; at least one of these symptoms must be a mood symptom (such as depression, anxiety or tension, affect liability, or persistent anger and irritability); two cycles of daily charting must be completed to confirm the timing of symptoms; and there must be evidence of functional impairment. Lastly, symptoms cannot reflect a worsening of another mental illness.11

Affective, behavioral, and physical symptoms of PMS and PMDD follow a cyclical pattern, starting at the LPMC and going away a few days following the start of menstruation. Amenorrheic, reproductive-aged women who have a hysterectomy but still have functional ovaries may also exhibit these cyclical symptoms.13

Conservative therapies and lifestyle adjustments, including dietary changes, stress management, daily symptom charting, exercise, relaxation, education, and sleep hygiene, can help most women manage their PMS symptoms. It is advised to consume small, frequent meals high in complex carbohydrates, limit or completely avoid the consumption of salt, coffee, chocolate, tobacco, and alcohol, and take vitamins and minerals in moderation. Herbs are frequently used to relieve the symptoms of PMS.10

## Objectives Of The Study

To assess prevalence of premenstrual syndrome among college going girls. 2. To determine the association of premenstrual syndrome with selected demographic variables. 3.To find out the association of Premenstrual syndrome with menstrual, lifestyle characteristics of college going girls.

## Hypothesis

All of the following hypothesis were tested at level 0.05 level of significance:
H1: There will be significant association found between premenstrual syndrome with selected demographic variables H2: There will be significant association found between menstrual, life style characteristics with premenstrual syndrome.

## Operational Definition

1.Prevalence: In this study, it refers to the proportion of college going girls that possess certain characteristics and attributes of premenstrual syndrome.2. Premenstrual syndrome: In this study refers to the presence of physical, emotional, and behavioral

symptoms that occurs in cyclic pattern before menstruation.3. Mild degree of symptoms: Although symptoms are present, they do not interfere with daily activities.4. Moderate degree of symptoms: Observable symptoms that interfere with daily activities.5. Severe degree of symptoms: Daily activities are being hampered by Symptoms6.Heavy blood flow: Every two to 3hrs. the pad needs to be changed.7.Moderate blood flow: two-three pads per day are required (every 5–6 h).8.Less blood flow: 1–2 pads per day are required.9.College going girls: In this study college going girls are B.Sc. Nursing First, Second- and third-year students.

INCLUSION CRITERIA: The study include girl students who are 1. Age group between 18 and 25 years.2. Willing to participate in the study by signing informed consent. EXCLUSION CRITERIA: The study excuse those girls who are having1. Amenorrhea 2. Irregular menstrual cycle 3. Polycystic ovarian disease (PCOD) 4. Suffering from medical illness.

The present study was carried out in the village of Mullana, Ambala. A descriptive research design was used. 200 samples were selected for the study by convenient sampling technique. Data was collected by TOOL 1 - Self structured Socio-demographic variables TOOL 2- Self structured Menstrual Characteristics of variables TOOL 3- life style characteristics of selected demographic variables TOOL 4 – Standardized PMS Scale through Google form; thus, the data was incorporated by using SPSS 16 version.

The reliability OF PMS scale is calculated by Inter rater Cronbach's alpha is 0.97.Thus the tool prepared are found to be reliable. Before conducting the main study two small scale studies were conducted (1) Tool try-out to evaluate the tool applicability and clarity to the current study. The researcher had neither difficulties nor conflict in completing tool try-out. (2) Pilot study was conducted to find out the feasibility of the study and to decide the plan of statistical analysis. The analysis of the study was done in accordance with the objectives of the study. It was feasible to conduct the pilot study and criterion measures were found to be effective.

**Ethical Consideration**

Formal administrative approval was taken from the university ethical committee for conducting the study. The permission to conduct the study in selected colleges of Ambala, Haryana. Informed consent was taken from the college going girls before the collection of data. Formal administrative approval was obtained from the Principal of selected colleges.

**Result of the study**

1.Findings related to frequency and percentage of selected variables data

sociodemographic variables of 56% belong from age group of 20-22, 48.5% 0f girls belong from Height 154-157 cm ,98.5% are unmarried , 75.5% having the normal BMI(18.5-24.5), 55.5% from rural ,32% girls from B.Sc nursing 2nd year ,96% girl have no family history of PMS ,91.5% takes normal amount of salt intake, and 46% belong from middle class family and in life style variables 69.5% are not involved in any physical activity,98% are not smoking ,95.5% non-alcoholic,70.5% girls are having healthy eating habit,30.5% are taking less than 6 hours sleep and in menstrual variables 54.5% girls having menarche age group of 11-13 years.86.5% length of menstrual cycle is in between 25-30 days, 48.5% have bleeding that lats 3-4 days, 84.5% of have moderate nature of menstrual bleeding, 44% girls having family history of dysmenorrhoea in mother, 38.55% have severe nature of pain,most of the girls are not using any kind of the medication and any type of remedial measure to relive the pain but 16% of girls use the medication,out of 16% using medication 46.8% uses meftalspas and 35% girls use the remedial measure, out of 35% girls, 68.6% use hot water bottle and 48%.

2.Mean, median and standard deviation of Premenstrual Syndrome Scale

(21%) of the girls had mild premenstrual symptoms, (48%) had moderate premenstrual symptoms ,27.5% of the girls had severe premenstrual symptoms and very few of the girls (3.5%having very severe symptoms. The calculate Mean±SD was 79.2±19.8 and median of the study was 77.

3. Findings related to association of premenstrual symptoms with selected variables at the level of significance $p<0.05$

There is no significant association between with selected Demographic variables Height, Weight, BMI, Area of residence, Marital status, family history of PMS caffeine consumption, amount of salt intake, type of personality, family income as the p value was ($P>0.005$). except, Age, type of stay, Year of study as the p value was. ($P<0.005$

Association Between Premenstrual Symptoms Score with selected menstrual characteristics variables

There is no significant association between with selected menstrual characteristics variables Age of menarche ,duration of menstrual cycle, Nature of menstrual bleeding, as the p value was higher than 0.05. except-NO.of days bleeding last, Dysmenorrhea, nature of Age Dysmenorrhea pain ,Family history of Dysmenorrhea ,and use of medication and remedial measure for pain relieve as the p value was lower than 0.05.

Association Between Premenstrual symptoms Score with selected lifestyle characteristics variables

• There is no significant association between with selected lifestyle characteristics variables physical activity, Form of exercise , alcohol use, as the p value was higher than 0.05. except-Smoking, eating habit and sleep cycle as the p value was lower than 0.05.

## Discussion

Premenstrual Syndrome (PMS) is a prevalent health concern among women of reproductive age, characterized by a constellation of physical, emotional, and behavioral symptoms that occur cyclically during the luteal phase of the menstrual cycle. The present study aim to assess prevalence of premenstrual syndrome among college going girls. The results revealed that in demographic analysis of the present study reveals a predominantly collage going girls56% are aged 20-22, 48.5% have a height of 154-157 cm, and 98.5% are unmarried. Most (75.5%) have a normal BMI, 55.5% are from rural areas, and 32% are B.Sc. Nursing 2nd-year students .The outcomes of this research have provided insight assesment of premenstrual symptoms and its prevalence among college going girls of selected colleges of ambala containing sociodemographic variables in 56% belong from 20 -22 age group, height 48.5% from 154-157 cm,75.5% bmi from 18.5-24.5 , with no family history of pms are 96%This study is supported by author Manisha Upadhay's study the prevalence of premenstrual syndrome in college going girls( in 2023)23The participants Lifestyle factors show 69.5% lack physical activity, 98% don't smoke, and 70.5% have healthy eating habits. This study is supported by author Fikru Wakjira Tolossa and Mebratu Legesse Bekele. Prevalence, impacts and medical managements of premenstrual syndrome among female students: cross-sectional study in college of health sciences, Mekelle University, Mekelle, Northern Ethiopia Tolossa and Bekele BMC Women's Health (2014)22The participants Menstrual data reveals 54.5% had menarche at 11-13 years, 86.5% have a 25-30 day cycle, and 38.55% experience severe pain. PMS severity varies, with 27.5% severe cases, 21% mild, and 3.5% very severe.This study is supported by author Buddhabunyakan N, Kaewrudee S, Chongsomchai C, Soontrapa S, Somboonporn W,Premenstrual syndrome (PMS) among high school students. International Journal of Women's Health (2017)27

Implications and Recommendations These findings underscore the need for increased awareness and education regarding PMS among college going girls and the general population. Interventions such as stress management programs, lifestyle modifications, and access to appropriate medical support could alleviate the burden of PMS. Future studies should consider longitudinal designs and objective physiological markers (e.g., hormone levels) to better understand the pathophysiology and course of PMS.

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**Conflict of interest**

There are no conflicts of interest.

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**Table 1:Frequency and percentage distribution of socio-demographic variable among college going girls of selected colleges of Ambala**

**N=200**

| S. NO | varivable | Frequency | Percentage |
|---|---|---|---|
| 1 | Age | | |
| | 1.1. 17-19 | 80 | 40% |
| | 1.2. 20-22 | 112 | 56% |
| | 1.3. 23-25 | 7 | 3.5% |
| | 1.4. >25 | 1 | 0.5% |
| 2 | Hight(CM) | | |
| | 2.1. 154-157 | 97 | 48.5% |
| | 2.2. 158-161 | 48 | 24% |
| | 2.3. 162-165 | 36 | 18% |
| | 2.4. 166-170 | 19 | 9.5% |
| 3 | weight(KG) | | |
| | 3.1. 41-50 | 109 | 54.5% |
| | 3.2. 51-60 | 56 | 28% |
| | 3.3. 61-70 | 30 | 15% |
| | 3.4. 71-80 | 19 | 2% |
| | 3.5.>80 | 1 | 0.5% |

| | | | |
|---|---|---|---|
| 4 | BMI | | |
| | 4.1. <18.5 | 33 | 16.5% |
| | 4.2. 18.5-24.9 | 151 | 75.5% |
| | 4.3. 25-39.5 | 11 | 5.5% |
| | 4.4.>80 | 5 | 2.5% |
| 5 | Area of Residence | | |
| | 5.1.Rural | 111 | 50.5% |
| | 5.2.Rural | 99 | 49.5% |
| 6 | Type of stay | | |
| | 6.1. Dormitory/PG | 96 | 48% |
| | 6.2. Home | 104 | 52% |
| 7 | Year of study | | |
| | 7.1.B.Sc. Nursing FirstYear | 63 | 31.1% |
| | 7.2.B.Sc. Nursing SecondYear | 40 | 20% |
| | 7.3.B.Sc. Nursing Third Year | 64 | 32% |
| | 7.4.B.Sc. Nursing Fourth Year | 33 | 16.5% |
| 8 | Marital status | | |
| | 8.1.Married | 3 | 1.5% |
| | 8.2.Unmarried | 197 | 98.5% |
| | 8.3.widow/divorce | 0 | 0 |
| 9 | Family history of PMS | | |
| | 9.1.Yes | 8 | 4% |
| | 9.2.No | 192 | 96% |
| | if yes specify | | |
| | 9.1.1 Mother | 8 | 4% |
| 10 | Caffeine consumption | | |
| | 10.1. Yes | 10 | 5% |
| | 10.2.No | 190 | 95% |
| | if yes specify | | |
| | 10.1.1 Coffee | 3 | 30% |
| | 10.1.2 Tea | 7 | 70% |
| 11 | Amount of salt Intake | | |
| | 11.1. Normal | 183 | 91.5% |
| | 11.2.Moderately high | 15 | 7.5% |
| | 11.3.High | 2 | 1% |

| | | | |
|---|---|---|---|
| 12 | Type of Personality | | |
| | 12.1 Introvert | 96 | 48% |
| | 12.2. Extrovert | 50 | 25% |
| | 12.3.Ambivert | 56 | 27% |
| 13 | Family income per month | | |
| | 13.15000 or less | 8 | 4% |

**Table 2 :Frequency and percentage distribution of Life style characteristics of Participants**
**N=200**

| S.NO | varivable | Frequency | Percentage |
|---|---|---|---|
| 1 | Age at Menarche | | |
| | 1.1. 11-13 years | 109 | 54.5% |
| | 1.2.13-17Years | 90 | 45 % |
| | 1.3.18-20Years | 1 | 0.5 % |
| 2 | Length of Menstrual Cycle | | |
| | 2.1. 25-30 days | 173 | 86.5% |
| | 2.2. 31-35 days | 27 | 13.5% |
| 3 | No. of days bleeding last | | |
| | 3.1. <2days | 2 | 1% |
| | 3.2. 2-3 days | 41 | 20.5% |
| | 3.3. 3-4 days | 97 | 48.5% |
| | 3.4. 5-days | 60 | 30 % |
| 4 | Nature of Menstrual Bleeding | | |
| | 4.1. Scanty | 9 | 4.5 % |
| | 4.2. Moderate | 169 | 84.5% |
| | 4.3. Heavy | 21 | 10.5% |
| 5 | No of Pads used Per day | | |
| | 5.1. 3 | 9 | 4.5 % |
| | 5.2. 3-4 | 169 | 84.5% |
| | 5.3. > 4 | 21 | 10.5% |

| | | | |
|---|---|---|---|
| 6 | Dysmenorrhea | | |
| | 6.1. Yes | 88 | 44 % |
| | 6.2. No | 112 | 56 % |
| | If yes specify the pain | | |
| | 6.1.1 Mild | 25 | 28.4% |
| | 6.1.2 Moderate | 29 | 32.9% |
| | 6.1.3 Severe | 34 | 38.6% |
| 7 | Family history of Dysmenorrhea | | |
| | 7.1. Yes | 87 | 43.5% |
| | 7.2. No | 113 | 56.5% |
| | If yes specify | | |
| | 7.1.1 Mother | 87 | 43.5% |
| 8 | Any medication used to relieve the pain | | |
| | 8.1. Yes | 32 | 16 % |
| | 8.2. No | 168 | 84 % |
| | If Yes specify the medication | | |
| | 8.1.1 Meftal spas | 15 | 46.8% |
| | 8.1.2 PCM | 10 | 31.2% |
| | 8.1.3 Ibuprofen | 1 | 3.1 % |
| | 8.1.4 Diclofenac | 1 | 3.1 % |
| | 8.1.5 Combiflame | 5 | 15.6% |
| 9 | Any Remedial measure used to Relive the pain | | |
| | 9.1. Yes | 70 | 35 % |
| | 9.2. No | 130 | 65 % |
| | If yes then specify | | |
| | 9.1.1 Hot water bottle | 48 | 68.6% |
| | 9.1.2 Lemon ginger tea | 7 | 10 % |
| | 9.1.3 Kadha | 6 | 8.6 % |
| | 9.1.4 Haldi doodh | 9 | 12. |

| | | |
|---|---|---|
| | | 8% |

**Table No 3 :Frequency and percentage distribution of Menstrual characteristics of college going girls.**

N=200

| S.NO | varivable | Frequency | Percentage |
|---|---|---|---|
| 1 | Physical activity | | |
| | 1.1Yes | 61 | 30.5% |
| | 1.2 No | 139 | 69.5% |
| | if yes specify the from of exercise | | |
| | Aerobic | 2 | 3.3% |
| | Strengthening exercise | 32 | 52.5% |
| | Flexibility | 23 | 37.7% |
| | Balance | 4 | 6.5% |
| 2 | Smoking | | |
| | 2.1 Yes | 4 | 2% |
| | 2.2No | 196 | 98% |
| 3 | Alcohol | | |
| | 3.1 Yes | 9 | 4.5% |
| | 3.2No | 191 | 95.55 |
| 4 | Eating habit | | |
| | 4.1 Healthy | 141 | 70.5% |
| | 4.2Unhealthy | 59 | 29.5% |
| 5 | Sleep cycle | | |
| | 5.1.<6 hours | 61 | 30.5% |
| | 5.2.6-9 hours | 136 | 68% |
| | 5.3.> 10 hours | 3 | 1.5% |

**Table No 4**
**Mean, median and standard deviation of Premenstrual Syndrome Scale**

N=200

| MEAN±SD | MEDIAN |
|---|---|
| 79.2±19.8 | 77 |

**Table No 5**
**Frequency percentage distribution of prevalence of Premenstrual Syndrome Scale**
**N=200**

| S.NO | SCORE | FREQUENCY | PERCENTAGE |
|---|---|---|---|
| No symptoms | 1-40 | 0 | (0%) |
| Mild symptoms | 41-80 | 41 | 21% |
| Moderate symptoms | 81-120 | 97 | 48% |
| Severe symptoms | 121-160 | 55 | 27.5% |
| Very Severe symptoms | 161-200 | 7 | 3.5% |

**Table No 6 Association Between Premenstrual symptoms Score with Demographic Variables**
**N=200**

| Sr. NO | varivable | mild 41 (41-40) | moderate 97 (81-120) | Severe 55 (121-160) | very severe 7 (161-200) | DF | Chi-Squaire | P-Value |
|---|---|---|---|---|---|---|---|---|
| 1 | Age | | | | | | | |
| | 1.1. 17-19 | 9 | 49 | 20 | 2 | | | |
| | 1.2. 20-22 | 28 | 46 | 33 | 5 | 9 | 175.4 | .001* |
| | 1.3. 23-25 | 3 | 2 | 2 | 0 | | | |
| | 1.4. >25 | 1 | 0 | 0 | 0 | | | |
| 2 | Height(CM) | | | | | | | |
| | 2.1. 154-157 | 17 | 59 | 16 | 4 | | | |
| | 2.2. 158-161 | 7 | 15 | 24 | 2 | 9 | 299.2 | .324NS |
| | 2.3. 162-165 | 10 | 14 | 12 | 0 | | | |
| | 2.4. 166-170 | 7 | 9 | 3 | 1 | | | |
| 3 | weight(KG) | | | | | | | |
| | 3.1. 41-50 | 24 | 60 | 31 | 6 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3.2. 51-60 | 9 | 24 | 19 | 0 | 9 | 283.3 | .436NS |
| | 3.3. 61-70 | 7 | 11 | 5 | 1 | | | |
| | 3.4. 71-80 | 1 | 2 | 0 | 0 | | | |
| 4 | BMI | | | | | | | |
| | 4.1. <18.5 | 6 | 19 | 9 | 1 | | | |
| | 4.2. 18.5-24.9 | 34 | 69 | 41 | 6 | 9 | 273.6 | .995NS |
| | 4.3. 25-39.5 | 1 | 41 | 4 | 0 | | | |
| 5 | Area of Residence | | | | | | | |
| | 5.1.Rural | | | | | | | |
| | 5.2.Rural | 25 | 49 | 24 | 3 | 3 | 113.8 | .111NS |
| | 5.3.Urban | 16 | 48 | 31 | 4 | | | |
| 6 | Type of stay | | | | | | | |
| | 6.1. Dormitory/PG | | 40 | 31 | 3 | 3 | 104.3 | .002* |
| | 6.2. Home | 18 | 57 | 24 | 4 | | | |
| 7 | Year of study | | | | | | | |
| | 7.1.B.Sc. Nursing FirstYear | 0 | 41 | 21 | 3 | | | |
| | 7.2.B.Sc.NursingSecondYea | 19 | 21 | 0 | 2 | 9 | 353.27 | .008* |
| | 7.3.B.Sc. Nursing ThirdYear | 0 | 25 | 33 | 0 | | | |

| Sr. NO | varivable | mild (41-40) | moderate (81-120) | Severe (121-160) | very severe (161-200) | DF | X2 | P VALUE |
|---|---|---|---|---|---|---|---|---|
| | 7.4.B.Sc. Nursing | 32 | 10 | 1 | 2 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Fourth Year | | | | | | | |
| 8 | Marital status | | | | | | | |
| | 8.1.Married | 1 | 1 | 1 | 1 | | | |
| | 8.2.Unmarried | 40 | 96 | 54 | 40 | 6 | 40.6 | .583NS |
| | 8.3.widow/divorce | 0 | 0 | 0 | 0 | | | |
| 9 | Family history of PMS | | | | | | | |
| | 9.1.Yes | | 1 | 5 | 1 | 3 | 74.1 | .461NS |
| | 9.2.No | | 40 | 92 | 54 | | | |
| | if yes specify | | | | | | | |
| | 9.1.1 Mother | | 1 | 5 | 1 | 3 | 79.1 | 1NS |
| 10 | Caffeine consumption | | | | | | | |
| | 10.1. Yes | 1 | 5 | 1 | 3 | 3 | 166.3 | .261NS |
| | 10.2.No | 40 | 92 | 54 | 4 | | | |
| | if yes specify | | | | | | | |
| | 10.1.1 Coffee | 1 | 2 | 0 | 0 | 3 | 192.1 | .709NS |
| | 10.1.2 Tea | 0 | 3 | 1 | 3 | | | |
| 11 | Amount of salt Intake | | | | | | | |
| | 11.1. Normal | 30 | 68 | 40 | 5 | 6 | 193.4 | .018 |
| | 11.2.Moderately high | 4 | 10 | 8 | 2 | | | |
| | 11.3.High | 7 | 19 | 7 | 0 | | | |
| 12 | Type of Personality | | | | | | | |
| | 12.1 Introvert | 22 | 38 | 33 | 4 | 6 | 198.7 | .027 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 12.2.Extrovert | 7 | 28 | 13 | 3 | | | |
| | 12.3.Ambivert | 12 | 32 | 9 | 0 | | | |
| 13 | Family income per month | | | | | | | |
| | 13.15000 or less | | 1 | 2 | 3 | | | |
| | 13.2. 5001-10000 | | 7 | 21 | 13 | 12 | 326.3 | .574 |
| | 13.3.10001-15,000 | | 0 | 2 | 0 | | | |
| | 13.4.15001-20000 | | 8 | 31 | 16 | | | |
| | 13.5.>20000 | | 25 | 41 | 23 | | | |

**Table No 7**
**Association between premenstrual Symptoms score with Menstrual Characteristics N=200**

| Sr. NO | varivable | mild 41 (41-40) | moder ate 97 (81-120) | Sever e 55 (121-160) | very severe 7 (161-200) | DF | X2 | P VALUE |
|---|---|---|---|---|---|---|---|---|
| 1 | Age at Menarche | | | | | | | |
| | 1.1. 11-13 years | 21 | 58 | 27 | 3 | 3 | 132.3 | .55NS |
| | 1.2.13-17Years | 20 | 38 | 28 | 4 | | | |
| | 1.3.18-20Years | 0 | 28 | 0 | 0 | | | |
| 2 | Length of Menstrual Cycle | | | | | | | |
| | 2.1. 25-30 days | 38 | 82 | 47 | 6 | 3 | 92.4 | .57NS |
| | 2.2. 31-35 days | 3 | 15 | 8 | 1 | | | |
| 3 | No. of days bleeding last | | | | | | | |
| | 3.1. <2days | 0 | 1 | 1 | 0 | | | |
| | 3.2. 2-3 days | 8 | 14 | 15 | 2 | 9 | 295.9 | .02* |
| | 3.3. 3-4 days | 27 | 48 | 20 | 1 | | | |
| | 3.4. 5-days | 6 | 34 | 19 | 4 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Nature of Menstrual Bleeding | | | | | | | |
| | 4.1. Scanty | 3 | 5 | 2 | 2 | | | |
| | 4.2. Moderate | 37 | 80 | 46 | 2 | 6 | 187.3 | .24NS |
| | 4.3. Heavy | 1 | 12 | 7 | 3 | | | |
| 5 | No of Pads used Per day | | | | | | | |
| | 5.1. 3 | 3 | 5 | 2 | 2 | | | |
| | 5.2. 3-4 | 37 | 80 | 46 | 2 | 6 | 187.3 | .24NS |
| | 5.3. > 4 | 1 | 12 | 7 | 3 | | | |
| 6 | Dysmenorrhea | | | | | | | |
| | 6.1. Yes | 16 | 41 | 24 | 5 | 3 | 103.5 | .004* |
| | 6.2. No | 25 | 56 | 31 | 2 | | | |
| | If yes specify the pain | | | | | | | |
| | 6.1.1 Mild | 7 | 13 | 4 | 0 | | | |
| | 6.1.2 Moderate | 4 | 13 | 10 | 2 | 6 | 119.5 | .034* |
| | 6.1.3 Severe | 5 | 15 | 10 | 3 | | | |
| 7 | Family history of Dysmenorrhea | | | | | | | |
| | 7.1. Yes | 4 | 21 | 4 | 4 | 3 | 101.5 | .008* |
| | 7.2. No | 37 | 76 | 51 | 3 | | | |
| 8 | Any medication used to relieve the pain | | | | | | | |
| | | | | | | 3 | 88.27 | .005* |
| | 8.1. Yes | 15 | 38 | 13 | 1 | | | |
| | 8.2. No | 26 | 59 | 42 | 6 | | | |
| | If Yes specify the medication | | | | | | | |
| | 8.1.1 Meftal | 15 | 17 | 7 | 0 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | spas | | | | | | | |
| | •8.1.2 PCM | 0 | 1 | 1 | 1 | | | |
| | 8.1.3 Ibuprofen | 0 | 8 | 1 | 0 | 12 | 542.7 | 1NS |
| | 8.1.4 Diclofenac | 0 | 5 | 1 | 0 | | | |
| | 8.1.5 combiflame | 0 | 7 | 3 | 0 | | | |
| 9 | Any Remedial measure used to Relive the pain | | | | | | | |
| | 9.1. Yes | 4 | 21 | 4 | 3 | 3 | 101.5 | .008* |
| | 9.2. No | 0 | 76 | 51 | 4 | | | |
| | If yes then specify | | | | | | | |
| | 9.1.1 Hot water bottle | 2 | 11 | 4 | 1 | | | |
| | 9.1.2Lemon ginger tea | 2 | 1 | 0 | 0 | 4 | 15.2 | .731NS |
| | 9.1.3 Kadha | 0 | 5 | 0 | 1 | | | |
| | 9.1.3 Haldi doodh | 0 | 3 | 0 | 1 | | | |

**Table No 8**
**Association of lifestyle characteristics with Premenstrual Symptoms score**
**N=200**

| Sr. NO | varivable | mild 41 (41-40) | moderate 97 (81-120) | Severe 55 (121-160) | very severe 7 (161-200) | DF | Chi squaire | value |
|---|---|---|---|---|---|---|---|---|
| 1 | Physical activity | | | | | | | |
| | 1.1Yes | 12 | 32 | 14 | 0 | 2 | 88.9 | .689NS |
| | 1.2 No if yes | 29 | 65 | 41 | 7 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | specify the from of exercise | | | | | | | |
| | Aerobic | 3 | 0 | 0 | 0 | | | |
| | Strengthening exercise | 2 | 19 | 8 | 0 | 6 | 164 | .073NS |
| | Flexibility | 4 | 13 | 6 | 0 | | | |
| | Balance | 3 | 0 | 0 | 0 | | | |
| 2 | Smoking | | | | | | | |
| | 2.1 Yes | 1 | 3 | 0 | 1 | 2 | 123.4 | 0.03* |
| | 2.2No | 40 | 94 | 55 | 0 | | | |
| 3 | Alcohol | | | | | | | |
| | 3.1 Yes | 4 | 2 | 3 | 0 | 2 | 66.97 | .270NS |
| | 3.2No | 37 | 95 | 52 | 0 | | | |
| 4 | Eating habit | | | | | | | |
| | 4.1 Healthy | 26 | 67 | 43 | 3 | 2 | 14.8 | .146 |
| | 4.2Unhealthy | 15 | 30 | 12 | 4 | | | |
| 5 | Sleep cycle | | | | | | | |
| | 5.1.<6 hours | 14 | 29 | 17 | 3 | 2 | 96.6 | .05* |
| | 5.2.6-9 hours | 26 | 66 | 38 | 4 | | | |
| | 5.3.> 10 hours | 1 | 2 | 0 | 0 | | | |