# Title: -Effectiveness of STP on knowledge regarding prevalence and Management of Pre-menstrual syndrome among adolescent girls

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**INTRODUCTION:-**

Menstruation is a normal physiological cycle, common to all females in the reproductive age group. Yet, many women across a range of different culture, experience various menstrual problems ranging from a mild discomfort to acute pain, anxiety, lethargy, household confinement, blood loss, irregularity, weakness and several deep rated cultural taboos make menstruation a regular and nagging but inevitable event to many of them. Often a stress of physical and emotional turmoil is observed in some particular group of females just for few days (7 to 10) days prior to menstruation which are apparently vague and troublesome called Premenstrual syndrome (PMS) or Premenstrual tension (PMT).

The degree and type of the premenstrual symptoms can vary significantly from woman to woman but their character is less important than their timing and their severity. In PMS, the premenstrual symptoms can affect work and school performance, and lead to problems/ conflicts in interpersonal relationships. It was noted that the cyclical luteal timing and the severity are important to evaluate for the diagnosis of PMS. Premenstrual dysphoric disorder (PMDD) is the extreme, predominantly psychological end of the PMS spectrum. In cases of PMDD, symptoms become severe enough to cause severe disability and often require more aggressive treatment that requires pharmacological intervention in addition to nonpharmacological treatments.

It has been found that more than 80 treatments proposed and many more have been tried for alleviating the symptoms of premenstrual syndrome but no treatment has been found to be consistently effective. Women can overcome from her premenstrual symptoms by realizing and sharing the problems with friends, family or with general health practitioners. A Menstrual dairy is useful, which involves keeping a record of each day physical and emotional changes. Members of alternative medical disciplines including homeopathy, naturopathy, acupuncture and osteopathy have developed remedies for Pre-menstrual syndrome. Changes in lifestyle and diet will help in dealing with premenstrual syndrome. Having a healthy diet will alleviate anxiety and depression. Salt, carbohydrate, caffeine, chocolate and alcohol should be avoided. Exercise, stress management, yoga, progressive muscle relaxation, relationship skills, self-help groups and

education are proven to help mind and body to adopt with stress, anxiety and depression making the women feel relaxed and calm.

## NEED FOR THE STUDY:-

The pooled prevalence of reproductive age women affected with PMS worldwide amounts to 47.8%. Among these, about 20% of women experience symptoms severe enough to disrupt their daily activities, and the remaining have mild to moderate symptoms. Symptoms of PMS include changes in appetite, weight gain, abdominal pain, back pain, lower back pain, headache, swelling and tenderness of the breasts, nausea, constipation, anxiety, irritability, anger, fatigue, restlessness, mood swings and crying.

The prevalence of PMS among the university students of different countries are as follows; for example, 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. This geographical difference in the prevalence of PMS may be attributed to disparities in genetic, dietary, and lifestyle factors among young adult females and also may be attributable to various community-adopted practices before and during menstruation.

Worldwide prevalence shows that 5% to 20% of women of reproductive age have moderate-to-severe premenstrual complaints and up to 75% of all women of reproductive age may experience symptoms of PMS. PMS, which is characterized by one or more physical, emotional or behavioral symptoms during the days before menstruation, was found in 94.8% of women of reproductive age (15 to 49 years).[6]

In India, it was shown that 12.2% had PMDD (premenstrual dysphoric disorder) and 67% were not interested in going to school during menstruation, and 71% reported lack of concentration during study hours. Different community-based surveys showed that the point prevalence of PMDD among women across the globe ranged from 1.2% to 6.4%. A Nigerian study also stated that PMDD prevalence in the country was 36.1%. The studies conducted in other universities of Ethiopia showed that the prevalence of PMDD ranged from 13.8% to 66.9% among medical and health science students.

World Health Organization 2014, with statistics consistently showing that women make more frequent attempts to end their own lives than men, it is imperative that we further understand the reasons underlying suicidal behaviors in women, in order to inform future prevention and treatment. The factors that drive an individual to suicide are often complex and varied; however, there is an increasing body of evidence that menstruation may play a significant role for some women. Studies have identified how suicide attempts in women are positively associated with particular menstrual cycle phases and with fluctuating levels of the female sex hormones oestrogen and progesterone. In addition to findings for attempted suicide, several autopsy studies have also identified significantly increased incidences of completed suicides during both the luteal and menses phases, leading researchers to conclude that menstrual-related changes are an important mediating factor. Women with PMDD should be considered a high-risk group for suicidality; thus, identifying and treating symptoms are vital in reducing suicide attempts.

Much of the regional studies could not be traced out by the investigator in this area might be due to lack of systematic data from Indian women regarding an important aspect of women's life. This necessitates an in-depth evaluation and assessment of Pre-menstrual syndrome. Hence, the research felt the need to find out the knowledge of prevalence and management of Pre-menstrual syndrome among B.Sc nursing students and to

develop a structured teaching programme which will be useful for educating the women in future to reduce the prevalence and improve the management of premenstrual syndrome.

The Nursing fraternity needs to aware about pre-menstrual syndrome and its consequences in the present scenario, because the adolescent girls were more prone to develop these symptoms due to numerous causes such as stressful life, domestic violence, mood disorder substance abuse, emotional trauma etc. So the challenges and opportunities of the medical and nursing profession is to find the appropriate solution for this problem. As the nurses are interacting more with adolescent girls in various settings like schools, colleges, hospitals, community health centers etc. Hence the knowledge on prevalence and management of Pre menstrual syndrome by nurses will be a gods gift to save many problems faced by adolescent girls in future.

## OBJECTIVES:-

1. To assess the existing level of knowledge of B.Sc nursing students regarding prevalence and management of Pre-menstrual syndrome before the administration of STP.

2. To evaluate the effectiveness of structured teaching program regarding prevalence and management of Pre-menstrual syndrome in terms of gain in knowledge score.

3. To find out the association between the pretest knowledge score with selected demographic variables.

### NULL HYPOTHESIS:-

**H01:** The mean post-test knowledge score of students regarding prevalence and management of premenstrual syndrome will not be significantly higher than the mean pre-test knowledge score.

**H02:** There will be no significant association between pre-test knowledge score of students regarding prevalence and management of premenstrual syndrome with their selected demographic variables.

### RESEARCH HYPOTHESIS:-

**H1:** The mean post-test knowledge score of students regarding prevalence and management of premenstrual syndrome will be significantly higher than the mean pre-test knowledge score.

**H2:** There will be significant association between pre-test knowledge score of students regarding prevalence and management of premenstrual syndrome with their selected demographic variables.

### METHODOLOGY:-

An evaluative approach was used for this study. The study was carried out in a selected nursing colleges of Tirupati. The research design was pre-experimental, one group pre-test, post-test design. The sample comprised of 60 students. The sample was selected by purposive sampling. Formal online permission was obtained from the authorities to conduct the pilot and main study. The reliability coefficient of the tool was found using coefficient of internal consistency using Karl Pearson's Correlation Coefficient. The reliability of the structured knowledge questionnaire was found to be 0.86 which indicated that the tool was reliable. A structured online questionnaire (Google Forms) method was used to assess the knowledge of students regarding prevalence and management of Pre-menstrual syndrome on 1st and 14th Day of Data collection.

On 7th day investigators administered the Structured teaching Programme through Online platform (Google meet). Data was analyzed using descriptive and inferential statistics.

## RESULTS:-

### Section A: Demographic Variables of Students:-

The frequency and percentage distribution of students by age, religion, family income, age at menarche are as follows.

- Out of 60 samples, majority 24 (40.00%) were in the age of 20 years, 20(33.33%) were above 20 years, 12 (20.00%) were in the age of 19 years and remaining 4(6.67) were below 19 years of age.

- In context of religion 34(56.67%) subjects were Christian, 18 (30.00%) subjects were Hindu, 8(13.33%) were Muslims.

- With regard to family income, majority of samples, 26(43.33%) had income between Rs 5001-10000, and 20 (33.33%) had income between Rs 10001-15000, 8(13.34%) had income above Rs.15000 and 6(10%) had income less than Rs.5000.

- In terms of age at menarche 29(48.33%) of the samples at the age of 14 years.17(28.34%) of the sample at the age of 15 years, 11(18.33%) of the sample at the age of below 14 years and 3 (5.00%) of the sample at the age of above 15 years.

- In regard to dietary habits, majority of the samples 43(71.67%) prefer mixed diet, 10(16.67%) prefer only vegetarian diet and remaining 7(11.66%) prefer non-vegetarian diet.

- With regard to source of information, majority of samples, 27(45.00%) had no information, 17(28.33%) had been exposed to books, 10 (16.67%) had some information through mass media and remaining 6(10.00%) had information from the health workers.

### Section B: Level of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students.

- In pre test, Knowledge score on General information on menstruation and Pre-menstrual syndrome among B.Sc nursing students was 4-11 with Mean score 7.48 and SD 1.88.

- Range score on Knowledge on causes and risk factors of Pre-menstrual syndrome was 2-10 with Mean score 5.26 and SD 1.83.

- Range score on Knowledge on prevalence and signs and symptoms of Pre-menstrual syndrome was 1-6 with Mean score 3.28 and SD 1.49.

- Range score on Knowledge on management and preventive measures was 0-6 with Mean score 3.06 and SD 1.52. The overall pre test Mean score was 19.1 with SD 4.66 and Mean percentage was 54%.

In post test, knowledge score on General information on menstruation and Pre-menstrual syndrome among B.Sc nursing students was 8-13 with Mean score 10.5 and SD 1.28.

- Range score on Knowledge on causes and risk factors of Pre-menstrual syndrome was 5-10 with Mean score 8.11 and SD 1.32.

- Range score on prevalence and signs and symptoms of Pre-menstrual syndrome was 2-6 with Mean score 4.93 and SD 0.86.

- Range score on management and preventive measures of pre-menstrual syndrome was 2-6 with Mean score 4.91 and SD 0.90.

- The overall pre test Mean score was 28.46 with SD 3.13 and Mean percentage was 81.31%.

**SECTION-C:-Percentage distribution of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students before and after STP.**
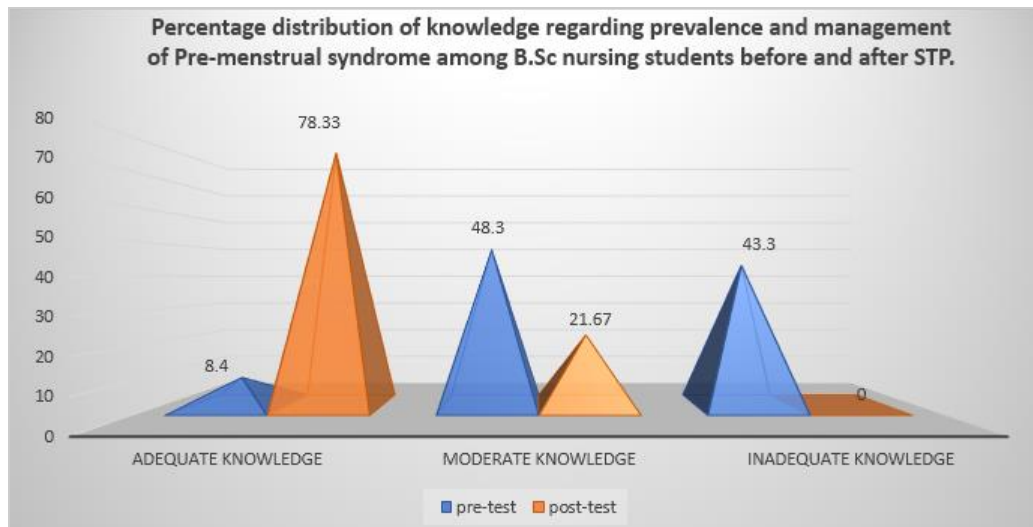


The above figure indicates that, in Pre test the level of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students shows that 26(43.3%) are having inadequate knowledge, 29(48.3%) are having moderate knowledge and 5(8.4%) were having adequate knowledge.

In the post test, majority of students 47(78.33%) had adequate knowledge, 13(21.67%) had moderate knowledge and none of them had inadequate knowledge regarding prevalence and management of Pre-menstrual syndrome after STP.

The Mean, SD and Enhancement of knowledge score on prevalence and management of Pre-menstrual syndrome among B.Sc nursing students showed that, with regard to general information on menstruation and Pre-menstrual syndrome the enhancement in mean percentage was 3.02.

With regard to knowledge on causes and risk factors of Pre-menstrual syndrome enhancement in mean percentage was 2.85. With regard to knowledge on prevalence, signs and symptoms of Pre-menstrual syndrome enhancement in mean percentage was 1.65.

With regard to knowledge on management and preventive measures of pre-menstrual syndrome enhancement in mean percentage was 1.85. The obtained post test mean value 26.4 was higher than pre test 19.1. The overall enhancement in mean percentage score was 9.36.

**Section D: Effectiveness of STP:-**

Mean and Standard deviation for overall improvement of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students before and after STP.

| S.no | Aspects of knowledge | Maximum score | Pretest | | Post test | | paired t-test |
|------|----------------------|---------------|---------|------|-----------|------|---------------|
| | | | Mean | SD | Mean | SD | |
| 1 | Knowledge on general information about menstruationa d Premenstrual syndrome | 13 | 7.48 | 1.88 | 10.5 | 1.28 | 11.28* |
| 2 | Knowledge on causes and risk factors of Premenstrual syndrome | 10 | 5.26 | 1.83 | 8.11 | 1.32 | 11.60* |
| 3 | Knowledge on prevalence, signs and symptoms of Premenstrual syndrome | 6 | 3.28 | 1.49 | 4.93 | 0.86 | 10.14* |
| 4 | Knowledge on management and preventive measures | 6 | 3.06 | 1.52 | 4.91 | 0.90 | 9.97* |
| 5 | Overall | 35 | 19.1 | 4.66 | 28.46 | 3.13 | 16.65* |

The above table represents the mean pre and post test knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students. The paired t-test was carried out and it was found to be invariably significant at P <0.05 level, hence null hypothesis (H01) is rejected and research hypothesis (H1) was accepted. It provides evidence that the STP was significantly effective in improving the knowledge regarding prevalence and management of pre menstrual syndrome among B.Sc nursing students.

**Section E: Association of pre test level of knowledge of students on prevalence and management of pre-menstrual syndrome with age, religion, family income, and age at menarche.**

## DISCUSSION:-

The findings are discussed in relation to the objectives, reviewed literature and hypothesis. It is presented in line with the objectives of the study

- The first objective was to assess the pre test knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students. As per the analysis the level of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students in pre test shows

that 26(43.3%) were having inadequate knowledge, 29(48.3%) were having moderate knowledge and 5(8.4%) were having adequate knowledge. The overall pre test Mean score was 19.1 with SD 4.66 and Mean percentage was 54%.

- The second objective was to assess the post test knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students. As per the analysis, the level of knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students in post test shows that majority of students 47(78.33%) had adequate knowledge,13(21.67%) had moderate knowledge and none of them had inadequate knowledge regarding prevalence and management of Pre-menstrual syndrome after STP.

- The overall post test Mean score was 28.46 with SD 3.13 and Mean percentage was 81.31%.

- Results revealed that Paired t-test value was 39.76, and the pre test score which was 40.4% and the post test score which was 83.0% significance difference between pre test and post test score was 42.6%. It reveals that the structured teaching program was highly effective. This study finding indicate that the Structured Teaching Programme was effective in enhancing the knowledge of adolescent girls regarding selected non-pharmacological management of premenstrual syndrome in selected colleges.

- The third objective was to assess the effectiveness of Structured Teaching Programme on knowledge regarding pre menstrual syndrome among adolescents. As per the results the paired t-test was carried out and in each domain the t value was found to be strongly significant like in Knowledge on general information about menstruation and Pre-menstrual syndrome (t=11.28 at $P < 0.05$ level of significance), In Knowledge on causes and risk factors of Pre-menstrual syndrome (t=11.60 at $P < 0.05$ level of significance), In Knowledge on prevalence, signs and symptoms of Pre-menstrual syndrome (t=10.14 at $P < 0.05$ level of significance) and in Knowledge on management and preventive measures (t=9.97 at $P < 0.05$ level of significance). Overall speaking, it was found to be invariably significant (t=16.65 at $P < 0.05$ level of significance). Hence the null hypothesis (H01) was rejected and research hypothesis (H1) was accepted. It provides evidence that the Structured Teaching Programme (STP) was significantly effective in improving the knowledge regarding prevalence and management of pre menstrual syndrome among B.Sc nursing students.

- The fourth objective was to associate the pre test knowledge regarding prevalence and management of Pre-menstrual syndrome among B.Sc nursing students with their selected demographic variables. The study proved that students had inadequate knowledge on pre-menstrual syndrome. After administration of the STP their knowledge improved to a remarkable extent and was effective in increasing the knowledge of students on prevalence and management of pre-menstrual syndrome. The findings of this study support the need for conducting health education, counselling and mass awareness programmes on prevalence and management of PMS to the women in reproductive age. Hence, it becomes the responsibility of the health workers to create awareness and providing full information and advice on prevalence and management of Pre-menstrual syndrome. The findings of this study have implication in various areas of nursing namely; nursing practice, nursing education, nursing administration and nursing research.

## RECOMMENDATIONS:-

1. A similar study can be under taken on large scale.

2. A similar study may be replicated with control group.

3. A survey can be done to determine interest among nurses in educating women on prevalence and management of pre-menstrual syndrome.

4. An extensive teaching strategy protocol may be developed including all aspects of pre-menstrual syndrome.

5. Longitudinal studies to determine the constant effectiveness of structured teaching programme over a period of time may be conducted.

## REFERENCES:-

1. Aruna "premenstrual syndromeNightingale Nurs Times2010510213https://www.nursingtimes.net/

2. H H Oo1 M T Sein O Mar A Aung Assessment of premenstrual syndrome among reproductive aged Myanmar womenAsian J Med

3. Sci2016743943https://www.nepjol.info/index.php/AJMS/article/view/13298

4. W Minichil E Eskindir D Demilew Y Mirkena Magnitude of premenstrual dysphoric disorder and its correlation with academic performance among female medical and health science students at University of Gondar, Ethiopia, 2019: a cross-sectional studyBMJ

5. Open2020107e034166https://dx.doi.org/10.1136/bmjopen-2019-034166

6. K M Nworie Premenstrual syndrome: etiology, diagnosis and treatment. A mini literature reviewJ Obstet Gynecol Investig201811416https://dx.doi.org/10.5114/jogi.2018.78010.