To evaluate the effectiveness of a structured teaching program on Management of Premenstrual Syndrome for high school girls aged between 12 to 15 years in a selected High school, Hyderabad

Dr. Seema Yadav*, Ms. Joyce

ABSTRACT
Objectives of the study were:
➢ To assess the knowledge level of the adolescent girls regarding Management of Premenstrual Syndrome by pretest.
➢ To develop and administer structured teaching program on Management of Premenstrual Syndrome to the high school girls.
➢ To assess the effectiveness of structured teaching program through post- test.
➢ To determine the association between knowledge and selected bio-socio demographic variables.

The study adopted the pre-experimental one group pre-test post-test design with the structured teaching as independent variable and knowledge of management of premenstrual syndrome by the high school girls aged between 12 to 15years as the dependent variable. The population of the study was the high school girls studying in classes from Std. VII to Std. X, aged between 12 to 15 years. The size of the sample was fifty.

The data was collected by interview method with the help of structured questionnaire. The reliability of the questionnaire was accessed by using split half method. The correlation coefficient was calculated using Karl Pearson's formula and the reliability R of the structured questionnaire is found to be practical.

It was observed that before the structured teaching program that 100% of the schoolchildren were below average regarding the knowledge of management of premenstrual syndrome and no schoolchildren were above average nor even average category. The overall performance of the pre-test mean score was 10.14 (25.35%) whereas the overall post-test mean score was found to be 23.06 (57.65 %). The tabulated paired 't' test was16.82 which is very much higher than the tabulated 't' value 2.3124 at 49 degrees of freedom with 5% level of significance. The data shows that there was a significant difference in the overall pre-test and the post-test knowledge scores among high school girls. Hence the first formulated hypothesis was accepted. Chi-Square test for assessing the association between knowledge scores of the high school girls with selected bio-socio demographic variables shows that the knowledge scores are associated to occupation of the subject's father. Remaining all selected bio- socio demographic variables have no association with the knowledge scores. The findings show that the knowledge of the management of premenstrual syndrome can be improved with structured teaching program and help them to lead a healthy reproductive life.

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Introduction

Adolescence' refers to the period from puberty to maturity during which physical, emotional, and psychological changes occur in a child. Adolescence is regarded as a unique phase of human development. Among adolescent girls' menarche is an important landmark in the process of growth and maturation.

Menstruation (a period) is a major stage of puberty in girls; it is one of the many physical signs that a girl is turning into a woman. And like a lot of the other changes associated with puberty, menstruation can be confusing. Some girls cannot wait to start their periods, whereas others may feel afraid or anxious. Just as some girls begin puberty earlier or later than others, the same applies to periods. Some girls may start menstruating as early as age 10, but others may not get their first period until they are 15 years old.

Some girls and women find that they feel sad or easily irritated during the few days or week before their periods. Others may get angry more quickly than normal or cry more than usual. Some girls crave certain foods. These types of emotional changes may be the result of premenstrual syndrome (PMS).

The mood changes associated with this condition have been described as early as the time of the ancient Greeks. However, it was not until 1931 that the medical community officially recognized this disorder. The term "premenstrual syndrome" was coined in 1953. There was official recognition of symptoms that have plagued women for centuries. Feminists were ambivalent about the acceptance by doctors that PMS was a problem that they needed to take cognizance of. They felt that this would just give men another opportunity to point a finger at the "weaker sex" and their physical and mental inability to cope.

Premenstrual syndrome (PMS) is a combination of emotional, physical, psychological, and mood disturbances that occur after a woman's ovulation and typically ending with the onset of her menstrual flow. The most common mood-related symptoms are irritability, depression, crying, oversensitivity, and mood swings with alternating sadness and anger. The most common physical symptoms are fatigue, bloating, breast tenderness (mastalgia), acne, and appetite changes with food cravings. PMS is usually at its worst during the 1 to 2 weeks before a girl's period starts, and it usually disappears when her period begins.

The symptoms of PMS begin after ovulation, peak just before menstruation begins, and then vanish at the start of menstruation. The symptoms can be both physiological and psychological. There are many symptoms of which the most common are: tender breasts, bloated abdomen, appetite changes and cravings, pimples, headaches, stomach upset and swollen hands and feet. Women afflicted with this problem also display mood swings, depression, and fatigue, and irritability, lack of concentration, oversensitivity, crying jags, and social withdrawal.

Widespread recognition of PMS has attracted a broad range of research interest in the treatment and management of the symptoms of PMS. Although there is no "cure" for PMS currently, there are many options in managing its signs and symptoms. The priority is an accurate diagnosis. Other medical or psychological conditions should be identified and treated. Proper diet, exercise and lifestyle changes can help relieve symptoms, and if these measures are not effective, over the counter or prescription medications may be indicated. Most women can control their PMS symptoms successfully so that they do not interfere with their leading healthy and productive lives.

The treatment of PMS can sometimes be as challenging as making the diagnosis of PMS. Various treatment approaches have been used to treat this condition. Some measures lack a solid scientific basis but seem to help some women. Other treatments with a sound scientific basis may not help all patients.

Self-care at home reduces many premenstrual symptoms.

- Dietary strategies may help.
  To lessen bloating and water retention, avoid foods high in salt (sodium), especially in the week before your period. Because diet may play a vital role in symptoms associated with low blood sugar, avoid candy, soda, and other sugary foods, especially in the week before your period.
  An adequate vitamin and mineral intake may also help with PMS symptoms.
- Vitamin E: Studies do not agree about how much vitamin E may be helpful, but 300-400 IU per day is a safe dose that may be of benefit.
- Calcium: Some women get relief being careful to take at least 1,200 mg of calcium per day, through a combination of normal eating and taking supplements.
- Magnesium: Most studies that have evaluated magnesium have failed to show overall benefit. One study of magnesium (200 mg/day) with 50 mg of vitamin B6 showed a significant reduction in anxiety symptoms, compared to magnesium alone. Food sources of magnesium include nuts, legumes, whole grains, dark green vegetables, seafood (oysters), and meats.
- Regular aerobic exercise and relaxation techniques can help to relieve many of the mood symptoms found with PMS. Muscle relaxation techniques and massage therapy may help.

Our society is often not tolerant of the changes that occur during PR menstruation. In some cultures, PR menstruation and menstruation are considered as special times for women to reconnect with each other, slow down, and honor their own lives and bodies. Menstruation is also considered a time of cleansing. By taking time to rest, and comforting oneself while still following healthy habits, the women can minimize their discomfort.

NEED FOR STUDY

In premenstrual syndrome, there is range of negative physical and emotional symptoms that can occur each month before period. Most women can tell their period is due by mild physical and emotional changes leading up to menstruation. In PMS, it is quite difficult to deal with symptoms. About five per cent of women suffer from PMS in its most unbearable form.

About 80% of women experience some premenstrual symptoms. The incidence of true PMS has often been overestimated by including all women who experience any physical or emotional symptoms prior to menstruation. It is estimated that clinically significant PMS (which is moderate to severe in intensity and affects a woman's functioning) occurs in 20% to 30% of women. About 2% to 6% of women are believed to have the more severe variant known as PMDD (Pre-menstrual dysphoric disorder). Painful menstruation affects approximately 50% of menstruating women, and 10% are incapacitated for up to 3 days. Painful menstruation is the leading cause of lost time from school and work among women of childbearing age. This pain may precede menstruation by several days or may accompany it, and it usually subsides as menstruation tapers off.

While some women may experience these symptoms intermittently, about one in 10 experiences them every month, according to Eades. For about one in 20 women, PMS can become so severe that it causes general depression in daily life, which have a very detrimental effect on their lives at home and at work. It has been observed that mood changes in women due to PMS threaten their relationship with employers, work colleagues, partner, and children. Some women involved in crimes while suffering from PMS. In these cases, the courts have considered them not responsible for their actions. At its worst, PMS can lead to suicidal tendencies in women. This severe form of PMS is called premenstrual dysphoric disorder (PMDD).

As many as 90% of all women will have to deal with the aches, pains and emotional stress of Premenstrual Syndrome or PMS at some time during their reproductive years while 30% to 40% of all women will have symptoms distressing enough to interfere with their everyday lives. Some of the symptoms of premenstrual syndrome include abdominal bloating, acne, anxiety, backache, breast swelling and tenderness, cramps, depression, food cravings, fainting spells, fatigue, headaches, insomnia, altered sex drive, swelling of the fingers and ankles, and personality changes such as drastic mood swings, outbursts of anger, violence, and thoughts of suicide. of tomorrow, the health and the wellbeing of future generations depend on her.

PURPOSE OF THE STUDY:

The purpose of the study to assess the effectiveness of a structured teaching program on Management of Premenstrual Syndrome for high school girls aged between 12 to 15 years in a selected High school, Hyderabad,

STATEMENT OF PROBLEM

"To evaluate the effectiveness of a structured teaching program on Management of Premenstrual Syndrome for high school girls aged between 12 to 15 years in a selected High school, Hyderabad. "

OBJECTIVES OF THE STUDY

- To assess the knowledge level of the adolescent girls regarding Management of Premenstrual Syndrome by pretest.
- To develop and administer structured teaching program on Management of Premenstrual Syndrome to the high school girls.
- To assess the effectiveness of structured teaching program through post- test.
- To determine the association between knowledge and selected bio-socio demographic variables.

OPERATIONAL DEFINITIONS:

Evaluate: It is defined as an assessment of the effectiveness of the structured teaching program on Management of Premenstrual Syndrome for high school girls aged between 12 to 15years and formation of an opinion about the effectiveness.

Effectiveness: It is the difference in the percentage of correct response and mean knowledge scores of pretests and post test conducted for high school girls in the present study.

Structured teaching program: Refers to the organized teaching program on Management of Premenstrual Syndrome.

High school girl: Individual girl who is studying in VII to X class and aged between 12 to 15years.

Premenstrual Syndrome: - Premenstrual syndrome (PMS) (also called PMT or premenstrual tension) is a collection of physical, psychological, and emotional symptoms related to a woman's menstrual cycle.

Management: - Treatment or control of Premenstrual syndrome (PMS) which includes

- Dietary management
- Non-Pharmacological management
- Pharmacological Management

ASSUMPTIONS:

➢ The high school girls will understand the Structured Teaching Program.
➢ The high school girls will gain knowledge regarding Management of Premenstrual Syndrome.
➢ The high school girls will be able to adapt to a healthy lifestyle.

➢ The high school girls will be able to manage premenstrual Symptoms effectively.
➢ The selected variables such as age, gender, education, and occupation, may have influence on the high school girl's knowledge about the management of premenstrual syndrome.

HYPOTHESIS:
HI there will be significant differences between the pretest and post-test knowledge scores of the subjects exposed to structured teaching program on Management of Premenstrual Syndrome.
H2 There will be a significant association between post-test knowledge score and selected demographic variables.

INCLUSIONS:
The study is dealing with high school girls who are studying in selected schools of Hyderabad and are present at the time of study.
✓ Girls who are aged between 12 to 15years.
✓ Girls who are willing to participate in the study.
✓ Girls who understand English, Telugu
✓ Girls studying in the classes between Std VII to Std X.

DELIMITATIONS:
✓ Evaluation of the effectiveness of the structured teaching program is only in terms of knowledge.
✓ Study is confined to a small sample of 50 high school girls, present in the selected school at the time of study.
✓ Study is limited to age group 12 to 15 years, which limits the generalization of findings on knowledge regarding management of Premenstrual Syndrome.

CONCEPTUAL FRAMEWORK BASED ON GENERAL SYSTEMS THEORY
A Framework is a basic structure supporting anything. A Conceptual Framework is a group of related concepts. It provides an overall view or orientation to focus our thoughts. A Conceptual Framework can be visualized as an umbrella under which many theories can exist. A theory like a conceptual model is made up of concepts and Propositions. It accounts for phenomena with much greater specificity.

Health concept has changed from cure i.e., yesterday's word, prevention is today's word. Primary focus of modern gynecological nursing is on preventive care of women. Present study's main aim is to help the adolescent girls have healthy menstruation and adequate knowledge regarding the management of Premenstrual Syndrome.

This present study is based on General Systems Theory proposed in the 1950's introduced by Ludwig Von Bertalanffy. Nurses are increasingly using Systems Theory i.e., not only in biological systems, but also in families, communities and nursing and health care. This theory provides a way of examining interrelationships and deriving principles.

Input: Input comprises a pretest and the preparation of the structured teaching program. A pretest is conducted on the samples and based on the scoring of the samples; an appropriate structured teaching program on the management of Premenstrual Syndrome is planned and prepared for high school girls aged between 12 to 15years.

Throughput: Throughput comprises the implementation of the structured teaching program. It involves an internal process of individual's understanding capacity of the lesson taught by the investigator.

Output: Output is the posttest results of high school girls.

Feedback: It refers to the effectiveness of the structured teaching program on Management of Premenstrual Syndrome for high school girls aged between 12 to 15 years.
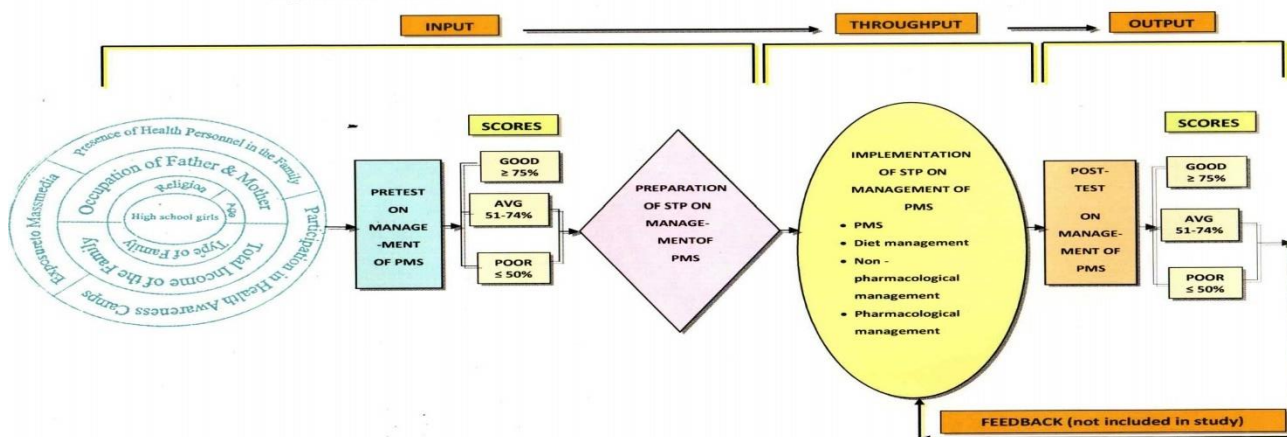
SCORE INTERPRETATION
≤50% - Below average
51- 74% - Average
2 75% - Above average

Fig. 1: CONCEPTUAL FRAME WORK BASED ON GENERAL SYSTEM THEORY

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REVIEW OF LITERATURE

A literature review involves the systematic identification, scrutiny and summary of written materials that contain information on a research problem. A thorough familiarization with previous studies is useful in suggesting aspects of a problem about which not much is known and, therefore, greater contribution can be made. The purpose of reviewing the related literature in any field is to help the individual gain information as to what has been already investigated, which methodology was used, what were the conditions and what more needs to be done in the future. It is an essential part of the research project.

A review of literature pertaining to present study is aimed at recognizing the knowledge of subjects about menstruation, premenstrual syndrome, and the various aspects of its management. It has been organized and presented under the following headings.

1. Studies related to knowledge and practices in menstrual cycle.
2. Studies related to prevalence and risk factors of premenstrual syndrome.
3. Studies related to the symptoms of premenstrual syndrome.
4. Studies related to the impact of premenstrual syndrome in the daily life.
5. Studies related to management of premenstrual syndrome.

METHODOLOGY

Research methodology deals with the method of investigation to be adopted by the investigator. Methodology is the science of method. It is a set of methods and principles used to perform a particular activity. The selection of research design is a crucial step in research as it is concerned with the overall framework for conducting the study. This design gives a structure and strategy for investigation. It incorporates some of the most important methodological decisions that the researcher makes in conducting the research study. Hence the details of methodology include the rationale for the choice of the research design, setting, description of the tool, population, sample, characteristics, pilot study, and methods of data collection and plan of data analysis.

RESEARCH APPROACH:

The research approach planned in this study is a pre-experimental approach. The present investigation aims at evaluating the effectiveness of a structured teaching program regarding management of Premenstrual Syndrome among high school girls aged between 12 to 15 years in a selected High school, at Hyderabad present at the time of study. Hence preexperimental research is the most useful method.

RESEARCH DESIGN:

A researcher's overall plan for obtaining answers to the research questions or for evaluating the research hypothesis is referred to as the research design. The research design adopted for the present study is one group pre-test and post-test experimental design. In this design, there is only one group and is pretested or premeasured. After the pretest, the independent variable is introduced to the complete sample irrespective of their premeasured dependent variable.

The independent variable structured teaching program was given to the whole group after the pretest. The effectiveness of the independent variable on the dependent is assessed with the help of the posttest.

$$0_2 \text{ x } 0_2$$
$$01 = \text{Pretest}$$
$$X = \text{Structured teaching program}$$
$$0_2 = \text{Posttest}$$

DESCRIPTION OF VARIABLES:

Independent Variable The independent variable in this study is the structured teaching program on Management of Premenstrual Syndrome. The structured teaching program was prepared by the investigator based on the needs of the sample with the help of textbooks, published articles and journals on related subjects and in consultation with the experts.

Dependent Variable The dependent variable in this study is the adherence to the management of premenstrual syndrome by the high school girls.

Extraneous Variables Extraneous variables are those which could influence the high school girls' adherence to the management of premenstrual syndrome and are age, education, occupation, exposure to the mass media, dietary pattern, and monthly income of the family.

SETTING OF THE STUDY

The present study was conducted at Hyderabad. The school is adequately equipped with all laboratories, library, auditorium, and educational technologies.

POPULATION

The present study consists of high school girls studying from Std. VII to Std.X at High School Hyderabad.

SAMPLE

The total sample consists of 50 high school girls aged between 12 to 15years who are studying at High School in Hyderabad Std. VII to Std X. The present study was aimed to assess the effectiveness of planned teaching on Management of PMS among high school girls who had fulfilled the sample criteria.

SAMPLING TECHNIQUE

In this study, a non-randomized purposive sampling technique was used for the selection of the sample. Purposive Sampling is one of the methods of non- probability sampling and it proceeds in the belief that researcher's knowledge about the population and its elements can be used to hand pick the cases to be included in the samples.

CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria
1. The High School Girls are studying at High School, Hyderabad.
2. Girls who are aged between 12 to 15years.
3. Girls studying in the classes between Std. VII to Std. X.
4. Girls who are willing to participate in the study.
5. Girls who English speaking, Telugu.

Exclusion criteria
The study excludes all boys from the school.
The study excludes all girls above the age of 15 years and below the age of 12 years.
Students who are absent on the day of data collection

SAMPLE CHARACTERISTICS

The sample is described in terms of bio-socio demographic data, which includes age, religion, and type of family, occupation of mother & father, income of the family, source of previous knowledge.

DESCRIPTION OF THE TOOL

The tool consisted of a structured questionnaire which was divided into 2 sub-parts.
Part A deals with demographic data of the high school girls such as age, religion, type of family, occupation of mother & father, income of the family per month, source of previous knowledge, and age of menarche.
Part B deals with assessment of knowledge regarding Management of PMS. It consists of 40 questions. Each question carries one mark; so, all questions put together a total of 40 marks. All the questions are designed with multiple choices with one correct answer.

SCORING:

Information regarding bio-socio demographic data was collected from selected high school girls who fulfilled the sample criteria. Each question of the questionnaire carries one score. Based on their questions the correct options are marked on the space provided beside the question. The correct answers for the questions were given score one and each wrong answer was given score zero.

Score Interpretation
50% - Below average
51-74% - Average
75% - Above average

METHOD OF DATA COLLECTION

Structured Questionnaire is used to assess the student's knowledge regarding Management of PMS. It is a method of gathering self-report information from respondents through self-administered questionnaire in a paper format.

RELIABILITY

Reliability refers to the stability, consistency, accuracy and dependability of an instrument or measurement. Split half method is used to find out the reliability of the knowledge and practice assessment tool. The correlation coefficient was calculated using Karl Pearson's formula and the reliability R of the structured questionnaire is found to be 0.99. Hence the tool was found reliable.

PILOT STUDY

As a part of the investigators educational. pursuit, the pilot study was conducted in Other High School, Hyderabad, to assess the effectiveness of structured teaching program on management of premenstrual syndrome to ensure the practicability, feasibility of the study, and appropriateness of the study and to plan for statistical analysis of the data. The pilot study was conducted on 10% of the samples of original study (five samples) were selected for Pilot study based on the sample criteria. All the five samples were given pretest followed by the structured teaching regarding. management of premenstrual syndrome. Post-test was conducted after one week to measure the effectiveness of the structured teaching

program. Posttest knowledge scores were significantly improved when compared with pretest knowledge scores. Hence the study was found to be feasible, practicable and appropriate.

TECHNIQUE OF DATA COLLECTION
To collect the data for the study, Pretest was conducted. Immediately after the pre-test the investigator provided a structured teaching program to the high school girls. The teaching was given in one session, on aspects of Management of Premenstrual Syndrome with the help of Audio-Visual Aids. post- test which was conducted a week of the pre-test. The posttest was conducted after one week of the structured teaching program to the same group with the help of the same structured questionnaire.

PLAN OF DATA ANALYSIS
After collecting the data, it was planned to analyze and interpret the data using descriptive and inferential statistics. Mean, standard deviation, standard error and paired't' test were computed from the raw scores obtained in pre-test and post-test. The values were then compared to assess the impact of structured teaching program. Data analysis and interpretation is organized in three sections as:

SECTION I:
Description of sample characteristics according to the demographical variables such as Age, Class, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income and Source of Previous Knowledge, and age of menarche of the High School girls with the help of frequency and percentage distributions.
SECTION II:
Area wise and item wise knowledge scores high school girls in pre-test and post-test on the Management of Premenstrual Syndrome and assessing the effectiveness of structured teaching program by comparing the pre-test and post-test knowledge scores of the high school girls.
SECTION III:
Relationship between the post-test knowledge scores of the high school girls and selected demographical variables such as Age, Class, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income and Source of Previous Knowledge of the high school girls by using Chi-Square test.

ANALYSIS AND INTERPRETATION
This chapter deals with the analysis and interpretation of the data related to the knowledge on Management of Premenstrual Syndrome among high school girls aged 12 to 15 Years in a selected High School at Hyderabad, Data was collected from 50 High School girls and Interpretations were done with the help of descriptive and inferential statistics to meet the objectives of the study.

Descriptive statistics such as Frequencies, Percentages, Mean, Standard deviation, Standard error were utilized for assessing the knowledge on Management of Premenstrual Syndrome among High School Girls. Inferential statistics such as Paired t-test and Nonparametric tests were utilized to test the stated hypothesis with the help of Chi-square test to determine if there were any significant associations between the knowledge levels of High School girls & selected demographic variables such as Age, Class, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income and Source of Previous Knowledge etc.,

The Objectives of the Study:
- To assess the knowledge level of the high school girls regarding Management of Premenstrual Syndrome by pretest.
- To develop and administer structured teaching program on Management of Premenstrual Syndrome.
- To assess the effectiveness of structured teaching program by posttest.
- To determine the association between the post-test knowledge scores and selected bio-socio demographic variables.
SECTION I
Description of sample characteristics according to the demographical variables such as Age, Class, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income and Source of Previous Knowledge etc., of the High School girls with the help of frequency and percentage distributions.
### SECTION II
Comparison of knowledge scores of the adolescent girls regarding the Management of Premenstrual Syndrome in pre-test and post-test and assessing the effectiveness of structured teaching program by comparing the pre-test and post-test knowledge scores of the high school girls.
SECTION III
Relationship between the post-test knowledge scores of the high school girls and selected demographical variables such as Age, Class, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income and Source of Previous Knowledge of the high school girls by using Chi-Square test.

SECTION II

Section Il deals with the analysis of knowledge scores of the high school girls and the effectiveness of Structured Teaching Program in improving the knowledge scores of the high school girls regarding Management of Premenstrual Syndrome. Inferential statistics such as paired t-tests are used to evaluate the significant difference between the pretest scores and post test scores. Paired t-test is applied to evaluate the effectiveness of the structured teaching program.
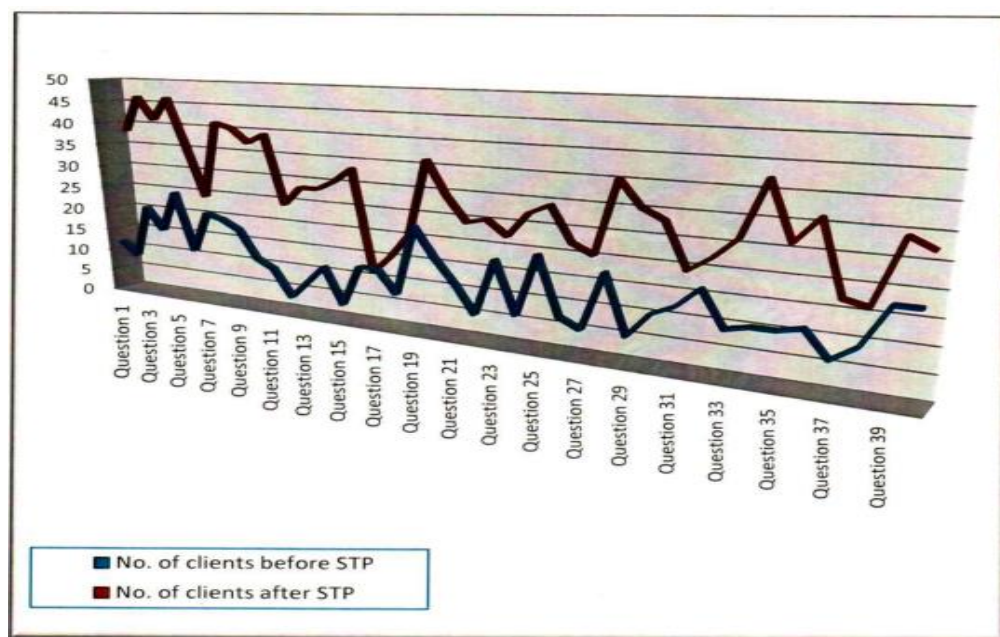
Fig 1: Comparison of question wise frequency of High School Girls before and after administering structure teaching program.

TABLE 2
The mean, standard deviation, and standard error of the knowledge scores of pre-test & post-tests in each area & the paired t test value of each specific area

Specific Area	Pre-Test			Post Test			Paired 't' Value
	Mean	SD	SE	Mean	SD	SE	
Overall, Knowledge	10.140	2.356	0.333	23.060	4.596	0.650	16.824
Anatomy & Physiology	1.900	1.266	0.179	4.600	1.107	0.156	11.834
Premenstrual Syndrome	3.700	1.555	0.220	8.700	1.972	0.279	13.137
Dietary Management of PMS	2.600	1.278	0.181	5.580	1.853	0.262	9.264
Non-Pharmacological of PMS	0.880	0.799	0.113	2.400	1.069	0.151	9.724

Pharmacological of PMS	1.060	0.867	0.123	1.780	1.016	0.144	3.824

Table 2 shows the results of paired t-test applied on the knowledge scores of pretest & post-tests of the High School Girls in each sub areas for evaluating the significance difference between pretest and post-test knowledge scores.

Degrees of Freedom: 49
Table value of t at 5% Level of Significance: 2.31
Level of Significance: 5% (0.05)

The above table shows that the mean scores of the knowledge of High School girls on Anatomy & Physiology before administering the structured teaching program was 1.9 with standard deviation 1.266 and standard error 0.179. The post-test mean score was 4.6 with standard deviation 1.1.7 and standard error O. 156. This clearly indicates the significant difference between the knowledge scores on Anatomy & Physiology of pretest & post-test. The paired 't' value (11.834) is greater than the tabulated value of 't' (2.3124) at 5 % level of significance with 49 degrees of freedom. Hence it is concluded that after structured teaching program on the management of premenstrual syndrome the knowledge scores of High School girls on Anatomy & Physiology have been increased significantly.

The mean scores of the knowledge of High School girls on the premenstrual syndrome before administering the structured teaching program was 3.7 with standard deviation 1.555 and standard error 0.220 and the post-test mean score 8.7 with standard deviation 1.972 and standard error 0.279. The paired 't' value (13.137) is greater than the tabulated value of 't' (2.3124) at 5 % Level of significance with 49 degrees of freedom. Hence it is concluded that the structured teaching program is effective in increasing the knowledge of High School girls on premenstrual syndrome.

Similarly, the mean scores of the knowledge of High School girls on Dietary management of PMS before administering the structured teaching program was 2.6 with standard deviation 1.278 and standard error 0.181. The post-test mean score is 5.58 with standard deviation 1.853 and standard error 0.262. The paired 't' value (9.264) is much greater than the tabulated value of 't' (2.3124) at 5 % Level of significance with 49 degrees of freedom. Hence it is concluded that the structured teaching program is highly effective in increasing the knowledge of High School girls on Dietary management of PMS.

The mean scores of the knowledge of High School girls on Non-Pharmacological of PMS before administering the structured teaching program was 0.880 with standard deviation 0.799 and standard error 0.113 and the post-test mean score is 2.4 with standard deviation 1.069 and standard error 0.151. The paired 't' value (9.724) is much greater than the tabulated value of 't' (2.3124) at 5 % Level of significance with 49 degrees of freedom. Hence it is concluded that the structured teaching program is highly effective in increasing the knowledge of High School girls on Non-Pharmacological of PMS.

The mean scores of the knowledge of High School girls on Pharmacological of PMS before administering the structured teaching program was 1.060 with standard deviation 0.867 and standard error 0.123 and the post-test mean score is 1.78 with standard deviation 1.016 and standard error 0.144. The paired 't' value (3.824) is greater than the tabulated value of 't' (2.3124) at 5 % Level of significance with 49 degrees of freedom. Hence it is concluded that the structured teaching program is highly effective in increasing the knowledge of High School girls on Pharmacological of PMS.

The above table shows that in all the areas, the post-test mean knowledge scores are higher than that of the pretest and in all the areas calculated 't' values are higher than the table value of 't'. This clearly shows the significant improvement in the post test knowledge scores of High School girls. Hence it is concluded that after structured teaching program on the management of premenstrual syndrome the knowledge scores of the High School girls have been increased. This positive result is a clear indication of the effectiveness of structured teaching program.
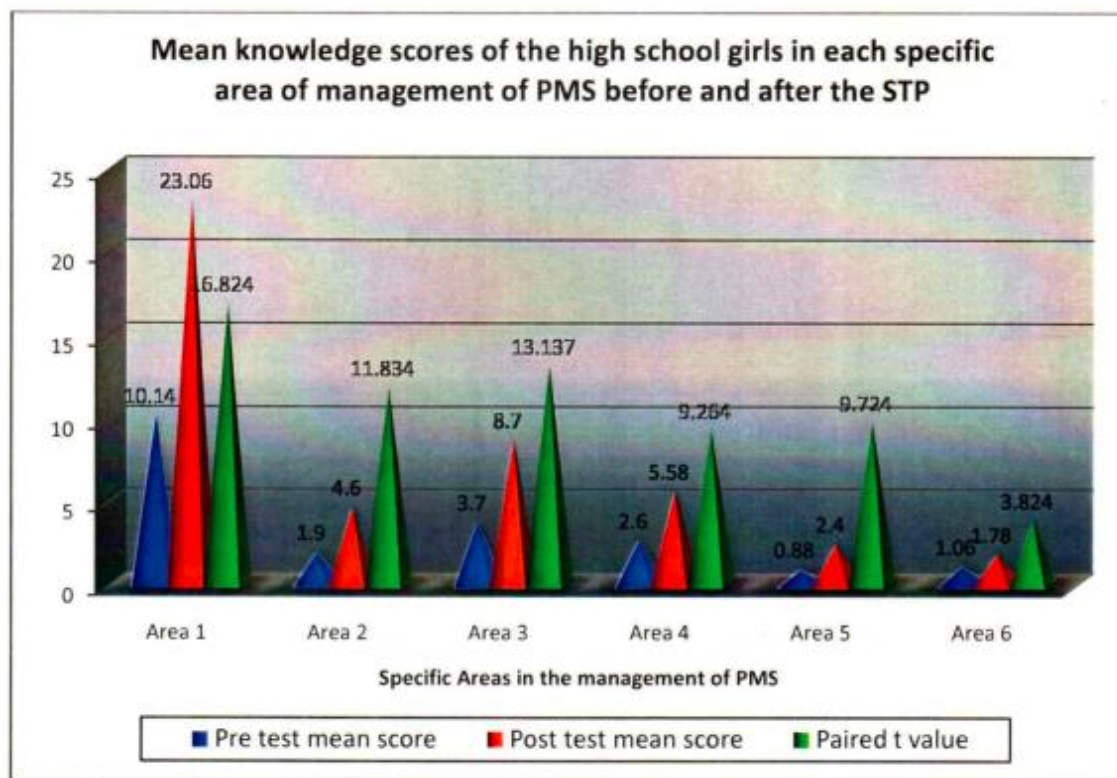
Fig 2 Pre-test and pos-test knowledge scores and paired t value of the significance in each area of management of premenstrual syndrome among high school girls.

Area 1: Overall, Knowledge, Area 2: Anatomy & Physiology, Area 3: Premenstrual syndrome, Area 4: Dietary management of PMS, Area 5: Non-Pharmacological management of PMS, Area 6: Pharmacological management of PMS.

TABLE 3
The difference in means and standard deviations of the knowledge scores of high school girls between pretest and posttest and the significant difference after applying paired t test.

t-Test: Paired Two Sam le for Means		
Parameters	Pre-Scores	Post Scores
Mean	10.14	23.06
Variance	5.55	21.12
Standard Deviation	2.36	4.60
Standard Error	0.33	0.65
t Stat	16.82	
t Critical one-tail	2.31	

Table 3 Shows the results of paired t-test applied on pre-test and post-test knowledge scores of the high school girls for evaluating the significance difference between pre and post-test knowledge scores.
Degrees of Freedom: 49 Calculated Paired t-value: 16.82.
Table value of t at 5% Level of Significance: 2.31

The above table shows that the pretest mean is 10.14 (25.35 %) and post test scores mean is 23.06 (57.65 %). The calculated value of t' is 16.82 which is very much higher than the tabulated 't' value 2.3124 at 49 degrees of freedom with 5% level of significance. This shows there is an extremely high significance difference between the Knowledge levels of pretest & post-test. By means of that we can conclude that the administered structured teaching program on Management of Premenstrual Syndrome is highly effective. The implementation of structured teaching program improved the overall knowledge of the high school girls regarding the Management of Premenstrual Syndrome.
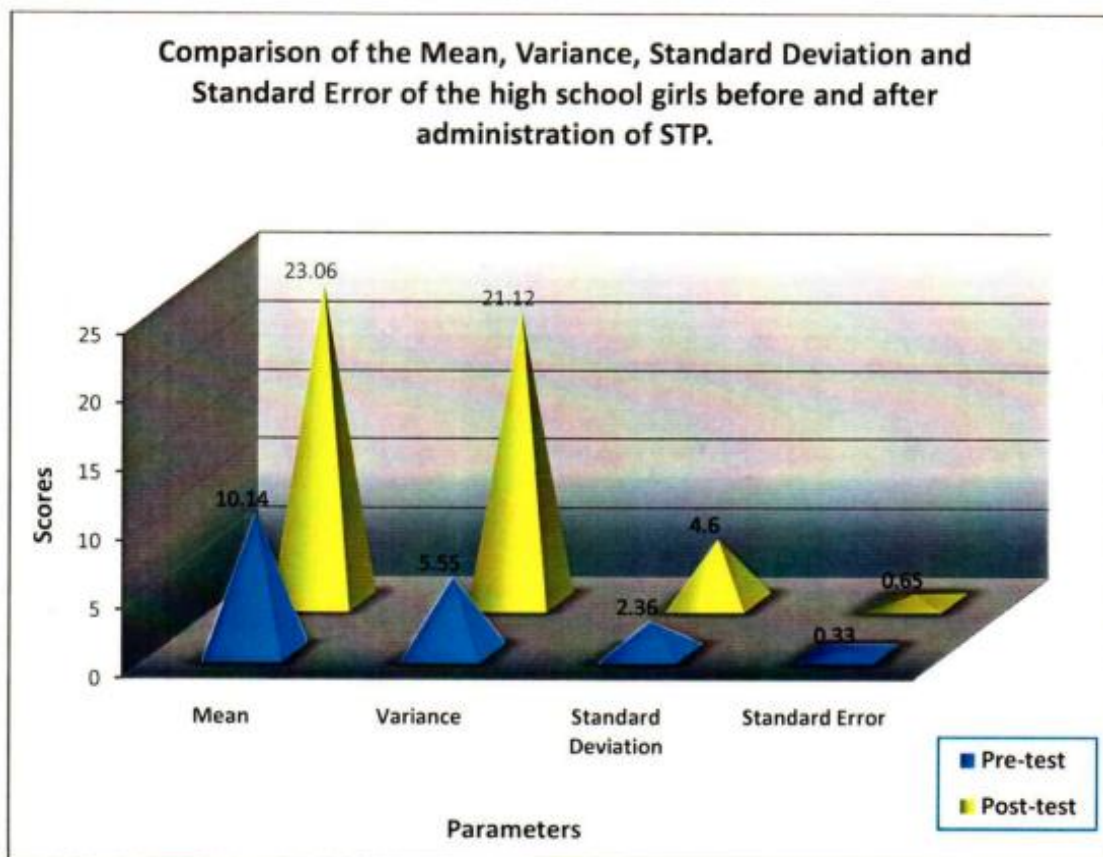
Fig. 3 Comparison of Mean knowledge scores, variance, standard deviation, and standard error scores of the high school girls regarding the management of premenstrual syndrome before and after administering Structured Teaching Program.
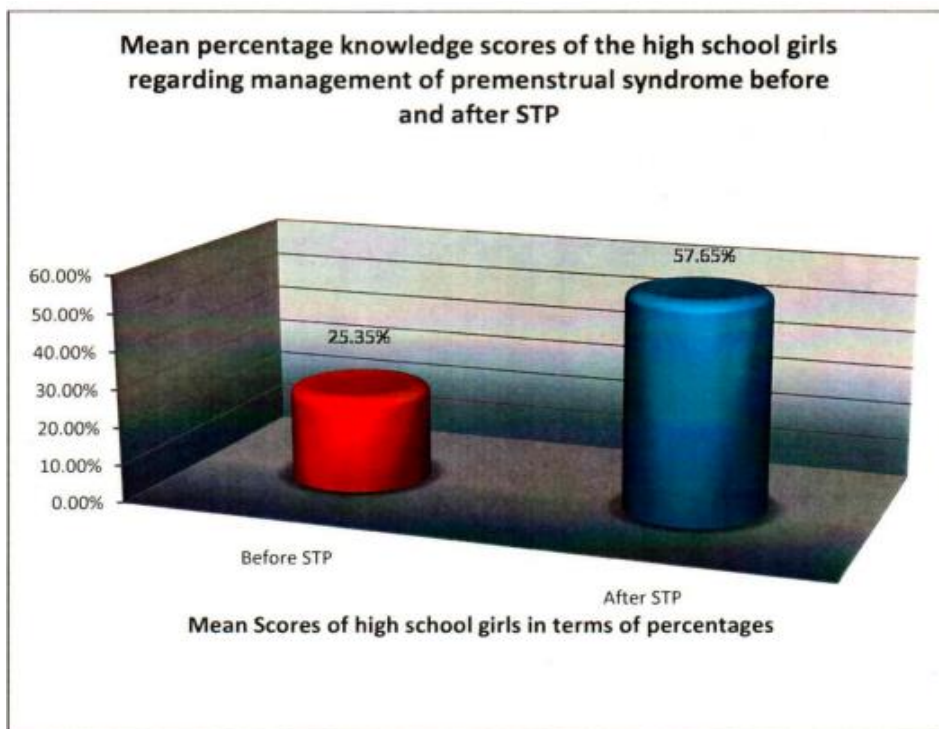
Fig. 4 Comparison of Mean knowledge scores of the high school girls regarding the management of premenstrual syndrome in terms of percentage before and after administering structure teaching program.

SECTION III

It deals with the relationship between the knowledge of the high school girls on Management of Premenstrual Syndrome with the selected demographical variables of the high school girls such as Age, Class of Study, Religion, Type of Family, Occupation of Mother, Occupation of Father, Family Income, Source of Previous Knowledge and Attained age of Menarche etc., Non parametric test such as Chi Square Test was applied for testing the association between the post-test knowledge scores and selected demographical variables.

Table 4 shows the results of Chi Square test for testing the association between the post-test knowledge scores of the high school girls on management of premenstrual Syndrome and the age.

TABLE 4

Chi Square Test for evaluate the association between the knowledge scores of the high school girls on the management of premenstrual syndrome and the age of the high school girls. (N = 50)

Age of the high school girls	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
12 Years	5	10.00%	8	16.00%	2	4.00%	15
13 Years	5	10.00%	8	16.00%	0	0.00%	13
14 Years	1	2.00%	13	26.00%	1	2.00%	15
2 15 Years	1	2.00%	5	10.00%	1	2.00%	7
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 4 shows the relationship of the post-test knowledge scores of the high school girls with their age. It is observed that only 4 % of the high school girls were having the above average knowledge levels. 26 % of the high school girls were performing at average knowledge levels, 16 % of the high school girls from the age group of 13 years and 16 % of the high school girls from the age group of Below 12 Years were performing at average levels.

The table value of Chi Square at 5% level of significance with 6 degrees of freedom is 12.59. As the calculated value of Chi Square (7.11) is smaller than the tabulated value we conclude that there is no significant association between the age of the high school girls and their knowledge levels on the Management of Premenstrual Syndrome.
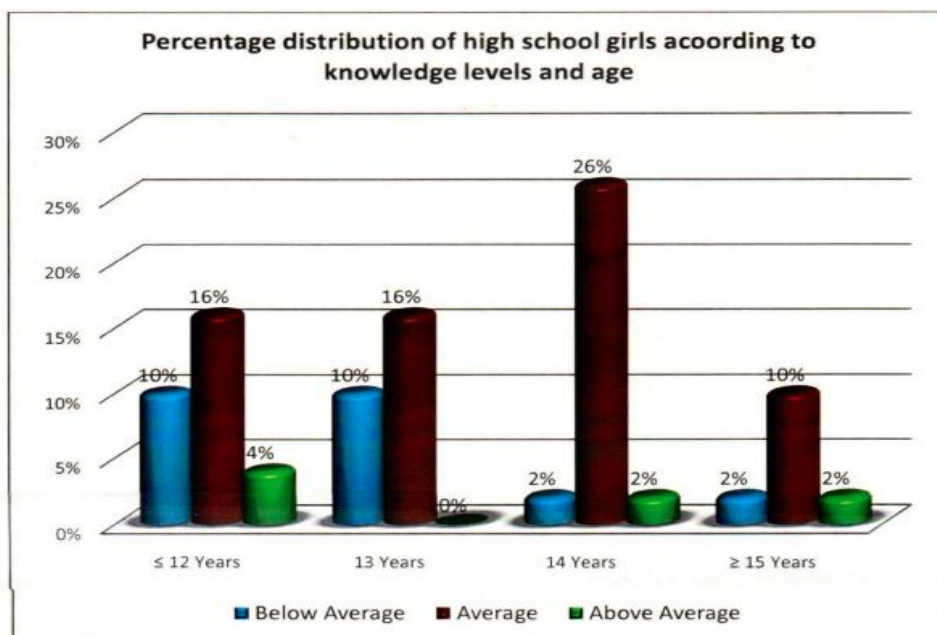

Fig. 5 Percentage distribution of the high school girls according to the post test knowledge levels and the age.

Table 5 shows the results of Chi Square test for testing the association between the post-test knowledge levels of the high school girls on Management of Premenstrual Syndrome & the Class of Study.

TABLE 5

Chi Square Test for testing the association between the knowledge levels of the high school girls on the management of premenstrual syndrome and the Class of study.

(N = 50)

Class of Study	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
STD VII STD VIII STD IX STD X	2 6 1 3	4.00% 12.00% 2.00% 6.00%	5 8 9 12	10.00% 16.00% 18.00% 24.00%	2 0 1 1	4.00% 0.00% 2.00% 2.00%	9 14 11 16
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 5 shows the relationship of the post-test knowledge scores of the high school girls with the Class of Study. It is observed that 24 % of the high school girls were studying 10th Standard and performing at average levels. 18 % of the high school girls were studying 9th Standard and performing at average levels. 16 % of the high school girls were studying 8th Standard and performing at average levels and 12 % of them were performing at below average knowledge levels. The table value of Chi Square at 5% level of significance with 6 degrees of freedom is 12.59, as the calculated value of Chi Square (6.513) is smaller than the tabulated value we conclude that there is no significant association between the Class of Study of the high school girls and their knowledge levels on Management of Premenstrual Syndrome.

Fig. 6 Percentage distributions of the high school girls according to the post test knowledge levels and the Class of study.
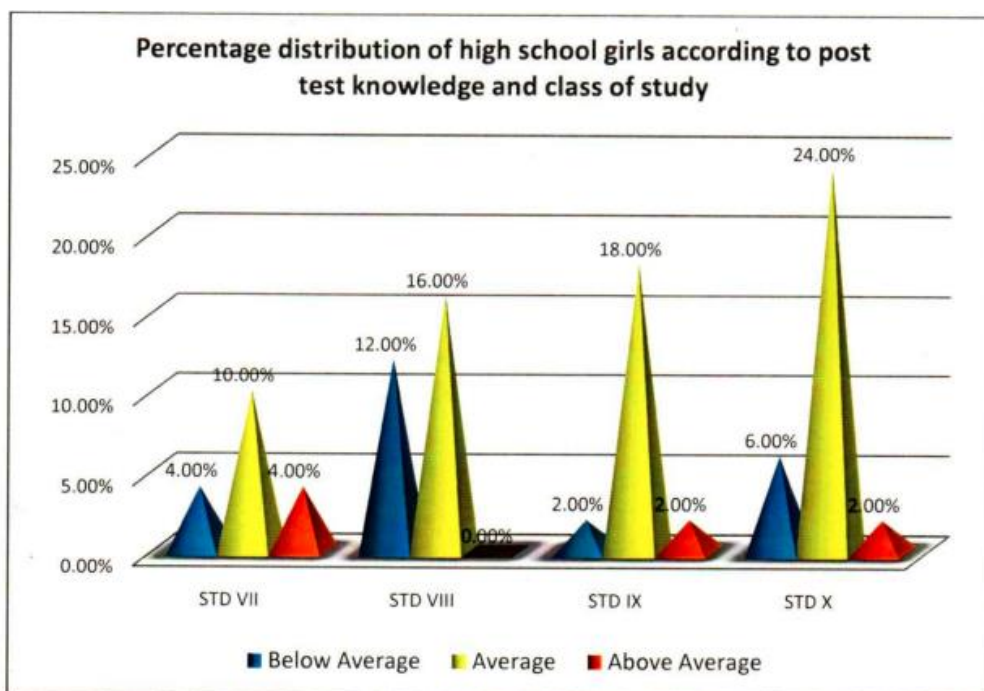

Table 6 shows the results of Chi Square test for testing the association between the post-test knowledge levels of the high school girls on Management of Premenstrual Syndrome and the Religion.
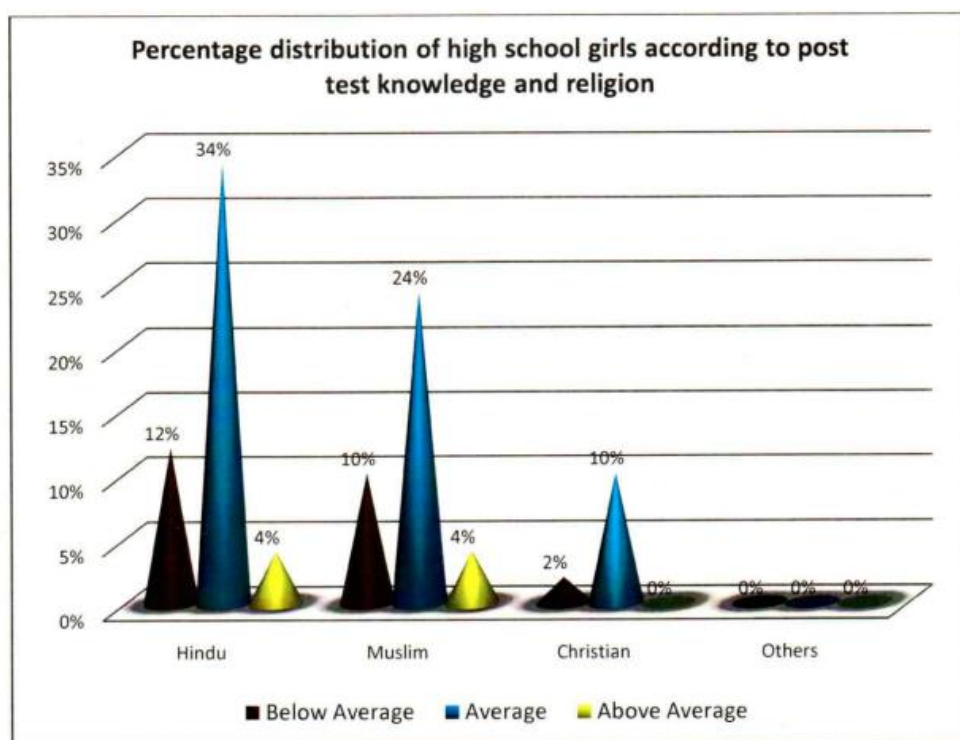
TABLE 6

Chi Square Test for testing the association between the post-test knowledge levels of the high school girls on the management of premenstrual syndrome and their Religion.   N=50

Religion	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
Hindu	6		17		2		25
Muslim	5		12		2 o		19
Christian Others	1 o	12.00%	5 o	34.00%		4.00%	6
		10.00%		24.00%		4.00%	
		2.00%		10.00%		0.00%	
		0.00%		0.00%		0.00%	
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 6 shows the relationship of the post-test knowledge scores of the high school girls with their Religion. 34 % of the Hindu girls, 24 % of Muslim girls and 10 % of Christian girls were performing at average knowledge levels. 12 % of the Hindu girls, 10 % of Muslim girls and 2 % of Christian girls were performing at below average knowledge levels. The table value of Chi Square at 5% level of significance with 4 degrees of freedom is 9.48, as the calculated value of Chi Square (0.601) is smaller than the tabulated value we conclude that there is no significant association between the Gender of the high school girls and their knowledge levels on Management of Premenstrual Syndrome.

Fig. 7 Percentage distribution of the high school girls according to the

Percentage distribution of high school girls according to post test knowledge and religion

posttest knowledge levels and the Religion.

Table 7 shows results of Chi square test for testing the association between the knowledge scores of the high school girls on management of premenstrual syndrome and the father occupation after administering the structured teaching program.

TABLE 7
Chi Square Test for testing the association between the knowledge scores & their father's occupation.

Occupation of Father	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
Employee	4	8.00%	15	30.00%	o	0.00%	19
Technical	1	2.00%	1	2.00%	1	2.00%	3
Business	3	6.00%	11	22.00%	o	0.00%	14
Cultivation	o	0.00%	1	2.00%	2	4.00%	3
Labor	4	8.00%	4	8.00%	1	2.00%	9
Expired	o	0.00%	2	4.00%	o	0.00%	2
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 7 shows the relationship of the post-test knowledge scores of the high school girls with their Father Occupation. It is observed that 30 % of the Employees daughters were performing at average levels.

The table value of Chi Square at 5% level of significance with 10 degrees of freedom is 18.307, as the calculated value of Chi Square (23.866) is higher than the tabulated value we conclude that there is highly significant association between their Father Occupation and their knowledge levels on Management of Premenstrual Syndrome.

Fig 8 The percentages of the high school girls according to their knowledge levels & their Father's Occupation.

Percentage distribution of high school girls according to post test knowledge and father's occupation
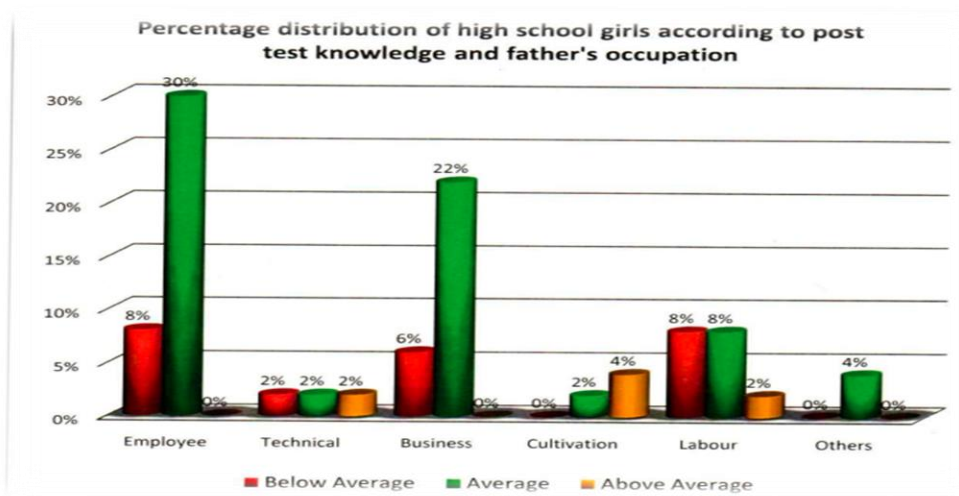
Table 8 shows the results of Chi Square test for testing the association between the knowledge scores of the high school girls on Management of Premenstrual Syndrome & their Mother's Occupation after administering the Structured Teaching Program.

TABLE 18
Chi Square Test for testing the association between the knowledge scores of the high school girls & their mother's occupation.

Occupation of Mother	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
Employee	1 1	2.00%		10.00%		0.00%	6
Business	o 10	2.00%		6.00%		0.00%	4
Cultivation	o	0.00%	5 3	0.00%	o 0	0.00%	38
Housewife		20.00%	o	50.00%	o 3	6.00%	2
Labor		0.00%	25	2.00%	1	2.00%	
			1				
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 18 shows the relationship of the post-test knowledge scores of the high school girls with their Mother Occupation. It is observed that 50 % of the Housewives were performing at average levels and 20 % of them were performing at Below Average levels. 10% of the Employees were performing at average levels.

The table value of Chi Square at 5% level of significance with 6 degrees of freedom is 12.59, as the calculated value of Chi Square (6.27) is smaller than the tabulated value we conclude that there is no significant association between their Mother Occupation and their knowledge levels on Management of Premenstrual Syndrome.

Fig. 9 The percentages of the high school girls according to their knowledge levels & their Mother's Occupation.

Percentage distribution of high school girls according to post test knowledge and mother's occupation
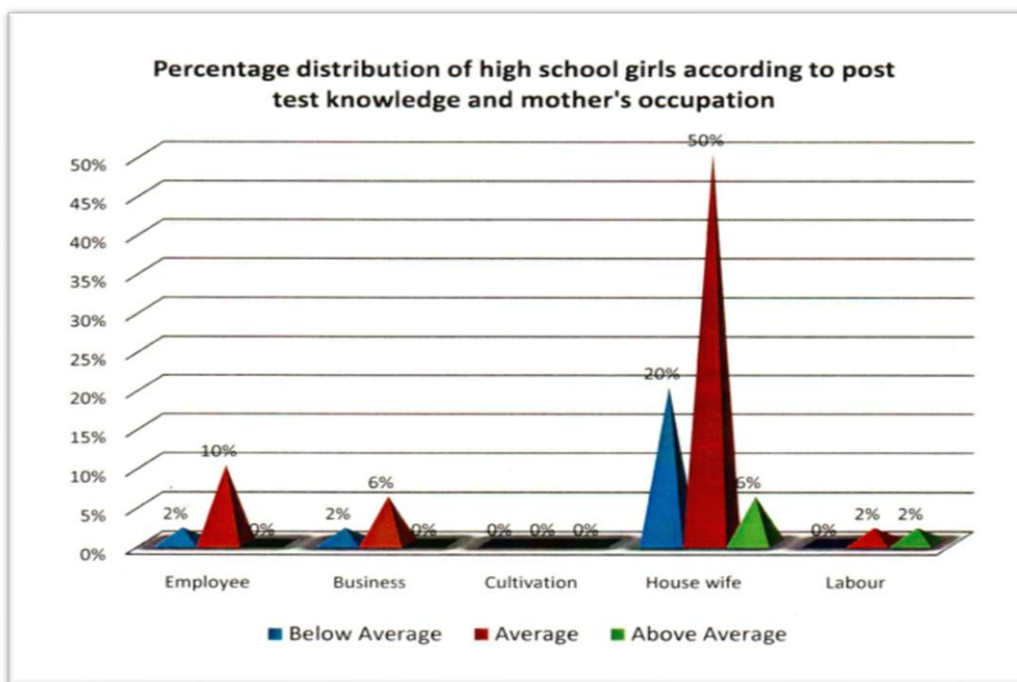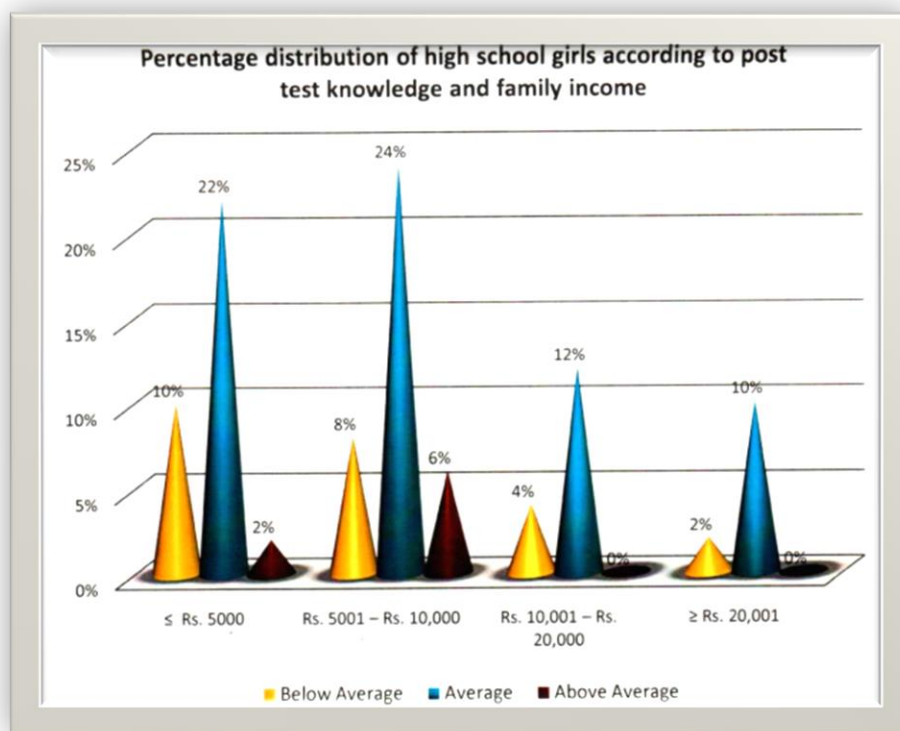
Table 9 shows the results of Chi Square test for testing the association between the knowledge scores of the high school girls on Management of Premenstrual Syndrome & their Family Income.

TABLE 9
Chi Square Test for testing the association between the knowledge scores & their family income
(N = 50)

Family Income	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
RS. 5000	5	10.00%	11	22.00%		2.00%	17
5001 - 10,000	4	8.00%	12	24.00%		6.00%	19
10,001 - 20,000	2	4.00%	6	12.00%	1 3 0 0	0.00%	8
20,001 & above	1	2.00%	5	10.00%		0.00%	6
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 9 shows the relationship between the post-test knowledge scores and their Family Income. It is observed that 24 % of the high school girls with family income Rs.5000/-toRs.10000/- were having the average knowledge levels. 22 % of the high school girls were performing at below average knowledge levels with the family income of Less than Rs.5000/-.

The table value of Chi Square at 5% level of significance with 6 degrees of freedom is 12.59 as the calculated value of Chi Square (3.42) is smaller than the tabulated value we conclude that there is no significant association between their family income and their knowledge levels on Management of Premenstrual Syndrome.

Fig. 10: The percentages of the high school girls according to their knowledge levels & their Family Income

Table 10 shows the results of Chi Square test for testing the association between the post- test knowledge scores of the high school girls on Management of Premenstrual Syndrome and the previous source of knowledge on the Management of Premenstrual Syndrome.

TABLE 10
Chi Square Test for Testing the Association between the Post Test Knowledge Scores and the Previous Source of Knowledge   (N = 50)

Previous Source of Knowledge	Knowledge Levels						Total	
	Below Avera e		Average		Above Avera e			
	F	%	F	%	F	%		
Experience Family Members Peer Group Subject/Syllabus Media	02 04 01 05	04.00% 08.00% 02.00% 10.00% 00.00%	02 16 05 11	04.00% 32.00% 10.00% 22.00% 00.00%	o 2 o 1 1	0.00% 4.00% 0.00% 2.00% 2.00%	22 06 01	14.7 NS
Grand Total	**12**	**24.00%**	**34**	**68.00%**	**4**	**8.00%**	**50**	

Note S* Significant at 0.05 level of significance.
NS Not significant at 0.05 level of significance.
Table value X^2 for 8 df at 0.05 level of significance is 15.50.

Table 10 shows that the relationship of the post—test knowledge scores of the high school girls with the previous source of knowledge on the Management of Premenstrual Syndrome. The table value of Chi Square at 5% level of significance with 8 degrees of freedom is 15.5, as the calculated value of Chi Square (14.7) is smaller than the tabulated value we conclude that there is no significant association between the post-test knowledge levels and previous source of knowledge on the Management of Premenstrual Syndrome.

Fig. 11 The percentage distribution of the high school girls according to the post test knowledge levels and the previous source of knowledge on the Management of Premenstrual Syndrome.
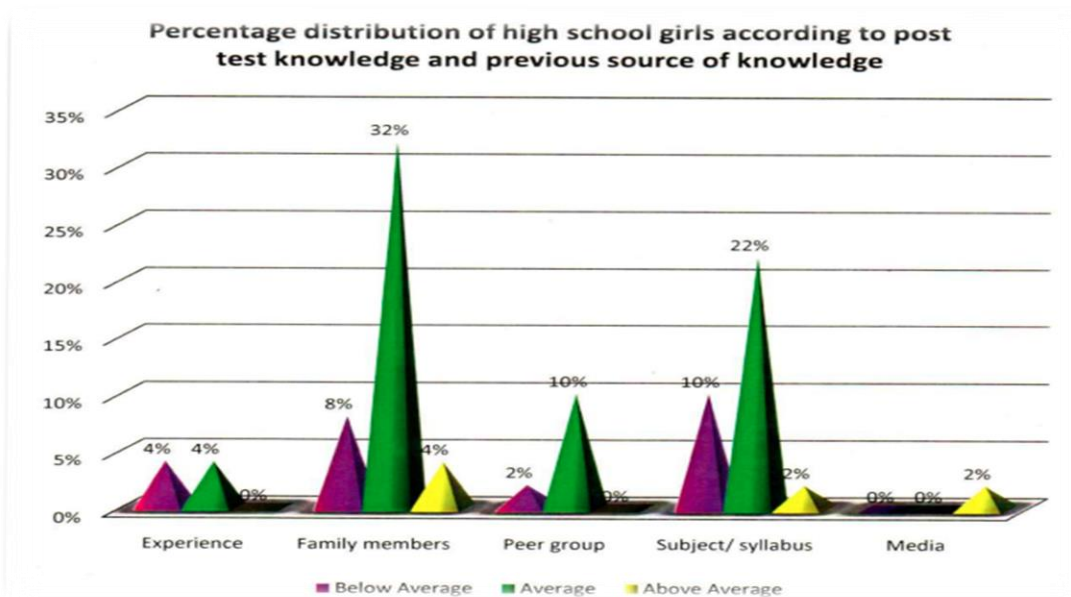

Table 11 shows the results of Chi Square test for testing the association between the knowledge scores of the high school girls on Management of Premenstrual Syndrome & their attained Age of Menarche.

TABLE 11
**Chi Square Test for testing the association between the knowledge scores & their Attained age of menarche.**
(N = 50)

Attained Age of Menarche	Knowledge Levels						Total
	Below Average		Average		Above Average		
	Freq	%	Freq	%	Freq	%	
10 Years	2	4.00%	1	2.00%	o o		3
11 Years	2	4.00%	6	12.00%	1		8
12 Years	5	10.00%	14 13	28.00%	3	0.00%	20
2 13 Years	3	6.00%		26.00%		0.00%	19
						2.00%	
						6.00%	
Grand Total	12	24.00%	34	68.00%	4	8.00%	50

Table 11 shows the relationship of the post-test knowledge scores of the high school girls with their Attained Age of Menarche. It is observed that 28 % of the high school girls were performing at average knowledge levels whose attained age of Menarche was 12 years, and 26 % of the high school girls were performing at average knowledge levels whose attained age of Menarche was more than 13 years.

The table value of Chi Square at 5% level of significance with 6 degrees of freedom is 12.59, as the calculated value of Chi Square (5.07) is smaller than the tabulated value we conclude that there is no significant association between the

Attained Age of Menarche of the High School girls and their knowledge levels on Management of Premenstrual Syndrome.

Fig. 12: The percentages of the high school girls according to their knowledge levels & their attained age of menarche.
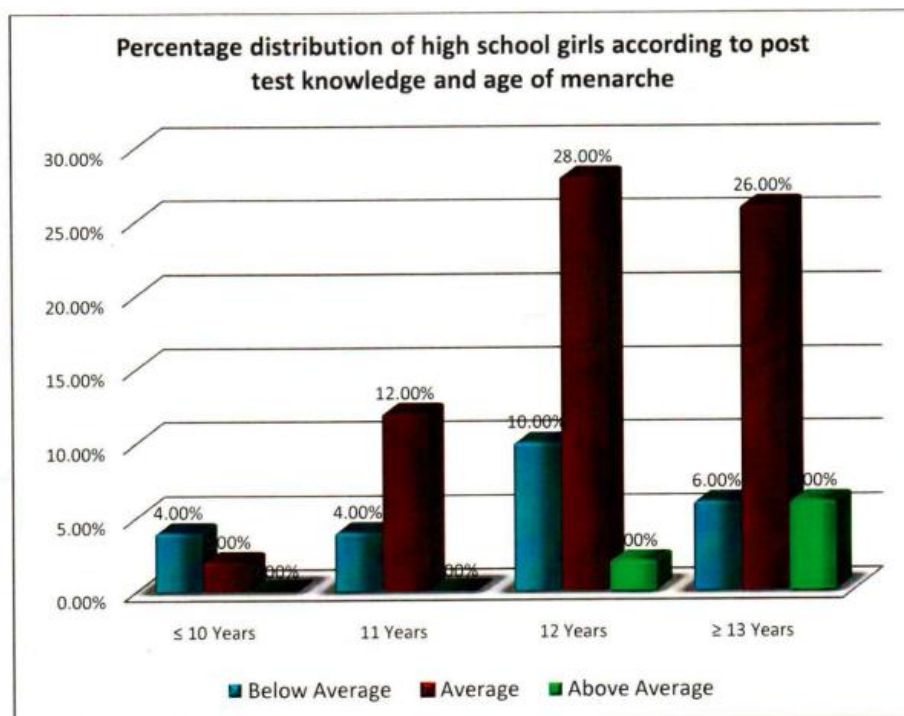
CONCLUSION
The study was undertaken to evaluate the effectiveness of the structured teaching program, on the management of Premenstrual Syndrome for the high school girls aged between 12 to 15years at High School, Hyderabad.

The objectives of the study:
- To assess the knowledge level of the high school girls regarding Management of Premenstrual Syndrome by pretest.
- To develop and administer the structured teaching program on Management of Premenstrual Syndrome on the high school girls.
- To assess the effectiveness of structured teaching program by posttest.
- To determine the relationship between the post-test knowledge scores and selected bio-socio demographic variables.

Premenstrual syndrome affects the day-to-day activities of students. So, the investigator felt that the study would help the high school girls to understand the several ways to manage the premenstrual syndrome, to acquire knowledge and skill in leading a healthy reproductive life and would help them in preventing the complications of Premenstrual syndrome such as premenstrual dysphoric disorder.

The review of literature helped the investigator to gain an insight into the present study, to gain in-depth knowledge of the content, develop the conceptual framework and frame a questionnaire for data collection.

The pre-experimental research with one group pre and post-test design was adopted. d. The sample was selected by non-randomized purposive sampling technique. The sample consisted of fifty high school girls studying in Std. VII to Std. X, present at the time of data collection.

The data was collected with the help of a structured questionnaire. The tool consisted of a structured questionnaire which was divided into 2 sub-parts.

1. **Part A** deals with demographic data of the high school girls such as age, religion, type of family, occupation of mother & father, income of the family per month, source of previous knowledge, and age of menarche.
2. **Part B** deals with assessment of knowledge regarding Management of PMS. It consists of 40 questions. Each question carries one mark; so, all questions put together a total of 40 marks. All the questions are designed with multiple choices with one correct answer.

Part B of the tool consists of 5 areas.
Area 1: Questions related to anatomy and physiology of female reproductive system. (Q. No. 1 to 6)

Area 2: Questions related to premenstrual syndrome (Q. No. 7 to 21)
Area 3: Questions related to dietary management of PMS. (Q.No. 22 to 32)
Area 4: Questions related to non-pharmacological management of PMS. (Q. No 33to 36)
Area 5: Questions related to pharmacological management of PMS. (Q. No 37 to 40)

The tool was given for content validity to various experts from nursing, obstetrics, gynecology, and statistics departments. The tool was tested for reliability by using the split half method with the use of Karl Pearson Correlation Coefficient and the value of Y for the structured questionnaire was to be .99 and the tool was found reliable.

The pilot study was conducted to determine the feasibility and practicability of conducting the main study. Structured teaching program is conducted in the same day. The post-test was given after seven days to test the effectiveness of structured teaching program.

FINDINGS OF THE STUDY
The findings show that there was a significant difference in pre-test and post-test knowledge score as area wise and item wise. The obtained paired 't' test value for knowledge and practice scores overall is significant in all the areas of knowledge.

The first objective of the study was to assess the knowledge of high school girls on the management of premenstrual syndrome by pre-test. To assess the knowledge of the students before the structured teaching program the investigator conducted the pre-test prior to the structured teaching plan to the sample. Table 11 shows that 100% of the students were below average regarding the knowledge of management of premenstrual syndrome and no students were above average nor even average category.

The second objective of the study was to develop and administer a structured teaching program on management of premenstrual syndrome to the high school girls. The investigator has developed a structured teaching program with the help of related literature from textbooks, journals, and online sources. For audio visual aid, power point was used.
e, the third objective of the study was to assess the effectiveness of structured teaching by post-test.

Table 13 shows that the overall performance of the pre-test mean score was 10.14 (25.35%) whereas the overall post-test mean score was found to be 23.06 (57.65 %). The tabulated paired 't' test was16.82 which is very much higher than the tabulated 't' value.
2.3124 at 49 degrees of freedom with 5% level of significance. The data shows that there was a significant difference in the overall pre-test and the post-test knowledge scores among high school girls. Hence the formulated hypothesis was accepted.

The table 12 shows that there was area wise significant difference in the pre-test and post-test scores of knowledges of management of premenstrual syndrome. The tabulated values of paired 't' test in the areas of knowledge of anatomy and physiology of female reproductive system, Premenstrual syndrome, dietary management of PMS, non-pharmacological management of PMS and pharmacological management of PMS were higher than the tabulated value. By means of this we can conclude that the structured teaching program on management of premenstrual syndrome for the high school girls was highly effective.

The fourth objective of the study was to determine the relationship between the post- test knowledge scores and selected bio-socio demographic variables. The selected bio-socio demographic variables were age, class of study, occupation of parents, and age of menarche. Table 17 shows the Chi Square Test that reveals high association between the knowledge scores of the high school girls & their father's occupation. The rest of the tables from 14, 15, 18 and 20 show that all other post-tests mean knowledge was not associated with any of the selected bio-socio demographic variables. Hence the second formulated hypothesis is accepted only in case of association of the post-test mean knowledge with the father's occupation but in case of other selected socio-demographic variables, the second hypothesis is rejected.

CONCLUSIONS
The following conclusions were drawn based on the findings of the study.
1. All the high school girls studying from Std VII to Std X possessed below average knowledge level and hardly knew anything about the management of premenstrual syndrome.
2. After the structured teaching program, there was a significant difference in the post-test knowledge scores which shows that exposure to structured teaching program would increase the knowledge.
3. All the high school girls have shown a lot of interest to learn about the various methods to manage premenstrual syndrome.
4. There is no association of knowledge of management of premenstrual syndrome with the selected bio-socio demographic variables.

DISCUSSION
The present study was conducted to assess the effectiveness of structured teaching program, on the management of premenstrual syndrome for high school girls at Hyderabad. This study was conducted with the help of the structured questionnaire. The data was analyzed with the help of descriptive and inferential statistics.

IMPLICATIONS
Implications for nursing research:
- The findings of the study revealed that the structured teaching program could improve the knowledge of management of premenstrual syndrome by the high school girls.
- The study is the reference for the coming investigators in the field of management of premenstrual syndrome.
- The study will encourage the nurse researchers to take up similar studies in the field of Obstetrical and Gynecological Nursing.

Implications for nursing education:
- The findings of the study revealed that the structured teaching program was effective when it is planned properly and provided in a conducive environment with appropriate audio-visual aids.
- The Nurses are vital persons in meeting changing needs of the society; they are in demand for updating the knowledge through in service education and continuing nursing education regarding the management of premenstrual syndrome for high school girls to prevent complications like premenstrual dysphoric disorder. The nurse educators can encourage the student nurses who are posted in the obstetrical and gynecological wards to provide health talks and demonstration programs on the management of premenstrual syndrome and leading a healthy lifestyle.

Implications to nursing practice:
- The findings of the study revealed that structured teaching program improved knowledge of management of premenstrual syndrome and found better response in the understanding of the high school girls about the following a healthy lifestyle.
- The health personnel especially nurses who deal with vast number of girls and women in the clinical as well as in the community settings have a significant role in bringing awareness in the women regarding the simple ways of managing premenstrual syndrome and leading a healthy life. Nurses will personalize the acquired knowledge on the management of premenstrual syndrome by educating the female clients whom they come across in their practice.
- The acquisition of information is not only limited to knowledge but also applicable in practice.
The study will enhance the scope of nursing practice in obstetrical and gynecological nursing.

Implications to nursing administration:
- The findings of the study showed that administration of structured teaching program on management of premenstrual syndrome for the high school girls is effective.
- The study will encourage the nurse administrators to organize in service education programs on management of premenstrual syndrome for nursing professionals and the female clients in the maternity wards and hospitals. The nurse administrator can disseminate the research findings to nurses in various areas of the maternity wards, so that more subjects will benefit.

LIMITATIONS
1. The results of the study are limited to the High School, Hyderabad.
2. Findings are limited to the statistical results which are used for the study.
3. This study was conducted on a limited number of high school girls only.

RECOMMENDATIONS

1. This study can be replicated on a large sample to validate the findings of the present study.
2. A similar study can be conducted for the other age group women.
3. An experimental study can be conducted to assess the effectiveness of lifestyle modification in management of the premenstrual syndrome in women.
4. A comparative study can be conducted to assess the effectiveness of dietary management and exercise therapy in the management of premenstrual syndrome.

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