International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 10 Issue 3, May-Jun 2026 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Effectiveness of Self-Instructional Module on Knowledge Regarding Premenstrual Syndrome and its Management among Secondary School Girls in Rural Schools

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ABSTRACT

Premenstrual Syndrome (PMS) is a common health issue affecting adolescent girls worldwide. It includes a combination of physical, emotional, behavioral, and psychological symptoms that occur before menstruation and may interfere with daily activities, school performance, and social relationships. Lack of awareness and poor understanding regarding PMS often lead to anxiety, misconceptions, and unhealthy coping practices among adolescent girls, especially in rural areas. Educational interventions can help improve awareness and encourage healthy menstrual practices.

The present study was conducted to assess the effectiveness of a self-instructional module regarding knowledge of Premenstrual Syndrome and its management among secondary school girls in selected rural secondary schools of Greater Noida. A quantitative research approach with a quasi-experimental one-group pre-test and post-test design was adopted for the study. Fifty secondary school girls were selected using non-probability convenient sampling technique. A structured self-administered questionnaire consisting of demographic variables and 30 knowledge-based questions regarding PMS and its management was used for data collection. The self-instructional module was administered after conducting the pre-test, followed by post-test evaluation.

The findings revealed that the majority of participants had inadequate knowledge regarding Premenstrual Syndrome before the intervention. Domain-wise pre-test scores showed poor awareness regarding treatment, intervention, etiology, and management of PMS. After administration of the self-instructional module, post-test scores demonstrated marked improvement in all domains of knowledge. Statistical analysis using paired t-test indicated a significant increase in post-test mean scores compared to pre-test scores, proving the effectiveness of the educational intervention.

The study concluded that self-instructional modules are effective teaching strategies for improving knowledge regarding Premenstrual Syndrome among adolescent girls. School-based menstrual health education programmes should be strengthened to improve reproductive health awareness and promote healthy practices among school-going girls.

How to cite this paper: Jyotshana | Neelam Chaudhary | Harpreet Kaur "Effectiveness of Self-Instructional Module on Knowledge Regarding Premenstrual Syndrome and its Management among Secondary School Girls in Rural Schools" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-3, June 2026, pp.668-673, URL: www.ijtsrd.com/papers/ijtsrd133289.pdf

IJTSRD133289

KEYWORDS: *Premenstrual Syndrome, Self-Instructional Module, Adolescent Girls, Menstrual Health, Knowledge, Rural Schools, Educational Intervention.*

INTRODUCTION

Adolescence is an important transitional stage between childhood and adulthood characterized by rapid growth and development. During this period, girls undergo various physical, hormonal, emotional, and psychological changes. Menstruation is one of the major physiological events occurring during

adolescence and plays a significant role in reproductive health. Although menstruation is a normal biological process, many adolescent girls experience menstrual-related problems that affect their daily life and wellbeing.

Premenstrual Syndrome (PMS) is one of the most common gynecological conditions experienced by adolescent girls and women of reproductive age. PMS refers to a group of recurrent physical, emotional, behavioral, and psychological symptoms occurring during the luteal phase of the menstrual cycle and disappearing after the onset of menstruation. Common symptoms include mood swings, irritability, fatigue, abdominal pain, bloating, headache, breast tenderness, depression, anxiety, sleep disturbances, and reduced concentration.

The prevalence of PMS among adolescent girls is increasing globally. Studies conducted in different countries have reported that a large percentage of school-going girls experience PMS symptoms that interfere with academic performance, physical activity, social interaction, and emotional stability. In India, menstrual health education remains inadequate, especially in rural communities where cultural taboos, myths, and lack of awareness continue to affect adolescent girls.

Lack of proper knowledge regarding PMS and its management may result in fear, stress, absenteeism from school, poor academic achievement, and unhealthy coping behaviors. Many adolescent girls do not seek medical advice due to embarrassment or misconceptions associated with menstruation. Therefore, educational interventions aimed at increasing awareness regarding menstrual health are essential.

Self-instructional modules are simple and cost-effective educational tools that allow individuals to learn independently at their own pace. These modules can provide accurate information regarding symptoms, causes, prevention, and management of PMS. Educational programmes in schools can empower adolescent girls to understand their reproductive health better and adopt healthy practices.

The present study was undertaken to assess the effectiveness of a self-instructional module regarding Premenstrual Syndrome and its management among secondary school girls in selected rural schools of Greater Noida.

Need of the Study

Premenstrual Syndrome is a significant public health concern among adolescent girls. Despite being common, PMS is often neglected due to lack of awareness, social stigma, and inadequate menstrual education. Many girls consider menstrual discomfort as normal and do not seek appropriate guidance or treatment.

Adolescent girls living in rural areas often face additional challenges related to menstrual hygiene and reproductive health education. Cultural restrictions and poor communication regarding menstruation contribute to misinformation and unhealthy practices. Lack of scientific knowledge regarding PMS may negatively affect emotional wellbeing, concentration, social participation, and quality of life.

School health education programmes can play a major role in improving awareness among adolescent girls. Nurses and educators have an important responsibility in promoting menstrual health education and correcting misconceptions related to menstruation and PMS.

The researcher observed that many school girls had inadequate knowledge regarding symptoms, causes, and management of PMS. Hence, the present study was conducted to evaluate the effectiveness of a self-instructional module in improving knowledge among secondary school girls.

Objectives of the Study

1. To assess the pre-test knowledge regarding Premenstrual Syndrome and its management among secondary school girls.
2. To develop and administer a self-instructional module regarding Premenstrual Syndrome and its management.
3. To evaluate the effectiveness of the self-instructional module by comparing pre-test and post-test knowledge scores.
4. To determine the association between pre-test knowledge scores and selected demographic variables.

Hypotheses

H1: There will be a significant difference between pre-test and post-test knowledge scores regarding Premenstrual Syndrome and its management among secondary school girls after administration of the self-instructional module.

H0: There will be no significant difference between pre-test and post-test knowledge scores regarding Premenstrual Syndrome and its management among secondary school girls after administration of the self-instructional module.

Methodology

Research Approach: A quantitative research approach was adopted for the present study because it enabled the researcher to assess and compare

knowledge levels before and after the intervention systematically.

Research Design: The study utilized a quasi-experimental one-group pre-test and post-test research design. In this design, knowledge regarding Premenstrual Syndrome was assessed before administration of the self-instructional module and reassessed after the intervention.

The design can be represented as:

$$O1 \rightarrow X \rightarrow O2$$

Where:
- O1 = Pre-test assessment
- X = Self-instructional module
- O2 = Post-test assessment

Setting of the Study: The study was conducted in selected rural secondary schools of Greater Noida. The setting was selected based on feasibility, accessibility of samples, and administrative permission.

Population: The target population consisted of secondary school girls studying in selected rural schools.

Sample and Sampling Technique: A total of 50 secondary school girls participated in the study. Non-probability convenient sampling technique was used to select the participants.

Independent Variable: The independent variable of the study was the self-instructional module regarding Premenstrual Syndrome and its management.

Dependent Variable: The dependent variable was the knowledge level of secondary school girls regarding Premenstrual Syndrome and its management.

Inclusion Criteria
- Secondary school girls willing to participate in the study
- Girls available during the period of data collection

Exclusion Criteria
- Girls absent during data collection
- Girls unwilling to participate in the study

Tool for Data Collection: The data collection tool consisted of two sections:

Section A: Demographic Variables: This section included demographic information such as age, religion, occupation of parents, education of parents, and age at menarche.

Section B: Structured Knowledge Questionnaire: The questionnaire contained 30 dichotomous questions related to:
- General information regarding PMS
- Etiology and incidence
- Clinical manifestations
- Diagnosis
- Treatment and management

Each correct response carried one mark, while incorrect responses carried zero marks. The maximum obtainable score was 30.

The level of knowledge was categorized as:
- Inadequate knowledge: Less than 50%
- Moderate knowledge: 51%–75%
- Adequate knowledge: Above 75%

Validity and Reliability: The tool was validated by experts including doctors, professors, and statisticians. Reliability was established using split-half method and Spearman-Brown prophecy formula. The reliability coefficient was found to be 0.98, indicating that the tool was highly reliable.

Pilot Study: A pilot study was conducted to assess feasibility and practicality of the research tool. The pilot study confirmed that the questionnaire was understandable and suitable for the participants.

Data Collection Procedure

Permission was obtained from school authorities before data collection. Informed consent was taken from participants, and confidentiality was maintained throughout the study.

Pre-test assessment was conducted using the structured questionnaire. After the pre-test, the self-instructional module was administered to the participants. Post-test evaluation was conducted after completion of the intervention to assess improvement in knowledge.

Plan for Data Analysis: The collected data were analyzed using descriptive and inferential statistics.

Descriptive Statistics
- Frequency
- Percentage
- Mean
- Standard deviation

Inferential Statistics
- Paired t-test
- Chi-square test

Analysis and Interpretation

The demographic findings showed that most participants belonged to the age group of 17 years and above. A large number of participants had attained menarche between 13–16 years.

Pre-test findings revealed that the majority of secondary school girls had inadequate knowledge regarding Premenstrual Syndrome and its

management. The highest pre-test mean percentage score was observed in the domain "What is PMS" (52.4%), whereas the lowest score was found in the domain "Treatment and Intervention" (46%).

The findings indicated that adolescent girls lacked proper understanding regarding causes, symptoms, diagnosis, and management of PMS. This may be due to inadequate reproductive health education, social stigma, and poor communication regarding menstruation.

After administration of the self-instructional module, the post-test scores increased significantly in all domains. Participants demonstrated improved understanding regarding:

- Symptoms of PMS
- Causes and risk factors
- Management strategies
- Healthy lifestyle modifications
- Importance of seeking medical help when necessary

Comparison of pre-test and post-test mean scores showed significant improvement after the intervention. The calculated paired t-test value indicated that the self-instructional module was effective in enhancing knowledge among secondary school girls.

The study findings support the research hypothesis that educational interventions improve awareness regarding Premenstrual Syndrome and its management.

Table 1: Frequency and percentage distribution of secondary school girls according to demographic variables

Demographic variables		f	%
Age in year	13-14 yrs	5	10%
	15 -16 yrs	20	40%
	17 yrs and above	25	50%
Education of parents	No formal education	10	20%
	Primary education	10	20%
	Secondary education	10	20%
	Higher secondary education	10	20%
	Graduate and above	10	20%
Occupation of parents	Health professional worker	25	50%
	Non-Health professional worker	25	50%
Religion	Hindu	15	30%
	Muslim	10	20%
	Christian	15	30%
	Others	10	20%
Age at menarche	Less than 13 years	15	30%
	13-16 years	20	40%
	More than 16 years	15	30%

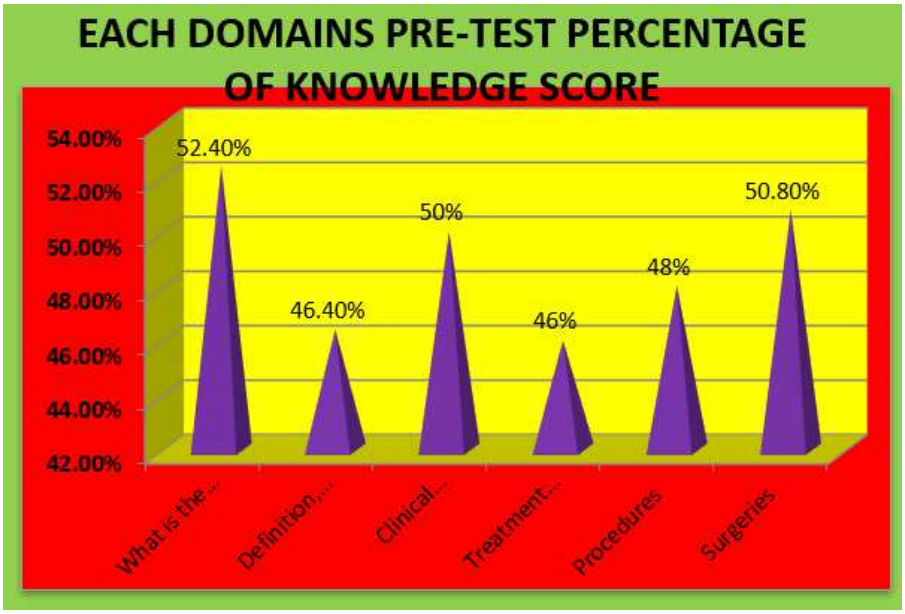

Figure 1:

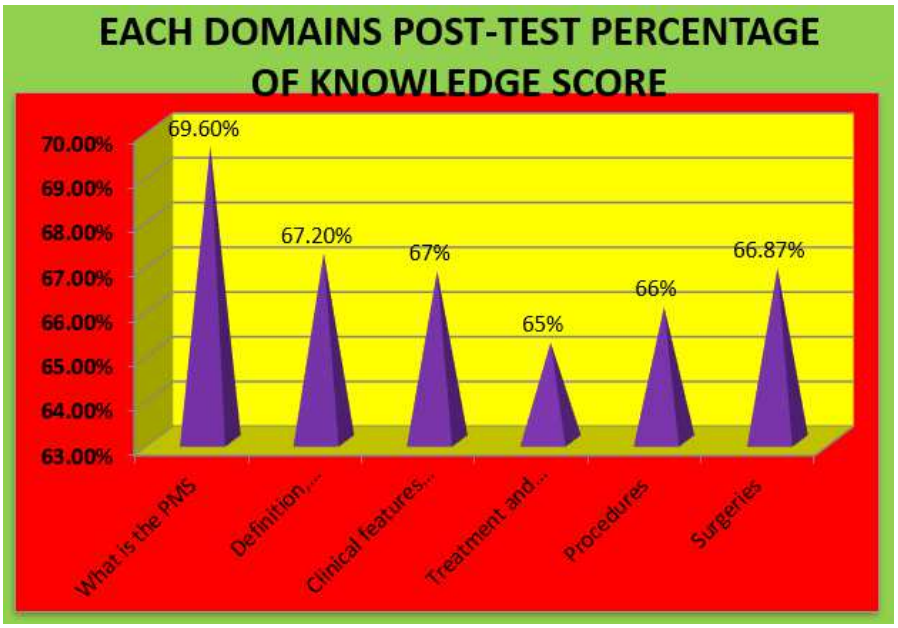

Figure 2:

Discussion

The present study assessed the effectiveness of a self-instructional module regarding knowledge of Premenstrual Syndrome among secondary school girls. The findings demonstrated that participants had inadequate knowledge regarding PMS before the educational intervention.

The results are consistent with previous studies conducted among adolescent girls in India and other countries, which reported poor awareness regarding menstrual health and PMS management. Many adolescent girls are not provided with adequate information regarding menstruation before menarche, leading to misconceptions and anxiety.

The present study revealed that knowledge improved significantly after administration of the self-instructional module. Similar findings have been reported by researchers who observed that educational programmes and structured teaching interventions improve menstrual health awareness among adolescents.

Educational interventions help adolescent girls understand that PMS is a manageable condition and encourage them to adopt healthy coping mechanisms such as:

- Balanced diet
- Regular exercise
- Stress management
- Proper sleep
- Menstrual hygiene practices

The study also emphasizes the role of school health nurses, teachers, and healthcare professionals in promoting reproductive health education among adolescents. Early education regarding menstruation and PMS can reduce fear, stigma, absenteeism, and emotional distress among school girls.

The findings suggest that school-based educational programmes should be strengthened to improve menstrual health literacy among adolescents, especially in rural communities.

Nursing Implications

Nursing Practice: Nurses can educate adolescent girls regarding menstrual health, PMS symptoms, and self-care practices through school health programmes.

Nursing Education: Nursing curricula should include adolescent reproductive health education and menstrual health promotion strategies.

Nursing Administration: School health administrators should organize regular awareness programmes regarding menstrual health and PMS management.

Nursing Research: Further research can be conducted on menstrual health interventions among larger populations and in different community settings.

Limitations of the Study

1. The study was limited to selected rural schools of Greater Noida.
2. The sample size was limited to 50 participants.
3. Non-probability sampling technique limits generalization of findings.
4. The study assessed only knowledge and not actual practices.

Recommendations

1. Similar studies can be conducted with larger sample sizes.

2. Comparative studies can be conducted between rural and urban school girls.
3. Structured teaching programmes can be implemented in schools regularly.
4. Studies can be conducted to assess menstrual hygiene practices among adolescents.

Conclusion

Premenstrual Syndrome is a common health problem among adolescent girls that can affect physical, emotional, psychological, and academic wellbeing. The present study found that secondary school girls had inadequate knowledge regarding PMS before the intervention.

Administration of the self-instructional module significantly improved knowledge regarding symptoms, causes, prevention, and management of Premenstrual Syndrome. The findings confirmed that educational interventions are effective in promoting menstrual health awareness among adolescent girls.

The study highlights the importance of school-based reproductive health education programmes and emphasizes the role of nurses and educators in promoting menstrual health awareness. Providing accurate information regarding PMS can help adolescent girls manage symptoms effectively and improve their overall quality of life.

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