



A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS IN NANDAGUDI GOVERNMENT HIGH SCHOOL, HOSAKOTE TALUK

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ABSTRACT

Background: Menstrual hygiene is a critical aspect of adolescent health that is often neglected due to lack of awareness, cultural taboos, and inadequate education. Poor menstrual hygiene can lead to infections, reproductive health problems, and absenteeism from school. Structured teaching programmes have been proven to enhance knowledge and promote better hygiene practices among adolescent girls. **Aim:** To assess the effectiveness of a structured teaching programme on knowledge regarding menstrual hygiene among adolescent girls in Nandagudi Government High School, Hosakote Taluk. **Methods:** A pre-experimental, one-group pre-test–post-test design was adopted. The study was conducted among **58 adolescent girls** selected by purposive sampling. A structured questionnaire was used to assess knowledge. The structured teaching programme covered menstrual hygiene measures, disposal of sanitary materials, and myths and misconceptions. Data were collected before and one weeks after the intervention. **Results:** The pre-test mean knowledge score was **9.5 (SD=1.88)**, and post-test mean score was **12.87 (SD=1.50)** indicating a statistically significant improvement ($p < 0.05$) in knowledge and hygiene. The findings suggest that structured teaching programmes are effective in improving awareness and promoting healthy practices among adolescent girls. **Conclusion:** Educational interventions, such as structured teaching programmes, can play a vital role in enhancing menstrual hygiene knowledge. Integration of menstrual health education into school curricula is recommended.

KEYWORDS: Menstrual hygiene, adolescent girls, structured teaching programme, knowledge, and pre-test, post-test.

INTRODUCTION

Menstrual hygiene refers to the practices and conditions necessary for maintaining health and cleanliness during menstruation, the monthly shedding of the uterine lining in people with female reproductive systems. It is a natural biological process, yet it is often surrounded by stigma, taboos, and misinformation. Maintaining proper menstrual hygiene is essential not only for physical health but also for dignity, education, and overall well-being. It involves the use of clean menstrual products like sanitary pads, tampons, or menstrual cups, along with regular washing of the body, proper disposal of used products, and access to clean water and private sanitation facilities.^[1]

Lack of menstrual hygiene awareness and resources can lead to infections, reproductive health problems, and social exclusion, especially among adolescent girls in underprivileged areas. Educating communities, providing affordable menstrual products, and normalizing conversations around menstruation are key steps in promoting menstrual health and gender equality.^[1]

Need for study

Menstrual hygiene management remains a critical public health and social issue worldwide, especially in low- and middle-income countries. Despite being a natural physiological process experienced by half the population, menstruation is frequently accompanied by cultural

taboos, stigma, and misinformation that negatively affect the health, education, and social well-being of menstruating individuals.^[2]

Several studies have demonstrated that inadequate menstrual hygiene practices are associated with increased risks of reproductive tract infections (RTIs), urinary tract infections (UTIs), and other gynaecological complications. This underlines the necessity of studying menstrual hygiene to develop effective health education programs and improve access to sanitary products and facilities.^[2]

Furthermore, menstrual hygiene significantly impacts educational outcomes. Girls often miss school during menstruation due to the absence of adequate sanitation facilities or menstrual products, contributing to higher dropout rates and gender disparities in education.

Understanding the barriers to menstrual hygiene management can inform interventions aimed at enhancing school attendance and performance.^[2]

Additionally, access to affordable and hygienic menstrual products, as well as clean sanitation facilities, remains limited in many rural and underserved communities. Investigating these gaps can guide policy makers and health practitioners in addressing infrastructural and socioeconomic challenges. The cultural silence and stigma surrounding menstruation also contribute to misinformation and unhealthy practices, underscoring the need for research to promote awareness, normalize discussions, and empower individuals to manage menstruation with dignity.^[2]

Given the interconnectedness of menstrual hygiene with health, education, gender equality, and human rights, comprehensive research in this field is imperative. Such studies can provide empirical evidence to shape policies, programs, and advocacy efforts aligned with global development goals, including the Sustainable Development Goals (SDGs).^[2]

Menstrual hygiene is vital to the empowerment and well-being of women and girls worldwide. It is about more than just access to sanitary pads and appropriate toilets – though those are important. It is also about ensuring women and girls live in an environment that values and supports their ability to manage their menstruation with dignity.^[3]

Globally, at least 500 million women and girls lack proper access to menstrual hygiene facilities and more than one-third of schools lack single-sex toilets. For adolescent girls, the presence of a safe water supply and clean, functioning, private toilet facilities for managing their menstruation can be the difference between dropping out and getting an education. Additionally, lack of proper menstrual hygiene products increases risk of reproductive and urinary tract infections.^[3]

Therefore, this study aims to explore menstrual hygiene practices, knowledge, and barriers among the target population, with the goal of informing evidence-based interventions that promote health, education, and practice about menstrual hygiene.

Review of literature

An epidemiologic study was undertaken using cross-sectional study method among 550 school-going adolescent girls aged 13-16 years. Data was collected using a pre-tested questionnaire and analysed using SPSS version 15. Around 34% participants were aware about menstruation prior to menarche, and mothers were the main source of information among both groups. Overall, 69% of adolescent girls were using sanitary napkins as menstrual absorbent, while 6% were using both cloth and sanitary napkins. Almost half of the rural participants dried the absorbent inside their homes. There is a need to equip the adolescent girls with knowledge regarding safe, hygienic practices to enable them to lead a healthy reproductive life.^[4]

A cross-sectional prospective study was conducted on 1016 school-going adolescent girls in January 2020. A questionnaire in English and in Kannada was distributed to girls of class 8-12 of ages between 10 and 19 years. 0.5% of the girls attained menarche by 12 to 14.9 years, 37.2% of the girls had their periods every 28-34 days, and 12.2% of the girls said they have heavy periods. 61.95% of the girls had dysmenorrhea, and 9.7% of the girls said that they required medications for the pain. 70.7% of the girls were using commercial sanitary napkins, 12.7% were using cloth, and 15.3% were using both. 55.5% of the girls who were using cloth as an absorbent were not drying the cloth in sunlight. 57.1% of the girls were washing their genitals more than 2 times a day. 93.8% were having bath during menses and 87.2% were using soap along with water. 37.7% of the girls disposed their pads by burning them, 50.8% of them disposed them in the dust bin, and 4.9% of them buried them. 8.6% of the girls said that they remained completely absent from school during periods. 17.85% said that they remained absent for a day. 53.4% of the respondents said that they have difficulty in concentrating at school. 76.1% said that they had adequate water and sanitation facilities at school. 22.3% said that there was adequate facility to change their pads at school. 73.2% said that they could get a spare pad at school. 43.3% of the girls said they avoided cultural functions during their periods, and 38.5% said that they avoided religious ceremonies and practices during their periods. 8.7% of the girls were made to sit outside the house during their periods. The girls from rural areas had poorer hygienic habits, in comparison to the urban girls. Cultural restrictions such as sitting outside the house during menstruation and restricting play were more in the rural girls than the urban girls. Menstrual morbidities, menstrual hygiene management, and cultural beliefs all play a role in school absenteeism in adolescent girls. Improvement of facilities at school and conducting

awareness programs can help adolescent girls to attend schools.^[5]

A cross-sectional study was conducted between 1 and 31 January 2020 involving 230 college-going girls belonging to the late adolescent age group (18-19 years) from four-degree colleges in Mangalore. Quota sampling was used; validated questionnaire was used to collect information regarding knowledge attitude and practices related to menstrual hygiene. Statistical analysis was done using SPSS 25.0. Knowledge regarding the basic physiology of menstruation was known to about 87% of participants. However, the source of blood was known to only 65%. The main source of their information was their mothers. About half of the students were aware of the various premenstrual signs and infections linked to poor menstrual hygiene. Various taboos regarding menstruation are still prevalent; however, it was surprising that the taboo was comparatively lesser among rural people. More than 80% of people thought that men should also be educated regarding menstruation. Sanitary pads were the most used absorbent material due to its ease of use and availability. Disposal was mainly through flushing, especially among rural students. Burning of the absorbent material is also followed; disposal bins were mainly used by urban students. About 38% of urban and 36.6% of rural students miss college during their menses, mainly due to pain.^[6]

A cross-sectional study was conducted among adolescent girls (10-19 years) residing in a tribal area of Nagpur District from January to March 2022. Three tribal residential schools (Ashram Shala) were selected from a total of six in Hingana Taluka of Nagpur District, using simple random sampling to fulfil the required sample size of 272. Demographic details, age at menarche, awareness of menstruation, and sources of information about menstruation, menstrual hygiene practices, and restrictions observed during menstruation were assessed. The average age at menarche was 13.04±0.96 years (range 11-16 years). Only 45.17% of girls were aware of the menarche and menstrual cycle before its onset. The duration of the menstrual cycle ranged from 21-35 days in most of the girls (90.69%), and it was regular in 85.86% of girls. Duration of bleeding was two to six days for the majority of the girls (87.93%). Around 73.79% of girls were using sanitary pads, while 26.21% of girls were using clothes. The most important restrictions imposed on the girls during menstruation were not being allowed to attend religious functions (97.93%), followed by not being allowed to attend classes (65.86%). The use of sanitary pads was significantly more in late adolescent girls than in early adolescent girls ($\chi^2=14.97$, $p=0.0001$), girls who have literate mothers than girls with illiterate mothers ($\chi^2=5.17$, $p=0.02$), and girls belonging to higher socioeconomic classes (class I, II, III) than lower ones (class IV, V) ($\chi^2=44.23$, $p<0.0001$). The tribal adolescent girls still don't exercise proper hygiene throughout their periods. During menstruation, the majority of girls are still subjected to various

restrictions.^[7]

OBJECTIVES

1. To assess the pre-test the pre-test level of knowledge regarding menstrual hygiene among adolescent girls in Nandagudi Government High School, Hosakote Taluk.
2. To evaluate the post-test level of knowledge after administering a structured teaching program among adolescent girls in Nandagudi Government High School, Hosakote Taluk.
3. To compare the pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls in Nandagudi Government High School, Hosakote Taluk.

Hypothesis

H1:- There will be a significant difference between pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls after the structured teaching program ($p<0.05$)

METHODOLOGY

RESEARCH DESIGN: Pre-experimental one-group pre-test post-test design

SETTING: - Government High School Nandagudi

POPULATION: - Adolescent girls studying in class VIII to X **SAMPLE SIZE:** - 58

SAMPLING TECHNIQUE: - Purposive sampling.

CRITERIA FOR SELECTION

Inclusion criteria

Girls aged 13-16 years who had attained menarche and were willing to participate.

Exclusion criteria

Girls absent during the study period.

DATA COLLECTION TOOL

Structured knowledge questionnaire with 15 multiple choice questions.

PROCEDURE

1. Pre-test was administered to assess baseline knowledge
2. A 45-60 minute structured teaching program was delivered with the help of PPT and audio visual aids.
3. Post-test was conducted after one week using the same questionnaire.

ETHICAL CONSIDERATION

- ❖ Permission obtained from the school principal
- ❖ Informed consent from students
- ❖ Confidentiality and anonymity were maintained

DATA ANALYSIS

Descriptive statistics: Mean, frequency, percentage, standard deviation were used to summarize data.

Inferential statistics: Paired t-test was applied to compare pre-test and post-test score

RESULT

PRE-TEST RESULTS

Level of knowledge	Score range	No of respondents (Out of 58)	Percentage
Inadequate (<50%)	0-5	02	3.44%
Moderate (50-75%)	6-10	39	67.24%
Adequate >75%	11-15	17	29.31%

POST-TEST RESULTS

Level of knowledge	Score range	of respondents (Out of 58)	Percentage
Inadequate (<50%)	0-5	0	0%
Moderate (50-75%)	6-10	0	0%
Adequate >75%	11-15	58	100%

MEAN, AND STANDARD DEVIATION OF THE PRE-TEST AND POST- TEST KNOWLEDGE SCORES OF STUDENTS

Knowledge aspects	No. of Items	Max Score	Pre-test		Post- test	
			Mean	SD	Mean	SD
Overall	15	15	9.5	1.88	12.87	1.5

COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE OF STUDENTS

Knowledge of the student	Pre test		Post test		t- test	inference
	Mean	S D	Mean	S D		
Experimental group	9.5	1.88	12.87	1.5	10.67	S

INTERPRETATION

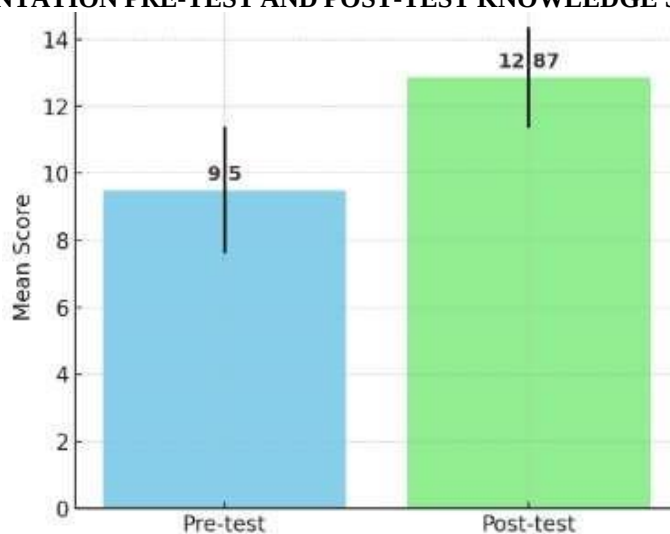
- The **mean knowledge score** of students increased from **9.5 (SD=1.88)** in the pre-test to **12.87 (SD=1.50)** in the post-test after the intervention (structured teaching program).
- The **calculated t-value = 10.67**.
- Since this value is **greater than the tabulated**

(critical) t-value at 0.05 level of significance, the difference is **statistically significant**.

- This means the **structured teaching program was effective** in improving students' knowledge.

DISCUSSION

GRAPHICAL REPRESENTATION PRE-TEST AND POST-TEST KNOWLEDGE SCORES



The present study aimed to evaluate the effectiveness of a structured teaching program on students' knowledge.

The findings revealed that the **mean pre-test knowledge score** of the experimental group was **9.5 ± 1.88**, while the

mean post-test score increased to 12.87 ± 1.50 . The t-test value of 10.67 was found to be statistically significant, indicating that the improvement in knowledge was not due to chance but due to the intervention.

The results highlight that the structured teaching program was highly effective in enhancing students' knowledge. The significant gain in post-test scores suggests that well-planned teaching strategies can bridge the knowledge gap effectively.

These findings are consistent with similar studies in the field of education and nursing, where structured teaching interventions have shown positive outcomes in improving awareness and knowledge levels. The reduction in standard deviation in the post-test also reflects better consistency and uniform understanding among students.

RECOMMENDATION

Possible Settings for Conducting Similar Studies

1. **Educational Institutions**
 - **Schools:** Among adolescent girls (middle school, high school).
 - **Colleges:** Female students in pre-university or degree courses.
 - **Hostels:** Residential girls' hostels where access to hygiene facilities may differ.
2. **Healthcare Settings**
 - **Primary Health Centres (PHCs):** Awareness programs for adolescent girls visiting health clinics.
 - **Community Health Centres:** Women and girls from rural/urban areas.
 - **Maternal and Child Health Clinics:** To educate mothers and adolescent daughters together.
3. **Community-Based Settings**
 - **Rural Villages:** Where traditional beliefs and taboos are more prevalent.
 - **Urban Slums:** Where lack of facilities and awareness can affect menstrual hygiene practices.
 - **Self-Help Groups (SHGs):** Women's groups can be educated to influence younger generations.
4. **Workplace & Social Groups**
 - **Factories and Workplaces:** Young women workers who may lack awareness or facilities.
 - **NGO-Run Programs:** Partnering with NGOs working in women's health to reach wider communities.
5. **Special Groups**
 - **Differently-abled Girls/Women:** Who may face unique challenges in menstrual hygiene.
 - **Tribal Communities:** Where cultural practices may significantly affect menstrual health.
 - **Refugee Camps/Orphanages:** Populations with limited access to menstrual hygiene resources.

CONCLUSION

The findings of the study revealed that the **structured teaching program on menstrual hygiene** significantly improved the knowledge levels of adolescent girls. The mean post-test knowledge score was notably higher than the pre-test score, and the difference was found to be **statistically significant** ($t = 10.67$, $p < 0.05$). This indicates that the intervention was effective in enhancing awareness and correcting misconceptions regarding menstrual hygiene.

Improved knowledge about menstrual hygiene is crucial for promoting healthy practices, preventing infections, and reducing stigma associated with menstruation. The study highlights the importance of **school-based health education programs** and emphasizes the need to integrate menstrual hygiene education into the regular curriculum.

REFERENCES

1. World Health Organization. Menstrual health [Internet]. Geneva: World Health Organization, 2022; [cited 2025 Aug 18]. Available from: <https://www.who.int/health-topics/menstruation>
2. Ommer M, Sahin M. Overcoming the taboo: advancing the global agenda for menstrual hygiene management for schoolgirls. *Am J Public Health*, 2013; 103(9): 1556–9. doi:10.2105/AJPH.2013.301374
3. World Vision International. Menstrual hygiene [Internet]. 2023 [cited 2025 Aug 18]. Available from: <https://www.wvi.org/clean-water-sanitation-and-hygiene/wash/menstrual-hygiene>
4. Ramachandra K, Gilyaru S, Eregowda A, Yathiraja S. A study on knowledge and practices regarding menstrual hygiene among urban adolescent girls. *Int J Contemp Pediatr*, 2016; 3(1): 142–5. doi:10.18203/2349-3291.ijcp20160147
5. Yaliwal RG, Biradar AM, Kori SS, Mudanur SR, Pujeri SU, Shannawaz M. Menstrual morbidities, menstrual hygiene, cultural practices during menstruation, and WASH practices at schools in adolescent girls of North Karnataka, India: a cross-sectional prospective study. *Obstetrics Gynecology Int.*, 2020; 2020; 6238193. doi:10.1155/2020/6238193. PMID: 33133193; PMCID: PMC7593755
6. Kotian H, Agrawal N, Swarna S, Shreya R, Patil VMB, Anarghya V, et al. Knowledge, attitude and practices regarding menstruation among adolescent girls in Mangalore, Karnataka. *J Family Med Prim Care*, 2025 Apr; 14(4): 1472–7. doi:10.4103/jfmpc.jfmpc_1821_24. PMID: 40396074; PMCID: PMC12088542
7. Borkar SK, Borkar A, Shaikh MK, Mendhe H, Ambad R, Joshi A. Study of menstrual hygiene practices among adolescent girls in a tribal area of Central India. *Cureus.*, 2022 Oct 13; 14(10): e30247. doi:10.7759/cureus.30247. PMID: 36381734; PMCID: PMC9652700