

Effectiveness of a Video-Assisted Teaching Programme on Knowledge Regarding Menstrual Hygiene among Adolescent Girls in Selected Private Schools, Greater Noida. UP.

Prof. Nithya N.¹ Prof. Neha Tiwari², Ankita Chaudhary^{3*}, Shalu⁴, Abdul Karim⁵, Tannu⁶, Maruf⁷

¹ Principal, NIMT Institute of Medical and Paramedial Sciences, Greater Noida, UP.

² Vice-Principal, NIMT Institute of Medical and Paramedial Sciences, Greater Noida, UP.

³ B.Sc. Nursing Students, NIMT Institute of Medical and Paramedial Sciences, Greater Noida, UP

Corresponding Author:

Ankita Chaudhary

Chaudhary1.ankita@gmail.com

Background: Menstrual hygiene is an essential component of adolescent reproductive health. Inadequate knowledge regarding menstruation and menstrual hygiene may lead to unhealthy practices, misconceptions, and increased risk of reproductive tract infections. Health education through innovative teaching methods such as video-assisted learning can significantly improve awareness among adolescent girls.

Objectives: The study aimed to assess the effectiveness of a Video-Assisted Teaching Programme (VATP) on knowledge regarding menstrual hygiene among adolescent girls in selected private schools of Greater Noida and to determine the association between pre-test knowledge and selected demographic variables.

Methodology: A quantitative approach with a pre-experimental one-group pre-test and post-test design was adopted. Sixty adolescent girls were selected using a non-probability purposive sampling technique. A structured knowledge questionnaire consisting of 20 items was administered before and seven days after the Video-Assisted Teaching Programme. Descriptive statistics, paired *t*-test, and Chi-square test were used for data analysis, with statistical significance set at $p < 0.05$.

Results: The pre-test mean knowledge score was 10.84 ± 2.63 , which increased significantly to 17.65 ± 1.54 after the intervention. The mean difference was 6.81 , and the paired *t*-value was 20.47 ($p < 0.001$), indicating a highly significant improvement in knowledge. Significant associations were observed between knowledge scores and educational status, parental education, family income, source of information, and type of menstrual absorbent used.

Conclusion: The Video-Assisted Teaching Programme was highly effective in improving knowledge regarding menstrual hygiene among adolescent girls. Integrating audiovisual educational interventions into school health programmes can promote healthy menstrual practices, dispel misconceptions, and enhance adolescent reproductive health.

Keywords: Menstrual Hygiene, Adolescent Girls, Video-Assisted Teaching Programme, Knowledge, School Health Education, Quasi-Experimental Study.

Introduction:

Adolescence is a crucial stage of human development characterized by rapid physical, psychological, emotional, and social changes. The World Health Organization (WHO) defines adolescence as the period between 10 and 19 years of age, during which biological maturation, cognitive development, and social transition occur. Healthy behaviours and knowledge acquired during this period influence health outcomes throughout life. Among adolescent girls, puberty marks the beginning of reproductive maturity, with menarche being one of the most important physiological milestones. Menstruation is a natural biological process resulting from cyclic hormonal changes involving the hypothalamic–pituitary–ovarian axis and reproductive system. However, many adolescent girls experience fear, anxiety, embarrassment, and confusion during menarche due to inadequate knowledge, lack of preparation, and prevailing sociocultural beliefs.^{1–3}

Menstrual hygiene refers to the practices followed by females during menstruation to maintain cleanliness, comfort, dignity, and health. It includes the use of clean menstrual absorbents, regular changing of absorbents, proper genital hygiene, safe disposal of menstrual waste, and access to adequate water, sanitation, and privacy facilities. Menstrual health is now recognized as an important component of sexual and reproductive health and a fundamental human right. The WHO and UNICEF emphasize that appropriate menstrual health education, availability of menstrual materials, sanitation facilities, and freedom from stigma are essential for enabling girls and women to manage menstruation safely and with dignity.^{3,4}

Background of the Study:

Menstrual health is an essential component of adolescent health and reproductive well-being. It encompasses not only menstrual hygiene practices but also access to accurate information, appropriate menstrual materials, adequate water, sanitation and hygiene facilities, healthcare services for menstrual problems, and an environment free from stigma and discrimination. Effective menstrual hygiene management enables adolescent girls to experience menstruation with dignity, confidence, and safety.^{1–3}

Need for the Study:

Menstrual hygiene is an important component of adolescent reproductive health and plays a significant role in maintaining the physical, psychological, and social well-being of girls. Although menstruation is a normal physiological process, many adolescent girls continue to experience fear, embarrassment, anxiety, and confusion due to inadequate knowledge and limited preparation before menarche. Lack of accurate information may lead to misconceptions, unhealthy menstrual practices, and reluctance to seek guidance for menstrual-related concerns.^{1–3}

In India, adolescent girls represent a significant population group requiring focused reproductive health education. Government initiatives such as the Rashtriya Kishor Swasthya Karyakram (RKSK), Menstrual Hygiene Scheme, and School Health and Wellness Programme have contributed to improving awareness and accessibility of menstrual health resources. However, studies continue to identify gaps in menstrual hygiene knowledge and practices among adolescent girls due to differences in educational status, parental education, socioeconomic conditions, and availability of reliable information sources.^{7,11,14}

Aim of the Study:

The aim of the study was to assess the effectiveness of a Video-Assisted Teaching Programme in improving knowledge regarding menstrual hygiene among adolescent girls studying in selected private schools of Greater Noida.

Statement of the Problem:

“A study to assess the effectiveness of a Video-Assisted Teaching Programme on knowledge regarding menstrual hygiene among adolescent girls in selected private schools, Greater Noida.”

Objectives of the Study:

The objectives of the study were to:

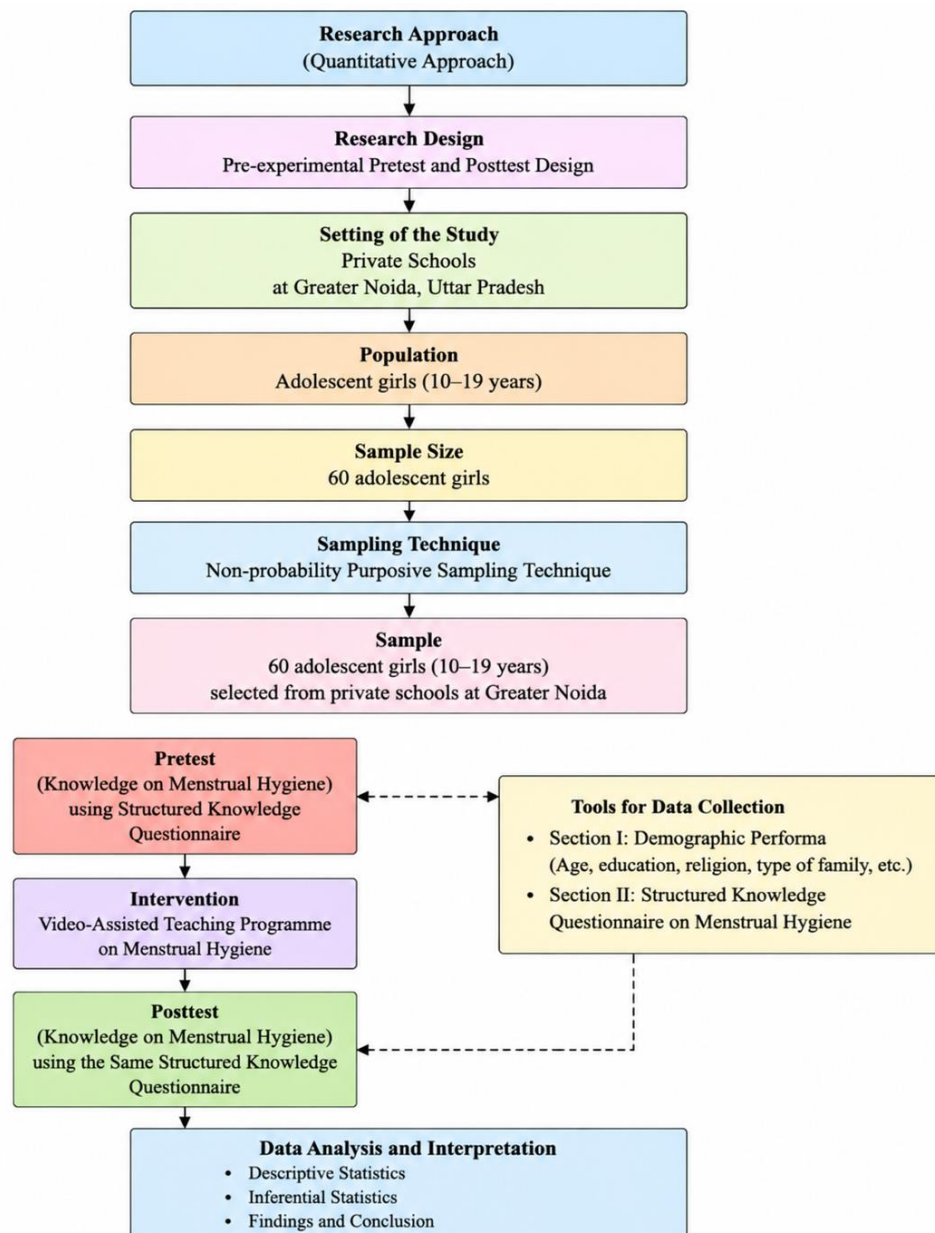
1. To assess the pre-test knowledge regarding menstrual hygiene among adolescent girls in selected private schools of Greater Noida.
2. To evaluate the effectiveness of the Video-Assisted Teaching Programme by comparing the pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls.
3. To determine the association between pre-test knowledge scores regarding menstrual hygiene and selected demographic variables among adolescent girls.

Hypotheses:

The following hypotheses were formulated and tested at $p < 0.05$ level of significance.

H₁: There is a statistically significant difference between the mean pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls following the Video-Assisted Teaching Programme.

H₂ : There is a statistically significant association between the pre-test knowledge scores regarding menstrual hygiene and selected demographic variables among adolescent girls.



METHODOLOGY:

Fig.No:Schematic Representation of Research Methodology

Variables:

The variables identified in the present study are:

Independent Variable: Video-Assisted Teaching Programme on Menstrual Hygiene

The independent variable in the present study is the Video-Assisted Teaching Programme developed and administered by the investigator to adolescent girls.

Dependent Variable: Knowledge regarding Menstrual Hygiene among Adolescent Girls

The dependent variable in the present study is the level of knowledge regarding menstrual hygiene among adolescent girls, which is assessed before and after administration of the Video-Assisted Teaching Programme using a structured knowledge questionnaire.

Extraneous Variables:

Extraneous variables are the variables that may influence the dependent variable but are not the main focus of the study (age, educational status, parental education, income, source of information, menstrual characteristics and menstrual hygiene-related factors).

Demographic Variables:

The demographic variables considered in the present study are selected personal, family, and menstrual-related characteristics of adolescent girls..

Description of Tools:

The investigator used the following tools for data collection:

Tool I: Demographic Variable Proforma:

It consisted of items related to: Age of adolescent girls, Educational status, Age at menarche, Educational status of parents, Occupation of parents, Family monthly income, Religion, Source of information regarding menstrual hygiene, Duration of menstrual flow, Menstrual cycle regularity, Menstrual cycle length, Type of menstrual absorbent used

Tool II: Structured Knowledge Questionnaire Regarding Menstrual Hygiene:

A structured knowledge questionnaire was used to assess the level of knowledge regarding menstrual hygiene among adolescent girls.

The structured knowledge questionnaire consisted of **20 items** to assess the knowledge regarding menstrual hygiene among adolescent girls. Each correct response was awarded a score of **one (1)** and each incorrect response or unanswered item was given a score of **zero (0)**. The maximum obtainable score was **20** and the minimum score was **0**.

The questionnaire included items related to:

- Meaning and importance of menstruation
- Physiology of menstruation and menstrual cycle
- Menstrual hygiene practices
- Use and disposal of menstrual absorbents
- Personal hygiene during menstruation
- Prevention of menstrual-related infections
- Nutritional and self-care practices during menstruation
- Myths and misconceptions related to menstruation

The responses were scored and categorized into different levels of knowledge based on the obtained scores.

Level of Knowledge	Score Range	Percentage
Good Knowledge	15-20	75-100%

Average Knowledge	8-14	40-70%
Poor Knowledge	0-7	Below 40%

Interpretation:

- **Good Knowledge (15–20):** Participants who scored between 15 and 20 (75–100%) demonstrated good knowledge regarding menstrual hygiene.
- **Average Knowledge (8–14):** Participants who scored between 8 and 14 (40–70%) demonstrated average knowledge regarding menstrual hygiene.
- **Poor Knowledge (0–7):** Participants who scored between 0 and 7 (below 40%) demonstrated poor knowledge regarding menstrual hygiene.

Ethical Considerations:

Ethical principles were followed throughout the research process to protect the rights, dignity, and safety of the participants. The following ethical measures were considered:

1. Ethical approval was obtained from the Institutional Ethics Committee before conducting the study.
2. Permission was obtained from the concerned authorities of selected private schools of Greater Noida.
3. The purpose and procedure of the study were explained to the participants.
4. Written informed consent was obtained from the adolescent girls and their parents/guardians wherever applicable before participation.
5. Participation in the study was voluntary, and participants were informed about their right to withdraw from the study at any time without any penalty.
6. Confidentiality and anonymity of participants were maintained throughout the study.
7. The collected information was used only for research purposes.
8. The Video-Assisted Teaching Programme provided beneficial menstrual health information to all participants.

Data Collection Procedure: The data collection procedure was carried out after obtaining ethical clearance and permission from concerned authorities.

The investigator followed the following steps:

1. Permission was obtained from the authorities of selected private schools of Greater Noida.
2. The participants were selected according to the inclusion criteria using a non-probability purposive sampling technique.
3. The purpose of the study was explained to the participants, and informed consent was obtained.
4. On the first day, the demographic variables were collected and a pre-test assessment of knowledge regarding menstrual hygiene (O_1) was conducted using a structured knowledge questionnaire.
5. On the same day, the Video-Assisted Teaching Programme (X) regarding menstrual hygiene was administered to the participants.
6. On the 7th day, a post-test assessment of knowledge regarding menstrual hygiene (O_2) was conducted using the same structured knowledge questionnaire.
7. The collected data were organized, tabulated, and analyzed according to the objectives of the study.

Plan for Data Analysis:

The collected data were analyzed using descriptive and inferential statistics.

Descriptive Statistics:

Descriptive statistics were used to summarize the data:

- Frequency and percentage distribution were used to describe demographic variables.
- Mean, median, and standard deviation were used to describe knowledge scores.

Inferential Statistics:

Inferential statistics were used to test the research hypotheses:

- Paired “t” test was used to determine the effectiveness of the Video-Assisted Teaching Programme by comparing pre-test and post-test knowledge scores.
- Chi-square test was used to determine the association between pre-test knowledge scores and selected demographic variables.
- The level of significance was set at $p < 0.05$.
- The findings were presented in the form of tables, figures, and diagrams for better interpretation.

Results: organization of study findings:

Section I: This provides the Frequency and Percentage Distribution of participants in terms of age in years, age of menarche, educational status of the student. educational status of the parents, occupation of parents, family monthly income, religion, source of information regarding menstrual hygiene, duration of menstrual flow, menstrual cycle regularity, length of menstrual cycle, type of menstrual absorbent used.

Section II: It deals with the distribution of adolescent girls according to level of knowledge regarding menstrual hygiene before and after video-assisted teaching programme in the experimental group.

Section III: It deals with the comparison of pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls.

Section IV: It deals with the association between post-test knowledge scores and selected demographic variables among adolescent girls.

SECTION-I Frequency and Percentage Distribution of Adolescent Girls According to Their Demographic and Menstrual History Variables

(N = 60)

S.No.	Demographic Variable	Category	Sample (N=60)	
			f	%
1	Age (in years)	10–13 years	18	30.0
		14–16 years	22	36.7
		17-19 years	20	33.3
2	Age at Menarche	10–12 years	35	58.3
		13–15 years	20	33.3
		>15 Years	05	8.4
		Upper Primary (Class VI to VIII)	32	53.3

3	Educational Status	Secondary Education (IX & X)	18	30.0
		Higher Secondary (Class XI & XII)	10	16.7
4	Educational Status of Parents	No Formal Education	18	30.0
		Primary Education	12	20.0
		Secondary Education	18	30.0
		Higher Secondary Education	10	16.7
		Graduate & Above	2	3.3
5	Occupation of Parents	Private Employee	28	46.7
		Government Employee	12	20.0
		Self Employed/Business	16	26.7
		Others	4	6.7
6	Family Monthly Income	Below ₹8,000	22	36.7
		₹8,001–₹12,000	10	16.7
		₹12,001–₹15,000	20	33.3
		Above ₹15,000	8	13.3
7	Religion	Hindu	46	76.7
		Muslim	6	10.0
		Christian	4	6.7
		Others	4	6.7
Menstrual History Variables				
8	Source of Information Regarding Menstrual Hygeine	Mother	22	36.7
		Teacher	18	30.0
		Friends	8	13.3
		Health Personnel	5	8.3
		Internet/Social Media	5	8.3
		Others	2	3.4
9	Duration of Menstrual Flow	1-3 days	18	30.0
		4-5 days	32	53.3
		>5 days	10	16.7
10	Menstrual Cycle Regularity	Regular	46	76.7
		Irregular	14	23.3
11	Length of Menstrual Cycle	<21 days	8	13.3
		21–35 days	38	63.3
		36-45 days	10	16.7
		>45 days	4	6.7
12	Type of Menstrual Absorbent Used	Sanitary Pad	42	70.0
		Cloth	14	23.3
		Others	4	6.7

Interpretation of Table: Distribution of Participants According to Demographic and Menstrual History Variables (N = 60)

The findings indicate that among the 60 adolescent girls, 22 (36.7%) belonged to the 14–16 years age group, followed by 20 (33.3%) in the 17–19 years age group and 18 (30.0%) in the 10–13 years age group.

Regarding the age at menarche, the majority of participants (35, 58.3%) attained menarche between 10–12 years, while 20 (33.3%) attained menarche between 13–15 years, and only 5 (8.4%) experienced menarche after 15 years.

With respect to educational status, more than half of the participants (32, 53.3%) were studying in Upper Primary (Classes VI–VIII), followed by 18 (30.0%) in Secondary Education (Classes IX–X) and 10 (16.7%) in Higher Secondary (Classes XI–XII).

Concerning the educational status of parents, 18 (30.0%) had no formal education, another 18 (30.0%) had completed secondary education, 12 (20.0%) had primary education, 10 (16.7%) had higher secondary education, and only 2 (3.3%) were graduates or above.

Regarding the occupation of parents, the largest proportion (28, 46.7%) were private employees, followed by 16 (26.7%) who were self-employed/business owners, 12 (20.0%) who were government employees, and 4 (6.7%) categorized as others.

With respect to family monthly income, 22 (36.7%) belonged to families earning below ₹8,000, 20 (33.3%) had an income of ₹12,001–₹15,000, 10 (16.7%) earned ₹8,001–₹12,000, and 8 (13.3%) had a monthly income above ₹15,000.

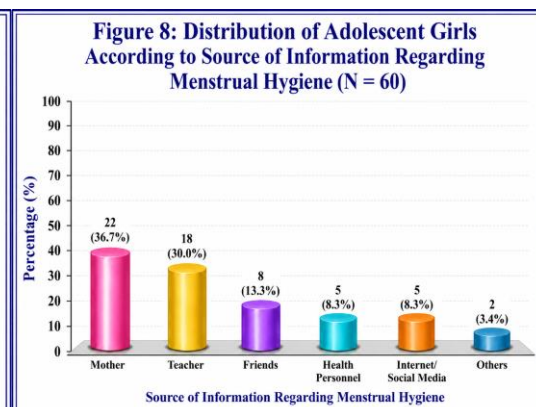
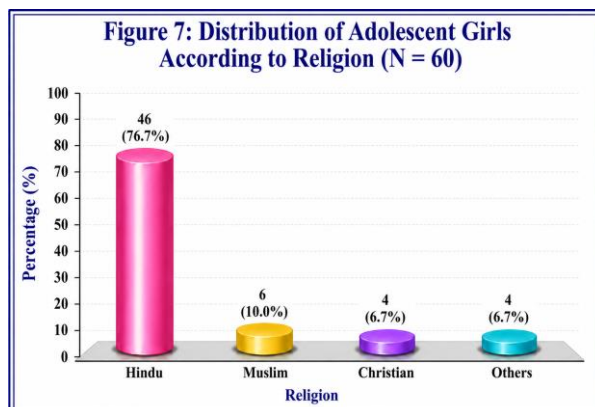
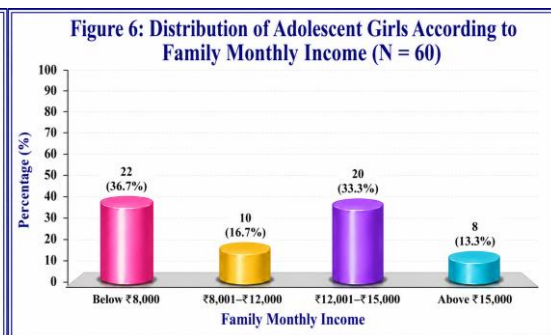
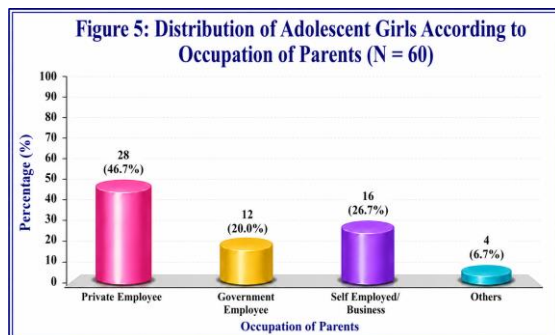
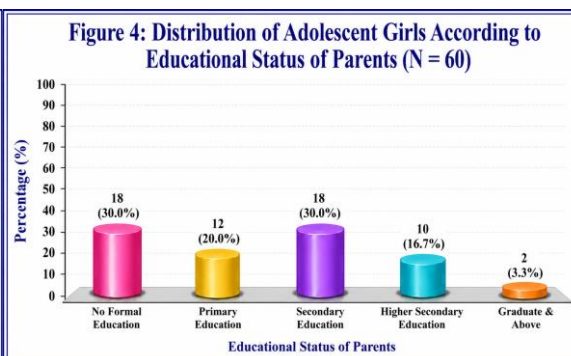
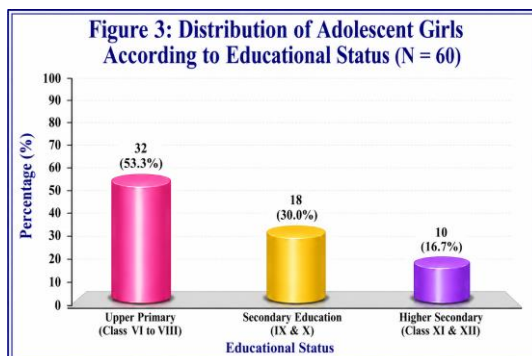
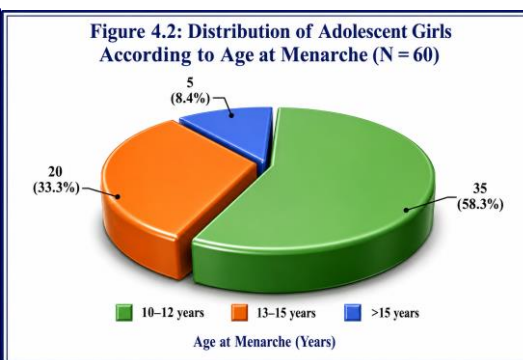
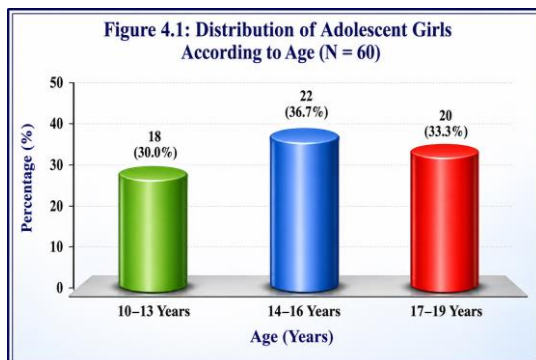
Regarding religion, the majority of participants (46, 76.7%) were Hindu, while 6 (10.0%) were Muslim, 4 (6.7%) were Christian, and 4 (6.7%) belonged to other religions.

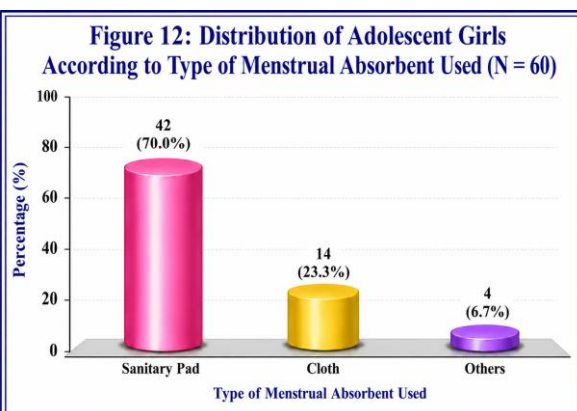
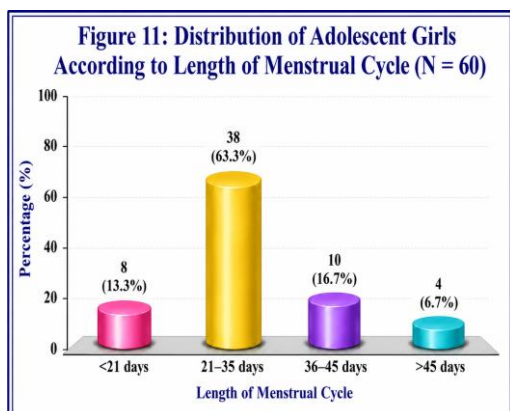
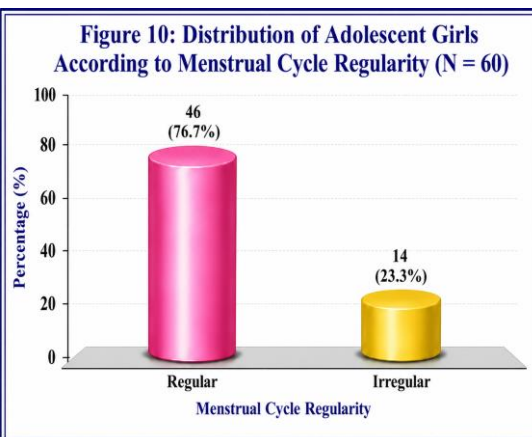
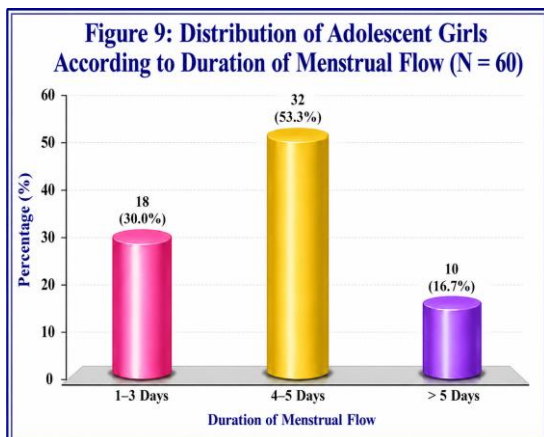
Among the menstrual history variables, the primary source of information regarding menstrual hygiene was mother (22, 36.7%), followed by teachers (18, 30.0%), friends (8, 13.3%), health personnel (5, 8.3%), internet/social media (5, 8.3%), and others (2, 3.4%).

Regarding the duration of menstrual flow, more than half of the participants (32, 53.3%) reported a flow lasting 4–5 days, whereas 18 (30.0%) had a duration of 1–3 days, and 10 (16.7%) experienced menstrual flow for more than 5 days.

With respect to menstrual cycle regularity, the majority (46, 76.7%) reported having a regular menstrual cycle, while 14 (23.3%) had an irregular cycle.

Regarding the length of the menstrual cycle, most participants (38, 63.3%) reported a cycle length of 21–35 days, followed by 10 (16.7%) with 36–45 days, 8 (13.3%) with less than 21 days, and 4 (6.7%) with more than 45 days.





SECTION-II Distribution of adolescent girls according to level of knowledge regarding menstrual hygiene before and after Video-Assisted Teaching Programme in the experimental group.

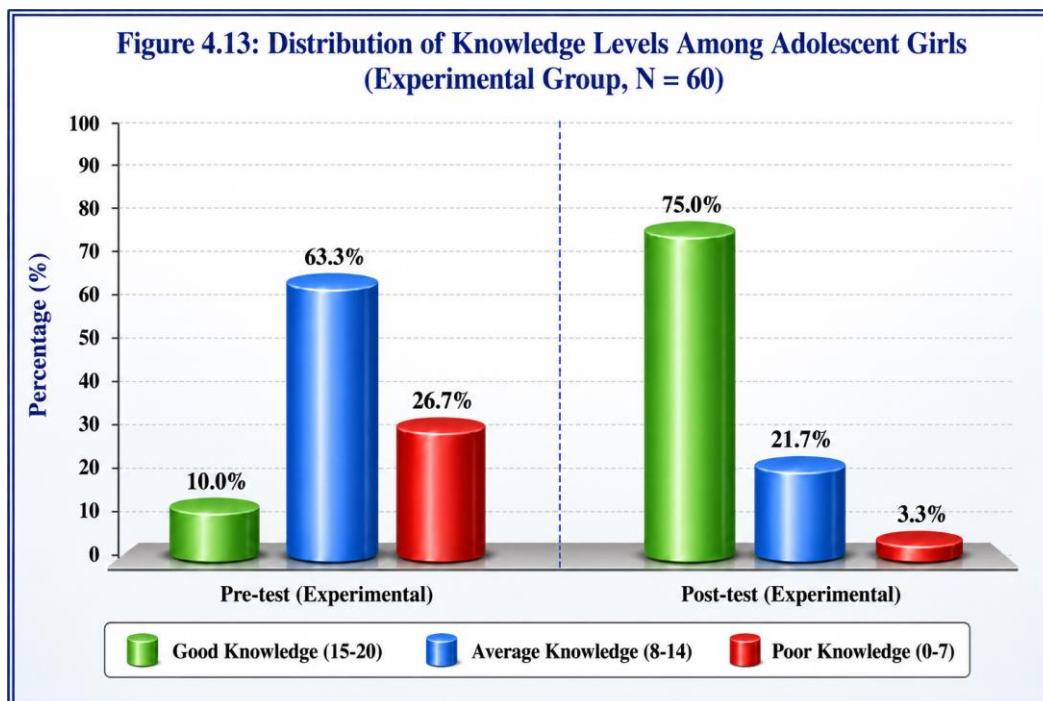
(N = 60)

Knowledge Level	Pre-Test		Post-Test	
	f	%	f	%
Good Knowledge (15-20)	6	10.0	45	75.0
Average Knowledge (8-14)	38	63.3	13	21.7
Poor Knowledge (0-7)	16	26.7	2	3.3

Interpretation: The above table shows the distribution of participants according to their level of knowledge regarding menstrual hygiene before and after the implementation of the Video-Assisted Teaching Programme among 60 adolescent girls.

In the **pre-test**, the majority of participants (**38, 63.3%**) had **average knowledge**, followed by **16 (26.7%)** with **poor knowledge**, while only **6 (10.0%)** demonstrated **good knowledge**.

In the **post-test**, a marked improvement in knowledge was observed. The majority of participants (**45, 75.0%**) achieved **good knowledge**, **13 (21.7%)** had **average knowledge**, and only **2 (3.3%)** remained in the **poor knowledge** category.



SECTION-III : Comparison of Pre-test and Post-test Knowledge Scores Regarding Menstrual Hygiene Among Adolescent Girls.

(N = 60)

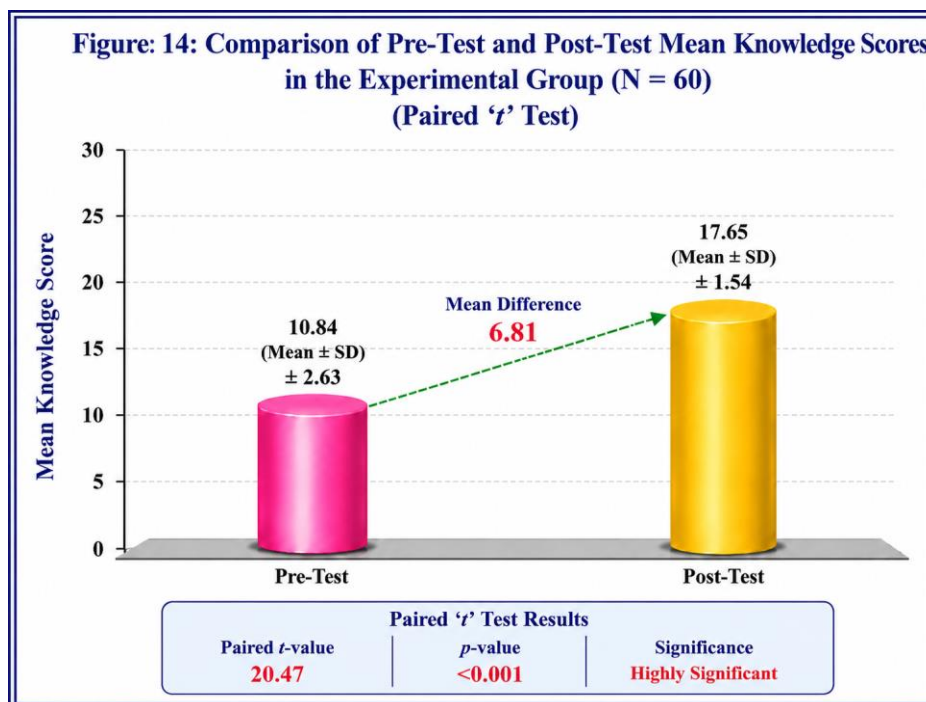
Group	Mean SD	±	Mean Difference	Paired value t	p-value	Level of Significance
Pre-Test	10.84	±	6.81	20.47	<0.001	Highly Significant
Post-Test	17.65	±				
	2.63					
	1.54					

Df (59), 't' tabulated value - 2.001 at $p < 0.05$ level of significance.

Interpretation:

The above table compares the pre-test and post-test knowledge scores regarding menstrual hygiene among 60 adolescent girls. The mean pre-test knowledge score was 10.84 ± 2.63 , which increased to 17.65 ± 1.54 in the post-test following the Video-Assisted Teaching Programme. The mean difference between the pre-test and post-test scores was 6.81, indicating a substantial improvement in participants' knowledge.

The calculated paired t -value was 20.47, which is considerably higher than the tabulated t -value of 2.001 at 59 degrees of freedom. The obtained p -value was < 0.001 , demonstrating that the observed improvement in knowledge was highly statistically significant.



SECTION-IV : Association between Pre-test Knowledge Scores and Selected Demographic Variables among Adolescent Girls.

(N = 60)

S.No.	Demographic Variable	Category	Good (n=45)	Average (n=13)	Poor (n=2)	χ^2	df	p-value	Level of Significance
1	Age (Years)	10–13	1	12	5	2.48	4	0.648	NS
		14–16	2	15	5				
		17–19	3	11	6				
2	Age at Menarche	10–12	3	20	10	2.96	4	0.564	NS
		13–15	2	15	5				
		>15	1	3	1				
3	Educational Status	Upper Primary	1	16	10	9.12	4	0.028	Significant*
		Secondary	2	14	4				
		Higher Secondary	3	8	2				
4	Educational Status of Parents	No Formal Education	0	8	8	12.84	8	0.046	Significant*
		Primary	1	9	3				
		Secondary	2	11	3				
		Higher Secondary	2	7	2				
		Graduate & Above	1	3	0				
		Private	3	17	8				
		Government	1	8	2				

5	Occupation of Parents	Self Employed	2	10	4	3.84	6	0.699	NS
		Others	0	3	2				
6	Family Monthly Income	Below ₹8,000	0	10	8	10.42	6	0.034	Significant*
		₹8,001–12,000	1	9	4				
		₹12,001–15,000	3	12	3				
		Above ₹15,000	2	7	1				
7	Religion	Hindu	5	30	12	2.04	6	0.915	NS
		Muslim	0	3	2				
		Christian	1	3	1				
		Others	0	2	1				
8	Source of Information regarding menstrual hygiene	Mother	3	13	3	11.26	10	0.041	Significant*
		Teacher	2	10	2				
		Friends	0	6	4				
		Health Personnel	1	3	1				
		Internet/Social Media	0	4	2				
		Others	0	2	4				
9	Duration of menstrual Flow	1–3 days	2	11	4	2.88	4	0.577	NS
		4–5 days	3	21	8				
		>5 days	1	6	4				
10	Menstrual Cycle Regularity	Regular	5	28	11	0.92	2	0.631	NS
		Irregular	1	10	5				
11	Menstrual Cycle Length	<21 days	0	4	2	3.21	6	0.781	NS
		21–35 days	5	21	8				
		36–45 days	1	10	3				
		>45 days	0	3	3				
12	Absorbent Used	Sanitary Pad	6	24	6	13.54	4	0.009	Significant*
		Cloth	0	12	8				
		Others	0	2	2				

Interpretation

The above table presents the association between the **post-test level of knowledge regarding menstrual hygiene** and selected demographic variables among adolescent girls using the Chi-square (χ^2) test.

The findings revealed that **educational status** showed a statistically significant association with the post-test knowledge level ($\chi^2 = 9.12$, $df = 4$, $p = 0.028$). Similarly, **educational status of parents** was significantly associated with post-test knowledge ($\chi^2 = 12.84$, $df = 8$, $p = 0.046$). **Family monthly income** also demonstrated a significant association ($\chi^2 = 10.42$, $df = 6$, $p = 0.034$), indicating that participants from families with different income levels differed significantly in their post-test knowledge scores.

Further, the **source of information regarding menstrual hygiene** was significantly associated with post-test knowledge ($\chi^2 = 11.26$, $df = 10$, $p = 0.041$). The **type of menstrual absorbent used** also showed a statistically significant association with post-test knowledge ($\chi^2 = 13.54$, $df = 4$, $p = 0.009$), suggesting that knowledge levels varied according to the absorbent used.

However, **age** ($\chi^2 = 2.48$, $df = 4$, $p = 0.648$), **age at menarche** ($\chi^2 = 2.96$, $df = 4$, $p = 0.564$), **occupation of parents** ($\chi^2 = 3.84$, $df = 6$, $p = 0.699$), **religion** ($\chi^2 = 2.04$, $df = 6$, $p = 0.915$), **duration of menstrual flow** ($\chi^2 = 2.88$, $df = 4$, $p = 0.577$), **menstrual cycle regularity** ($\chi^2 = 0.92$, $df = 2$, $p = 0.631$), and **length of menstrual cycle** ($\chi^2 = 3.21$, $df = 6$, $p = 0.781$) did not show statistically significant associations with the post-test knowledge level ($p > 0.05$).

Summary of major findings:

The summary of the major findings is presented according to the objectives of the study.

Objective 1: To assess the pre-test knowledge regarding menstrual hygiene among adolescent girls.

- The majority of the adolescent girls (38; 63.3%) had average knowledge regarding menstrual hygiene.
- Sixteen (26.7%) participants had poor knowledge.
- Only six (10.0%) participants had good knowledge.
- The mean pre-test knowledge score was 10.84 ± 2.63 , indicating that the participants had only moderate knowledge regarding menstrual hygiene before the intervention.

Objective 2: To evaluate the effectiveness of the Video-Assisted Teaching Programme on knowledge regarding menstrual hygiene among adolescent girls.

- Following the Video-Assisted Teaching Programme, a marked improvement in knowledge was observed.
- Forty-five (75.0%) participants had good knowledge in the post-test.
- Thirteen (21.7%) participants had average knowledge.
- Only two (3.3%) participants had poor knowledge.
- The mean post-test knowledge score increased to 17.65 ± 1.54 compared to the pre-test mean score of 10.84 ± 2.63 .
- The mean difference between the pre-test and post-test knowledge scores was 6.81.
- The obtained paired t-value was 20.47, which was statistically highly significant ($p < 0.001$).
- These findings indicate that the Video-Assisted Teaching Programme was highly effective in improving the knowledge of adolescent girls regarding menstrual hygiene.

Objective 3: To determine the association between pre-test knowledge regarding menstrual hygiene and selected demographic variables among adolescent girls.

- A statistically significant association was found between pre-test knowledge regarding menstrual hygiene and educational status ($p < 0.05$).
- Educational status of parents was significantly associated with the pre-test knowledge regarding menstrual hygiene ($p < 0.05$).
- Family monthly income showed a statistically significant association with the pre-test knowledge regarding menstrual hygiene ($p < 0.05$).
- Source of information regarding menstrual hygiene had a significant association with the pre-test knowledge scores ($p < 0.05$).

- Type of menstrual absorbent used was significantly associated with the pre-test knowledge regarding menstrual hygiene ($p < 0.05$).
- No statistically significant association was found between pre-test knowledge and age, age at menarche, occupation of parents, religion, duration of menstrual flow, menstrual cycle regularity, or length of menstrual cycle ($p > 0.05$).
- These findings indicate that educational and socioeconomic factors had a significant influence on the baseline knowledge regarding menstrual hygiene, whereas biological and other demographic variables did not show a significant association.
- Hence, the research hypothesis (H_2) was partially accepted indicating that only selected demographic variables were significantly associated with the pre-test knowledge regarding menstrual hygiene among adolescent girls.

Overall Summary

The findings of the study demonstrate that adolescent girls had only average knowledge regarding menstrual hygiene before the educational intervention. The Video-Assisted Teaching Programme resulted in a significant improvement in knowledge, as evidenced by the increase in the post-test mean score and the highly significant paired t-test result ($t = 20.47$, $p < 0.001$). Furthermore, educational status, educational status of parents, family monthly income, source of information regarding menstrual hygiene, and type of menstrual absorbent used were found to be significantly associated with pre-test knowledge. The study concludes that the Video-Assisted Teaching Programme is an effective educational strategy for enhancing knowledge regarding menstrual hygiene among adolescent girls in selected private schools.

Implications for Nursing Practice

- Community health nurses and school health nurses should conduct regular health education programmes on menstrual hygiene among adolescent girls.
- Nurses should encourage adolescents to adopt safe menstrual hygiene practices and address myths and misconceptions related to menstruation..

Implications for Nursing Administration:

- Nursing administrators should encourage the implementation of structured health education programmes on menstrual hygiene in schools.
- Adequate audiovisual teaching aids and educational resources should be made available for conducting health education sessions.
- Collaboration between schools, healthcare institutions, and community health services should be strengthened to promote menstrual health education.
- Policies supporting adolescent reproductive health education should be encouraged at institutional and community levels.

Implications for Nursing Research:

- Similar studies can be conducted using a larger sample size and different research settings to improve the generalizability of the findings.

- Comparative studies may be undertaken to evaluate the effectiveness of different educational interventions such as video-assisted teaching, structured teaching programmes, peer education, and mobile-based learning.
- Longitudinal studies may be conducted to assess the long-term retention of knowledge and changes in menstrual hygiene practices following educational interventions.
- Further research may explore the impact of educational programmes on attitudes, practices, and health outcomes related to menstrual hygiene among adolescents.

Overall, the findings of the study suggest that a Video-Assisted Teaching Programme is an effective educational strategy for improving knowledge regarding menstrual hygiene among adolescent girls. The study supports the integration of structured menstrual hygiene education into school health programmes to promote healthy menstrual practices and improve adolescent health outcomes.

Recommendations:

Based on the findings of the present study, the following recommendations are made:

1. Similar studies may be conducted on a larger sample to improve the generalizability of the findings.
2. A true experimental study with a control group may be undertaken to evaluate the effectiveness of educational interventions on menstrual hygiene.
3. Longitudinal studies may be conducted to assess the long-term retention of knowledge and changes in menstrual hygiene practices following educational programmes.
4. Comparative studies may be carried out to evaluate the effectiveness of different teaching strategies such as video-assisted teaching, structured teaching programmes, peer education, and mobile-based learning.
5. Similar studies may be conducted among adolescent girls studying in government schools, rural schools, and other educational settings.
6. Educational interventions on menstrual hygiene should be integrated into regular school health programmes to promote awareness and healthy menstrual practices.
7. School health nurses and community health nurses should organize periodic awareness programmes, workshops, and counselling sessions on menstrual hygiene for adolescent girls.
8. Parents, teachers, and healthcare professionals should be actively involved in providing accurate information and guidance regarding menstrual hygiene to adolescents.
9. Future studies may include the assessment of knowledge, attitude, and practices related to menstrual hygiene to obtain a comprehensive understanding of menstrual health among adolescents.
10. Further research may be undertaken to evaluate the impact of educational interventions on school attendance, reproductive health outcomes, and quality of life among adolescent girls.

These recommendations may contribute to strengthening menstrual hygiene education and promoting healthy menstrual practices among adolescent girls through effective school and community-based health education programmes.

Conclusion:

Menstrual hygiene is an essential component of adolescent health and well-being. Adequate knowledge during adolescence helps girls adopt healthy menstrual practices, prevents reproductive and urinary tract infections, and promotes confidence in managing menstruation. Schools play a vital role in creating awareness by providing appropriate health education during this crucial stage of life.

The present study was undertaken to assess the effectiveness of a Video-Assisted Teaching Programme on knowledge regarding menstrual hygiene among adolescent girls in selected private schools, Greater Noida. The findings revealed that the majority of the participants had only average knowledge regarding menstrual hygiene before the educational intervention. Following the implementation of the Video-Assisted Teaching Programme, a significant improvement in knowledge was observed, as evidenced by the increase in the post-test mean knowledge score and the highly significant paired t-test result ($t = 20.47$, $p < 0.001$).

The study also identified that educational status, educational status of parents, family monthly income, source of information regarding menstrual hygiene, and type of menstrual absorbent used were significantly associated with post-test knowledge. These findings suggest that educational and socioeconomic factors influence adolescents' understanding of menstrual hygiene and highlight the importance of targeted health education.

The results of the study demonstrate that the Video-Assisted Teaching Programme is an effective educational intervention for improving knowledge regarding menstrual hygiene among adolescent girls. Video-assisted learning offers a simple, engaging, and cost-effective approach to delivering accurate health information and can be effectively incorporated into school health education programmes.

In conclusion, regular educational programmes on menstrual hygiene should be integrated into school health services to improve awareness, encourage healthy menstrual practices, and dispel misconceptions related to menstruation. Active involvement of nurses, teachers, parents, and healthcare professionals can further strengthen menstrual health education and contribute to the overall health, dignity, and well-being of adolescent girls.

References:

1. Polit DF, Beck CT. Nursing research: generating and assessing evidence for nursing practice. 12th ed. Philadelphia: Wolters Kluwer; 2024.
2. World Health Organization. Adolescent health [Internet]. Geneva: WHO; 2024 [cited 2026 Jul 5]. Available from: <https://www.who.int/health-topics/adolescent-health>
3. World Health Organization. Menstrual health [Internet]. Geneva: WHO; 2024 [cited 2026 Jul 5]. Available from: <https://www.who.int/news-room/fact-sheets/detail/menstrual-health>
4. World Health Organization, United Nations Children's Fund. Progress on drinking water, sanitation and hygiene in schools 2015–2023: special focus on menstrual health. Geneva: WHO; 2024.
5. United Nations Children's Fund. Guidance for monitoring menstrual health and hygiene. New York: UNICEF; 2020.
6. United Nations Children's Fund. Menstrual health and hygiene. New York: UNICEF; 2024.
7. Ministry of Health and Family Welfare, Government of India. Rashtriya Kishor Swasthya Karyakram (RKSK): operational framework. New Delhi: Government of India; 2023.
8. United Nations Educational, Scientific and Cultural Organization. International technical guidance on sexuality education: an evidence-informed approach. Paris: UNESCO; 2023.
9. Hennegan J, Winkler IT, Bobel C, Keiser D, Hampton J, Larsson G, et al. Menstrual health: a definition for policy, practice, and research. Sex Reprod Health Matters. 2021;29(1):1911618.
10. Sommer M, Phillips-Howard PA, Mahon T, Zients S, Jones M, Caruso BA. Beyond menstrual hygiene: addressing menstrual health to achieve gender equality and improve health. Lancet Public Health. 2021;6(8):e595-e597.

Copyright & License:

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.