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A study to assess the effectiveness of structured teaching programme on menstrual hygiene among higher secondary school girls in selected schools at Ankola

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Abstract
Background: Menstrual hygiene places a major role to promote healthy life. This study was performed to assess the current level of knowledge and practicing behavior in regard to menstrual hygiene.
Statement of the problem: A study to assess the effectiveness of structured teaching programme on menstrual hygiene among higher secondary school girls in selected schools at Ankola.
Objectives
1. To assess the pre-test level of knowledge of students regarding menstrual hygiene
2. To assess the post-test level of knowledge of students regarding menstrual hygiene
3. To find the association between pre-existing knowledge on menstrual hygiene with selected socio demographic data

Research methodology
Research approach: Quantitative evaluative approach.
Research design: One Group Pre Test Post Test Design.
Research setting: K.L.E'S Girl's High School Ankola.
Population: Student studying in 8th and 9th students selected K.L.E'S girl's high school Ankola.
Sample size: 40 students.
Sampling technique: Non probability purposive sampling technique.
Tool: Structured knowledge questionnaire.
Results: The pre–test mean knowledge score was ±12.43 and standard deviations (S D) ±3.69 were as the post-test mean knowledge score was ±22.13 and standard deviations (S D) ±4.59 the calculated paired" t" value was 10.48. This was higher than the table value of 2.02 at 0.05 level of significance hence H1 and H2 was accepted. The study showed that there was significant association between the knowledge score age $\chi 2$=10.08, DF = 4, P = 9.49 (S)*, Hence the null hypothesis was rejected and research hypothesis was accepted. The study showed that there was non-significant association between the knowledge score and Religion $\chi 2$=0.758, DF = 2, P = 5.99 (NS)*, Class $\chi 2$ = 2.64, DF = 2, P = 5.99 (NS)*, Mother's education $\chi 2$=12.44, DF = 6, P = 12.59 (NS)*, Type of family $\chi 2$=2.26, DF = 2, P = 5.99 (NS)*, Area of residence $\chi 2$ = 4.43, DF = 2, P = 5.99 (NS)* Hence the null htpothesis was accepted and research hypothesis was rejected.
Conclusion: The results of the study indicated that after introducing structured teaching programme most of adolescent girls had adequate knowledge regarding menstrual hygiene. So the study concluded that structured teaching programme is more effective to increase the knowledge of menstrual hygiene among adolescent girls.

Keywords: Menstrual hygiene, adolescent girls, Ankola, structured teaching programme

Introduction
Adolescence has been defined by WHO as the period of life between 10-19 years. There is transition from childhood to adulthood in this period. Adolescent girls constitute about one-fifth of the total female population in the world [1].
Menstruation is a healthy sign and a physiological natural cyclic event, occurring every 21-35 days, lasting between 2 and 7 days and causes bleeding of about 25–80 mL per menstruation. According to Hennegan *et al.* 'Menstrual health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle' [2].

Adolescent is an essential period where females are preparing and adjusting themselves to manage their menstrual bleeding in safe and clean way [3].

Hygienic practices during menstruation are the use of sanitary pads and adequate washing of genital area. Good Menstrual Hygiene Practices are essential during menstruation; they include 1) regular change of clothing and underwear; 2) change of hygienic pads every three to four hours; 3) daily showering, 4) adequate washing of genitalia after each voiding of urine and feces [4].

To prevent physical discomfort and leakages, adolescent girls need to know the types of menstrual care products that exist and how to appropriately use and dispose of them hygienically. Knowledge of what product to use, how often to change it, and access to adequate water, sanitation, and hygiene facilities help women and girls to maintain good hygiene during menstruation [5].

Proper knowledge about menstrual hygiene and its application can improve adolescent girls' reproductive health to a great extent [6].

Problem statement

A study to assess the effectiveness of structured teaching programme on menstrual hygiene among higher secondary school girls in selected schools at Ankola.

Objective of the study

- To assess the pre–test level of knowledge of students regarding menstrual hygiene.
- To assess the post–test level of knowledge of regarding menstrual hygiene.
- To find the association between pre-existing knowledge on menstrual hygiene with selected socio-demographic data.

Hypothesis

H_1: The mean post-test knowledge score of students regarding menstrual hygiene will be significantly higher than the mean pre-test knowledge score.

H_2: There will be significant association between levels of knowledge of students regarding menstrual hygiene with a selected demographic data.

Delimitation

a) The study is limited to class 8th and 9th student of KLE's girl's high school, Ankola.
b) Study area is limited to students who were present at the time of data collection

Methodology

Research approach

Quantitative research

Research design

Pre- experimental with one group pre-test and post- test design was adopted for the present study.

Sample

Students of 8th and 9th standard students studying in K.L.E'S girl's high school Ankola.

Sampling technique

Non probability purposive sampling technique.

Sample size

40 students of 8th and 9th standard students studying in K.L.E'S girl's high school Ankola.

Tool

Data was collected with the help of demographic data and structured knowledge questionnaires.

Plan for data analysis

Descriptive statistics (frequency, percentage, range, mean, median and standard deviation) and inferential statistics (t-test) were used for the analysis and interpretation of data.

Setting of the study

K.L.E'S girl's high school Ankola.

Sampling criteria

Inclusion criteria

- Studying in K.L.E'S girls high school Ankola
- Only girls
- 8th and 9th standard students
- Willing to participate in the study
- Present at the time of data collection

Exclusion criteria

- Not willing to participate
- Students who are studying in the 10th standard

Variables

Independent variable

Structured teaching programme

Dependant variable

To assess the effectiveness of structured teaching programme on standard 8th and 9th regarding menstrual hygiene.

Content validity of the tool

Content validity examines the extent to which the measurement includes all the major elements relevant to the construct being measured. In order to obtain the validity, the prepared instruments along with problem statement, objectives, operational definitions, structured knowledge questionnaires, lesson plan were submitted to three experts from the field of research and statistics. The exports gave valuable suggestions. As per suggestions of the exports were incorporated and necessary correction on language correction were made in vernacular tool.

Reliability of the tool

Reliability is the degree to which an assessment tool produces stable and consistent results or degree of consistency or accuracy with which an instrument measures the attribute it is designed to measure. The Reliability of the tool was established by using test-retest method (Karl Pearson co-efficient of correlation method) which measures the coefficient of internal consistency. The reliability coefficient value of Structured Knowledge Questionnaire of Knowledge was 0.93. The developed tool was found to be valid, reliable and feasible to conduct main study.

Data collection instruments

The tool used for data collection was demographic data of adolescents girls, structured knowledge questionnaires and structured teaching programme regarding menstrual hygiene.

Results

Data was analyzed by using descriptive and inferential statistics. The analysis of the data organized under the following sections.

Table 1: Frequency and percentage distribution of subject according to pre-test and post-test knowledge score of adolescent girls regarding menstrual hygiene with their Socio-demographic data

SI. No.	Baseline data	Frequency	Percentage (%)
1 Age (In year)			
	12-13 years	7	17%
	13-14 years	24	60%
	14-15 years	9	23%
2. Religion			
	Hindu	39	98%
	Christian.	0	0
	Muslim	1	2%
3. Class			
	8th standard	20	50%
	9th standard	20	50%
4. Mother's education			
	Below 5th standard	7	18%
	6th to 10th standard	24	60%
	PUC	7	17%
	Degree	2	5%
5. Types of family			
	Joint family	18	45%
	Nuclear family	22	55%
6. Area of residence			
	Rural	27	68%
	Urban	13	32%

The data presented in table 1 indicated

- Majority of students 24 (60%) belonged to age group of 13-14 years.
- Majority of students were Hindu 39 (98%).
- Majority of students in both classes 8th and 9th is 20 (50%).
- Majority of students mother's education is at 6th to 10th standard 24 (60%).
- Majority of students had a nuclear family 22 (55%).
- Majority of students belongs to rural area 27 (68%).

Table 2: Frequency and percentage distribution of knowledge levels score of students regarding menstrual hygiene.

Knowledge	Intervals	Pre-test knowledge score		Post-test knowledge score	
		Frequency (f)	Percentage (%)	Frequency(f)	Percentage (%)
Inadequate knowledge	0-10	15	37.5%	0	0
Moderate knowledge	11-20	03	7.5%	14	35%
Adequate knowledge	21-30	2	5%	26	65%

This table reveals the Pre-test and post-test knowledge score of the students of class 8th and 9th. Samples indicates of Post-test that moderate knowledge of students score 14 (35%) and adequate knowledge score is 26 (65%)

Pre-test knowledge score of students of class 8th and 9th was inadequate knowledge were 15 (37%). Moderate knowledge score was 3 (7.5%) and adequate knowledge was 2 (5%).

Table 3: Comparison of mean pre-test and post-test knowledge score level of students regarding menstrual hygiene to evaluate the effectiveness of structured teaching programme

Level of knowledge	Mean	Standard deviation	Degree of freedom	P Value	Calculated 'T' value	Table 'T' value
Pre-test	12.43	3.69	40	0.05	10.48	2.02
Post-test	22.13	4.59	40	0.05		

The data and the table show that mean post-test knowledge score of sample is significantly higher than the mean pre-test knowledge score i.e., the table and the calculated value t =, which shows that calculated value is greater than the table value.

Hence alternative hypothesis was accepted indicated that there will be significant gain in knowledge on menstrual hygiene among selected class 8th and 9thstudents in KLE'S Girls high school Ankola.

Table 4: Analysis of association between the knowledge of menstrual hygiene among students with socio demographic data.

Sl. No.	Demographic variable	Knowledge score			Total	Chi square test
		Inadequate	Moderate	Adequate		
1	**Age**					
	12-13 years	4	3	0	7	$\chi 2=10.08$

	13-14 years	7	17	0	24	DF = 4
	14-15 years	4	3	2	9	P = 9.49 (S)
2	**Religion**					
	Hindu	15	22	2	39	$\chi2$=0.758
	Christian	0	0	0	0	DF = 2
	Muslim	0	1	0	1	P = 5.99 (NS)
3	**Class**					
	8th standard	9	11	0	20	$\chi2$=2.64
	9th standard	6	12	2	20	DF = 2, P = 5.99 (NS)
4	**Mother's education**					
	Below 5thstandrd	2	5	0	7	$\chi2$=12.44
	6th to 10th standard	10	14	0	24	DF = 6
	P.U.C	3	3	1	7	P = 12.59 (NS)
	Degree and master degree	0	1	1	2	
5	**Type of family**					
	Joint family	6	12	0	18	$\chi2$=2.26
	Nuclear family	9	11	2	22	DF = 2, P = 5.99 (NS)
6	**Area of residence**					
	Rural	11	16	0	27	$\chi2$=4.43
	Urban	4	7	2	13	DF = 2, P = 5.99 (NS)

The association between knowledge of menstrual hygiene among students with socio demographic variable has been shown.

There was significant association between the knowledge score age $\chi2$=10.08, DF = 4, P = 9.49 (S)*, Hence the null hypothesis was rejected and research hypothesis was accepted.

Discussion

The result shows that the pre-test knowledge score of students of class 8th and 9th was inadequate knowledge were 15 (37%). Moderate knowledge score was 3 (7.5%) and adequate knowledge was 2 (5%), post-test that moderate knowledge of students score 14 (35%) and adequate knowledge score is 26 (65%), the calculated paired" t" value was 10.48 which was higher than the table value of 2.02 at 0.05 level of significance hence H1 and H2 was accepted this shows that stimulation was effective in increasing the knowledge of students regarding menstrual hygiene. The Chi-Square Test of association between the knowledge score age $\chi2$=10.08, DF = 4, P=9.49 (S)*, Hence the null hypothesis was rejected and research hypothesis was accepted.

Conclusion

The results of the study indicated that after introducing structured teaching programme most of adolescent girls had adequate knowledge regarding menstrual hygiene. So the study concluded that structured teaching programme is more effective to increase the knowledge of menstrual hygiene among adolescent girls.

Conflict of Interest

Not available

Financial Support

Not available

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