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## Effectiveness of video assisted teaching programme on knowledge regarding menstrual cup among girls

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### Abstract

Nurses are the key for the lock of health promotion and maintenance in society. The investigators felt the need to teach the adolescents girls and increase their knowledge regarding menstrual cup as it is more important and comfortable but not frequently used by adolescents girls due to less knowledge about it. Increasing the knowledge regarding menstrual cup will increase the use of cup and eventually help decreasing the disease rate related to menstruation.

**Methodology:** An evaluative study was carried out to evaluate the effectiveness of video assisted teaching programme on knowledge regarding menstrual cup among girls of Degree College of engineering at Aurangabad, Maharashtra. One group pretest posttest research design was adopted. The conceptual framework used for the study was based on modified open system theory. Structured knowledge questionnaire was used to collect data from 50 adolescent girls. Convenient sampling technique was used to collect data.

**Result:** It was revealed that in pretest 18 (36%) girls had poor, 26 (52%) had average and only 6 (12%) had good Knowledge regarding menstrual cup, whereas in posttest 7 (14%) had average and 43 (86%) had good knowledge regarding menstrual cup. Study showed that the mean posttest knowledge score (23.68) was apparently higher than the mean pretest knowledge score (12.74). Paired t test value was 4.75 which was significant at 0.05.

**Conclusion:** The finding of the study supported that effectiveness of video assisted teaching programme in increasing the knowledge regarding menstrual cup among the adolescent girls studying in Degree College.

**Keywords:** Video assisted teaching programme, menstrual cup, adolescent girls, evaluation, effectiveness

### 1. Introduction

The menstrual cycle is a series of natural changes in hormone production and the structures of the uterus and ovaries of the female reproductive system that make pregnancy possible. The menstrual cycle can cause some women to experience problems that disrupt daily lives. These can include cramps, tender breasts, tiredness, and premenstrual syndrome. More severe problems such as premenstrual dysphoric disorder are experienced by 3–8% of women. The menstrual cycle can be modified by hormonal birth control <sup>[1]</sup>.

Menstrual cup is a menstrual hygiene device which is inserted into the vagina during menstruation. Its purpose is to collect menstrual fluid (blood from the uterine lining mixed with other fluids). Menstrual cups are usually made of flexible medical grade silicone, latex, or a thermoplastic isomer. They are shaped like a bell with a stem or a ring. The stem is used for insertion and removal. The bell-shaped cup seals against the vaginal wall just below the cervix. Every 4–12 hours (depending on the amount of flow), the cup is removed, emptied, rinsed, and reinserted. After each period, the cup requires cleaning <sup>[2]</sup>.

Unlike tampons and pads, cups collect menstrual fluid rather than absorbing it. One cup may be reusable for up to 10 years this makes their long-term cost lower than that of disposable tampons or pads, though the initial cost is higher. Menstrual cups are also promoted as more practical and eco-friendly than pads and tampons. Given that the menstrual cup is reusable, its use greatly decreases the amount of waste generated from menstrual cycles, as there is no daily waste and the amount of discarded packaging decreases as well <sup>[3]</sup>.

A village called Kumbalangi in Ernakulam district of Kerala has been declared the first

napkin-free village in the country. According to a report in Hindustan Times, more than 5,000 menstrual cups have been distributed among girls and women and they have been given training by volunteers for three months about their use and advantages, said organizers of a campaign, "Avalkayi" (for her). Kerala Governor Arif Mohammad Khan said that Kumbalangi is a role model for all villages in the country and such schemes would go a long way in empowering women. "Our country will prosper only if our villages do," he added [4].

In India. Results: A total 82% were aware about menstrual cup but only 2.6% have used it.02-Mar-2020. Menstrual cups are a safe option relative to other forms of menstrual hygiene [5].

Menstrual cups are safe when used as directed and no health risks related to their use have been found. No medical research was conducted to ensure that menstrual cups were safe prior to introduction on the market. Early research in 1962 evaluated 50 women using a bell-shaped cup. The researchers obtained vaginal smears, gram stains, and basic aerobic cultures of vaginal secretions. Vaginal speculum examination was performed, and pH was measured. No significant changes were noted. This report was the first containing extensive information on the safety and acceptability of a widely used menstrual cup that included both [6].

## 2. Need for study

Today's adolescents (24%) are tomorrow's adults who are the strength of the nation. Today's adolescent girls are our future homemakers. Most of the adolescents tend to be extremely unaware of their own body their physical well-being and psychological change. Half of the adolescence age 12- 15 years residing in 9th to 12th standard do not know about menstruation until its onset.

The girls should be educated about significance of menstruation and development of secondary sexual characteristics, selection of sanitary menstrual absorbent and its proper disposal. So that she does not develop psychological upset and received education would indirectly wipe away the age-old wrong ideas and make her feel free to discuss menstrual matters without any inhibitions.

Menstruation and puberty hygiene is rarely discussed at

home as well as schools; especially in the regions the current study was conducted. Due to some cultural and religious restrictions many young girls in this country lack appropriate and sufficient information regarding menstrual hygiene causing incorrect and unhealthy behavior during their menstrual Period [7].

## 3. Problem Statement

A Study to Evaluate the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Menstrual Cup Among the Girls Studying in Selected Degree Colleges, Aurangabad.

### 3.1. Objectives

1. To assess the pretest knowledge regarding menstrual cup among the girls studying in selected Degree College at Aurangabad.
2. To prepare and administered Video assisted teaching programme regarding menstrual cup at Aurangabad..
3. To assess the post-test knowledge regarding menstrual cup among the girls studying in selected Degree College at Aurangabad.
4. To find out the association between pre-test knowledge score with selected demographic variable.

## 4. Hypothesis

H1: There will be a significant difference in the mean pretest and post-test knowledge score regarding menstrual cup among girls in selected degree college at Aurangabad.

H2: There will be significant association between pretest knowledge score with selected demographic variables.

## 5. Conceptual Framework

The conceptual framework set up for this study is based on von bertalanffy's open system theory with impact, throughout, output, feedback, boundary and environment. It is a theoretical approach to the study of problems that are scientifically based and emphasizes the selection, arrangement and classification of its concept. A conceptual frame work states functional relationship between events and it's not limited to statistical relationship.

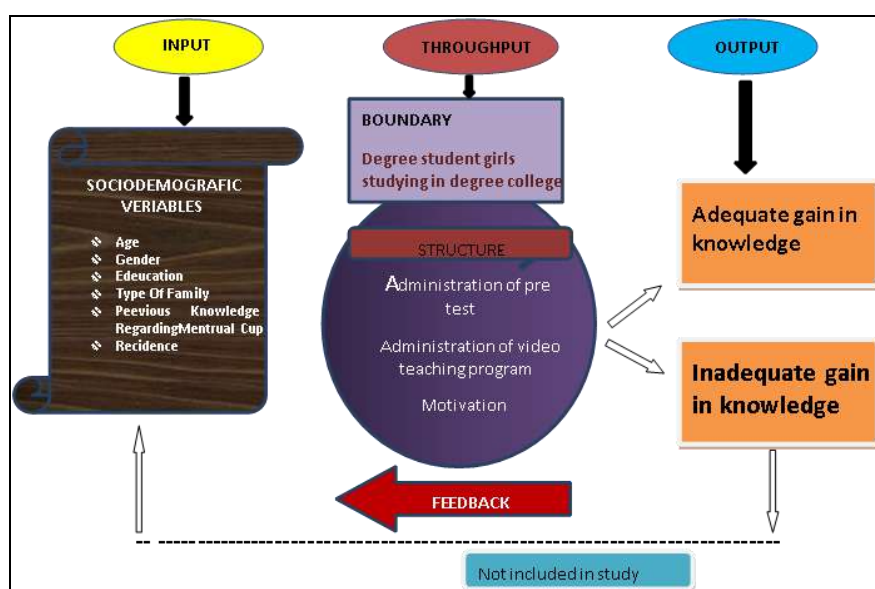


Fig 1: Conceptual Framework Adopted From Modified Open System Theory.

**Inclusion criteria**

- Girls learning at selected Degree College in Aurangabad.
- Girls willing to participate in the study.

**Exclusion criteria**

- Girls who were not present at the time of data collection.

**Ethical Aspects**

1. Ethical committee approval obtained.
2. Informed consent taken.

**Variables**

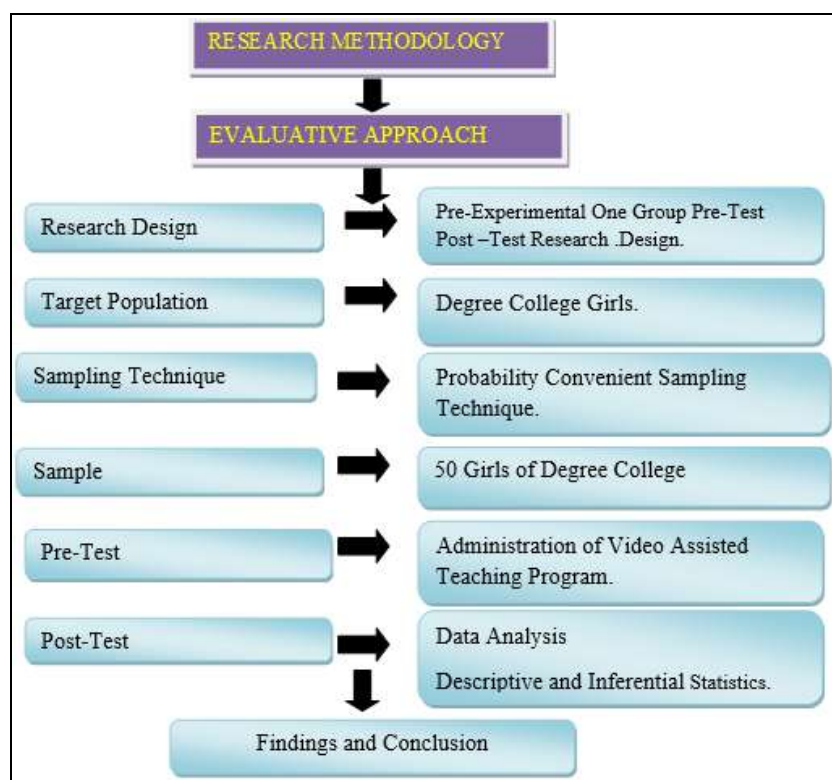
**Demographic variables:** Age, gender, education, previous knowledge regarding menstrual cup and place of residence.

**Dependent variables:** Knowledge regarding menstrual cup.

**Independent variables:** Video assisted teaching program regarding menstrual cup.

**6. Methodology**

An evaluative approach was used for this study to test the effectiveness of video assisted teaching programme on knowledge regarding menstrual cup and the research design used was pre-experimental one group pre-test and post-test. Probability convenient sampling technique was used by the researcher in this study the sample size collected was 50 degree college girls fulfilling the exclusive and inclusive criteria.



**Fig 2:** Schematic representation of research methodology

**7. Tools**

**Table 1:** Description of tools

Section A	Demographical variable
Section B	Structured Knowledge Questionnaire
Section C	Video Assisted Teaching Program On Menstrual Cup

**8. Method and Material**

This study was conducted to evaluate the effectiveness of video assisted teaching programme on knowledge regarding menstrual cup among the adolescent girls. Probability convenient sampling technique was used to select the samples needed for the study, with the sample size of 50 adolescent girls and pre-experimental one group pretest posttest research design. A proper structured questionnaire consisting 30 question was prepared to evaluate the knowledge regarding menstrual cup among the samples, the questionnaire were been validated by the healthcare sector professionals. Pretest and post-test was conducted among

the samples with the intervention of a video regarding information about menstrual cup. The pilot study was conducted at MIT College of engineering Aurangabad with the sample size of 10girls and the main study was conducted at degree college Aurangabad with the sample size of 50 girls. The questionnaire consisted of 30 questions for 30marks and the results were divided into 3categories 1-10 (Poor), 10-20 (Average) and 20-30 (Good). Hypothesis for the study were H1- There will be significant difference in the mean pre-test and posttest knowledge score regarding menstrual cup and H2: There will be significant association between mean post-test score with selected Demographic variables in which research hypothesis H2 was accepted

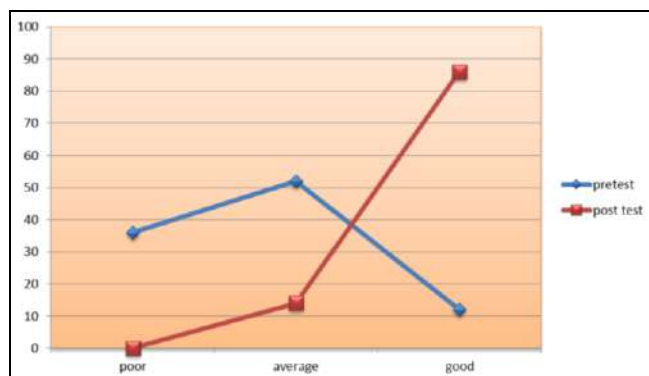
**9. Results**

This deals with analysis and interpretation of data collected from degree students of Degree College of engineering of evaluation of effectiveness of planned teaching programme on knowledge regarding menstrual cup. The data were

collected from 50 degree students. The data was organized. Collected data tabulated analyzed and interpreted by using descriptive and inferential statistical, based on data collected and the objective the study.

**Table 2:** Frequency and percentage distribution of demographic variable of degree students.

Sr. no	Demographic variables	Frequency	Percentage
1.	<b>Age</b>		
	18-19 year	43	86%
	19-20 year	1	2%
	20-21 year	0	0
2.	<b>Religion</b>		
	Hindu	46	92%
	Christian	1	2%
	Muslim	1	2%
3.	<b>Education</b>		
	1 <sup>st</sup> yr	50	100%
	2 <sup>nd</sup> yr	0	0
	3 <sup>rd</sup> yr	0	0
4.	<b>Types of family</b>		
	Joint family	14	28%
	Nuclear family	36	72%
	Extended family	0	0
5.	<b>Previous knowledge regarding menstrual cup</b>		
	Yes	29	58%
	No	21	42%
6.	<b>Place of residence</b>		



**Fig 3:** Knowledge of participants regarding menstrual cup

Data from the above table depicts that in pre-test 18 (36%) participants had poor knowledge 26(52%) subject had average knowledge and 6(12%) of them participants had good knowledge regarding menstrual cup. In post-test, 7(14%) participants had average knowledge, 43 (86%) participants had good knowledge of them, 0(0%) participants had poor knowledge regarding menstrual cup.

**Table 3:** Effectiveness of planned teaching programme on knowledge menstrual cup

Knowledge assessment	Mean	Mean difference	SD	DF	Paired value t	P value
Pre-test	12.74	10.94	4.777	45	4.75	0.05
Post-test	23.68		3.337			

The paired t value was computed to determine the effectiveness of planned teaching programme among girls in selected degree college regarding menstrual cup.

The following research hypothesis was stated

**H<sub>1</sub>:** There will be significant difference in the mean pre-test and post-test knowledge score regarding menstrual cup.

Data in the table 3 illustrates that the mean post-test knowledge score (23.68) was greater than mean pre-test knowledge (12.74). The mean difference between pre-test and post-test score was (10.94). Paired t knowledge score is (4.75) was significant.

This indicated that the planned teaching was effective in increasing the knowledge regarding menstrual cup among girls in selected in degree colleges.

## 10. Discussion

The present study was conducted to evaluate the effectiveness of the video assisted Teaching programme among the degree students studying in Degree College regarding menstrual cup. In order to achieve the objectives of the study, one group pretest post-test Design with evaluative approach was adopted. Non probability convenient sampling Technique was used to select the sample. The data were collected for 50 participants by Using structured knowledge questionnaire. The finding of the study has been discussed with the reference to the hypothesis and objective.

### The study attempts to test the following hypothesis

**H<sub>1</sub>:** There will be significant difference in the mean pre-test and post-test knowledge score regarding menstrual cup among degree students studying in Degree Colleges.

**H<sub>2</sub>:** There will be significant association between mean post-test score with selected Demographic variables.

### Findings of the study

Distribution of the frequency percentage of demographic variables:

Revealed that 50(100%) participants were in the age group between 18-19 years, 43(86%) Participants were in age group between 19-20 years, 7(19%) participants were in age group between 20-21 years and remaining 0(0%) participants were in age group between 21-22Years.

Distribution of sample based on Gender shows that 100% (50) participant were Girls. Distribution of samples based on religion shows that 92% (42) participant were Hindu, 02% (01) participant were Muslim, 01(02%) participant were Christians & 2% (01) Participant others participants 2(4%).

The first & third objective was to assess the knowledge of the degree students

### Studying in Degree College regarding menstrual cup, before and after the administration of the video assisted teaching programme.

The data depicts that in pre-test 18(36%) subjects had poor knowledge, 18 (36%) Subjects had average knowledge & 03 (06%) subjects had good knowledge regarding menstrual cup. In post-test 04 (08%) subject had poor knowledge, 07(14%) subject had Average knowledge and 39 (78%) subjects had good knowledge regarding menstrual cup

The overall mean of knowledge regarding menstrual cup was 10.78with SD  $\pm$ 2.518 in Pre-test. Overall mean of post-test was 15.42 with SD  $\pm$ 3.758.

The fourth objective was to assess the effectiveness of video assisted teaching program. On Knowledge regarding menstrual cup among the degree students studying in degree college.



**H1:** There will be significant difference in the mean pre-test and post-test knowledge score regarding menstrual cup among degree students studying in Degree Colleges. The mean pre-test knowledge score (3.337) was greater than the mean post-test score (4.777). The mean difference between pre-test & post-test score was (1.44).

Knowledge score is paired  $t=3.337$  \* $p<0.05$  is significant at 0.05% level. Hence research hypothesis H2 was accepted. This indicated that the video assisted teaching programme was effective in increasing the knowledge of degree students studying in degree-college regarding menstrual cup. This shows that there is significant difference between the pre-test and post-test knowledge score.

**H2:** There will be significant association between post-test score with selected demographic variables.

Findings reveals that the chi square value of age ( $\chi^2=1.5434$ ), Education ( $\chi^2=0.0$ ), religion ( $\chi^2=2.6995$ ), place of residence ( $\chi^2=0.007$ ), Types of family ( $\chi^2=0.08$ ) previous knowledge regarding Menstrual cup is ( $\chi^2=0.084$ ). Therefore, research hypothesis H2 was accepted.

### Limitation of the study

- 1) Non probability convenient sampling techniques were used to select the sample.
- 2) Smaller size sample makes the study difficult to generalize.

### 11. Conclusion

The present study was conducted to assess the effectiveness of Video assisted teaching program on knowledge regarding menstrual cup among the girls. The following conclusions were made on the basis of the finding of the study. It also brought out the limitation of the study in picture.

1. The knowledge of adolescent girls regarding menstrual cup was inadequate when assessed in pre-test, were as the knowledge level had improved in the post-test.

2. Video assessed teaching programme menstrual cup was effective. The analysis of pre-test knowledge score was 4.777 were as post-test knowledge score was 3.337 the mean difference 1.44. Paired test knowledge score was  $t=4.75$ . Hence research hypothesis H1 was accepted. This indicates that the VATP was effective in increasing the knowledge of adolescent girls regarding menstrual cup.

The finding of the study shows that there is increase in knowledge of adolescent girls regarding menstrual cup. The findings of the present study serve as a basis for the professional and the student to conduct further studies. The generalization of the study can be made by replication of the study. Teacher can direct motivate the nursing researchers, so that they can conduct research in the same and different condition or practice study, and there by professional independence can be achieved. This study will serve as a valuable reference material for future investigator.

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