

Impact of Awareness on the Usage of Menstrual Cups among Adolescent Girls in Selected Rural Community Area, Bengaluru

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Abstract:

The study was conducted on the impact of awareness on the usage of menstrual cups among adolescent girls in selected rural community. A Quasi experimental one group pre-test post-test design was used to assess the pre-test and post test level of knowledge regarding usage of menstrual cups among adolescent girls. about 50 adolescent girls were selected by using random sampling technique in selected high school, rural community area, Bangalore. The self-administered structured questionnaire was used to collect the data. Chi square test was used to determine the association between the pre-test knowledge scores and selected demographic variables and measures at 5% ($P < 0.05$). There was a significant association between pre-test level of knowledge regarding usage of menstrual cups among adolescent girls with their selected demographic variables. The pre test mean score was 35.56 & the SD score was 4.78 whereas in post test, the Mean score was 82.88 and SD was 4.04 and in the enhancement mean was 47.52m, SD was 5.6 and the calculated overall paired t value was 1.15 and it was significant at less than 0.05 level. Hence it is concluded that there is an enhancement of knowledge among adolescent girls regarding the usage of menstrual cups.

Key Words: Menstrual cups, Knowledge, Adolescent girls,

Introduction:

The period from 10 and 19 years are known as adolescents age, which is the transitional period between childhood and adulthood. The menstrual cycle's normal physical process of discharging blood and related materials through the vagina is known as menstruation, or menses. To detect

menstrual flow, women and teenage girls around the world require menstrual hygiene management products that are safe, efficient, and reasonably priced. The market offers a plethora of options, including menstruation cups, tampons, and sanitary napkins. Everywhere in the world, women and girls

manage their menstruation in unique ways that are contingent upon a range of factors, including individual choices, access to resources, economic standing, cultural beliefs and customs, and knowledge. The non-absorbent, bell-shaped menstrual cup is composed of flexible, medical-grade silicone.

The main privileges of a woman are giving birth, raising a family, and establishing the fundamental unit of society. Therefore, every country must prioritize the reproductive health of women in order to establish the groundwork for a robust society. Millions of women worldwide go through the regular biological process of menstruation every month. Menarche is a cultural event that denotes the beginning of a woman's reproductive years and, for many, her passage into full adulthood. The basic issue of how to control the menstrual flow and what happens to a girl or women who is unable to do so properly is one of the challenges associated with menstruation that is often overlooked. A menstrual cup is a tool for controlling menstrual flow

Objectives of the study:

- To assess the existing knowledge regarding usage of menstrual cups among adolescent girls.
- To assess the post-test level of knowledge regarding usage of menstrual cups among adolescent girls.
- To compare the pre-test and post-test level of knowledge regarding usage of menstrual cups among adolescent girls.
- To find associate pre-test level of knowledge regarding usage of menstrual cups among adolescent girls with their selected demographic variables.

Hypothesis:

H1: There is a significant difference between the mean pre-test and post-test knowledge score of adolescent girls regarding knowledge on usage of menstrual cups.

H2: There is a significant association between the mean pre test knowledge score regarding usage of menstrual cups with their selected demographic variables.

Assumptions:

Adolescent girls may have some knowledge on usage of menstrual cup.

Research methodology:

Research Design: Quasi experimental one group pre-test post-test design is adopted for the present study.

Variables:

Research Variable: Awareness on the usage of menstrual cups

Demographic Variables: In this study it refers to Age, Education, Religion, Residence, Attained age of menstruation, Menstrual cycle, Previous knowledge regarding menstrual cup, Economic status, Usage of menstrual cups.

Sources of the data:

Setting of the study:

The study conducted in selected high school, rural community area, Bangalore.

Sample:

Sample for the study will be 50 adolescent girls of selected high school, rural community area, Bangalore.

Sampling Technique:

Random sampling technique is adopted to select the samples.

Sampling Criteria:

Adolescent girls who are:

- Available during the period of data collection.
- Willing to participate in the study

Exclusion Criteria:

Adolescent girls who are not available during the period of data collection.

Data collection tool:

The data was collected through the self-administered structured questionnaire. It was prepared to assess the knowledge regarding usage of menstrual cups among adolescent girls in selected rural community area, Bangalore.

The tool consists of two sections:

Section 1:

It consists of 7 socio-demographic variables which includes Age, Education, Religion, Residence, Attained age of menstruation, Menstrual cycle, Previous knowledge regarding menstrual cup, Economic status, Usage of menstrual cups.

Section 2:

A structured questionnaire was prepared regarding the knowledge regarding usage of menstrual cups.

Procedure for data collection:

A prior permission was obtained from the Head Mistress, M.Tres High School, Bangalore. The data collection was carried out on the month of June 19th 2024 among the adolescent girls. The study period was 7 days. The study was conducted as follows:

- 1) The purpose of the study was explained to the sample and informed consent was taken before starting the study.
- 2) A pre-test was conducted by self-administration of structured knowledge questionnaire to each sample. Duration of 45 minutes was given for each sample to complete the tool

3) On the same day the Structured Teaching Programme was administered regarding menstrual cup among adolescent girls for 45 minutes using PPT and flash cards.

4) Post test was conducted by using the same structured knowledge questionnaire after 7 days of the structured teaching programme.

Results:

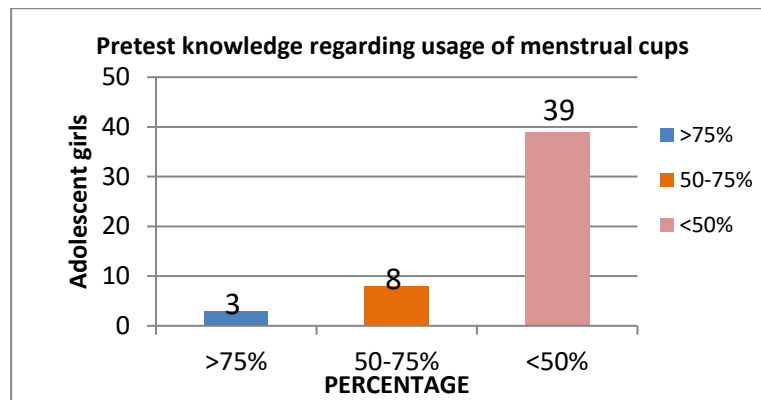
A. Sample characteristics

Percentage wise distribution of adolescent girls to their age group reveals that majority of the adolescence (40%) was in the age group of 14 years. Majority (36%) of adolescents were studying 8th standard. Majority (86%) of adolescents were from Hindu families. Majority (84%) of adolescents were attained menstruation at the age of 13 years. Majority (52%) of adolescents were having 24 days of menstrual cycle. Majority (66%) of adolescents were not having the previous knowledge regarding menstrual cups and the majority (66%) of adolescent's family income is 10,000 per month.

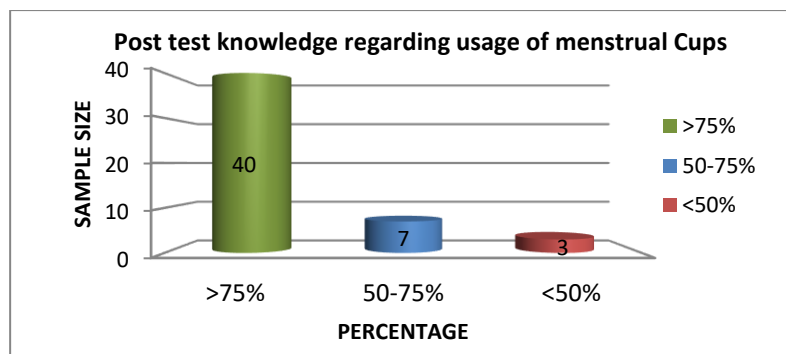
Table 1: Sample characteristics

Sl. No.	Demographic variables	Category	Frequency	Percentage
1	Age	a)<13 years	15	0.3
		b)14 years	20	0.4
		c)15 years	13	0.26
		d)>15 years	2	0.04
2	Education	a)8th standard	18	0.36
		b)9th standard	15	0.3
		c)10th standard	17	0.34
		d)PUC	0	0
3	Religion	a)Hindu	43	0.86
		b)Muslim	6	0.12
		c)Christian	0	0
		d)Others	1	0.02

4	Attained Age Of Menstruation	a)Not attained	5	0.1
		b)13 years	42	0.84
		c)14 years	3	0.06
		d)>15 years	0	0
5	Menstrual cycle	a)24 days	26	0.52
		b)28 days	22	0.44
		c)40 days	2	0.04
		d)60 days	0	0
6	Previous Knowledge Regarding Menstrual Cup	a) Yes	17	0.34
		b)No	33	0.66
7	Family Income	a)<10,000/-	8	0.16
		b)10,000-20,000/-	33	0.66
		c)20,000-30,000/-	6	0.12
		d)>30,000/-	3	0.06



Graph 1: Pre-test knowledge regarding usage of menstrual cups among adolescent girls.



Graph 2: Post-test knowledge regarding usage of menstrual cups among adolescent girls.

TABLE 2: Association of pre-test level of knowledge regarding usage of menstrual cups among adolescent girls with their selected demographic variables

Sl. No.	Demographic variables	Category	Respondents		Chi-square value
			≤8	>8	
1	Age	a)<13 years	11	4	3.4892 NS
		b)14 years	11	9	
		c)15 years	5	8	
		d)>15 years	1	1	
2	Education	a)8th standard	13	5	3.4818 NS
		b)9th standard	8	7	
		c)10th standard	7	10	
		d)PUC	0	0	
3	Religion	a)Hindu	24	19	20.05 S
		b)Muslim	3	3	
		c)Christian	0	0	
		d)Others	1	0	
4	Attained Age Of Menstruation	a)Not attained	4	11	1.8205 NS
		b)13 years	23	19	
		c)14 years	1	2	
		d)>15 years	0	0	
5	Menstrual cycle	a)24 days	17	9	12.49 S
		b)28 days	9	13	
		c)40 days	2	0	
		d)60 days	0	0	
6	Previous Knowledge Regarding Menstrual Cup	a) Yes	4	13	11.02 S
		b)No	24	9	
7	Family Income	a)<10,000/-	7	1	7.6477 S
		b)10,000-20,000/-	14	19	
		c)20,000-30,000/-	5	1	
		d)>30,000/-	2	1	

Table 3: Comparison between the pre-test and post-test level of knowledge regarding usage of menstrual cups among adolescent girls.

SL N O	PRETEST					POST TEST			ENHANCEMENT			Paired d value	P-value
	Domain	Max score	Mean	SD	Mean %	Mean	SD	Mean %	Mean	SD	Mean %		
1	Definition	2	0.9	0.788	45	1.72	0.57	86	0.82	0.9	41	1.31	P<0.05
2	Procedure	6	2.29	1.44	37.3	4.9	1.12	81.67	2.6	1.7	44.33	9.81	P<0.05
3	Material/cost/shape/size/storage	5	1.92	1.242	38.4	4.36	1.08	87.2	2.4	1.6	48.8	8.27	P<0.05
4	Sterilization	4	1.42	0.949	35.5	3.3	0.83	82.5	1.88	1.2	47	4.56	P<0.05
5	Activities	4	1.22	1.266	30.5	3.7	0.67	92.5	2.48	1.4	62	1.09	P<0.05
6	Benefits	4	1.14	1.125	28.5	2.74	1.19	68.5	1.6	1.3	40	1.42	P<0.05
Over all		25	8.84	4.78	35.3 6	20.72	4.04	82.88	11.88	5.6	47.52	1.15	P<0.05

Note: * Significant at 5% level for 29 df (i.e. P<0.05)

Conclusion:

"In conclusion, the low usage of menstrual cups among rural adolescent girls is a concerning issue that warrants attention. Despite its numerous benefits, including environmental sustainability and cost-effectiveness, various barriers hinder its adoption. These include lack of awareness, cultural beliefs, and limited access to resources. To address this, it is essential to implement targeted interventions, such as educational programs, community outreach, and availability of menstrual cups at affordable prices. By addressing these barriers and increasing awareness, we can empower rural adolescent girls to make informed choices about their menstrual health and well-being, ultimately promoting a healthier and more sustainable future for all."

Therefore, it is crucial to develop strategies to increase awareness and accessibility of menstrual cups among rural adolescent girls, ultimately reducing the gender and geographic disparities in menstrual health management.

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