



Awareness and Utilization of Menstrual Cup among Adolescent Nursing Students of a Selected College

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Abstract

Introduction: Menstruation is normal physiological process of a woman, during this period basic hygiene and care is most important. Most of the women use sanitary napkins and pads for maintaining menstrual hygiene, though menstrual cup is a good alternative to sanitary pads as it is reusable and environment-friendly. Awareness of nursing students about this will have significant clinical and public health implications. Hence, the current research aimed at assessing awareness and utilization of menstrual cup among adolescent nursing students.

Methods: An Analytical cross-sectional research design was conducted among 121 adolescent nursing students selected by enumerative sampling from Nepalese Army Institute of Health Sciences, College of Nursing and Nepali Army college of Health Science. Semi-structured questionnaire was used to collect the data. Descriptive statistics such as frequency, percentage, mean and standard deviation was used to describe the socio-demographic characteristics and inferential statistics i.e., spearman rank correlation was used to find out the correlation between level of awareness and utilization of menstrual cup.

Results: In this study, majority (81%) of the respondents had moderate level and only (14%) of respondents had adequate level of awareness on menstrual cup. Very few respondents (9.1%) of them had used menstrual cup. There was negligible positive correlation between level of awareness and utilization of menstrual cup ($r=0.003$).

Conclusion: The findings of the study concluded that nursing students have moderate knowledge regarding menstrual cup and its usage and only very few of them are using it hence, there is a need for educational programs, campaigns and continuous monitoring to improve and reinforce the knowledge regarding menstrual cup and its usage among students as they are the one who in future will reach to serve the public and raise awareness throughout the country.

Keywords: Adolescent, awareness, menstrual cup, nursing students, utilization

Introduction

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19. Menstruation or menses is the natural bodily process of releasing blood and associated matter from the uterus through the vagina as part of the menstrual cycle.¹

Women and adolescent girls worldwide need safe, effective and affordable menstrual hygiene management product to catch menstrual flow. A basket of choices like sanitary napkins, tampons, menstrual cup etc., are available in the market. All over the world, women and girls use their own strategies for managing menstruation that varies from country to country, depending on personal preferences, available resources, economic status, indigenous traditions, cultural beliefs, and knowledge.²

The menstrual cup is a non-absorbent bell-shaped device made of flexible medical grade silicone that is inserted into the vagina to collect menstrual flow. It creates a seal and is held in place by the walls of the vagina. It collects three times more blood than pads or tampons and needs to be emptied every 6-12 hours, after which it is rinsed and re-inserted. After each menstrual cycle the cup must be boiled for 5-10 minutes. Cups are reusable for 5-10 years. Since cups do not disrupt vaginal flora and pH, health risks like toxic shock syndrome, infections and skin irritations are minimal in comparison to other materials. Good hand hygiene is important for safe cup use.¹

Globally, in 2019 about 24% of the population were women of reproductive age (aged 15-49), and about 350 million menstruate on any given day. If a woman bleeds 5/28 days, this means 130-260 pads/tampons per year, or 5,000-10,000 pad over her reproductive years. One cup would therefore replace up to 2600 pads/tampons. No good statistics was found regarding on how many uses menstrual cups. However, the global market of menstrual cup is raising.³

It reported that menstrual cups are feasible alternatives to tampons and effectively reduce costs and waste, providing an environmentally friendly alternative as well as comfort for females.⁴ Menstrual cup is safe; the risk of sexually transmitted infections was lower among menstrual cup users and associated with a lower risk of bacterial vaginosis than using sanitary pads or traditional materials.⁵

A guide to menstrual hygiene management materials published by the UNICEF in 2019 states that the cup is one of the most wonderful options compared to other products which can prevent girls from skipping school during their menstrual days. In Nepal never-ending Chhaupadi system where there is possibility of animal attack can be eliminated with the use of this product.⁶

Pilot study conducted in Nepal after distribution of menstrual cup revealed positive perception of respondents towards menstrual cup as they do not need to miss even single class to maintain menstrual hygiene. Also using the menstrual cup was found easy, convenient, economical and of environment friendly.⁷

Menstrual hygiene management can be challenging in low-income settings like Nepal and among school-aged girls due to traditional beliefs, lack of knowledge and information on best hygienic practices, and limited access to appropriate and affordable menstrual hygiene products.⁸

Despite the fact that respondents were aware about menstrual cup is one of the safe, comfortable, eco-friendly and sustainable menstrual hygiene management product none of the respondents have used it.⁹ There was lack of awareness of the benefits of menstrual cup even among medical students as well as nursing students in India and none of them had used it.^{10,11}

Though menstrual cups have been available for decades, their use is limited because of lack of awareness even in medical personnel and due to popularity of sanitary pads. Populations who are aware of it are also not using menstrual cups. During literature review very few studies have been conducted regarding menstrual cup in Nepal. Therefore, researcher felt a need to conduct this study to investigate the awareness level and utilization of menstrual cup among the adolescent nursing students

Methods

Analytical cross sectional research design was adopted to find out the awareness and utilization of menstrual cup among adolescent nursing students of Nepalese Army Institute of Health Sciences, College of Nursing and Nepali Army college of Health Science, Bhandarkhal, Kathmandu district, Province no. 3. Students of age group 10-19 years, who already had menarche and provided consent for the study were included in this study. Total enumerative sampling was used for sample selection. There were altogether 121 adolescent nursing students therefore N=121. Data was collected by using semi-structured self-administered questionnaire. Data was collected after getting ethical approval from Institutional Review Committee (IRC) of NAIHS. Informed written assent from respondents and informed written consent from vice-principal was obtained for respondents of age less than 18 years. Informed written consent was obtained from respondents of age 18 years and greater than 18 years was obtained after explaining the purpose of study. Researcher herself collected data. Data was collected in classroom setting and data contamination was reduced by placing the respondents in a distance of about 1 meter and were not allowed to talk to each other during data collection. Approximately, it took about 20-25 minutes for each respondent to fill up the questionnaire. Data was collected in 5 days duration i.e from 2080/8/4 to 2080/8/8. Collected data from respondents was checked and reviewed for its completeness before leaving the respondents. After the data collection, collected data was

edited, classified and coded. The coded data was entered, cleaned and tabulated using the statistical package for social science (SPSS) version 20. Data was analyzed using descriptive statistical method such as frequency, percentage, mean and standard deviation. Inferential statistics i.e spearman rank correlation was used to find out correlation between level of awareness and utilization of menstrual cup. Analyzed data were presented on academic tables and described in texts.

Results

The highest proportion (52.1. %) of the respondents were age of 17-18 years with mean age of 17.52 and standard deviation ± 1.191 . Majority (84.3%) of the respondents were studying certificate level in nursing. Highest proportion (61.2%) of the respondents belonged to Brahmin/ Chhetri ethnic group. Most (86.0%) of the respondents were Hindu. Among respondents (37.2%) monthly family income was above 40,000 per month. Majority (53.7%) of the respondents were residing in urban area.(Table 1)

Table 1: Socio-demographic Characteristics of Respondents N=121

Variables	Frequency	Percentage (%)
Age in Completed Years		
15-16	27	22.1
17-18	63	52.1
18-19	31	25.6
Mean \pm S.D.=17.52 \pm 1.191		
Educational Level		
Certificate	102	84.3
Bachelor	19	15.7
Ethnicity		
Dalit	4	3.3
Janajati	43	35.5
Brahmin /Chhetri	74	61.2
Religion		
Hinduism	104	86.0
Buddhism	11	9.1
Kirat	3	2.5
Christianity	3	2.5
Family monthly income in NRs		
Below 15,000	6	5.0
16,000-20,000	15	14.4
21,000-30,000	24	19.8
31,000-40,000	31	25.6
Above 40,000	45	37.2
Permanent place of residence		

Rural	56	46.3
Urban	65	53.7

Table 2: Awareness of Respondents on Menstrual Cup N=121

Level of Awareness	Frequency	Percentage (%)
Adequate (> or equal to 75%)	17	14.0
Moderate (51-75%)	98	81.0
Inadequate (< or equal to 50%)	6	5.0
Total	121	100

Table 2 reveals that majority (81.0%) of the respondents had moderate level of awareness on menstrual cup followed by (14.0%) of the respondents had adequate level of awareness and (5.0%) of the respondents had inadequate level of awareness.

Table 3: Utilization of Menstrual Cup among Respondents in Terms of Duration and Consistency

Variables	Frequency	Percentage (%)
Use of menstrual cup (N=121)		
Yes	11	9.1
No	110	90.9
If yes, duration of usage(n=11)		
Less than 6 months	7	63.6
6 months to 1 year	3	27.3
More than 1 year	1	9.1
If yes, use of menstrual cup consistently in each menstruation(n=11)		
Yes	9	81.8
No	2	18.2
If yes, reasons for using menstrual cup*(n=9)		
Comfort	9	100
Environment friendliness	9	100
Durable	7	77.7
No need to change frequently	7	77.7
If yes, recommend it to others(n=11)		
Yes	10	90.9
No	1	9.1
If no, use of other menstrual hygiene product (n=110)		
Sanitary pads	109	99.1
Tampons	1	0.9

* Multiple response

Table 3 depicts that majority (90.9%) of the respondent's do not use menstrual cup. Less than one-fourth (9.1%) answered that they had used menstrual cup among them (63.6%) were using menstrual cup for less than 6 months and majority of users (81.8%) of respondents were using

menstrual cup consistently in each menstruation. Among users all (100%) used menstrual cup because of its comfort and environment friendliness. Most of the users (90.9%) recommend it to others. Among non users almost all (99.1%) of respondents uses sanitary pads during menstruation.

Table 4: Correlation between Awareness and Utilization of Menstrual Cup among Respondents N=121

Utilization of Menstrual Cup	Level of Awareness			r	p value
	Adequate n (%)	Moderate n (%)	Inadequate n (%)		
Yes	2 (18.2)	8 (72.7)	1(9.1)	0.003	0.974 (>0.05)
No	15 (13.6)	90 (91.8)	5(4.5)		

Table 4 shows that there is negligible positive correlation between level of awareness and utilization of menstrual cup and there is statistically insignificant relationship indicates that though the respondents are aware regarding menstrual cup the utilization of this cup is negligible.

Discussion

Socio-demographic Characteristics of Respondents

Regarding the socio-demographic characteristics of the respondents, this study revealed highest proportion (52.1%) of the respondents was age of 17-18 years with mean age of 17.52 and standard deviation ± 1.191 . Majority (84.3%) of the respondents were studying certificate level in nursing. Most (61.2%) of the respondents belonged to Brahmin/Chhetri ethnic group and where (86%) of the respondents' followed Hindu religion. More than half (53.7%) of the respondents were from urban residence. The socio-demographic characteristics of respondents are similar as well as in contrast at the same with other studies which is due to discrepancy in study population and study setting.

Awareness of Respondents on Menstrual Cup

The findings of present study revealed that 14% of the respondents had adequate level of awareness on menstrual cup, which is in contrast with the study conducted among 120 nursing students of Poyanil College of Nursing, Kozhencherry, Kerela, which revealed that 26.67% had adequate level of awareness.¹²

The present study showed that 81% respondents had moderate level of awareness on menstrual cup which is supported by the study conducted among 50 adolescent girls from St. Sebastian School, Thrissur, India, which revealed that 86% had moderate level of awareness¹³ but in contrast to the study conducted among 120 nursing students of Poyanil College of Nursing, Kozhencherry, Kerela, which revealed that 70.83% had moderate level of awareness on menstrual cup.¹² The difference in finding might be due to difference in study setting.

The result of the present study reported that 5% of

respondents had inadequate level of awareness on menstrual cup which is supported by the study conducted among 40 nursing students in Canossa College of Nursing, Cherukunnu, India which revealed that 5% had inadequate level of awareness¹³ but is in contrast with the study conducted among 120 nursing students of Poyanil College of Nursing, Kozhencherry, Kerela, which revealed that 2.5% had inadequate awareness.¹²

Utilization of Menstrual Cup: This study showed that only 9.1% of respondents used the menstrual cup which is inconsistent with the study conducted among 109 medical students in Kerela and 108 adolescent girls in India which revealed that 18.4% and 2.8% of respondents had used menstrual cup respectively.¹⁴ The difference might be due to difference in study population and study setting and sample size.

This study showed that 63.6% of respondents used menstrual cup for less than 6 months which is contrast with the study conducted among 103 early adult women, Kerala which revealed that 49.4% of the respondents had used menstrual cup for less than 6 months.¹⁵ Present study revealed that 7.4% of respondents are consistently using menstrual cup with each menstruation which is in contrast with the study conducted among 109 medical students in Kerela which showed 12.8% consistent users.¹⁴ The discrepancy is explained due to difference in study population and sample size.

This study revealed that (7.4%) of respondents used menstrual cup because of comfort and eco-friendliness which is contrast with the study conducted on reproductive aged women, Korea which revealed that 1.6% had used menstrual cup because of comfort and eco-friendliness.¹

In this study most (90%) of the respondents used sanitary pads which is supported by the study which revealed (91.7%) of the women used sanitary pads, (0.82%) used tampons, none of them used clothes which is in contrast with the study which revealed 1.2% of them had used tampons, 2.4% of women were using clothes respectively for menstrual sanitation method.¹⁷

In this study 90.9% of user respondents recommend

menstrual cup to others which is in contrast with the findings of the study conducted among 109 medical students in Kerala which showed only (69.7%) of respondents recommended menstrual cup to others.¹⁴

Correlation between Awareness and Utilization of Menstrual Cup among Respondents

The present study showed that there is negligible positive correlation between level of awareness and utilization of menstrual cup and there is statistically insignificant relationship which indicates that though the respondents are aware regarding menstrual cup the utilization of this cup is negligible.

Conclusion

The study concluded that the students have moderate knowledge regarding menstrual cup and its usage and only very few of them are using it hence, there is a need for educational programs, campaigns and continuous monitoring to improve and reinforce the knowledge regarding menstrual cup and its usage among students as they are the one who in future will reach to serve the public and raise awareness throughout the country.

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