



Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/17992

DOI URL: <http://dx.doi.org/10.21474/IJAR01/17992>



RESEARCH ARTICLE

A STUDY TO ASSESS THE KNOWLEDGE ABOUT MENSTRUAL CUP; IT'S ACCEPTIBILITY, SAFETY, LEAKAGE AND AVAILABILITY AMONG THE TEENAGE GIRL AND THEIR MOTHER IN A PARTICULAR RURAL AREA IN BENGALURU

Prof Devi Nanjappan, Miss. Ashwini, Banasharee Debnath, Ariti Ghosh, Arun Barman, Avani P.S, Arunkrishna Bagchi and Barsha Biswas

Manuscript Info

Manuscript History

Received: 10 October 2023

Final Accepted: 14 November 2023

Published: December 2023

Key words:-

Menstrual Cup, Menstrual Hygiene, Planned Teaching Programme

Abstract

Background: Menstruation is also known as menses or period or monthly discharge of blood and mucosal tissue from the inner lining of uterus through vagina. The first menstrual period usually occurs between 12-15 years of age, called as Menarche. The typical length of time between the first day of one period and the first day of next period is 21-45 days in young women; 21-31 days in adults (an average of 28 days). Bleeding usually lasts around 2 to 7 days. Feminine hygiene products are personal care products used during vaginal discharge, and other bodily functions related to the vulva and vagina. Products that are used during menstruation may also be called menstrual hygiene products, including menstrual pads, tampons, menstrual pads, period panties etc. Feminine hygiene products also include products meant to cleanse the vulva or vagina, such as douches, feminine wipes, and soap. Feminine hygiene products are either disposable or reusable. Sanitary napkins, tampons, and pantyliners are disposable feminine hygiene products. Menstrual cups, cloth menstrual pads, period panties, and sponges are reusable feminine hygiene products. Menstrual cup is a device made up of silicon for menstrual hygiene. Despite its being safe, eco-friendly, cheap, and durable its non-acceptability may be due to higher adoption barriers. We conducted this study to assess the acceptability and safety of menstrual cups.

Methods: Post-test design and evaluative approach was adopted. Purposive sampling technique was used to select the sample of 60 of teenage and mothers for a period of seven days for data collection. Multiple choice questions, close ended questionnaire and planned teaching programme were used as a tool to assess the knowledge on menstrual cups. The data obtained were analysed in terms of the objectives and it was calculated and tabulated

Results: The overall findings are that study shows the majority respondents 30 (76.9%) did not have knowledge regarding menstrual cup and 9 (23.1%) did have knowledge about menstrual cup.

Conclusion: The study shows that the respondents had inadequate knowledge regarding menstrual cup. There is a significant increase in post-test scores after the planned teaching programme about menstrual cup and menstrual hygiene.

Introduction:-**Menstrual Cup**

The menstrual cup is a reusable, non-toxic, and non-allergic silicone device that can be used to capture menstrual fluids made up of silicon that is non-allergic and not toxic. After insertion of the menstrual cup, it opens in an oval shape and has to be positioned between the posterior fornix and pubic bone, covering the cervix. To remove it, a finger has to be hooked over the rim behind the pubic bone.

Menstrual cups have been available for decades, but their use remains limited. Despite its safety, eco-friendliness, affordability, and durability, several barriers to adoption persist.

Thus, this study was conducted with the primary objective to assess the adaptability of menstrual cups by examining the level of acceptance among women. The study also intends to examine the efficacy of menstrual cups in terms of side effects experienced and perceived ease of usage by the women in the study.

Although menstrual cups have not been associated with an increased risk of reproductive tract and urogenital infections in women in high-income countries, research on the safety of menstrual cups among girls and women in LMIC has relied on self-reported information with no clinical or laboratory confirmatory studies. There is a concern that an insertable menstrual item may increase the risk of infections, particularly *Staphylococcus aureus*, leading to menstrual toxic shock syndrome (mTSS). Tampons are linked to mTSS in women of reproductive age. Surveillance data for the period 1979–1996 indicate that 5296 cases were reported in women in the USA using highly absorbent tampons. The tampons were found to have been associated with vaginal microtrauma arising from the high absorbency. Menstrual cups which collect menstrual blood, however, are non-absorptive and do not disrupt the vaginal epithelium. Furthermore, among women using female barrier methods, which similarly uses medical grade silicone or latex products, mTSS is very low (~2.25 cases per 100 000 users per year). Nevertheless, concern remains about any vaginal intrusion, particularly among girls, with poor water, sanitation and hygiene (WASH) facilities. Further laboratory and field-based studies are, thus, needed to clarify risks associated with menstrual products to better define the cost-benefit of subsidised provision for girls in LMIC. This paper describes the exploration of knowledge, acceptability, safety of menstrual cup during a randomised controlled pilot feasibility study among teenage girls and mothers in a rural area in Bengaluru.

Need For The Study

If there are so many advantages of menstrual cup over sanitary pads, then why is still not been so popular?

Probably because of lack of knowledge and the menstrual cup not been promoted as much as it should have been, especially in a country like India. Also, because India is still an unreasonably conservative country. A menstrual cup is inserted into the vagina, while a menstrual pad isn't. So, people think that using a cup in unmarried girls might result in loss of virginity. Since we follow western culture, the idea of use and throw is becoming more a norm than thinking in a realistic way! Due to the lack of promotion and popularity of sanitary pads even educated ones have meagre knowledge about menstrual cup. So, the objective of the study was to assess knowledge about Menstrual Cup and its usage among population.

Menstrual cups greatly reduce the waste generated from menstrual cycles as it is reusable, unlike sanitary pads and tampons. Hence, it is more eco-friendly. Since it can be used for five or more years, it's more economical too. Menstrual Hygiene Management (MHM) is an integral part of the Swachh Bharat Mission Guidelines (SBM-G). The MHM Guideline (December 2015) is issued by the Ministry of Drinking Water and Sanitation to support all adolescent girls and women. According to it, the sanitary waste should be wrapped in leak proof pouches provided by producer and should be disposed with dry waste at the time of door-to-door collection. According to State of India's Environment 2019 Survey, the Menstrual Hygiene Alliance of India (MHAI) has approximated that there are 336 million menstruating women in India, of which 36 per cent use disposable sanitary napkins - that total to 121 million women.

The corona virus pandemic has triggered what has been described as a "sanitary pad crisis" in India. 15% of girls had access to sanitary pads during the lockdown. This is not only the case in India. Women in Fiji, the US, UK also have reported severe shortage of disposable menstrual products. The sustainable product lines on offer are cloth pads

and menstrual cup. Menstrual cups are estimated to have less than 1.5 % of the environmental impact of disposables at 10% of the cost. Menstrual cups, meanwhile, are flexible bell-shaped receptacle that collects menstrual blood. Menstrual cup is made up of silicon which last for up to 10 years [4].

This study can be used to bring awareness about an advanced alternative which has the following advantages over other menstrual products:

- It is eco-friendly and budget friendly.
- Can be used for longer duration.
- Reduce risk for infection and rashes

Methods:-

Study Design

Research design is also known as the blue print that a researcher selects to carry out their research study. Sometimes, the term research design is used interchangeably with the term methodology. Broadly speaking, research design includes six major elements which are time, place and source of data collection, tools, method of data collection and method of data analysis. The research design used in this study is post-test study design.

Participants

The participants for the present study were primary caregivers of mentally ill patients and who fulfilled the inclusion criteria such as available at the time of data collection period, can understand Kannada or English language, willing to participate in the study.

Sample size and estimation

Sample size for the present study is 39 teenage girls and mothers at rural area in Soladevanahalli, Bengaluru, Karnataka.

Sampling Technique

Sampling is the process of selecting a group of people or other element with which to conduct a study. The sampling technique adopted for the study is Purposive Sample Technique.

Instruments

Section A: Distribution of women based on socio-demographical variables.

Section B: Effectiveness of planned teaching programme on knowledge regarding menstrual cup.

Section C: Analysis of post-test knowledge scores of respondents on menstrual cup.

Section D: Association between post-test knowledge scores of respondents with selected socio-demographic variables.

Validity of the tool

Structured Knowledge Questionnaire and Multiple Choice Questions will be constructed for the study to evaluate the effectiveness of planned teaching programme on menstrual cups among teenage girls and mothers.

The steps included in preparation tools are:

- **Review of Literature**
- **Consultation with expert in OBG**

After the extensive review of literature and discussion with the experts, structured knowledge questionnaire and multiple choice questions were prepared to evaluate knowledge regarding menstrual cup.

Section 1: Socio demographic variable

This section consists of several items; they are Age in years, Religion, Type of Family, Monthly income of family, Age of menarche, Flow of Menstrual bleeding, Duration of menstruation, Types of sanitary protection used, Total income spend on sanitary products every month.

Section 2: This section deals with the structured knowledge questionnaire and multiple choice questions regarding menstruation and menstrual cup. It consists of 18 questionnaires related to menstruation, menstrual phase, menstrual hygiene, complication of neglected menstrual hygiene and menstrual products.

Reliability of the tool

Scoring key ward prepared for Section-1 by coding the socio demographic variables.

Section-2: Score of 1 mark allotted for each correct answer and 0 for each correct answer. Thus, total mark was given for knowledge assessment.

Data Collection

Permission from concerned Authority

Formal written permission was obtained from Principal, Smt. Nagarathamma College of Nursing, Bengaluru prior to the data collection from respondents in order to evaluate the planned teaching programme regarding menstrual cup.

Data Collection from concerned Authority

After the Formal written permission was obtained from Principal, Smt. Nagarathamma College of Nursing and study was conducted during the month of June from 20/06/23 to 27/06/23. Respondents were selected in accordance with laid down criteria. Consent was obtained from each respondent after giving assurance of confidentiality.

Permission of data collection

Data was collected from women living in rural area in Soladevanahalli as per the convenience of respondents.

Post-Test

Post-test administered to the samples using structured knowledge questionnaire and multiple choice questions after 7 days of planned teaching programme.

Planned Data Analysis

The collected data were organized, tabulated and analysed by using both descriptive statistics (mean, standard deviation and mean%) and inferential statistics was done to assess the effectiveness of planned teaching programme on menstrual cup and to determine the association between post-test knowledge with demographic variables of the sample.

Analyse and Interpretation

Data collection procedure

Prior to the data collection, permission was obtained from the concerned authority. The samples were informed about the purpose of the study and consent was taken from the respondents.

Statistical Analysis

The below table evaluates the knowledge among teenage girls and mothers regarding menstrual cycle and menstrual hygiene and menstrual cup in a pre-experimental post-test design.

Table 1:- Frequency and percentage distribution of women based on age.

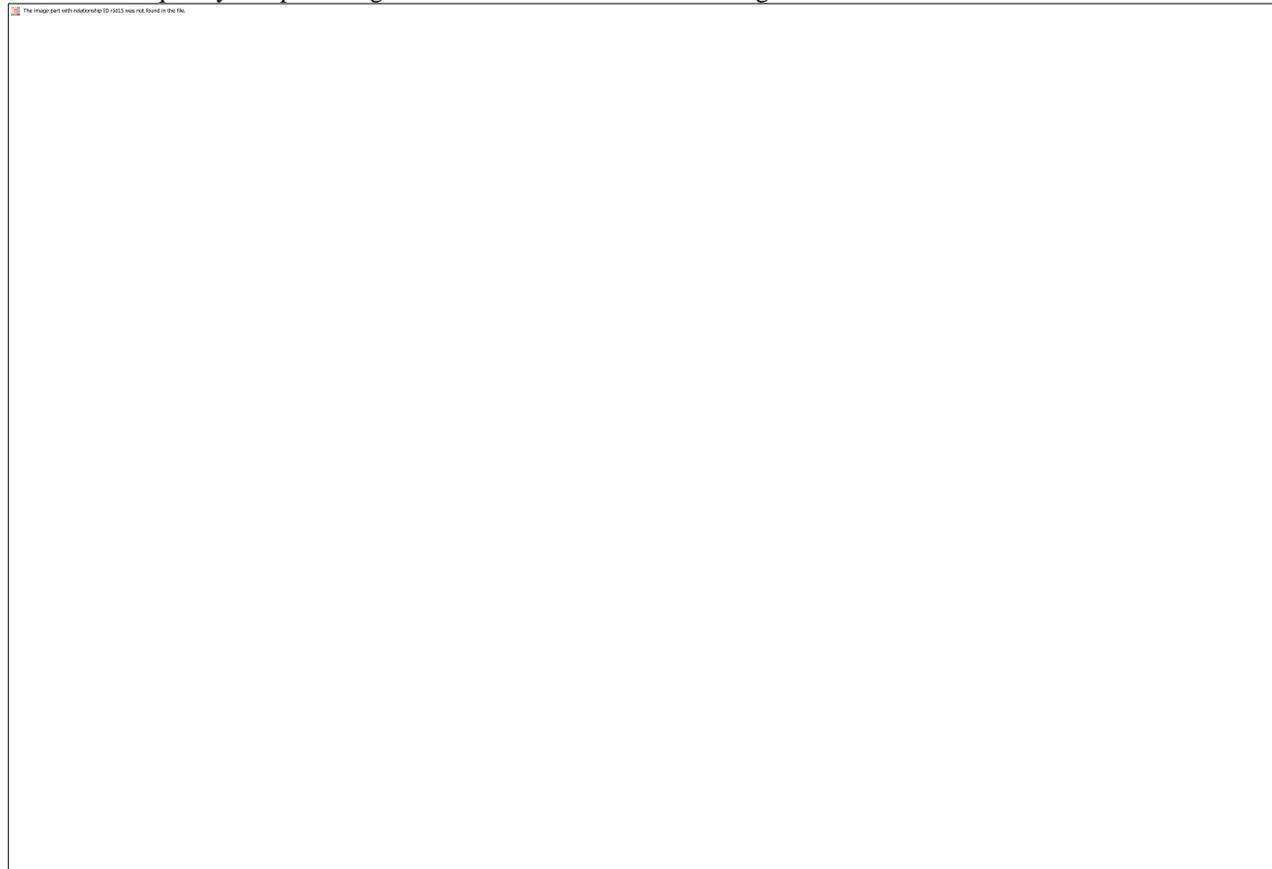


Table 1 shows that the maximum respondents 19 (48.7%) were from the age of 22 years, 7 (17.9%) were from the age of 21 years, 3 (7.7%) were from the age of 20 years and 3 (7.7%) were from the age of 24 years, 2 (5.1%) were from 23 years and the least respondents were 1 (2.6%) were from the age of 18 years , 1 (2.6%) were from the age of 19 years, 1 (2.6%) were from the age of 26 years, 1 (2.6%) were from the age of 30 years and 1 (2.6%) were from the age of 33 years.

Table 2:- Frequency and percentage distribution of women based on Educational status .



Table 2 shows that majority respondents 34 (87.2%) were graduate and 5 (12.8%) were done schooling

Discussion:-

This chapter discusses the major findings of the study and reviews them in relation to findings from the results of the previous study. The present study was aimed to evaluate the effectiveness of structured teaching programme on knowledge regarding menstrual cup. In order to achieve the objective of the study one group post-test design with preexperimental design was adopted. Purposive sampling technique was used to select the sample. The data was collected from 39 women through structured knowledge questionnaire and multiple choice questions, before and after structured teaching programme regarding menstrual cup and was analysed keeping in the view of the objective of the study.

Limitations

The study was limited to:

1. Teenage girls and mothers in rural area, Soladevanahalli, Bengaluru
2. Effectiveness of planned teaching programme was assessed in terms of knowledge scores by structured questionnaire.

Nursing Implications

The findings of the study have implications in the following areas:

Nursing Education: As a nurse educator, there are many opportunities for nursing professionals to educate higher secondary student girls by providing health education, which helps in minimizing mortality and morbidity rate among teenage girls due to poor menstrual cup.

Nursing Research:

The study would help to have an insight into development of teaching modules and relevant information and materials of menstrual cup, assessing the knowledge about menstrual cup. A detailed study using standardized parameters suitable to local population could be used in order to get scientific result.

Nursing Practice:

1. Nursing professionals working in the community setting will be able to find opportunities to teach and improve the knowledge of teenage girls and mothers regarding menstrual cup.
2. Mastery of working in an environmental demands and findings sufficient resources and improved communication will be helpful to improve the knowledge regarding menstrual cup.
3. Health education to the women will be important factor to know how to use menstrual cup and to improve good personal menstrual hygiene.
4. Implication for practice includes fostering planned discussion and continued education for using safe method of sanitary protection

Conclusion:-

This chapter presents the conclusion drawn, implications, limitations, suggestions and recommendation. The focus of the study was “To evaluate the effectiveness of planned teaching programme on knowledge regarding menstrual cup among teenage girls and mothers at Soladevanahalli, Bengaluru.” The main aim of the study was to assess the level of knowledge regarding menstrual cup among teenage girls and mothers in rural areas.

The conclusions which have drawn from the study are:

- In the present study, 76.9% of the subjects had poor knowledge, 11.9% average knowledge and none of them had good knowledge regarding menstrual cup. Among the subjects 77% knew what a menstrual cup was, 42% had knowledge about the action of menstrual cup 40% had knowledge about how to use a menstrual cup, 37% knew about advantages of menstrual cup and 51% had knowledge about certain facts on menstrual cup. As per the statistical analysis there was no significant association between the level of knowledge and baseline variables at 0.05 level of significance. The results of the study emphasize need for sensitization and education regarding menstrual cup.
- The post-test knowledge score was significantly higher due to exposure of planned teaching programme. Hence, it was effective.

References:-

1. Shwetha BK, Amritha B (2020) menstrual cup and Awareness among reproductive women International journal of reproduction, contraception, obstetrics and gynaecology, India. Jaypee publishers 9(4): 1382-1387.

2. Manorama ETI, Shreya MS, Sailakshmi MPA (2019) knowledge about menstrual cup and its usage among medical students International journal of reproduction, contraception, obstetrics and gynaecology, 8th (edn), India. Jaypee publishers 8(12): 4966-4970.
3. Beksinska ME, Smit J, Greener R, Todd CS, Lee MLT, et al. (2015) Acceptability and performance of the menstrual cup, trial study comparing the menstrual cup to tampons or sanitary pads. Journal of women's health. Wolters Kluwers publishers 24(2): 151-158.
4. Pohhrel D, Bhattarai S, Esmgard M, Schickfus MV, Forsberg BC, et al. (2021) Acceptability and feasibility of using vaginal menstrual cups among schoolgirls, a qualitative pilot study, 18th (edn), Nepal. Journal of reproductive health pharmaceutical press 18: 20.
5. Gharacheh M, Ranjbar M, Hajinasab N, Haghani S (2021) Acceptability and safety of the menstrual cups among Iranian women, a cross sectional study, 21st (edn), Iran. Journal of women's health 21:105
6. Vanejik AM, Laserson KF, Nyothach E, Oruko K, Omoto J, et al. (2018) Use of menstrual cup among school girls, 43rd (edn), West Kenya. Journal of reproductive health 15(1):139.
7. Arenas-Gallo C, Ramirez-Rocha G, Gonzalez-hakspiel L, Palomino Suarez D, RuedaEspinol S, et al. (2020) [Acceptability and safety of menstrual cup, a systematic review of the literature. Rev Colomb Obstet Ginecol 71(2): 163-177.
8. Boakye-Yiadom A, Aladago DA, Beweleyir J, Mohammed HB, Salifu MF, et al. (2018) Assessing the knowledge, attitude and practice of menstrual hygiene management among junior high schools' adolescent females in the Yendi municipality in the northern region of Ghana. European Scientific Journal ESJ 14(36).
9. Deepa S, Agrawal T, Attokaran T, Fathima FN, Johnson AR (2019) Awareness, perceptions and practices regarding menstruation and menstrual hygiene among students of a college in Bengaluru urban district, South India: A cross sectional study. International Journal of Community Medicine and Public Health 6(3): 1126-1132.
10. Pohhrel D, Bhattarai S, Esmgard M, Schickfus MV, Forsberg BC, et al. (2021) Acceptability and feasibility of using vaginal menstrual cups among schoolgirls in rural Nepal: A qualitative pilot study. Reproductive health 18: 1-10
11. Hema Priya S, Nandi P, Seethraman N, Ramya MR, Nishanthini N, et al. (2017) A study of menstrual hygiene and related personal hygiene practices among among adolescent girls in rural Puducherry. Int J Community Med Public Health 4(7): 2348-2355.
12. Kakani CR, Bhatt JK (2017) Study of adaptability and efficacy of menstrual cup in managing menstrual health and hygiene. Int J Reprod Contracept Obstet Gynecol 6(7): 3045-3053.
13. C Sreedevi, Jayasree AK, Zachariah SM, Divyamol N, Deepak KS (2022) Experience and Adaptability of menstrual cup as a menstrual hygiene management method among its users in Kerala. International Journal of Public health 9(2): 918-921.
14. Van EijkAM, Sivakami M, Thakkar MB, Bauman A, Laserson KF, et al. (2016) Menstrual Hygiene management among adolescent girls in India; a systematic review and metanalysis. BMJ open 6(3): e010290.
15. Juma J, Nyothach E, Laserson KF, Oduor C, Arita L, et al. (2017) Examining the safety of menstrual cups among rural primary school girls in western Kenya. Observational studies nested in a randomized controlled feasibility study. BMJ open 7(4): e0105429.