

The Level of Knowledge Regarding Use of Menstrual Cup among Nursing Students in Selected College, Kozhikode

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ABSTRACT

Menstruation involves the shedding of endometrial layers, with average blood loss of 50–80 mL. The menstrual cup—a reusable, non-toxic, silicone device—collects menstrual fluid effectively, yet adoption remains low among many populations, including healthcare trainees. This study examined knowledge disparities among nursing students in Kerala, India. Researchers aimed to assess knowledge levels regarding menstrual cup use and explore associations with demographic factors. The conceptual framework followed the Modified Open System Theory. This quantitative, descriptive study surveyed 100 nursing students selected through purposive sampling. Data came from a validated 15-item knowledge questionnaire, analyzed via descriptive statistics and chi-square tests ($p < 0.05$). Knowledge levels proved predominantly high: 61% scored excellent (12–15 marks) and 32% good. Significant associations emerged between knowledge and residence ($\chi^2 = 18.116$) and marital status ($\chi^2 = 25.55$; both $p < 0.05$). These results highlight strong baseline awareness among nursing students, despite limited uptake.

Keywords: Menstrual cup, Knowledge, Nursing Students

INTRODUCTION

Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood. Menstruation is a complex coordinated biological process and its onset indicates the start of reproductive years in female life. Menstruation is the shedding of endometrial layers, and the average blood loss through menstruation is about 50-80 ml. 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.

Problem Statement

A descriptive study to assess the level of knowledge regarding use of menstrual cup among nursing students in selected college, Kozhikode.

Objectives

1. To assess the level of knowledge regarding use of menstrual cup among nursing students.
2. To find out the association between the level of knowledge regarding menstrual cup and the selected demographic variables among nursing students.

Hypothesis

H1 - There will be significant association between level of knowledge regarding menstrual cup and selected demographic variables.

METHODOLOGY

Research Approach: Quantitative research approach

Research Design: A non-experimental research design (descriptive design)

Population: Population selected for the present study is 2nd semester and 5th semester female nursing students in selected college, Kozhikode.

Sample Size: 100

Sampling Technique: Nonprobability purposive sampling technique SAMPLING Inclusion criteria

- Students who are willing to participate.
- Students available during the time of data collection
- Both users and nonusers of menstrual cup.

Exclusion criteria

- Students who are not willing to participate
- Absentees during data collection
- Students with medical conditions.

Setting Of The Study: The study was conducted among female nursing students who are studying BSC Nursing in KMCT College of Nursing.

Variables:

- Knowledge regarding use of menstrual cup.

Tool

- The tool used in this study is a self-structured questionnaire and demographic profile. Section A: Demographic data
- It is defined to collect demographic data (Age, Year of nursing program, Current residence, Religion, Marital status, Monthly income, Previous knowledge, History of gynaecological disorder)
- Section B: Knowledge questionnaire
- It is defined to assess knowledge regarding menstrual cup among nursing students by a self- structured questionnaire

Validity and Reliability of the Tool

The data collection tool, along with the problem statement, objectives, operational definitions, and blueprint, was submitted to subject experts for content validity assessment. Tool reliability was established through a pilot study conducted with 10 participants meeting inclusion criteria. The Cronbach's α was 0.97.

Data Collection Procedure

Data collection commenced after securing ethics committee approval and formal permission from authorities at KMCT College of Nursing. Participants were recruited using non-probability purposive sampling. Pre- and post-intervention data were gathered electronically via Google Forms questionnaires, with adequate time provided for

completion.

Ethical Considerations

The research proposal was presented to the institutional research committee at KMCT College of Nursing, securing formal approval. Ethical clearance was obtained from the KMCT College Ethics Committee. Informed consent—written or electronic—was obtained from all participants prior to data collection, ensuring confidentiality and voluntary participation.

Results

Sl. No	Demographic Variables	Category	Frequency	Percentage
1	Age	18 years	15	15%
		19–21 years	66	66%
		22–24 years	19	19%
		Above 24 years	0	0%
2	Religion	Muslim	45	45%
		Hindu	44	44%
		Christian	11	11%
		Others	0	0%
3	Residence	Hostel	47	47%
		Day scholar	44	44%
		Paying guest	9	9%
		Others	0	0%
4	Monthly Income	Up to 5000	19	19%
		5000–10000	17	17%
		10000–15000	26	26%
		Above 15000	38	38%
5	Marital Status	Married	4	4%
		Unmarried	96	96%
		Divorced	0	0%
		Widowed	0	0%
6	History of Gynecological Disorders	PCOS/PCOD	8	8%
		Endometriosis	2	2%
		Dysmenorrhea	28	28%
		Nil	62	62%
7	Previous Knowledge about Menstrual Cup	Peer group	35	35%
		Medical professional	9	9%
		Media	55	55%
		Others	1	1%

Table 3. Frequency (percentage) distribution of sociodemographic characteristics of the sample

Sample Characteristics

The study included 100 nursing students, with 66% aged 19–21 years, 19% aged 22–24 years, 15% aged 18 years, and none older than 24 years. Religiously, participants comprised 45% Muslim, 44% Hindu, and 11% Christian; 47% resided in hostels, 44% were day scholars, and 9% paying guests. Monthly family income levels were: 38% > ₹15,000, 26% ₹10,001–15,000, 19% ≤ ₹5,000, and 17% ₹5,001–10,000; 96% were unmarried.

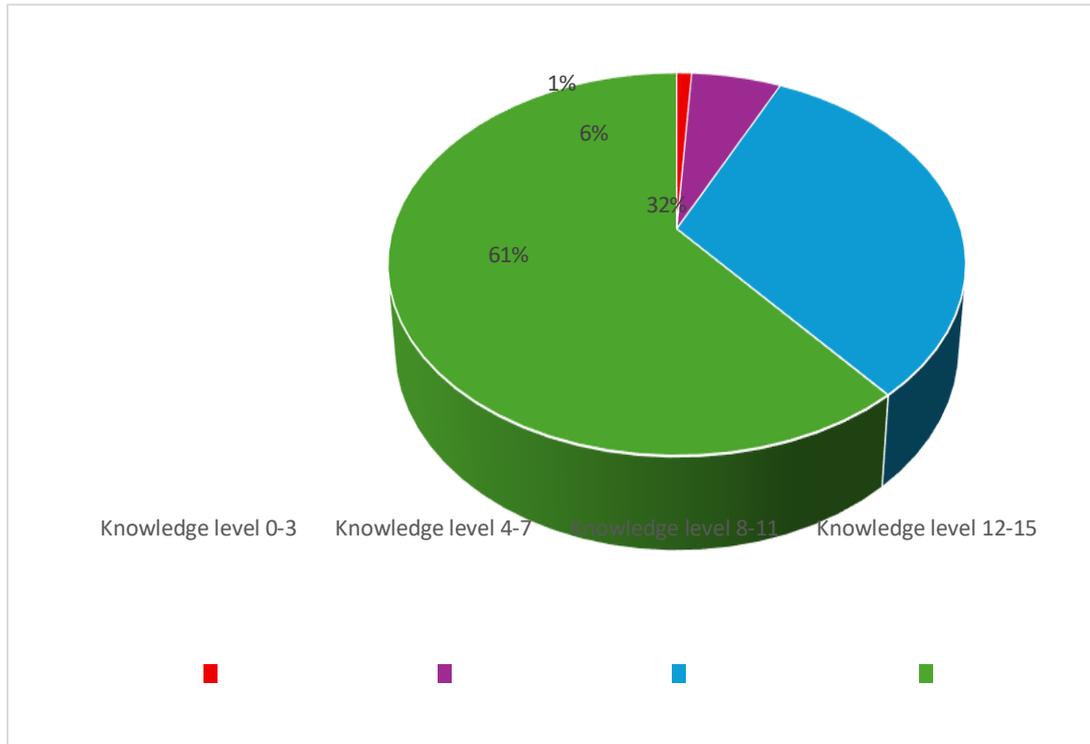
Health and Knowledge Profile

No gynaecological disorders were reported by 62% of participants, while 28% had dysmenorrhea, 8% PCOS/PCOD, and 2% endometriosis. Sources of prior knowledge on menstrual cups included media (55%),

peers (35%), medical professionals (9%), and other sources (1%).

Figure 1: Knowledge level of nursing students regarding menstrual cup

Figure 1 illustrates post-intervention knowledge distribution among 100 nursing students regarding menstrual cups. The majority (61%) achieved excellent knowledge, followed by good (32%), fair (6%), and poor (1%), reflecting the intervention's effectiveness in shifting baseline moderate awareness to higher levels.



Association between the level of knowledge regarding the menstrual cup and the selected demographic variables

Table 2: Association between the level of knowledge regarding the menstrual cup and the selected demographic variables

Selected Variables	Chi-square Value	df	P Value	Significance (0.05)
Age	9.68	6	0.139	Not significant
Religion	4.543	6	0.604	Not significant
Residence	18.116	6	0.006	Significant
Marital status	25.55	3	0.000012	Significant
Income	9.402	9	0.401	Not significant
Gynaecological disorders	4.409	9	0.882	Not significant
Previous knowledge	10.948	9	0.279	Not significant

Chi-square tests examined associations between selected demographic/clinical variables and post-intervention knowledge levels on menstrual cups among 100 nursing students.

Significant Associations

Age ($\chi^2(6) = 9.68, p = .139, ns$) and religion ($\chi^2(6) = 4.54, p = .604, ns$) showed no significant links to knowledge gains. Residence ($\chi^2(6) = 18.12, p = .006, p < .01$) and marital status ($\chi^2(3) = 25.55, p < .0001, p < .001$) were significantly associated—hostel/day scholars and unmarried students (96% of sample) likely drove excellent scores (61%).

Non-Significant Factors

Income ($\chi^2(9) = 9.40, p = .401$), gynaecological disorders ($\chi^2(9) = 4.41, p = .882$), and previous knowledge ($\chi^2(9) = 10.95, p = .279$) did not predict outcomes, suggesting the intervention equalized gains across groups.

DISCUSSION

This descriptive study assessed knowledge of menstrual cup use among 100 nursing students at a selected college in Kozhikode, using purposive sampling. Results showed 61% exhibited excellent knowledge, 32% good, 6% fair, and 1% poor.

A similar study by De U and Satpathi (2023) surveyed 335 nursing students across eastern India via stratified random sampling. Most participants aged 17–25 (91%) were unmarried (88.4%), with 70.4% scoring 11–20—indicating familiarity with menstrual cups but limited understanding of proper usage.

RECOMMENDATIONS

On the basis of the findings of the study the following recommendations have been made:

- Similar study can be replicated as a large sample and in other settings.
- Similar study can be conducted by using quasi experimental design.
- Conduct comparative study as medical vs. non-medical students to see if knowledge differs by academic background.
- The follow up study can be done to assess the knowledge and practice regarding menstrual cup among nursing students.

CONCLUSION

This descriptive study evaluated nursing students' knowledge of menstrual cup use through a non-probability purposive sampling approach with 100 participants. Data collection employed a structured demographic proforma and knowledge questionnaire. Findings indicated 61% demonstrated excellent knowledge, 32% good knowledge, 6% fair knowledge, and 1% poor knowledge.

REFERENCE

1. De U, Satpathi S, Kumari S. Knowledge of nursing students on usage of menstrual cup in the eastern states of India. *Future Health*. 2023;1(1):73-78. <https://aiimsbhopal.edu.in/FutureHealth/011.pdf>
2. K. M., Anand Kumar. Effectiveness of structured teaching programme regarding knowledge about uses of menstrual cup among nursing students. *Int J Res Med Sci*. 2024;12(4):1156-1159. doi:10.18203/2320-6012.ijrms20240836. <https://doi.org/10.18203/2320-6012.ijrms20240836>
3. Kavitha H, Ajitha E, et al. Knowledge, attitude, practices regarding menstrual cup among females in an urban setting of South Kerala. *J Family Reprod Health*. 2022. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10350547/>
4. Chaudhary A, Khadka A, et al. Study to assess the knowledge regarding menstrual cup among nursing students of selected campus, Birgunj. *Asian J Nurs Educ Res*. 2024. <https://ajner.com/HTMLPaper.aspx>
5. Priya M. Knowledge regarding menstrual cup among nursing students, Kannur district. *Int J Innov Sci Res Technol*. 2022. <https://www.ijisrt.com/assets/upload/files/IJISRT22OCT218.pdf>
6. Siji CS, Jincy MP, et al. A quantitative study to assess the level of knowledge and attitude on menstrual cup among adolescent girls in selected school, Thrissur. *Res J Sci Technol*. 2022;14(3). <https://rjstonline.com/HTMLPaper.aspx?Journal=Research%20Journal%20of>
7. Gayathri Mallika, Sudevan. Knowledge, attitude and practice regarding menstrual cup among females in an urban setting of South Kerala. *J Family Reprod Health*. 2022:243-247. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10350547/>
8. Saldon N, Blessy M. A study to assess the level of knowledge regarding menstrual cup among women

- of reproductive age group in a view to develop an information pamphlet in a selected hospital, Bangalore. *Womens Health Sci J.* 2023;7(1). <https://medwinpublishers.com/WHSJ/a-study-to-assess-the-levelofknowledge-regarding-menstrual-cup-among-women-of-reproductiveagegroup-in-a-view-to-develop-an-information-pamphlet-in-selectedhospitalbangalore.pdf>
9. Anupama Arumadi, Rupesh Raman, et al. Knowledge, attitude and experience of students regarding menstrual cup usage in medical college in North Kerala, India. *Cureus.* 2023. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10613098/>
 10. Devi Nenjappan, Aswini, et al. A study to assess the knowledge about menstrual cup—its acceptability, safety, leakage and availability among the teenage girl and their mother in a particular rural area, Bangalore. *Int J Advance Res.* 2023. <https://www.journalijar.com/article/47161/a-study-to-assess-theknowledgeabout-menstrual-cup-its-acceptibility,-safety,-leakeage-andavailabilityamong-the-teenage-girl-and-their-mother-in-a-particular-rural-areainbengaluru/>
 11. Anu P, Dilsha P, et al. A descriptive study to assess the knowledge and attitude regarding menstrual cup among at LLM Hospital, Kidangoor. *Int J Nurs Educ Res.* 2024;12(2). <https://ijneronline.com/HTMLPaper.aspx>
 12. Saldon N, Blessy M. A study to assess the level of knowledge regarding menstrual cup among women of reproductive age group in a view to develop an information pamphlet in a selected hospital, Bangalore. *Womens Health Sci J.* 2023;7(1). <https://medwinpublishers.com/WHSJ/a-study-to-assess-the-levelofknowledge-regarding-menstrual-cup-among-women-of-reproductiveagegroup-in-a-view-to-develop-an-information-pamphlet-in>
 13. K.M. Aswini, A. Kumar. Effectiveness of structured teaching programme regarding knowledge about uses of menstrual cup among nursing students. *Int J Res Med Sci.* 2024;12(4):1156-1159. doi:10.18203/2320-6012.ijrms20240836. <https://doi.org/10.18203/2320-6012.ijrms20240836>
 14. Kavitha H, Ajitha E, et al. Knowledge, attitude, practices regarding menstrual cup among females in an urban setting of South Kerala. *J Family Reprod Health.* 2022. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10350547/>
 15. Chaudhary A, Khadka A, et al. Study to assess the knowledge regarding menstrual cup among nursing students of selected campus, Birgunj. *Asian J Nurs Educ Res.* 2024. <https://ajner.com/HTMLPaper.aspx>