

NURSES KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING MENSTRUAL CUP PUBLIC HOSPITALS RAWALPINDI AND ISLAMABAD

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Abstract

Background: Menstrual hygiene is a critical aspect of women's health, yet awareness and correct practices regarding menstrual cups remain limited among healthcare professionals. Nurses play a pivotal role in educating women about safe and sustainable menstrual hygiene options.

Objective: To assess the knowledge, attitudes, and practices of nurses regarding menstrual cups at Maternal and Child Health (MCH) centers in PIMS, Poly Clinic, and Holy Family Hospital, Islamabad.

Methods: A descriptive cross-sectional study was conducted over nine months, with a sample of 200 female nurses. Data were collected using an adapted questionnaire on menstrual cup knowledge, attitudes, and practices. Convenient sampling was applied, and analysis was performed using SPSS version 25.

Results: Findings revealed that 80% of nurses were aware of menstrual cups, primarily through media sources (56.7%). While 53.3% understood the mechanism of collection, many were uncertain about proper sterilization (40%) and usage frequency. Only 40% would recommend menstrual cups to patients, and 46.7% were unsure. Knowledge gaps and misconceptions were prevalent despite moderate awareness.

Conclusion: Nurses demonstrated moderate awareness but limited practical knowledge and confidence regarding menstrual cup use. Structured educational programs and hands-on training are essential to enhance nurses' capacity to promote sustainable menstrual hygiene practices and improve women's health outcomes.

INTRODUCTION

Menstruation remains a taboo topic in many countries, causing women and girls to hesitate to discuss menstrual hygiene, which contributes to poor practices and misinformation [1]. Despite WHO's definition of Menstrual Hygiene Management (MHM) emphasizing clean materials, privacy, water, and proper disposal, many women especially in low-resource settings

continue to face significant barriers in managing menstruation effectively [2,3]. Over time, menstrual technologies have evolved, with early patents for pads and menstrual cups dating back to 1854–1921 [4], and the menstrual cup regaining popularity in the 1970s due to feminist and environmental movements [5].

Menstrual cups offer several advantages, including being reusable, cost-effective, eco-friendly, and reducing exposure to harmful chemicals compared to disposable products [6]. However, despite high awareness in some regions, actual usage remains very low for example, only 2.6% were using the cup despite 82% awareness in one study [7]. Increasing menstrual cup use could reduce menstrual waste by up to 84% [8]. Persistent myths, such as concerns about virginity, and poor awareness of environmental impacts continue to hinder adoption [9,10].

Evidence also shows that nurses and healthcare professionals often lack adequate knowledge, with only 36% demonstrating proper understanding and many holding misconceptions about safety and hygiene [11,12]. Cultural norms further shape nurses' attitudes, limiting their willingness to recommend menstrual cups [13], though training programs have been shown to significantly improve acceptance and positive attitudes [14]. In Pakistan, research is scarce, with one study finding that 57.6% of healthcare workers were unaware of menstrual cups and shared misconceptions similar to the general population [15]. These findings highlight the critical need to assess nurses' knowledge, attitudes, and practices regarding menstrual cups to strengthen menstrual hygiene education and promote sustainable menstrual health options.

METHODOLOGY

Research Design

A descriptive cross-sectional research design is used to assess the knowledge, attitudes, and practices of female nurses regarding menstrual cups. The cross-sectional design allows the researcher to collect data from participants at a specific point during the study period and to describe their existing knowledge, attitudes, and practices related to menstrual cup use.

Study Setting

The study is conducted in the Maternal and Child Health (MCH) departments/centers of three major public hospitals, including:

1. Pakistan Institute of Medical Sciences (PIMS), Islamabad

2. Polyclinic Hospital, Islamabad

3. Holy Family Hospital, Rawalpindi

These hospitals provide maternal and child health services and employ a large number of female nurses who have opportunities to provide health education and counseling to women regarding menstrual hygiene.

Study Population

The study population consists of female nurses working in the selected MCH departments/centers of PIMS Hospital, Polyclinic Hospital, and Holy Family Hospital. The target population includes nurses who are potentially involved in providing health education and reproductive health services to women.

Study Duration

The study is conducted over a period of nine months. This period includes the preparation of the study, obtaining administrative and ethical permissions, data collection, data entry, data analysis, and interpretation of findings.

Sample Size

The sample consists of 200 female nurses from the selected hospitals. The participants are selected according to the predefined inclusion and exclusion criteria.

Sampling Technique

A convenience sampling technique is used to recruit participants. Female nurses who meet the eligibility criteria and are available and willing to participate during the data collection period are approached and invited to participate in the study.

Inclusion Criteria

Female nurses are included in the study if they:

- Are working in the selected hospitals/MCH departments.
- Are between 20 and 50 years of age.
- Are willing to participate in the study.
- Provide informed consent.
- Are able to understand and respond to the questionnaire in English.

Exclusion Criteria

Nurses are excluded from the study if they:

- Are not working in the selected departments/hospitals.
- Are unwilling to participate in the study.
- Do not provide informed consent.
- Are unable to understand the English-language questionnaire.

Research Instrument

Data are collected using an adapted structured questionnaire related to menstrual cups. The questionnaire is administered in English and is provided to participants in paper form.

The questionnaire assesses three major areas:

Demographic Information

This section collects relevant demographic information about the participants, such as age and other selected characteristics.

Knowledge Regarding Menstrual Cups

This section assesses participants' knowledge regarding menstrual cups, including awareness, mechanism of menstrual blood collection, duration of use, cleaning and sterilization, safety, benefits, and possible misconceptions.

Attitudes and Practices

This section assesses nurses' attitudes toward menstrual cups and their willingness to use, discuss, educate, or recommend menstrual cups to women. It also assesses their reported practices and confidence regarding menstrual cup use and counseling.

Data Collection Procedure

Data are collected after obtaining permission from the concerned authorities of the selected hospitals. The researcher approaches eligible female nurses in their respective departments and explains the purpose and significance of the study.

Participants are informed that their participation is voluntary and that they have the right to decline participation or withdraw from the study at any time. Written informed consent is obtained before administering the questionnaire.

The questionnaire is distributed to eligible participants in paper form. Participants complete the questionnaire independently, and the researcher remains available to clarify any questions related to the instructions without influencing their responses. Completed questionnaires are collected by the researcher and checked for completeness.

Some nurses may initially hesitate to provide information because of the sensitive nature of menstrual hygiene; however, participants who meet the eligibility criteria and voluntarily agree to participate are included in the study.

Ethical Considerations

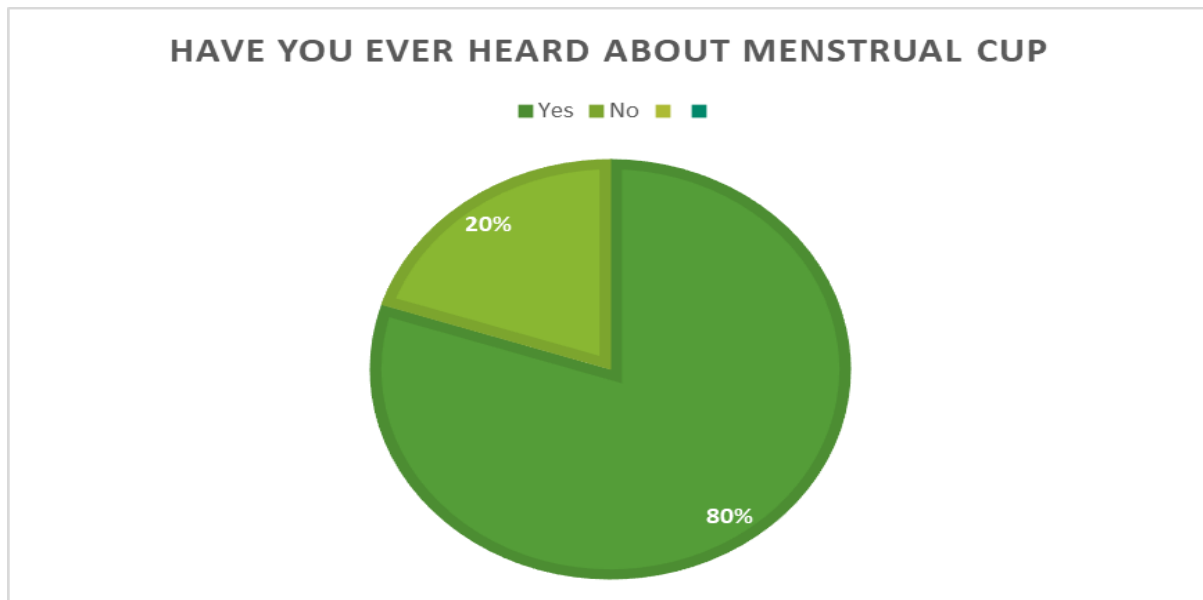
Ethical principles are followed throughout the study. Permission to conduct the study is obtained from the relevant authorities of the selected hospitals. The researcher informs the concerned preceptor and departmental in-charges about the study before data collection.

Written informed consent is obtained from each participant. Participants are informed about the purpose of the study, the voluntary nature of participation, and their right to withdraw without any consequences.

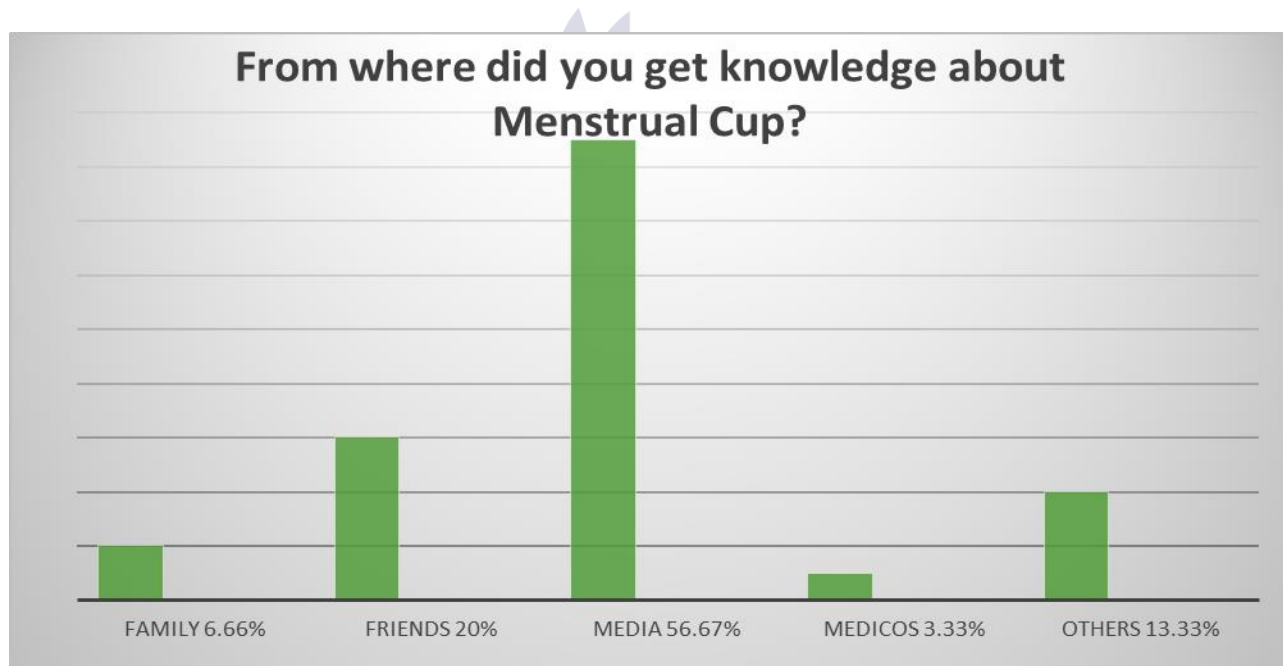
Confidentiality and privacy are maintained throughout the research process. Participants' names and other personally identifying information are not disclosed. The collected information is used only for academic and research purposes.

Results

This descriptive study used an adapted questionnaire to assess the knowledge, attitude, and practices of 200 nurses regarding menstrual cup use across MCH Center PIMS, Polyclinic, and Holy Family Hospital. Data were collected over a period of nine months in 2024 and analyzed using SPSS version 25.0, with results presented through tables, graphs, percentages, and charts. The socio-demographic findings indicate that most participants were young, urban-dwelling nurses, mainly holding GNM or BSN qualifications, with a majority being married.



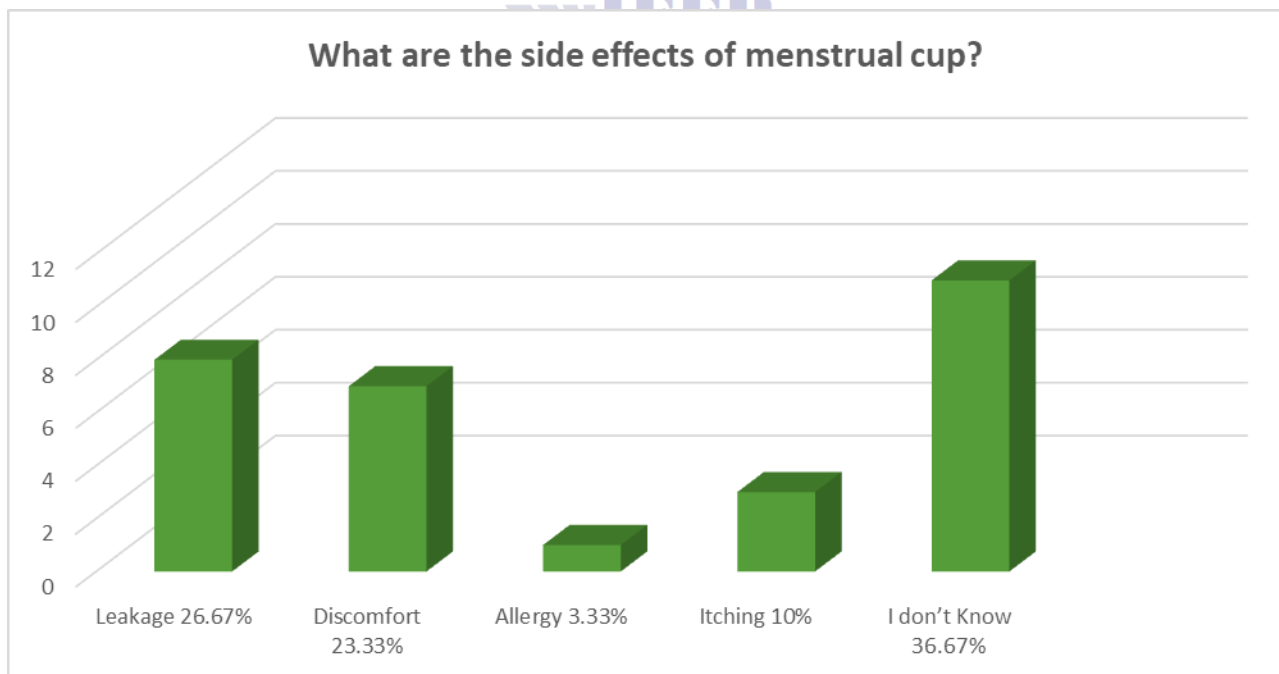
Participants were asked about their awareness of menstrual cups. The results indicated a high level of awareness, with 80% of nurses reporting that they had heard of menstrual cups, while 20% indicated they had not.



The majority of nurses reported that their knowledge of menstrual cups was primarily obtained from media sources (56.67%), followed by friends (20%). Smaller proportions of participants cited family (6.67%), other sources (13.33%), and medical professionals (3.33%) as their sources of information.



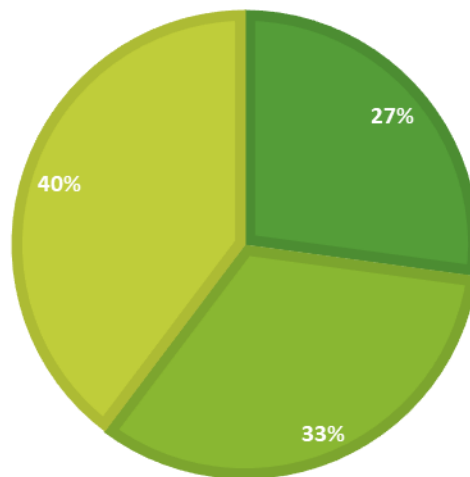
Over half of the nurses (53.33%) reported understanding how a menstrual cup collects menstrual fluid, while a significant proportion (36.67%) indicated that they did not know how it works, highlighting a notable gap in knowledge.



The most commonly reported side effect of menstrual cup use was leakage (26.67%), followed by discomfort (23.33%). Smaller proportions of nurses mentioned itching (10%) and allergy (3.33%), while a notable 36.67% of participants expressed uncertainty by selecting "I don't know," indicating gaps in knowledge about potential side effects.

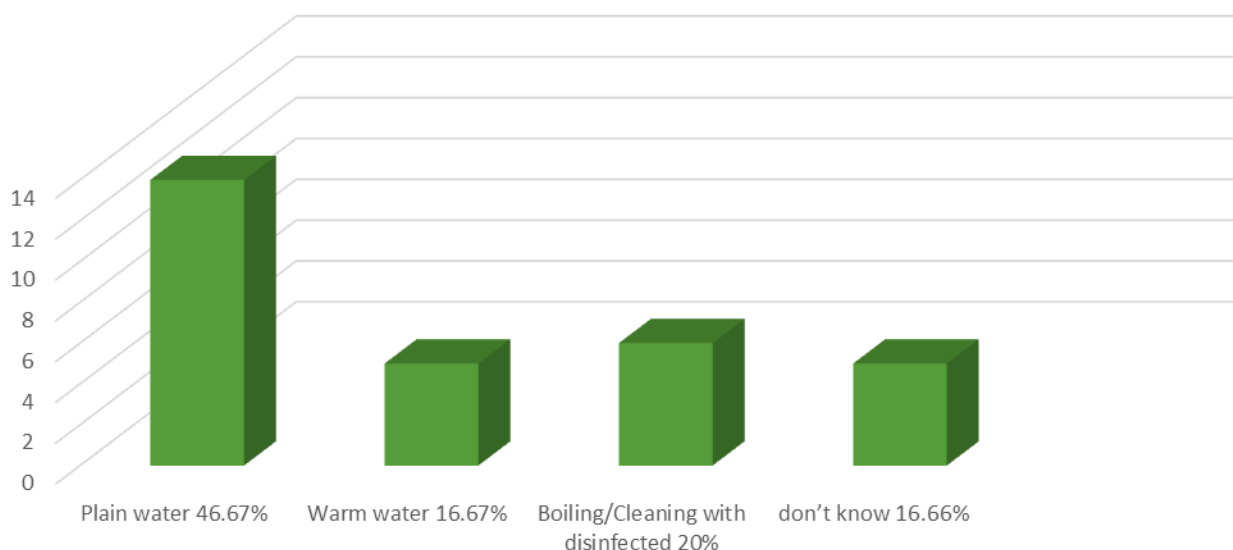
HOW THE STERILIZATION OF CUP IS DONE?

■ Boiling ■ Washing with water ■ I don't know

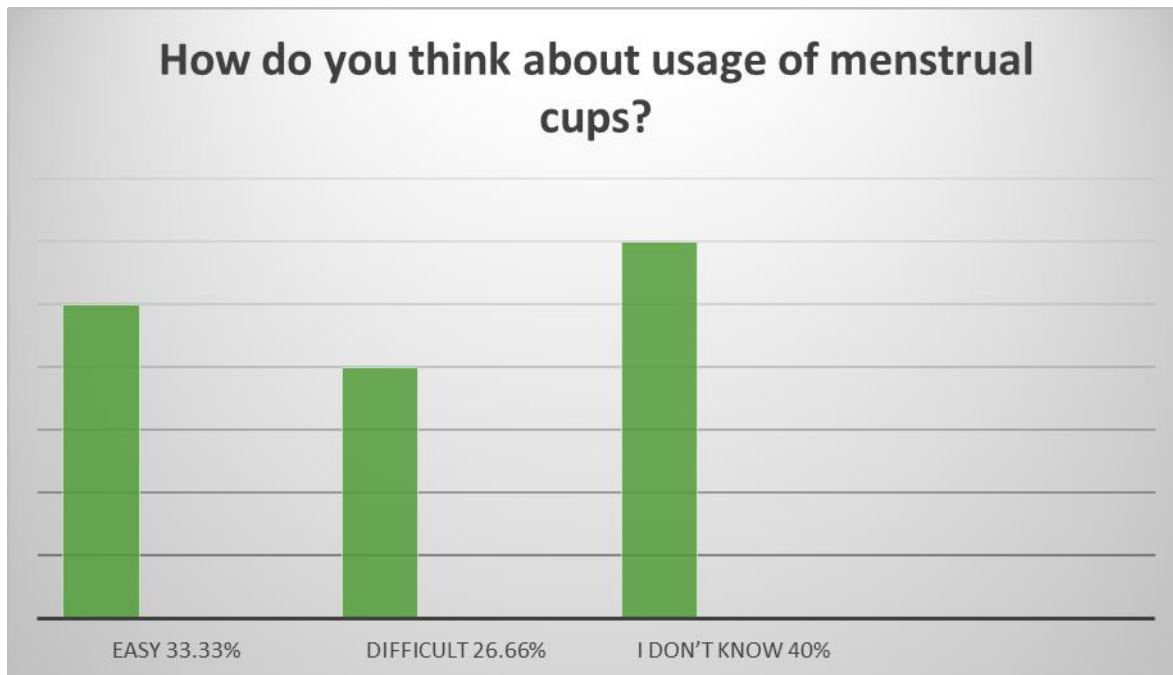


The majority of participants (40%) reported that they did not know how to properly sterilize a menstrual cup. Among those who provided a response, 33.33% suggested washing with water, while 26.67% identified boiling as a method of sterilization, indicating gaps in practical knowledge regarding safe menstrual cup use.

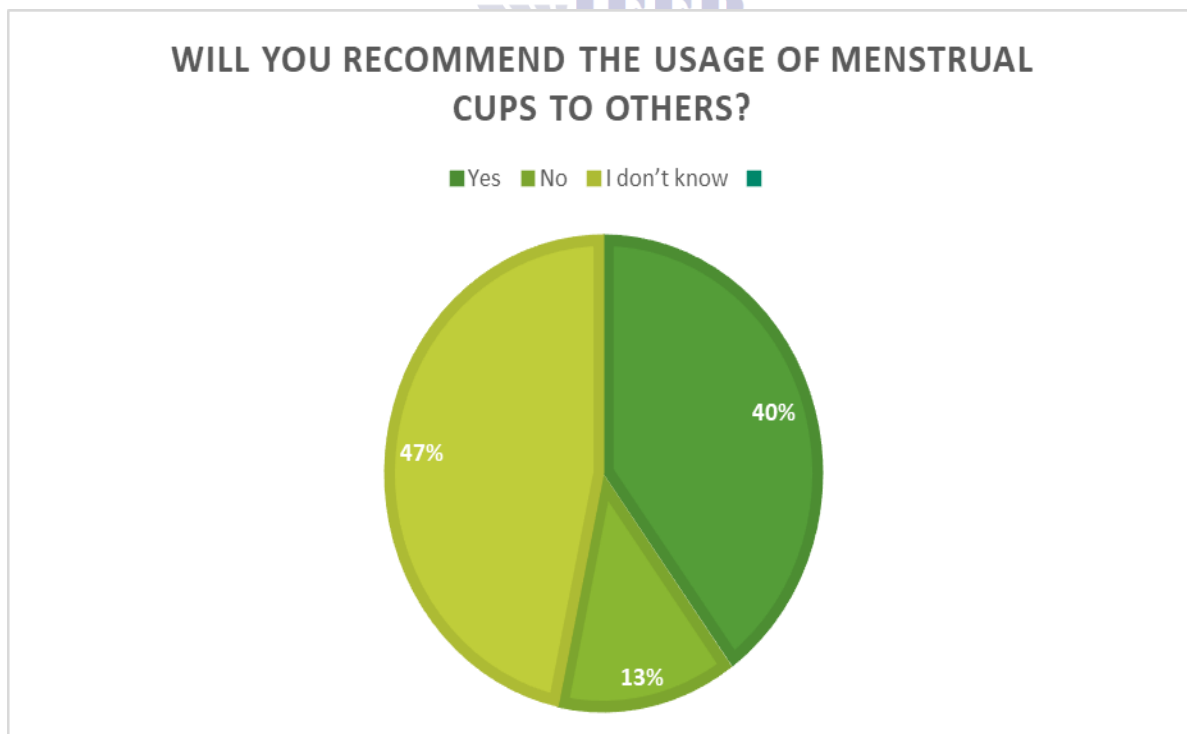
How the menstrual cup is cleaned during period days?



A significant proportion of nurses (46.67%) reported using plain water to clean menstrual cups during their periods. Smaller proportions used warm water (16.67%), boiling or disinfectant methods (20%), while 16.66% indicated using alternative cleaning methods, highlighting variability and potential gaps in proper menstrual cup hygiene practices.



These findings indicate that a significant portion of nurses (40%) were unsure about using a menstrual cup, while approximately one-third found it easy to use, and around one-fourth considered it difficult, reflecting varying levels of confidence and familiarity with the product.



The results also show that 40% of nurses would recommend the menstrual cup to others, 13.33% would not, and 46.67% were unsure, indicating uncertainty and mixed attitudes toward promoting its use.

Discussion

The study among nurses at PIMS Hospital, Polyclinic Hospital Islamabad, and Holy Family Hospital Rawalpindi revealed that while awareness of menstrual cups was relatively high (80%), significant gaps existed in practical knowledge, sterilization, and usage. Most nurses learned about menstrual cups through media sources (56.7%), with few receiving guidance from medical professionals. Knowledge regarding function, material, emptying frequency, and potential side effects was limited, reflecting findings from similar studies in India, Uganda, and Ethiopia. Attitudes were mixed, with about 40% unsure about usage and only 40% willing to recommend them, highlighting uncertainty and hesitancy. Cleaning and sterilization practices varied widely, indicating insufficient hands-on experience. Despite these gaps, many nurses acknowledged the benefits of menstrual cups, particularly for activities like sleeping and sports, and expressed interest in learning more. The study, conducted with a sample of 200 nurses, underscores the need for structured education and training programs to enhance nurses' knowledge, confidence, and ability to guide patients on menstrual cup use, ultimately supporting broader adoption and improving menstrual health management. Nurses at PIMS, Poly Clinic, and Holy Family Hospital showed moderate awareness of menstrual cups but lacked sufficient knowledge and practical confidence. Limited training and misconceptions hindered their ability to guide patients effectively. Structured education and hands-on training are essential to improve menstrual hygiene practices, promote menstrual cup adoption, and enhance women's health outcomes.

Authors Contribution

Introduction: SA
Methodology: MT
Formal analysis: IM
Discussion: TA,RN,
Writing review: NK

Editing: RB

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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