

A KNOWLEDGE, ATTITUDE AND PRACTICE STUDY OF MENSTRUAL CUP
USE AMONG EMERGING ADULT WOMEN

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requirements for the Masters of Social Work Degree Examination

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CERTIFICATION OF APPROVAL

This is to certify that this dissertation entitled “A Knowledge, Attitude and Practice Study of Menstrual Cup Use Among Emerging Adult Women” is a record of genuine work done by Ms. Arsha N.D., fourth semester Master of Social Work (MSW) student of this college under my supervision and guidance and that it is hereby approved for submission.

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DECLARATION

I, Arsha N.D., do hereby declare that the Dissertation titled “A Knowledge, Attitude and Practice Study of Menstrual Cup Use Among Emerging Adult Women” is based on the original work carried out by me and submitted to the University of Kerala during the year 2021-2023 towards partial fulfillment of the requirements for the Master of Social Work (MSW) Degree Examination. It has not been submitted for the award of any degree, diploma, fellowship or other similar title of recognition before.

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ABSTRACT

Menstrual health and hygiene are crucial aspects of women's well-being, yet they often face challenges due to limited access to safe and sustainable menstrual products. The menstrual cup has emerged as a promising alternative to traditional menstrual products, offering various benefits such as eco-friendliness, cost-effectiveness, and enhanced comfort. This study aimed to investigate the knowledge, attitude, and practices of menstrual cup usage among emerging adult women aged 18-29 years.

A cross sectional study was conducted on 102 adult women between the age category of 18-29. Data was collected through Google forms using structured questionnaire. Chi-square test was used to determine the association.

The findings revealed that the majority of respondents were aware of menstrual cups and had a good level of knowledge regarding the various aspects of menstrual cup. Also, the majority showcased a positive attitude towards menstrual cup. When it comes to practice only 52% were users of menstrual cup. The study also found a significant association between area of living and menstrual cup usage. Additionally, the research highlighted the significance of knowledge in promoting menstrual cup adoption. While the level of knowledge varied among respondents, it did not significantly impact the attitude or usage of menstrual cups. In conclusion, this study contributes valuable insights into menstrual health and hygiene, emphasizing the potential of menstrual cups in empowering women and reducing environmental impact.

CHAPTER I: INTRODUCTION

Chapter I: Introduction

Overview of the Chapter

The chapter provides a general introduction about the topic being presented in the study. The chapter includes introduction, background of the study, statement of the problem and significance of the study. It also includes chapterization of the whole study.

1.1. Introduction

Menstruation is a natural physiological process experienced by women, yet it often comes with challenges related to menstrual health and hygiene. Access to safe and sustainable menstrual products is crucial for women's well-being and empowerment. In recent years, the menstrual cup has emerged as a promising alternative to traditional menstrual products, offering numerous benefits such as eco-friendliness, cost-effectiveness, and improved comfort. As emerging adult women (aged 18-29) constitute a significant demographic in society, understanding their knowledge, attitude, and practice regarding menstrual cups is vital to promote their menstrual health and hygiene.

This study aims to investigate the knowledge, attitude, and practice of menstrual cup use among emerging adult women. By exploring these factors, the study helps to gain valuable insights into the current awareness and acceptance of menstrual cups in this specific age group. By shedding light on the knowledge, attitude, and practice of menstrual cup usage among emerging adult women, the study focuses to inform the authorities for improved policies and interventions that can facilitate a better menstrual health outcome and contribute to sustainable menstrual practices. This work also endeavors to empower women with comprehensive information and foster positive attitude towards menstrual cups, promoting a healthier and more environmentally conscious future for menstrual health.

1.2. Statement of the problem

Despite the potential benefits associated with menstrual cups, such as cost-effectiveness, environmental sustainability, and increased comfort, compared to traditional sanitary products, the number of menstrual cup users are very low (Arenas-Gallo et al., 2020). The reasons for low use have been attributed to religious restrictiveness, cultural beliefs, misconceptions, toxic shock syndrome, etc. (Wall et al., 2018). This suggests that there is a lack of comprehensive understanding among women regarding right knowledge, attitude, and practice (KAP) related to menstrual cup use, leading to reduced usage and missed opportunities for improved menstrual health.

KAP surveys has established their place among the methodologies and is mostly used to investigate health behavior. Today they continue to be widely used to gain information on health-seeking practices (Hausmann-Muela et al., 2003; Manderson et al., 1992).

Emerging Adulthood is a term used to describe a period of development spanning from about ages 18 to 29. In his research, Arnett notes that the emerging adults are characterized by: acceptance of responsibility for oneself, making of independent decisions, becoming financially independent (Arnett, 2014). Even though being a significant age category, there also seems to be less research in this area concentrating on KAP of emerging adult women. Without understanding their KAP of menstrual cup, it becomes challenging to design effective interventions and educational campaigns that promote the adoption and safe use of menstrual cups among this group.

By addressing this research gap, the study aims assess the level of knowledge about menstrual cups, understand the attitudes towards menstrual cups, and determine the actual practice and usage of menstrual cups among emerging adult women. On further note, the findings of this study will provide valuable insights for policymakers, healthcare providers, and social workers, enabling them to develop evidence-based strategies to promote menstrual cup usage and enhance menstrual health outcomes among this specific population.

1.3. Background of the Study

Menstruation is a complex coordinated biological process (Hawkins et al., 2008) and its onset usually marks the beginning of reproductive years in a female's life (Rosner et al., 2022). The periodic shedding of the lining of a woman's uterus is referred to as Menstruation, or a menstrual period. Over a period of three to five days, the uterine lining breaks down into a bloody substance. It then passes down through the cervix and exits through the vagina (Idoko et al., 2022). This process typically occurs once a month and it plays a crucial role in women's reproductive health, marking the beginning of the menstrual cycle, which lasts an average of 28 days.

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 2019). Menstrual health is an integral part of overall health because between menarche and menopause, most women menstruate (Critchley, 2022). Yet for many women around the world, menstruation regularly and often catastrophically disrupts their physical, mental, and social well-being (Matteson et al., 2022). Physically, menstruation can bring about painful cramps, migraines, fatigue, and other discomforts that interfere with daily activities and productivity. In some cases, women face serious health conditions such as endometriosis or polycystic ovary syndrome, exacerbating the challenges they already face during menstruation (Hawkins et al., 2008). Mentally, the hormonal fluctuations associated with menstruation can trigger mood swings, irritability, anxiety, or depression, affecting their emotional stability and overall mental health. Additionally, the societal stigma and lack of understanding surrounding menstruation contribute to a sense of shame and embarrassment, leading to social isolation and restricted participation in various aspects of life. Delayed, irregular, painful, and heavy menstrual bleeding are some among the leading reasons for physician office visits by women (Ziv et al., 1999). These discomforts often necessitate the use of menstrual hygiene products to manage menstrual flow and maintain personal hygiene.

Menstruation and menstrual practices still face many social, cultural, and religious restrictions which are a big barrier in the path of menstrual hygiene management. In many parts of the country especially in rural areas, girls are not prepared and aware about menstruation and they face many difficulties and challenges at home, schools, and work places. Girls and women have very less or no knowledge about reproductive

tract infections caused due to ignorance of personal hygiene during menstruation time. In rural areas, women do not have access to sanitary products or they know very little about the types and method of using them or are unable to afford such products due to high cost. So, they mostly rely on reusable cloth pads which they wash and use again. Women manage menstruation differently when they are at home or outside; at homes, they dispose of menstrual products in domestic wastes and in public toilets and they flush them in the toilets without knowing the consequences of choking (Kaur, 2018). Taboos surrounding menstruation limit access to health care (Trant et al., 2022). Menstrual health is often shrouded in societal taboos and stigmas that adversely affect the well-being and empowerment of women. These taboos restrict open discussions about menstruation and create a culture of shame, secrecy, and misinformation. Many societies consider menstruation as impure or dirty, leading to exclusionary practices such as menstrual seclusion, where women are isolated or prohibited from participating in daily activities. These taboos perpetuate myths and misconceptions, hindering access to accurate information, proper hygiene products, and healthcare services. They can also contribute to limited educational opportunities for girls, affecting their overall development and potential. Overcoming these taboos requires promoting comprehensive menstrual health education, challenging harmful cultural beliefs, and fostering an environment that celebrates menstruation as a natural and normal bodily process, free from stigma and discrimination.

Adolescent girls in Low- & Middle-Income Countries are often uninformed and unprepared for menarche. Information is primarily obtained from mothers and other female family members who are not necessarily well equipped to fill gaps in girls' knowledge. Exclusion and shame lead to misconceptions and unhygienic practices during menstruation. Rather than seek medical consultation, girls tend to miss school, self-medicate and refrain from social interaction. Also problematic is that relatives and teachers are often not prepared to respond to the needs of girls (Chandra-Mouli et al., 2017). Menstrual health and hygiene are a major public health and social issues in Nepal. Due to inadequate infrastructure to provide education, healthcare, and communication as well as religious teachings, women and girls are excluded from participation in many activities of daily living and community activities during menstruation (Sharma et al., 2022).

Women and adolescent girls worldwide need safe, effective and affordable menstrual hygiene management products (van Ejjik et al., 2019). Historically, women have used various materials and methods to manage menstruation. Traditional methods include the use of cloth, grass, leaves, or other absorbent materials. Over time, the development of modern menstrual hygiene products has provided women with more convenient and hygienic options for menstrual management. Various menstrual products have been developed to provide comfort and convenience to women during their menstrual cycles. A basket of choices like sanitary napkins, tampons, menstrual cup etc., are available in the market (Wall et al., 2018).

Even though different menstruation products are available, the commonly used menstrual care products are the sanitary pads. Due to the ease of use, women are interested to buy it. But the continuous usage of sanitary pads causes problems like reproductive tract and pelvic infections. Although they are useful and hygienic it creates a lot of plastic waste. The disposal of sanitary pads also increases environmental pollution (Peter, et al., 2021). Sanitary pads are made of bleached rayon, which is non-biodegradable. On average, a woman throws about 150 kg of sanitary pad waste every year, which is far away from the eco-friendly practices (Bhor et al., 2018). While sanitary pads have provided a convenient and accessible option for managing menstruation, their usage can have negative impacts on both individuals and the environment. One major concern is the potential health risks associated with the chemicals and synthetic materials used in manufacturing pads. The prolonged use of pads can lead to a warm and damp environment, creating a breeding ground for bacteria and increasing the risk of infections.

The best solution to the issues related to sanitary pads is the use of menstrual cups. These materials are made up of natural rubber or silicone rubber which can be easily inserted into the vagina. This can reduce the problems faced by using sanitary napkins and can be reused for five years or more (Peter et al., 2021). Menstrual cup is one of the safe, comfortable, ecofriendly and sustainable menstrual hygiene management products available throughout the world (C S et al., 2022). A menstrual cup is a device that is inserted into the vagina during menstruation. It acts by collecting menstrual fluid. They are usually made of flexible medical grade silicone and shaped like a bell with a stem. The stem helps for easy insertion and removal. The bell shape of the cup helps it to get sealed against the vaginal walls below the cervix. The cup has to be

removed, emptied, rinsed and reinserted depending on the amount of flow, usually 6-12 hours (Eti et al., 2019). Menstrual cups reduce a greater amount of waste generated from other menstrual products as it is reusable. As it could be used for five or more years, this eliminates the need for constant purchases of disposable products like pads or tampons, resulting in significant cost savings over time. By choosing a reusable option, individuals can significantly reduce their contribution to landfill waste and plastic pollution. The production of menstrual cups requires fewer resources and energy compared to the manufacturing of disposable products, resulting in a lower carbon footprint. The rubber used in manufacturing menstrual cups has been made resistant to bacterial growth, thus ensuring its safety against urogenital infections (Bhor et al., 2018). Furthermore, menstrual cups offer increased comfort and convenience. Once properly inserted, they form a secure seal, preventing leaks and allowing for longer wear times compared to pads or tampons. This means fewer trips to the restroom and fewer interruptions to daily activities. Menstrual cups are also versatile, suitable for various physical activities, including swimming, yoga, and sports, providing freedom of movement without worries of leakage. The benefits of menstrual cups extend beyond cost and sustainability. They have been associated with reduced odor, decreased risk of leakage, and longer duration of wear compared to disposable products. Menstrual cups are a satisfactory alternative to tampons and have the potential to be a sustainable solution to menstrual management, with moderate cost savings and much-reduced environmental effects compared with tampons (Howard et al., 2019). The advantages of menstrual cup are far more compared to other menstrual products but its usage is limited due to either the lack of awareness or the fear of trying something new among the people of reproductive age group and also myths like using menstrual cups in unmarried girls might result in loss of virginity (Eti et al., 2019). Furthermore, menstrual cups have the potential to empower individuals by providing a greater sense of control over their menstrual cycle, reducing the need for frequent product changes, and enabling participation in various activities with increased confidence (van Eijk et al., 2019). Menstrual cups are made from medical-grade silicone or latex, which are non-toxic and hypoallergenic, reducing the risk of irritation or allergic reactions. They do not contain chemicals or fragrances often found in disposable products, ensuring a healthier and more comfortable experience. Moreover, using a menstrual cup promotes a better understanding and acceptance of one's own body. Cups can hold a

larger amount of menstrual fluid compared to pads or tampons, allowing individuals to have a more accurate understanding of their menstrual flow. This increased awareness can lead to improved body literacy and better self-care practices.

Despite these advantages, the adoption and usage of menstrual cups among emerging adult women (aged 18-29 years) are not yet widely studied. Emerging adulthood is a distinct life stage characterized by significant transitions, exploration of personal identity, and the formation of attitudes and behaviors related to health and well-being. Arnett proposed that this period, typically spanning from the late teens to the mid-20s, is characterized by specific psychosocial and cultural changes (Arnett, 2000). Linking Arnett's concept of emerging adulthood with menstrual cup usage, we can see how the adoption of menstrual cups aligns with the values and aspirations of this life stage. Emerging adults are often seeking autonomy and making conscious choices that align with their personal values, sustainability being one of them. By choosing to use menstrual cups, individuals in this stage of life can actively engage in sustainable practices and contribute to a greener lifestyle. Moreover, emerging adulthood is a time of exploration and experimentation. This includes exploring different aspects of one's identity, values, and lifestyle choices. Trying out alternative menstrual products such as menstrual cups can be seen as a part of this exploration. It allows individuals to challenge the societal norms and expectations surrounding menstrual hygiene, while also embracing a more eco-friendly and self-directed approach to their own well-being. Furthermore, the use of menstrual cups can empower emerging adults in terms of their body literacy and self-care practices. As they navigate this transitional period, individuals in emerging adulthood are often focused on understanding and taking ownership of their bodies and health. Using a menstrual cup provides an opportunity for increased body awareness, as it requires learning about one's menstrual flow, the anatomy of the reproductive system, and the menstrual cup insertion and removal process. This knowledge can contribute to a sense of bodily autonomy and empowerment.

Understanding the knowledge, attitudes, and practices of menstrual cup usage among this specific demographic is crucial for addressing their unique needs and preferences. Many individuals in this stage of life may be transitioning from traditional menstrual products, such as pads or tampons, and may have limited awareness of alternative options like menstrual cups. By assessing their knowledge, researchers and educators

can identify gaps and misconceptions, leading to targeted educational interventions that promote informed decision-making and empower individuals to make choices aligned with their values and preferences. Exploring the attitudes of emerging adult women towards menstrual cup usage provides insights into their perceptions, beliefs, and cultural factors that may influence their acceptance or resistance to adopting this menstrual product. Attitudes can be shaped by societal norms, personal experiences, and perceptions of convenience, comfort, and sustainability. By understanding these attitudes, researchers can develop tailored communication strategies to address concerns, debunk myths, and promote positive attitudes towards menstrual cups. Evaluating the practice of menstrual cup usage among emerging adult women helps assess the actual adoption and implementation of this alternative menstrual product. This research provides valuable data on the barriers and facilitators individuals may encounter when using menstrual cups. Factors such as ease of use, comfort, hygiene, and access to resources and support can influence the successful integration of menstrual cups into their menstrual hygiene practices. Findings from such studies can inform product improvements, educational campaigns, and healthcare services to better support individuals in their use of menstrual cups. Overall, studying the knowledge, attitude, and practice of menstrual cup usage among emerging adult women is essential for informing educational initiatives, debunking myths, addressing barriers, and developing supportive resources. This research can contribute to promoting sustainable and healthy menstrual practices, empowering individuals in their choices, and fostering a positive and inclusive discourse around menstrual health.

In the following chapters, this study will delve into the specific objectives, methodology, results, and discussions surrounding this research study, providing a comprehensive analysis of the knowledge, attitudes, and practices of menstrual cups among emerging adult women.

1.4. Significance of the study

According to UNICEF, every month, 1.8 billion people across the world menstruate. Menstruation is a normal and healthy part of life for most women. Roughly half of the female population - around 26 per cent of the global population -- are of reproductive

age. Most women menstruate each month for about two to seven days. Yet, as normal as it is, menstruation is stigmatized around the world

Among the menstrual products available in the country more than half of the menstruating women populations are familiar only with the sanitary napkins (Peter et al., 2021). Stayfree, whisper, comfy etc. are some of the brands that renamed sanitary napkins in the Indian market of feminine hygiene products. Even though pads are inconvenient- cost wise, health wise and environmental wise women are not ready to switch over to alternative means of menstrual management. Popularity of sanitary napkins are one among the reason for this environmental impact caused by sanitary waste is one of the topics in discussions today. A plastic, industrially manufactured, disposable sanitary pad requires about 500–800 years to decompose. Thousands of tons of disposable sanitary waste are generated every month all the world. 432 million pads/sanitary napkins are generated in India annually, the potential to cover landfills spread over 24 hectares (Mehrotra, 2018).

Girls and women need effective, safe, and affordable menstrual products. Menstrual cups seem to be an effective and safe alternative to other menstrual products (van Ejjik et al., 2019). Menstrual cups reduce a greater amount of waste generated from other menstrual products as it is reusable. As it could be used for five or more years, this eliminates the need for constant purchases of disposable products like pads or tampons, resulting in significant cost savings over time. By choosing a reusable option, individuals can significantly reduce their contribution to landfill waste and plastic pollution. The advantages of menstrual cup are far more compared to other menstrual products but its usage is limited due to either the lack of awareness or the fear of trying something new among the people of reproductive age group and also myths like using menstrual cups in unmarried girls might result in loss of virginity (Eti et al., 2019).

By addressing the research objectives and examining the knowledge, attitudes, and practices of menstrual cup usage within this demographic, this study holds several significant. By exploring the knowledge, attitudes, and practices related to menstrual cup usage, this study can inform public health policies and initiatives aimed at promoting sustainable and affordable menstrual hygiene options. Understanding the factors influencing the adoption and usage of menstrual cups among emerging adult

women can inform strategies to promote sustainable menstrual practices, aligning with global sustainability goals. This study's findings can provide valuable insights for policymakers, environmental advocates, and organizations working towards sustainable development. this study holds significance from an economic perspective. Menstrual cups have the advantage of being reusable, potentially reducing the financial burden on women in the long run. By exploring the attitudes and practices surrounding menstrual cup usage among emerging adult women, this study can contribute to economic evaluations of menstrual hygiene management options. Understanding the economic implications and potential cost savings associated with menstrual cup usage can inform decision-making for individuals, healthcare providers, and policymakers, promoting equitable access to affordable menstrual hygiene products.

1.5. Chapterization

The whole study is divided into six parts and they are as follows,

- **Chapter I Introduction:** The chapter gives an overview about the background and significance of the study. It also elaborates on the statement of the problem
- **Chapter II Review of Literature:** The chapter summarizes the findings from different studies based on similar themes. It also includes theoretical framework which supports the study.
- **Chapter III Methodology:** The methodology followed in the present study is given in this chapter including the aim, objectives, universe and unit, details on data collection and analysis etc.
- **Chapter IV Data Analysis:** The results of analyzed data is presented in this chapter as tables and figures. It is divided into 5 sections which include socio demographic details, questions to assess the knowledge of the respondents, questions to understand the attitude of the respondents, questions to determine the practice and usage pattern and hypothesis testing.
- **Chapter V Discussions:** Detailed description of the results derived after data analysis is given in this chapter. The probable reasons for the results are also given in the chapter.
- **Chapter VI Findings, Suggestions and Conclusions:** The chapter summarizes major findings of the study. It also put forwards suggestions, implications and

recommendations for further research. Conclusion of the whole research is also given.

Summary of the Chapter

The chapter described about the background for the study such as menstruation, the challenges faced during menstruation, ill effect caused by disposable products for the environment, how menstrual cup act as a safe and convenient option for females etc. It explained the statement of the problem and also pointed out the significance of the study. It also included Chapterisation of the study.

CHAPTER II: REVIEW OF LITERATURE

Chapter II: Literature Review

Overview of the Chapter

The analysis of prior and current studies that are relevant to the research at hand, as well as the identification of research gaps in those earlier studies, are two key tasks that has to be undertaken while conducting research. It aids in gaining a comprehensive understanding of the issue and raises the standard of empirical investigation. This chapter is written to establish the requirement of the current study by reviewing previous studies based on similar themes. Thematic analysis is used to conduct review of literature and different themes discussed under the review of literature include,

- Menstrual Health and Hygiene
- Impact of Menstrual Products
- Menstrual cup in General

2.1. Menstrual Health and Hygiene

In Kaur's study conducted during 2018, it was found that menstruation and menstrual practices still face many social, cultural, and religious restrictions which are a big barrier in the path of menstrual hygiene management. In many parts of the country especially in rural areas girls are not prepared and aware about menstruation so they face many difficulties and challenges at home, schools, and work places. It was found that little, inaccurate, or incomplete knowledge about menstruation is a great hindrance in the path of personal and menstrual hygiene management. Girls and women have very less or no knowledge about reproductive tract infections caused due to ignorance of personal hygiene during menstruation time. In rural areas, women do not have access to sanitary products or they know very little about the types and method of using them or are unable to afford such products due to high cost. So, they mostly rely on reusable cloth pads which they wash and use again. Needs and requirements of the adolescent girls and women are ignored despite the fact that there are major developments in the area of water and sanitation. Women manage menstruation differently when they are at home or outside; at homes, they dispose of menstrual products in domestic wastes and in public toilets and they flush them in the toilets without knowing the consequences of choking.

In Chandra-Mouli's study conducted in the year 2017, he aimed at studying: how knowledgeable are adolescent girls in low- and middle-income countries about menstruation and how prepared are they for reaching menarche; who are their sources of information regarding menstruation; how well do the adults around them respond to their information needs; what negative health and social effects do adolescents experience as a result of menstruation and how do adolescents respond when they experience these negative effects and what practices do they develop as a result. Using a structured search strategy, articles that investigate young girls' preparedness for menarche, knowledge of menstruation and practices surrounding menstrual hygiene in Low- and Middle-Income Countries were identified. A total of 81 studies published in peer-reviewed journals between the years 2000 and 2015 that describe the experiences of adolescent girls from 25 different countries were included. Adolescent girls in Low- & Middle-Income Countries are often uninformed and unprepared for menarche. Information is primarily obtained from mothers and other female family members who are not necessarily well equipped to fill gaps in girls' knowledge. Exclusion and shame lead to misconceptions and unhygienic practices during menstruation. Rather than seek medical consultation, girls tend to miss school, self-medicate and refrain from social interaction. Also problematic is that relatives and teachers are often not prepared to respond to the needs of girls. LMIC must recognize that lack of preparation, knowledge and poor practices surrounding menstruation are key impediments not only to girls' education, but also to self-confidence and personal development. In addition to investment in private latrines with clean water for girls in both schools and communities, countries must consider how to improve the provision of knowledge and understanding and how to better respond to the needs of adolescent girls.

Houppert's book written in the year 1999, he describes menstruation as a physiological phenomenon which has been linked to many religious traditions and taboos in developing countries like India. Cultural, religious and traditional beliefs can lead to different restrictions that women face during their menstrual period. The taboos associated with menstruation are not just of historical interest. It is still common for menstruating women to remain isolated at home during the menstrual period. Some of them do not wash their bodies, shower or bathe. In some communities, they are not allowed to use water sources during menstruation as

considered unclean. Menstrual management is still a source of social embarrassment, with such euphemisms as time of the month, period, or on the rag still in common use. Even advertisers are still reluctant to talk directly about menstruation; they continue to discuss feminine hygiene and urge women to stay fresh. This persistent discomfort with the reality of menstruation is aptly called the culture of concealment

In Soeiro's study conducted in the year 2021, the major objective was to provide an overview of the main Menstrual Hygiene Management issues affecting Venezuelan migrant adolescents and young women in the north-western border of Venezuela-Brazil. A cross-sectional study was conducted, early in 2021, with the use of a self-responded questionnaire, in Spanish, adapted from the Menstrual Practice Needs Scale (MPNS-36). All identified adolescents and young women aged between 12 and 24 years old were invited to participate (convenience sample-167 women). Women with complete questionnaires and who menstruate were included. Information on access to and quality of hygiene kits and toilets were retrieved, and a descriptive analysis performed, with an evaluation of frequencies for categorical variables and mean for continuous variables. Adolescent and young women (10–24 years old) are habitually a neglected group in humanitarian settings (situations of forced displacement, armed conflict, or natural disaster) and, in those contexts, they hardly have access to hygienic menstrual products, safe toilets, or water. This study provides an overview of the menstrual hygiene management issues among Venezuelan adolescents and young migrants living in the northwestern Brazilian border. It was found that almost half of the participants who menstruate did not receive any hygiene kits, a significant number of respondents were not able to wash their hands whenever they wanted, and the majority did not feel safe to use the toilets evidencing the period poverty (lack of menstrual supplies, private toilets, sanitation conditions, and education) that affects the wellbeing of these women, especially during humanitarian crisis.

Chinyama's study conducted in the year 2019, explores girls' experiences of Menstrual Hygiene Management (MHM) in rural schools of Zambia from the perspectives of schoolgirls, schoolboys and community and school-based adults key to MHM for schoolgirls. In July and August 2015, a qualitative exploratory study was conducted in six rural schools of Mumbwa and Rufunsa districts of Zambia. Twelve in-depth interviews (IDIs) and six focus group discussions (FGDs) were conducted

among girls ages 14–18 who had begun menstruating. Two FGDs with boys ages 14–18 and 25 key informant interviews were also conducted with teachers, female guardians and traditional leaders to provide the context within which schoolgirls practice MHM. Most girls reported learning about menstruation only at menarche and did not know the physiological basis of menstruation. They reported Menstrual Hygiene Management (MHM)-related challenges, including: use of non-absorbent and uncomfortable menstrual cloth and inadequate provision of sanitary materials, water, hygiene and sanitation facilities (WASH) in schools. In particular, toilets did not have soap and water or doors and locks for privacy and had a bad odor. Girls' school attendance and participation in physical activities was compromised when menstruating due to fear of teasing (especially by boys) and embarrassment from menstrual leakage. Boys said they could tell when girls were menstruating by the smell and their behavior, for instance, moving less and isolating themselves from their peers. Girls complained of friction burns on their inner thighs during their long journey to school due to chaffing of wet non-absorbent material used to make menstrual cloth. Girls preferred to dispose used menstrual materials in pit latrines and not waste bins for fear that they could be retrieved for witchcraft against them. Though traditional leaders and female guardians played a pivotal role in teaching girls MHM, they have not resolved challenges to MHM among schoolgirls.

Wall's study conducted during the year of 2018, aimed to explore the local understanding of menstruation through focus-group discussions and individual interviews. A detailed ethnographic survey of menstrual beliefs was carried out through 40 focus group discussions, 64 in-depth key informant interviews, and 16 individual case histories in the Tigray Region of northern Ethiopia. A total of 240 individuals participated in six types of focus groups (pre-menarchal girls, menstruating adolescents, married women of reproductive age, post-menopausal women, adolescent males, and married men). In-depth interviews were also carried out with 80 individuals, including Orthodox Christian priests, imams from the Muslim community, principals of primary and secondary schools, teachers and nurses, as well as menstruating schoolgirls and women. The challenges Tigrayan schoolgirls face in managing their menses is rooted in a general cultural reluctance to discuss the subject of menstruation. The failure to discuss menstruation at home means that many girls arrive at menarche unprepared for the experience of menstruation. When menstrual

bleeding first begins—often unexpectedly—girls may be frightened, embarrassed, and suffer unnecessary psycho-social trauma. This task is made more difficult by lack of access to satisfactory menstrual management materials, which are either unavailable, too expensive, or have inadequate absorbent capacity. Male family members who control financial resources often do not understand the importance of this aspect of their daughters' lives because of ignorance or benign neglect. The stigma associated with menstruation is increased by negative religious attitudes that categorize menstruating women as ritually unclean, as well as by thoughtless, mean, and sometimes cruel taunting and teasing behavior by fellow students (especially adolescent boys) when menstrual hygiene accidents occur. This is worsened by pitifully inadequate toileting facilities, poorly constructed latrines, lack of access to soap and water for cleaning, lack of menstrual pads when menstruation begins unexpectedly, and lack of basic medications to help with menstrual cramps when these occur.

2.2. Menstrual Products and its impacts

Harrison's study conducted in the year 2022, aims at increasing the global environmental impact of disposable menstrual products and creating equitable opportunity for healthy hygiene products. Many menstruators around the world do not have the luxury of choice when it comes to period products. Additionally, cultural context may contribute to menstrual product use patterns; for example, in some environments the use of internal menstrual hygiene materials (i.e. tampons) are thought to be culturally inappropriate. When an individual is in a circumstance that does allow them choice of menstrual products, many factors contribute to their decision making. The most commonly used menstrual product worldwide is the disposable menstrual pad. The global environmental impact of menstrual products comes from the use of raw materials, energy, and water during the actual manufacturing processes, the ingredients used in the products themselves (cotton versus plastics), and their packaging (usually plastics), and how many products are used and disposed of worldwide. In terms of the raw materials in disposable menstrual products, pads can contain up to 90% plastic, which largely end up in landfills. Disposable pads and tampons are most often made of cotton with rayon or other synthetic fibres and plastics such as polyester. After use, tampons, applicators, and

pads are either thrown out as solid waste or end up in the water systems if flushed down the toilet; if disposed as solid waste, these products end up in landfills or are burnt in incinerators to generate energy. While in a landfill, disposable pads are estimated to take 500 to 800 years to break down, and materials such as plastic never truly biodegrade. This is of major concern given that each menstruator will use and dispose of between 5000 and 15 000 pads and tampons in their lifetime.

Arena's study conducted in 2016, assessed the technical feasibility, environmental compatibility and the social acceptability of an innovative recycling process of wastes generated by hygiene products. It also developed comparisons with the conventional management options of energy recovery in a Municipal Solid Waste incinerator and disposal in sanitary landfill the utilization of absorbent. The use of sanitary napkins and tampons for menstrual protection has many in- conveniences and hazards. Discomforts and embarrassment associated with using napkins include the constant awareness of their bulk and friction, the fear of leakage and revealing bulges, and the problem of disposal. More serious disadvantages are contamination of the pad by urine and feces (kept warm and moist at the vaginal orifice), the rhythmic, stimulating effect of the friction, and the occasional occurrence of urticaria and contact dermatitis. The waste generated by absorbent hygiene products utilization represents a not negligible fraction of municipal solid waste. Conventional pads are estimated to be 90% plastic, which along with their wrappers, wings and adhesives- each add some 2g of non-biodegradable plastic—or the equivalent of four plastic bags—to the environment with each use and take an estimated 500 to 800 years to decompose.

Borowski's study conducted in the year 2011 investigates environmental and health concerns related to disposable tampons and sanitary napkins. For this work, 160 people were surveyed to answer this question and determine if women were aware of these environmental and health issues and if they knew of greener and healthier alternatives other than conventional disposable pads and tampons. Additionally, interviews were conducted with a product developer of conventional pads and tampons, a manufacturer of reusable pads and feminine cups, a therapist who has worked with consumer development, as well as a woman who uses alternative menstruation products. Women are most concerned about the price of products and environmental impact. Many women would consider switching to a "greener" product such as a 100% organic cotton tampon or pad, but as learned during

interviews and additional research, the definition of “green” is open for debate. While reusable menstruation products such as reusable pads or insertable cups are in fact the “greenest” option, many women would not consider these as they must be cleaned or laundered.

Auroville Village Action Group’s conducted in the year 2011 aims to better understand the interplay of factors (socio-economic, educational, cultural, environmental) that determine a rural Indian woman's menstrual hygiene management (MHM) practices. This study was conducted with 300 women in 2 blocks of Villipuram district, rural Tamil Nadu. The survey identified a general lack of information available to women about menstruation, and limited options for alleviating their menstrual discomfort. Nearly all women (95%) experience some lifestyle restriction associated with menstruation with the belief in impurity and being polluted as the most commonly identified reason for these restrictions. The extent, to which a woman is influenced by beliefs that result in lifestyle restrictions, is most strongly correlated with her level of education. The survey revealed that choice of products used to manage menstruation (either cloth or disposable pad) is mostly influenced by cost factors, comfort and habit as well as cultural restrictions and beliefs. Women are largely not aware of the environmental impact in product choice. Implications for the future of Menstrual Hygiene Management for Tamil Nadu which can have relevance for India are noted at the end of this report. Concerning product choice, the crucial issue being examined was whether the women are able to use the product in a hygienic way without unnecessary negative self-image. The issue of sanitary waste disposal was also examined. Vast majority of women reported using old cloth and disposable pads or combination of both to manage their menstruation with a clear trend that younger women tend to use disposable pads. Both of the products have pros and cons however, concerning health, the choice of product doesn't seem to have an impact. Cloth is less expensive and creates no environmental pollution, but is difficult to handle when away from home. Nearly three fourth of cloth-users answered that there were some issues or myths about drying the cloth in their village. Disposable pads have the biggest advantage of convenience however, they create environmental pollution, with the majority of users throwing them away with the garbage, burning or burying them. Habit, economic factors (no cost of cloth) and comfort are the most strongly motivating factors for women to choose to use cloth

rather than disposable pads – environmental factors relating to disposal are not a consideration affecting choice.

Bhor's study conducted in the year 2018 aims at concluding the best practices to be observed and put forth as a solution that is more economical, viable and rational than landfill dumping of disposable menstrual products. Disposal of used sanitary pads is a major challenge across India. Lack of awareness and immense taboo around menstruation in India adds up to the issues of proper sanitary waste management. This infectious waste, if not handled properly, would pose an immense threat to the oceans, land, and human health. So far while importance was given only to promoting the usage of sanitary napkins, it is equally important that the problems caused by dumping sanitary waste in landfills be addressed. Using ash, soil, dried leaves during periods to soak the blood is even carried on today. Sanitary napkin is currently the most widely used product in India. Products used during menstruation and its disposal techniques vary from whether the woman stays in rural area or urban and even whether there are adequate disposal facilities available for her. Most of the women dispose of their sanitary pads or other menstrual products into garbage bins that ultimately become a part of municipal solid waste. In urban areas, where modern disposable menstrual products are used, they dispose of them by flushing in toilets and throwing in dustbins. The disposal method of a menstrual product largely depends even on the cultural beliefs and location or time of disposal, since menstruation is still considered as something to be kept private and secretive, women prefer to dispose their products or wash them in private and bury or burn only at night or when no person, especially men are around. At some locations, incinerators are used for disposing menstrual waste material but due to shyness or fear of being seen by others they refrained from using it. Toilet facilities in India lack bins for the disposal of sanitary pads. Thus, women are forced to flush the pads in the toilets or wrap and throw them in the dustbins. Where dustbins are not placed, they leave the soiled pads wrapped or unwrapped in the toilet corners. This makes the toilets dirty, breeding place for flies and mosquitoes, and also unhygienic for other toilet users and cleaners. All these above unhygienic practices create a lot of health issues and infection for whoever is exposed to them or have to clean the areas.

Kim's study conducted in 2021, focused on the sanitary pads' health movement in Korea from the feminist health perspective. The methodology was based on web

content/statement analysis. Statements were collected and analysed from government, women NGOs, online petitions, news articles, and reports gathered for three years from March 2017 to September 2020. In Korea, the women's disposable sanitary pads health movement was triggered by the Korean Women's Environmental Network (KWEN), the Korean environment NGO, and a professor named Kim Man-goo. KWEN unveiled that it detected carcinogenic substances in the harmful substance detection tests by professor Kim Man-goo's team at Gangwon-University in. The victims' main symptoms were the change of menstrual cycle, menstrual pain, menstrual period, and external urtication among. It caused a big controversy on the safety of disposable sanitary pads in Korean society. KWEN and other environmental NGOs, consumer advocates, and feminist NGOs requested thorough investigations of disposable sanitary pads' health impact to be assessed by the government. In response, the Ministry of Food and Drug Safety (hereafter, MFDS) announced that they would conduct harmful substance detection tests on ten disposable sanitary pad products. But the Sanitary Pads Safety Review Committee of MFDS announced that it scientifically, hardly trusted the results by Professor Kang Man-goo's research team and KWEN. Against it, KWEN refuted, "MFDS had reduced and distorted the experimental information and the test results. As a result, MFDS had to unveil all controversial sanitary brands to the public to prevent speculation. Women's petitions for a thorough investigation of the disposable sanitary pads were accepted by The Blue House's online site and the Citizen Petition online platform service. The Justice Party's women's committee submitted the petition for epidemiological researches on the safety of disposable sanitary pads to the Ministry of Environment.

2.3. Menstrual cup in General

Pena's study conducted in 1962 talks about TH advantages of menstrual cup usage. The rubber menstrual cup, which acts as a catch basin for the flow and seals off the upper vagina in the same way as a diaphragm, represents an advance internal menstrual protection. It has proved to be safe, sanitary, and comfortable and permits women to continue their customary physical activities during their periods. The rubber has been made resistant to bacterial growth. This can be strengthened by immersing the menstrual cup in a weak solution of chlorine bleach after each monthly use. The menstrual cup is anatomically designed to engage and retain itself in proper position. The cup is made of soft rubber, flexible so that the wearer is never conscious

of its presence. Below the lower and smaller rim there are six tiny holes intended to allow oxygen to escape to avoid cramps, and also to release the vacuum when removing the cup. The cup provided adequate menstrual protection and There were no cramps, pressure complaints, or signs of irritation upon vaginal examinations. The cup does not impede the free flow of menstrual blood or cause back-flow into the cervix. Use of the cup is hygienic as it avoids the infections commonly associated with sanitary napkins and tampons.

Kakani's study conducted in the year 2017 aimed towards assessing the adaptability and the effectiveness of menstrual cup by naïve users who have been using sanitary pads/tampons/cloth as conventional menstrual sanitary protection. The study was conducted at Gujarat Medical Education and Research Society, Medical College and Hospital, Dharpur, Patan, Gujarat, India. Total 158 participants aged between ages of 20 to 50 years with regular menstrual cycle were enrolled in the study. Participants were provided menstrual cups to be used for three consecutive menstrual cycles. They were given detailed explanation/information about its usage. Feedback was obtained after every cycle for three cycles using a structured questionnaire. The cup was preferred for comfort, dryness, and less odour. Insertion was easy for 80% participants and 90% participants found removal easy. Problem of leakage was encountered in 3-6%. There were few side effects like rashes, dryness or infection. These results demonstrate that this reusable vaginal device has no significant health risks and is acceptable to many women without the need for fitting or other medical services. The menstrual cup has been explored as a means of menstrual hygiene management in developing countries like India. As it is made of silicone it is inert and smooth thereby almost nullifying the problems like infections, allergies, rashes, and excoriations. It is worn internally hence it eliminates foul odor and feeling of wetness. It can also be worn for long hours because of its capacity and the ability to adapt to the body completely. Menstrual cup can be sterilized before use and thus is most hygienic and safe menstrual sanitary protection. It is a reusable device which can last through the menstrual life-cycle of a woman if used carefully. The participants found menstrual cup insertion and removal easy with increasing comfort in second and third cycle. There was minimal problem of leakage. High comfort levels were accounted to medical graded silicon rubber material. Most participants did not find any problem in cleaning the cup. The problems of rashes,

dryness, infection and allergy were minimal and managed appropriately. The menstrual cup was acceptable to most users in relation to comfort, ease of use, and effectiveness in menstrual collection.

In van Ejik's study conducted in the year 2019 aimed at reviewing international studies on menstrual cup leakage, acceptability, and safety and explored menstrual cup availability to inform programmes. In this systematic review and meta-analysis, articles were searched in PubMed, Cochrane Library, Web of Science, Popline, Cinahl, Global Health database, Emerald, Google Scholar, Science.gov, and World-Wide Science from database inception to May 14, 2019, for quantitative or qualitative studies published in English on experiences and leakage associated with menstrual cups, and adverse event reports. We also screened the Manufacturer and User Facility Device Experience database from the US Food and Drug Administration for events related to menstrual cups. To be eligible for inclusion, the material needed to have information on leakage, acceptability, or safety of menstrual cups. The main outcome of interest was menstrual blood leakage when using a menstrual cup. Safety outcomes of interest included serious adverse events; vaginal abrasions and effects on vaginal microflora; effects on the reproductive, digestive, or urinary tract; and safety in poor sanitary conditions. Findings were tabulated or combined by use of forest plots (random-effects meta-analysis). We also did preliminary estimates on costs and environmental savings potentially associated with cup. Leakage was similar or less when using the menstrual cup than when using disposable pads and tampons. The adoption of a menstrual cup required a familiarization phase and peer support seemed to be important for uptake in low-income and middle-income countries. Challenges in resource constrained settings (eg, lack of sanitation, hygiene, and privacy) did not stop women from using the cup. Around 70% of participants in 13 studies declared wanting to continue use. It was identified that several incidental case reports of vaginal damage, toxic shock syndrome, or urinary tract complaints after menstrual cup use, and difficulty retrieving the menstrual cup was also reported. In studies that examined the vagina and cervix during follow-up, no mechanical harm was evident from use of a menstrual cup. Infection risk did not appear to increase with use of a menstrual cup, and compared with pads and tampons, some studies indicated a decreased infection risk. It was reported that pain might happen due to variations in

the pelvic anatomy or wrong positioning of the menstrual cup leading to internal pressure.

Manley's study conducted in the year 2021 aims a comparison of physical and mechanical properties of menstrual cups. Menstrual cups vary in size, shape, material, and firmness. In October 2020, 14 popular and highly rated menstrual cups underwent quantitative comparison in laboratory settings (the United Kingdom), and they were compared in terms of their dimensions, volume, and compressive strength (firmness) using the Instron Universal Testing System. The overall designs were compared including shape, material, and features. In this comparison of 14 menstrual cups, dimensions varied greatly. Menstrual cup variations across the brands could be confusing. There is no level of regulation and standardization of menstrual cups in terms of size, shape, volume, or firmness. There is no correlation between a menstrual cup's size, shape, and volume, or a menstrual cup's material, shape, and firmness. Women guess which shape or material might suit them, and if incorrect may experience discomfort, leaks, and increase the risk of injury. With menstrual cup size and firmness having a direct effect on safety, usability, comfort, and leaks, it is important to identify acceptable physical and mechanical properties of menstrual cups, with categorization similar to the absorbency levels of tampons or sanitary pads. Standardization across menstrual cup types and brands would empower women to make the choices necessary for a successful menstrual cup experience and improve safety overall.

Pokhrel study conducted in the year 2021 aims at exploring the acceptability and feasibility of using vaginal menstrual cups among school-aged girls in Thokarpa, Sindupalchowk, Nepal. This is an exploratory study based on four focus group discussions with a purposive sample of 28 schoolgirls between 13 and 19 years of age who were provided with vaginal menstrual cups in Thokarpa, Sindupalchowk, Nepal. The data were collected between February and March 2019, i.e. approximately three months after the distribution of the menstrual cup. Participants were included in the study if they had started their menstruation and never given birth. Conventional content analysis was applied. Menstrual hygiene management can be challenging in low-income settings 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. An alternative method for

menstrual hygiene management, instead of sanitary pads or tampons, is the vaginal menstrual cup. The findings of the study indicated that the majority of participants had a positive perception of the menstrual cup. One notable benefit reported by participants was the ability to attend all school classes without any interruptions caused by menstrual hygiene management issues. The convenience of using the menstrual cup while outdoors was also highlighted, as it eliminated concerns about changing, washing, or disposing of homemade or sanitary pads. Economic and environmental advantages were emphasized, with participants acknowledging the reusability of the menstrual cup as a positive feature compared to disposable pads or tampons. Cleaning the cup was reported to be hassle-free. Participants emphasized the benefits of the menstrual cup for girls and women and expressed a willingness to recommend it to their friends. However, some discomforts were mentioned, including pain during insertion, a sensation of the cup sticking out of the vagina, a constant urge to urinate, and occasional leakage, particularly at night. Concerns regarding reduced fertility and the fear of losing virginity were also voiced by some participants. Additionally, some participants expressed uncertainty about the size, shape, and texture of the menstrual cup and felt unsure about the proper insertion technique. Overall, the findings highlighted the positive experiences and benefits of using menstrual cups while also addressing the concerns and discomforts associated with their use.

Gharacheh's study conducted in the year 2021 aims to determine the acceptability and safety of menstrual cups among Iranian women. This is a cross-sectional study conducted in 2020. Iranian women between the ages of 18 and 50 with regular menstrual periods who used the menstrual cup at least for three months were included. Participants were selected through continuous sampling, and they completed a web-based questionnaire including demographic characteristics form as well as checklists on acceptability and safety through a link sent electronically via social media. The findings of the study revealed that the menstrual cup was generally considered a safe and acceptable method of menstrual hygiene management, leading to positive experiences among most women. However, it was observed that the use of menstrual cups was limited among Iranian women. This limitation appeared to be influenced by the taboo nature of extramarital affairs in Iranian culture, the prohibition of such relationships in Islamic teachings, and the significance placed on maintaining

virginity, particularly among unmarried women. It was noted that a significant proportion of the participants who completed the questionnaire were unmarried, indicating a potential difference in attitudes towards virginity among current users of the product compared to the general population in Iran. Nevertheless, majority of the participants expressed their intention to continue using the menstrual cup and recommended it to others, highlighting a high level of satisfaction with the product. One notable issue raised by a large percentage of the participants was leakage, which could potentially be attributed to incorrect insertion of the cup. Many women purchased the menstrual cup from online shopping websites or pharmacies without receiving sufficient training on its proper use. Despite this concern, the study indicated that the health risks associated with menstrual cup use were minimal. Instances of vaginal irritation, subjective vaginal pain, pelvic pain, allergies, and rashes were reported to be low. Furthermore, low rates of health risks during cup use, including pain during removal, subjective vaginal pain, pelvic pain, and rashes or allergies, contributed to high levels of satisfaction with the menstrual cup. The high level of acceptability and safety of the menstrual cup showed that this product is a suitable alternative for menstrual management in Iranian women.

Beksinska study conducted in the year 2020 aims at evaluating long-term user acceptability of menstrual cups in a student population in South Africa. A cohort of female students aged 18-24 years attending 10 further education institutions including 22 campus sites in KwaZulu-Natal, South Africa, were offered menstrual cups after receiving education and training in their use. The students were followed for up to 12 months to assess menstrual cup acceptability, user experiences and continuation. The experiences of the users of menstrual cup varied. Despite receiving education, training, and informational leaflets, approximately half of the students reported finding the cup easy or quite easy to use on their first attempt, while the rest encountered difficulties. However, over half of the students reported improvement in insertion and removal with practice, indicating a learning curve associated with the menstrual cup. Most of the problems encountered by the were related to discomfort during cup insertion, and some expressed fear or apprehension about trying the product, highlighting the need for ongoing user support even after acceptance of the menstrual cup. Interestingly, many preferred to clean their menstrual cup at their own residence, suggesting a specific context for cup maintenance. It was noted that women

may choose to use a variety of menstrual hygiene products over the course of a menstrual cycle, depending on their flow and personal preference. For those who continued using the menstrual cup, positive reports included improved knowledge about their bodies and increased confidence in managing their menstrual cycle. Many users expressed satisfaction with the cup, particularly in terms of potential cost-savings on menstrual hygiene products in the future.

Brindhaavanan's study conducted in the year 2022 aims to assess menstrual cup awareness among the female medical college students. A cross sectional study was conducted on 389 undergraduate female medical students, among which 355 students responded after consent. Data was collected through Google forms using pre-tested semi structured questionnaire. Collected data was transferred to Microsoft excel and was analysed using statistical package for the social sciences (SPSS) version 21. Chi-square test was used to determine the association. The findings of the study indicated that nearly three-fourths of the students were aware of menstrual cups, but only 15% of them were actually using them. The primary sources of information about menstrual cups were the internet, followed by friends and peers. The popularity and promotion of sanitary napkins contributed to limited access to menstrual cups. However, despite the lack of accessibility, 59% of the students considered menstrual cups to be a safe device. Additionally, over half of the students were aware that silicone is the material used to make menstrual cups. The preference for menstrual cups was driven by factors such as their long-term use, convenience, reduced frequency of disposal, and cost-effectiveness. Furthermore, half of the students recommended menstrual cups as an alternative to sanitary napkins. These findings highlight the positive perception of menstrual cups among the students, with recognition of their advantages over traditional sanitary napkins. Overall, the study revealed a significant awareness of menstrual cups among the students, although the usage rate was relatively low. The primary reasons for using menstrual cups were their convenience, economic benefits, and long-term use. The findings underscore the need for increased accessibility and promotion of menstrual cups as a viable alternative to sanitary napkins, considering their safety, cost-effectiveness, and user recommendations.

Tapa's study on conducted in the year 2023 aims to assess the knowledge and attitude regarding menstrual cups among young women. A descriptive study design was

adopted for the study. 200 young women were selected using non-probability convenient sampling technique. The study tool was administered to assess the knowledge and attitude regarding menstrual cups. The findings of the study revealed that women in the reproductive age are actively seeking better and safer menstrual hygiene products, and menstrual cups have gained significant popularity in recent years, largely influenced by peers and advertisements on various social media platforms. There was a moderate positive correlation between knowledge and attitude towards menstrual cups, which was statistically significant. However, personal and cultural taboos associated with the use of menstrual cups still exist, impacting their acceptability. The study identified several significant associations related to knowledge and attitude towards menstrual cups. Knowledge was found to be associated with the course of study, type of sanitary hygiene product used, and previous information about menstrual cups. Regarding attitude, a significant percentage of participants had a neutral attitude towards using menstrual cups. Attitude was also associated with the regularity of the menstrual cycle, type of sanitary hygiene product used, and existing information about menstrual cups. Despite being aware of menstrual cups, the majority of young women expressed skepticism towards their use. This skepticism primarily stemmed from personal and socio-cultural factors that influenced the acceptability of menstrual cups. It was noted that social media served as a major source of information for young women, but it lacked in providing empathetic support for women in using menstrual cups. Overall, the findings highlight the growing interest among women in seeking improved menstrual hygiene products, with menstrual cups gaining popularity. However, personal and cultural factors, as well as the lack of empathetic support on social media, contribute to the skepticism and limited acceptance of menstrual cups among young women.

2.4. Research Gap Analysis

The existing literature explains about the challenges faced during menstruation, socio-cultural taboos and restrictions, environmental impact of disposable sanitary products and the efficiency of menstrual cup. Based on the literature review conducted under the themes of “Menstrual Health and Hygiene”, “Impact of Menstrual Products”, and “Menstrual Cups in general”, several research gaps have also been identified. These gaps relate to the limited inclusion of both users and non-users of menstrual cups in a

single study, the predominant focus on adolescent girls or reproductive women and the lack of studies specifically targeting the emerging adult category (18-29 years).

The current literature predominantly focuses on the experiences and perceptions of either menstrual cup users or non-users. There is a lack of comprehensive studies that compare the knowledge, attitudes, and practices of both user groups within the same research study. Such a comparative analysis would provide a more comprehensive understanding of the factors influencing the adoption or non-adoption of menstrual cups among different individuals, shedding light on the barriers, facilitators, and preferences of each group. Existing studies often concentrate on adolescent girls or women in the reproductive age group, neglecting the unique experiences and needs of emerging adult women (aged 18-29). This demographic represents a crucial transitional phase in life, characterized by significant shifts in education, career, relationships, and personal identity formation. Understanding the knowledge, attitudes, and practices of menstrual cup usage specifically within this demographic is vital for tailoring interventions and initiatives that address their specific needs and preferences.

Summary of the Chapter

Review of literature chapter included reviews of similar studies and literatures based on the topic of the study. The reviews were done in thematic manner which included sub themes of Menstrual Health and Hygiene, Impact of Menstrual Products and Menstrual cup in General

CHAPTER III: METHODOLOGY

Chapter III: Methodology

Overview of the Chapter

A well-defined research methodology is an essential component of a research study. This chapter describes on the methodology used for the present study. It gives details about the sample for the study, the research design, method and tools used for data collection and the statistical techniques used for data analysis.

3.1. Title of the Study

A Knowledge Attitude and Practice study of Menstrual Cup Use Among Emerging Adult Women

3.2. Objectives

General objectives

- To study the knowledge, attitude and practice of menstrual cup among emerging adult women (18-29 years)

Specific objectives

1. To assess the level of knowledge about menstrual cups among emerging adult women
2. To understand the attitude towards menstrual cups among emerging adult women
3. To determine the practice and usage of menstrual cups among emerging adult women

3.3. Hypothesis and Major Variables

- There is an association between the usage of menstrual cup and area of living.
- There is an association between the level of knowledge and level of attitude.
- There is an association between the level of knowledge and practice of menstrual cup.
- There is an association between the level of attitude and practice of menstrual cup.
- There is an association between the usage of menstrual cup and religion
- There is an association between the usage of menstrual cup and financial status.

- There is an association between the usage of menstrual cup and marital status.

Dependent Variables

- Knowledge
- Attitude
- Practice

Independent Variables

- Area of living
- Religion
- Financial status
- Marital status

3.4. Definition of Concepts

Theoretical Definition

Knowledge: Knowledge refers to facts, information, and skills gained through experience or education and understanding of an issue or phenomenon. (Bates, 2005)

Attitude: Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor (Eagly, A et al., 1998)

Practice: Practice is the repeating of an act, behavior, or sequence of activities, frequently to better performance or learn an ability or trade (N et al., 2015)

Operational Definition

Knowledge: Knowledge refers to the understanding and awareness of emerging adult women regarding menstrual cups. It encompasses factual information, awareness of the benefits and drawbacks of menstrual cups, familiarity with their usage, and awareness of proper hygiene practices associated with their use.

Attitude: Attitude refers to the emotional and evaluative responses of emerging adult women towards menstrual cups. It includes their beliefs, perceptions, and feelings towards menstrual cups as a menstrual hygiene product. Attitudes can range from positive to negative and may be influenced by cultural, social, and personal factors

Practice: Practice refers to the actual behavior and usage patterns of emerging adult women concerning menstrual cups. It encompasses the frequency, consistency, and manner in which individuals engage in the use of menstrual cups, including insertion, removal, cleaning, and maintenance practices.

3.5. Pilot Study

A pilot study was conducted to validate the research procedures and assess the feasibility of data collection methods before implementing the main study. The pilot study involved a small sample of participants who were similar to the target population in terms of age and gender. The purpose of the pilot study was to identify any potential issues or challenges in the data collection process and make necessary adjustments. During the pilot study, the research procedures, questionnaire, and data collection methods were tested and evaluated. The feedback received from the pilot participants was used to refine the questionnaire, clarify any ambiguous items, and ensure the smooth administration of the survey. The pilot study helped to enhance the reliability and validity of the research instruments and provided insights into the practical aspects of data collection. Based on the findings and modifications made during the pilot study, the research team was able to proceed with confidence to the main study, ensuring the effectiveness and efficiency of the data collection process.

3.6. Research Design

This study employed a cross-sectional quantitative research design to investigate the knowledge, attitudes, and practices of menstrual cup usage among emerging adult women aged 18-29 years. A cross-sectional design allows for the collection of data at a single point in time, providing a snapshot of the population's characteristics and behaviors.

3.7. Universe and Unit of Study

Universe: All menstruating women between the age of (18-29) in Kerala

Unit: An individual menstruating woman between the age of 18-29 in Kerala

Sample: Menstruating women between the age category of 18-29 in Kerala

Sample Size: 102 menstruating emerging adult women (18-29) in Kerala

3.8. Sampling Design

Non-probability convenience sampling was used to select participants. Convenience sampling was chosen for its practicality and accessibility, as it involved selecting participants who were readily available and willing to participate. However, it is important to acknowledge that convenience sampling may introduce some biases and limit the generalizability of the findings.

Inclusion Criteria

- Participants should fall within the age range of 18-29 years.
- The sample should include both users and non-users of menstrual cups.

Exclusion Criteria

- Individuals outside the specified age range (below 18 years or above 29 years)
- Individuals who do not identify as female or were not assigned female at birth will be excluded.
- Women who have not reached menarche.
- Women who already had menopause because of surgical or physiological reasons.
- Participants who fail to provide sufficient data or complete the questionnaire in its entirety may be excluded from the final analysis.

3.9. Data Collection

The primary data collection instrument for this study was a structured questionnaire. The questionnaire was developed based on the objectives of the study. It consisted of multiple-choice and Likert scale questions, allowing participants to provide quantitative responses. The questionnaire covered socio-demographic details, knowledge about menstrual cups, attitudes towards menstrual cups, practices and usage patterns of menstrual cups. The questionnaire was circulated through online platforms like social media. The respondents included both users and non-users of menstrual cup belonging to the age category of 18-29 years in Kerala. The tool was primarily circulated to the friend's circle and the researcher made use of the social networking skills to reach a wider range of people for their participation.

3.10. Pre-test

The questionnaire was pre-tested with a small sample of participants to ensure its clarity, comprehensibility, and relevance. Feedback from the pre-testing phase has been incorporated to refine and finalize the questionnaire for the main data collection process. The pre-test phase of this study involved collecting data from 2 users and 2 non-users of menstrual cups. To ensure a comprehensive understanding of the participants' experiences, the pre-test data collection was conducted in person. This allowed for face-to-face interactions with the participants, providing an opportunity to clarify any questions or concerns they may have had while completing the questionnaire. The researcher approached potential participants who met the criteria of being either users or non-users of menstrual cups within the specified age range. Efforts were made to ensure a balance between users and non-users in order to gather insights from both perspectives. During the pre-test data collection, participants were provided with an explanation of the study's objectives and their rights as participants. Informed consent was obtained from each participant, ensuring their voluntary participation and understanding of the purpose of the pre-test. As they responded to the questionnaire, the researcher observed their engagement and noted any areas of confusion or ambiguity. Following the completion of the questionnaire, a brief debriefing session was conducted with each participant. This allowed the researcher to gather additional qualitative insights and address any questions or concerns raised by the participants. The feedback received from the participants during the debriefing was documented and considered for potential revisions to the questionnaire. The pre-test data collected in person was then analyzed to assess the comprehensibility of the questionnaire items, the appropriateness of response options, and the overall flow of the questionnaire. This analysis helped identify any potential areas for improvement or modifications needed to enhance the clarity and relevance of the questionnaire for the main data collection phase.

3.11. Data Analysis

Collected data was transferred to Microsoft excel and was analyzed using statistical package for the social sciences (SPSS)version 21. Descriptive statistics, such as frequencies, percentages and cross tabs were used to summarize the socio-

demographic characteristics of the participants, as well as their knowledge levels, attitudes, and practices related to menstrual cup usage. Chi-square tests was conducted to check the association between variables in knowledge, attitudes, and practices.

3.12. Ethical Considerations

This study adhered to ethical guidelines to ensure the well-being, privacy, and confidentiality of the participants. Informed consent was obtained from all participants, and they had the right to withdraw from the study at any point without facing any consequences. All collected data was stored securely and accessed only by authorized researcher involved in the study. Any personal identifiers were removed to maintain participant anonymity.

3.14. Assumptions, Limitations and Scope of the study

Assumptions of the study

- It is assumed that participants will provide genuine and truthful responses to the questionnaire, reflecting their actual knowledge, attitudes, and practices related to menstrual cup. The study relies on the assumption that participants will not intentionally provide false information or biases that could affect the validity of the findings.
- It is assumed that the participants possess a reasonable level of comprehension and understanding of the questions asked in the questionnaire. This assumption assumes that participants will interpret and respond to the questions accurately and in line with their true experiences and perceptions.
- The study assumes that the sample of participants, although selected through convenience sampling, is reasonably representative of the larger population of emerging adult women aged 18-29 years. While convenience sampling may introduce certain biases, it is assumed that the selected participants reflect a diverse range of socio-demographic characteristics and experiences that are relevant to the research objectives.

Limitations of the study

- The research was conducted within a limited period of time which consequently limits the number of samples that can be included. Due to time constraints, the study may only be able to collect data within a relatively short period. As a result, the sample size may be smaller than desired, potentially reducing the statistical power and generalizability of the findings.
- The study focuses on a specific demographic, namely emerging adult women aged 18-29 years. The findings may not be generalizable to other age groups or populations with different socio-cultural backgrounds, limiting the external validity of the study.
- The study primarily focuses on quantitative data collection and analysis. While the structured questionnaire provides valuable insights, it may not capture the rich qualitative nuances and in-depth experiences of participants.

Scope of the study

- The study will gather comprehensive information about the participants, including age, area of living (urban/rural), educational background, financial status, marital status, family type, and other relevant demographic factors. This information will provide a contextual understanding of the respondents and help identify any demographic factors that may influence their knowledge, attitudes, and practices related to menstrual cup usage.
- The study aims to assess the level of knowledge that emerging adult women have regarding menstrual cups. This involves understanding their awareness of menstrual cups, their familiarity with the materials used in manufacturing them, their knowledge about different cup sizes, the cost, and the overall understanding of menstrual cup benefits and usage.
- The study will delve into the attitudes of the respondents towards menstrual cups. It will explore their perceptions of the comfort, safety, environmental impact, and cost-effectiveness of menstrual cups.
- The study will investigate the actual usage patterns and practices of menstrual cup users among the respondents. It will gather information on how often they use menstrual cups, the duration for which they keep the cup inserted, whether they

use other menstrual products simultaneously, and their experience with leakage and comfort during usage.

- The study aims to identify the factors that influence respondents to either adopt or not adopt menstrual cups. By exploring the reasons behind their decisions, the study can uncover barriers to adoption and suggest strategies to promote the use of menstrual cups.

Summary of the Chapter

The methodology chapter described about the way in which the research is conducted. It included the aim objectives of the study. It also explained the hypothesis framed for studying the objectives. It also described the method and design followed in the study and the inclusion and exclusion criteria for the samples the study. The way in which data was collected and analyzed and the tools used to collect and analyses data was also mentioned in the chapter. The chapter also included scope, assumptions and limitations with regard to the study undertaken.

CHAPTER IV: DATA ANALYSIS AND INTERPRETATION

Chapter IV: Data Analysis and Interpretation

Overview of the Chapter

This chapter presents the findings of the study, providing a detailed analysis of the collected data and addressing the research objectives and specific research questions. The results are presented in a clear and organized manner, utilizing appropriate tables, graphs, and descriptive statistics to facilitate understanding and interpretation.

The chapter is divided into following sections,

- 4.1. Socio-demographic Characteristics of the Respondents
- 4.2. Objective 1- Level of Knowledge about Menstrual Cups
- 4.3. Objective 2- Attitudes towards Menstrual Cups
- 4.4. Objective 3- Practice and Usage Patterns of Menstrual Cups
- 4.5. Objective 4- Hypothesis testing

4.1. Socio-Demographic Profile of the Respondents

Age of the respondents

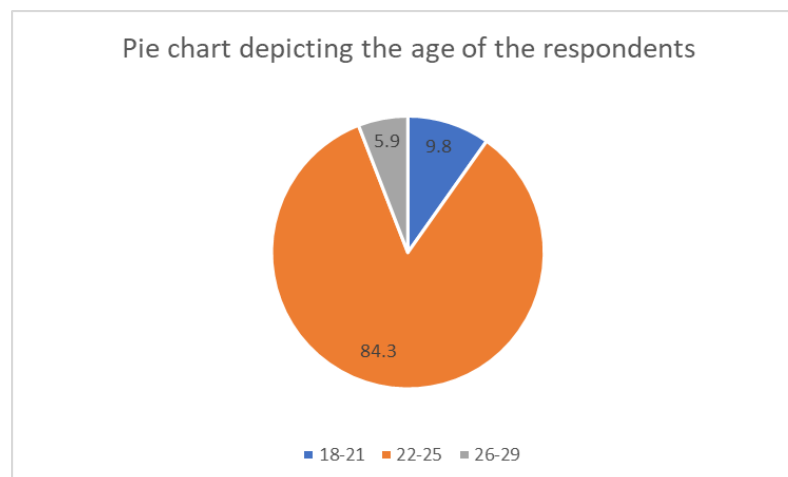


Fig 4.1.1 Pie chart depicting the age of the respondents

The Fig 1.1 depicts the age category of the respondents. Among 102 respondents, the majority (84.3%) belong to the age category of 22-25, 9.8% belong to the 18-21 age category and the remaining 5.9% belong to the 26-29 age category.

Districts of the respondents

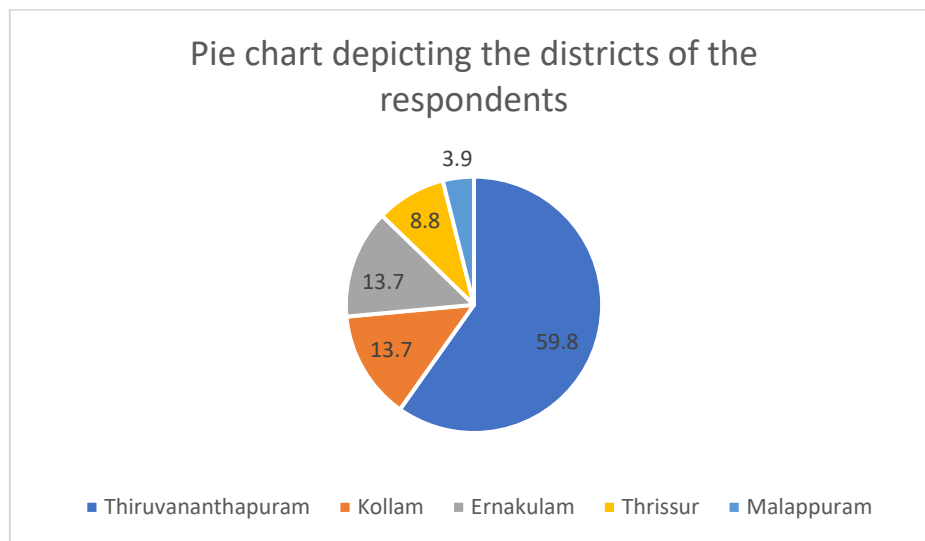


Fig 4.1.2 Pie chart depicting the districts of the respondents

The pie diagram in Fig 1.3 illustrates the districts from which the samples responded. Out of 102 respondents, more than half of the respondents (59.8%) are from Thiruvananthapuram district, 13.7% from Kollam and another 13.7% from Ernakulam. The remaining 8.8% are from Thrissur and the remaining 3.9% are from Malappuram.

Area of living of the respondents

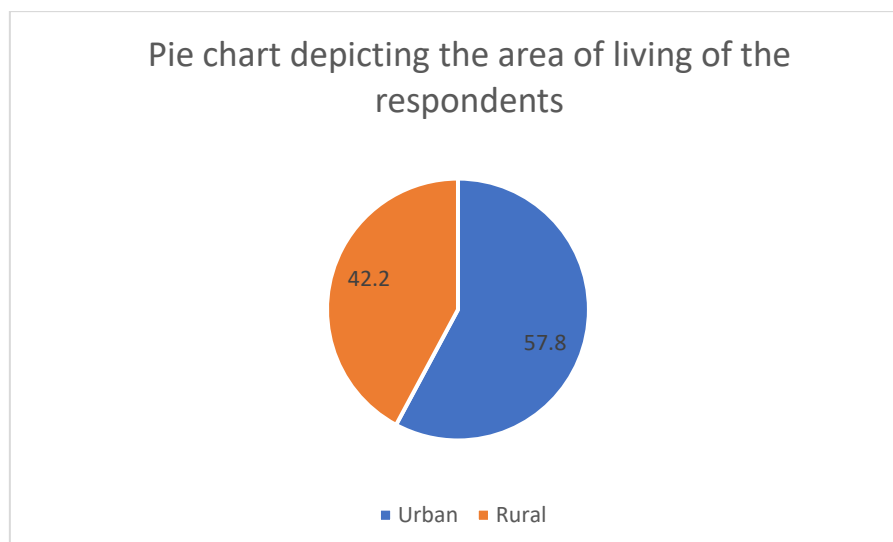


Fig 4.1.3 Pie chart depicting the area of living of the respondents

The pie diagram in Fig 1.3 shows the area of living where more than half (57.8%) are from urban area and the remaining 42.2% are from the rural area.

Level of education of the respondents

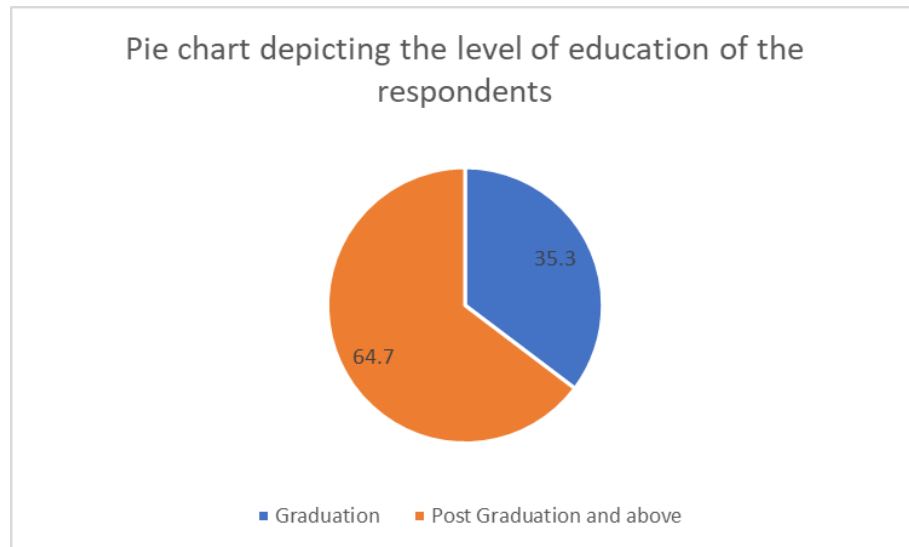


Fig 4.1.4 Pie chart depicting the level of education of the respondents

The pie chart in Fig 1.4 shows the level of education of the respondents. A significant percentage of the respondents (64.7%) have the qualification of post-graduation and above and the remaining 35.3% have the qualification of graduation.

Financial status of the respondents

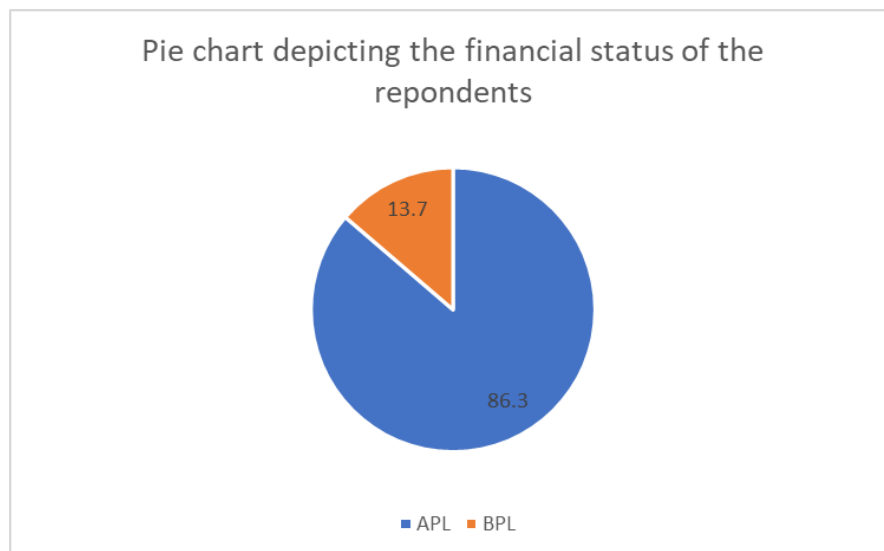


Fig 4.1.5 Pie chart depicting the financial status of the respondents

The pie chart in Fig 1.5 depicts the financial status of the respondents. The result reveals that the majority (86.3%) belonged to the APL category while the remaining 13.7% belonged to the BPL category

Marital status of the respondents

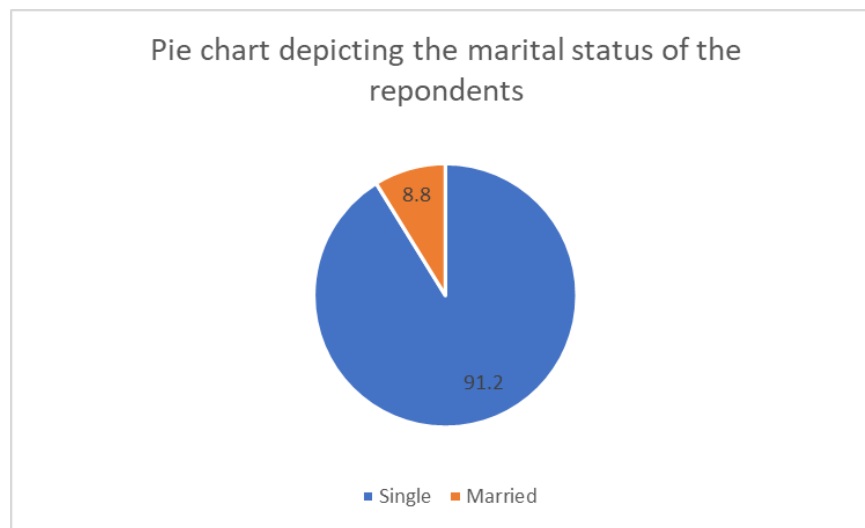


Fig 4.1.6 Pie chart depicting the marital status of the respondents

The pie chart in Fig 1.6 illustrates the marital status of the respondents. The result reveals that a vast majority (91.2%) were single while the remaining 8.8% were married.

Occupation status of the respondents

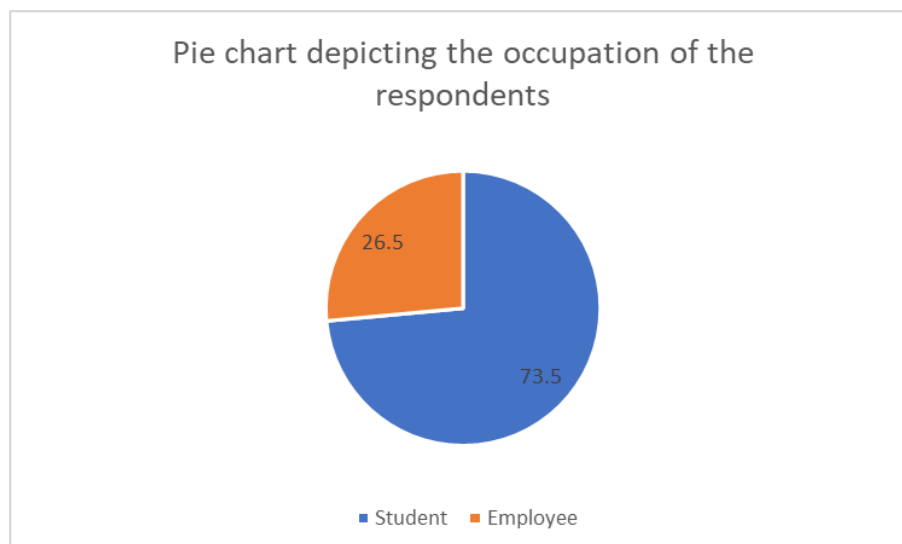


Fig 4.1.7 Pie chart depicting the occupation of the respondents

The pie chart in Fig 1.7 depicts the occupation of the respondents. It was found that among the samples, less than three fourth of the respondents (73.5%) were students and the remaining 26.5% were employees

Type of family that the respondents belong to

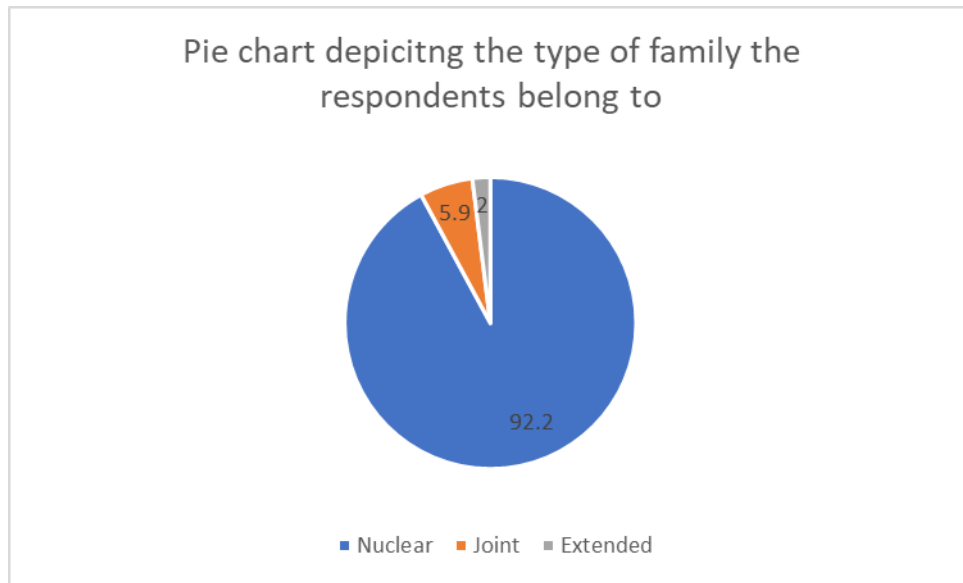


Fig 4.1.8 Pie chart depicting the type of family that the respondents belong to

The pie chart in Fig 1.8 reveals the type of family that the respondents belong to. The majority (92.2%) of the respondents belonged to the nuclear family, 5.9% belonged to the joint family and the remaining 2% belonged too the extended family.

Have you heard of menstrual cup?

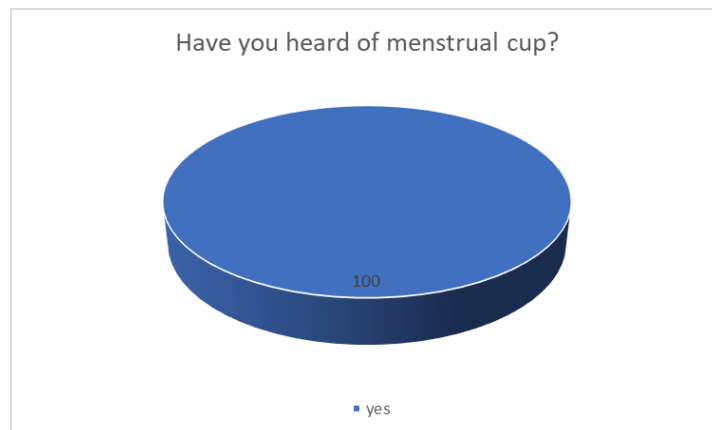


Fig 4.1.9 Pie chart depicting whether the respondents have heard about menstrual cup

The pie chart in Fig 1.9 reveals that all the respondents have heard about the menstrual cup.

Source of information

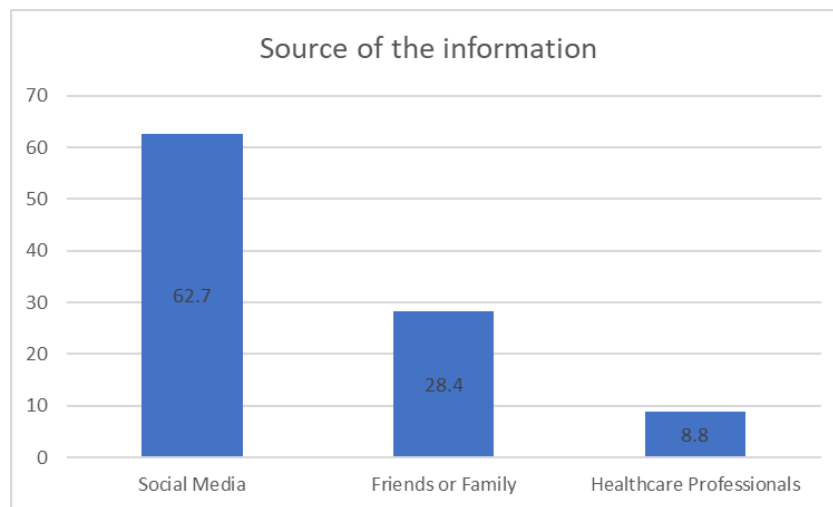


Fig 4.1.10 Bar graph depicting the source of information for menstrual cup

The bar graph in Fig 1.10 talks about the various source from which the respondents heard about menstrual cup. It reveals that a significant percentage (62.7%) has heard about the menstrual cup from social media and more than half (28.4%) heard from friend or family members. Only 8% of the respondents heard about menstrual cup from healthcare professionals. This finding aligned with that of the study conducted among females in urban setting of south Kerala where 76.6% of the respondent's primary source was social media. (Sudevan Devan, G. M et al., 2022). These findings align with that of Brindhaavanan's study conducted in the year 2022 where Internet was the main source of knowledge about the usage of menstrual cup to 45% of students, followed by peers and friends (30.9%) (Brindhaavanan et al., 2022)

4.2. Objective 1- Level of Knowledge about Menstrual Cups

Safety of the device

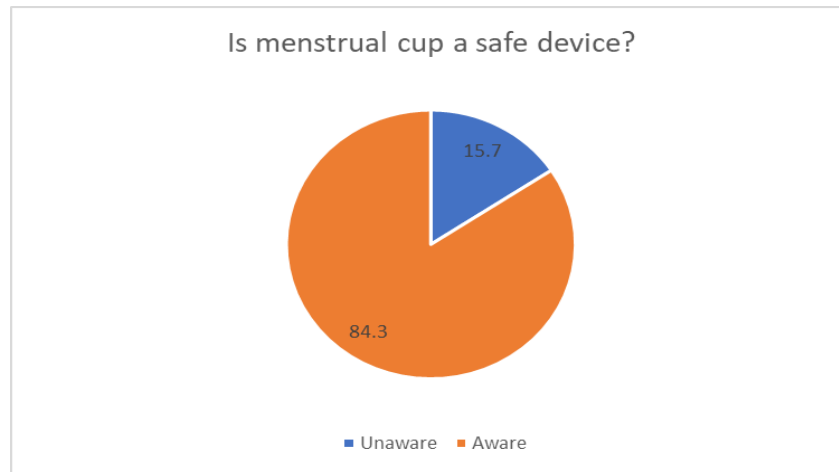


Fig 4.2.1 Pie chart depicting the safety of the device

The pie chart Fig 2.1 illustrates the respondent's notion of the safety of the device. It clearly says that the majority (84.3%) agree to the statement and they believe that the device is safe to use and the minimum (15.7%) doesn't rely on the safety of the device. This finding aligned with that of the study conducted among reproductive women in a rural territory hospital where 84% considered menstrual cup to be a safe device (S, M. et al., 2021)

Material from which menstrual cups are made of

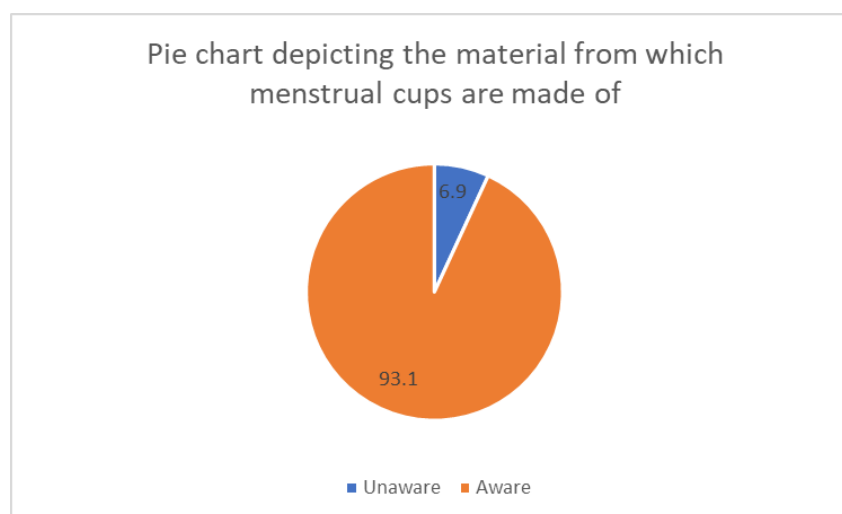


Fig 4.2.2 Pie chart depicting the materials from which menstrual cup are made of

The pie diagram in Fig 2.2 illustrates the material from which menstrual cups are made of. A vast majority (93.1%) responded that they are aware of the materials from which menstrual cup are made of (silicone, rubber, latex) and the meager (6.9%) responded negatively about their awareness regarding the materials. The high percentage of respondents who are aware of the materials from which menstrual cups are made suggests that individuals within this emerging adult women demographic possess knowledge about the different materials used in manufacturing menstrual cups.

Different sizes of menstrual cup available

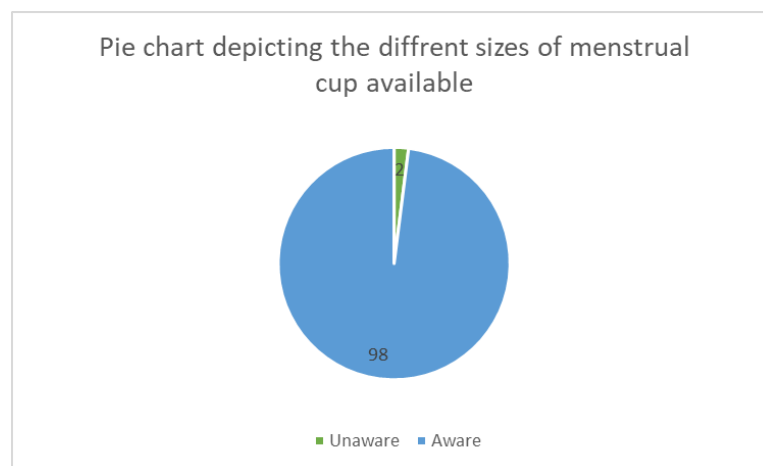


Fig 4.2.3 Pie chart depicting the various sizes of menstrual cup available

The pie diagram in Fig 2.3 illustrates the different sizes of menstrual cup available in the market and the result shows that the vast majority (98%) are aware of the various sizes available (small, medium, large) and only the remaining 2% are unaware of it. This finding indicates that they understand the importance of selecting the right cup size for a comfortable and effective fit.

Size of menstrual cup suitable to use

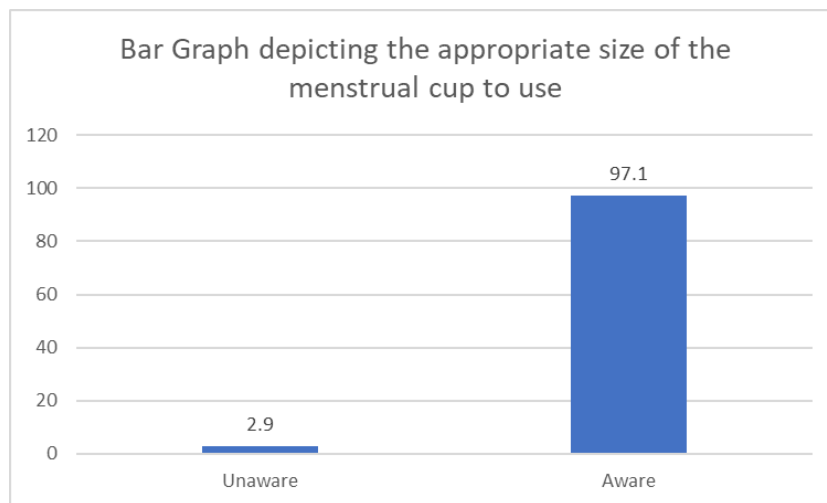


Fig 4.2.4 Bar graph depicting the appropriate size of the menstrual cup to use

The bar graph in Fig 2.4 talks about the appropriate size of the menstrual cup to be used. It reveals that the vast majority (97.1%) are aware of the fact that the size of the cup depends upon the individual and the remaining 2.9% are unaware of it. The high percentage of respondents who are aware that the size of the menstrual cup depends upon the individual suggests that individuals within this emerging adult women demographic understand the importance of selecting the right cup size for their unique anatomical needs and menstrual flow. This finding indicates that they are knowledgeable about the variations in cup sizes available in the market and the necessity of finding the most suitable fit.

The cost of the menstrual cup

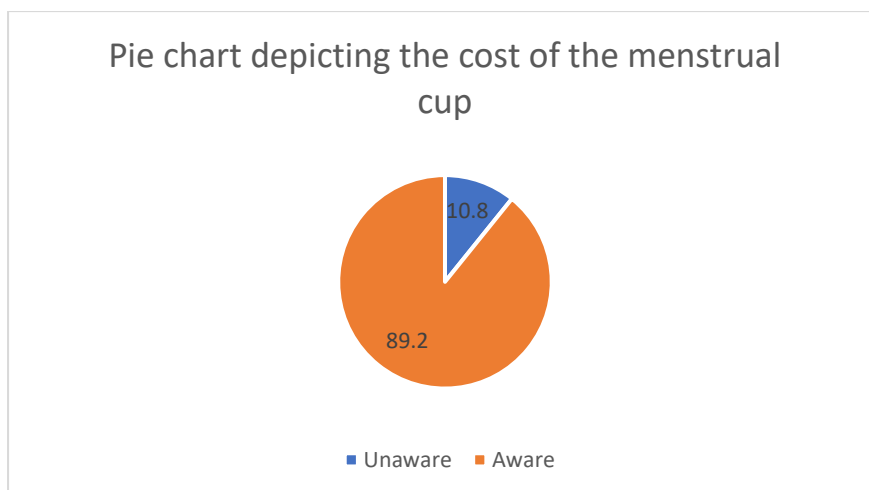


Fig 4.2.5 Pie chart depicting the cost of the menstrual cup

The pie chart in Fig 2.5 illustrates the cost of the menstrual cup. It reveals that the majority of the respondents (89.2%) are aware of it (more than 200/-) and remaining 10.8% are unaware of it.

Sterilization of the menstrual cup

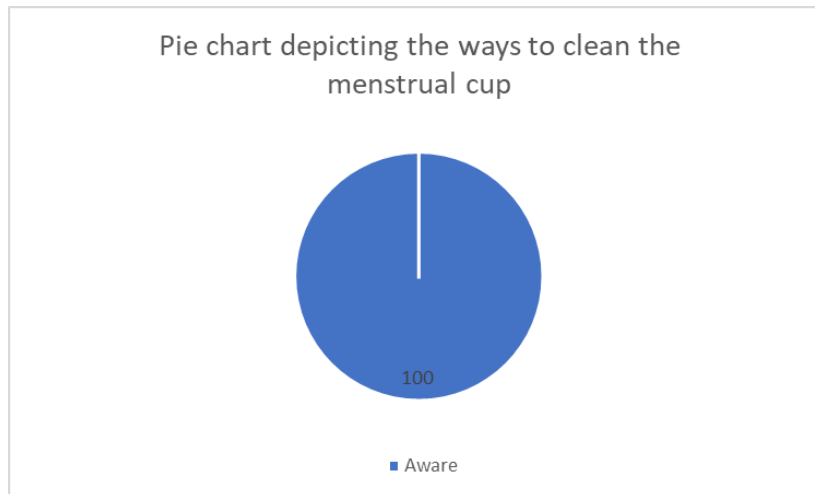


Fig 4.2.6 Pie chart depicting the ways to clean the menstrual cup

The pie chart in Fig 2.6 illustrates the awareness of the respondents on how to clean the menstrual cup. It reveals that all the respondents are aware of the various ways to clean it which include boiling, using soap and water, using specialized menstrual cup cleaners.

Reusable and Eco friendly

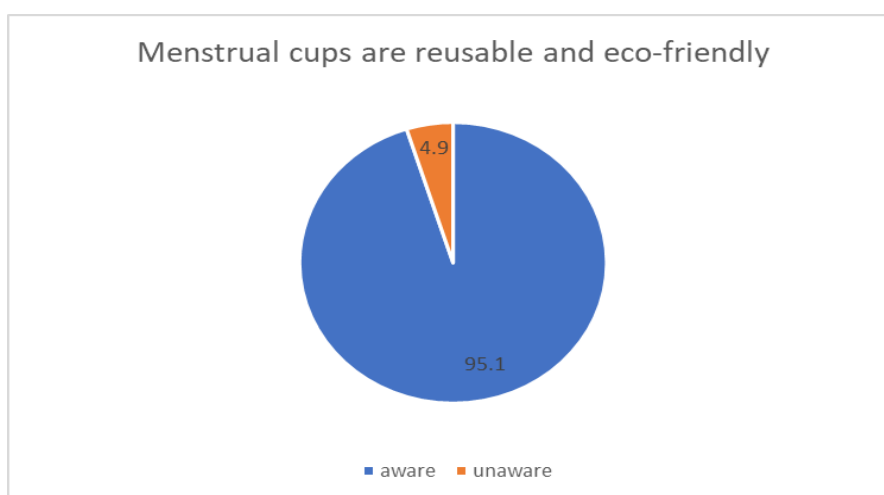


Fig 4.2.7 Pie chart depicting the reusable and eco-friendly feature of menstrual cup

In Fig 2.7, the result clearly showcases that the majority of the respondents (95.1%) are aware of the fact that menstrual cups are reusable and eco-friendly. The high percentage of respondents who are aware of the reusable and eco-friendly nature of menstrual cups suggests that individuals within this emerging adult women demographic are well-informed about the advantages of using menstrual cups over traditional disposable sanitary products. This awareness may be attributed to various factors, including increased access to information, growing emphasis on environmental concerns, and the influence of social media and online platforms that disseminate information on sustainable menstruation practices.

Longer duration of usage of menstrual cup

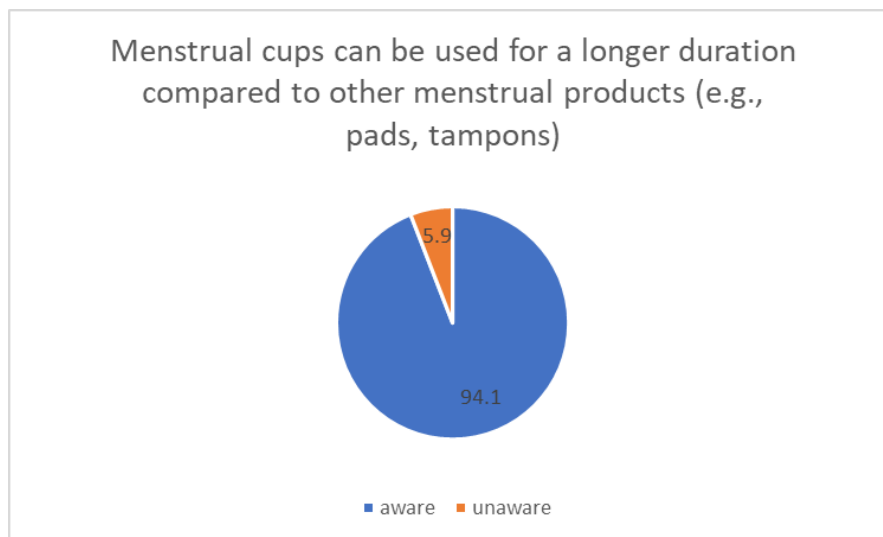


Fig 4.2.8 Pie chart depicts the usage of menstrual cup for longer duration when compared to other menstrual products.

In Fig 2.8, the pie chart depicts the usage of menstrual cup for a longer duration when compared to other products. It clearly shows that the vast majority (94.1%) are aware of this characteristic of the menstrual cup and the remaining 5.9% are unaware of it. The high percentage of awareness among the respondents indicates that they have knowledge about the extended wear time provided by menstrual cups, which may have contributed to their positive attitudes and adoption of this menstrual hygiene product.

Lack of health risks of menstrual cup

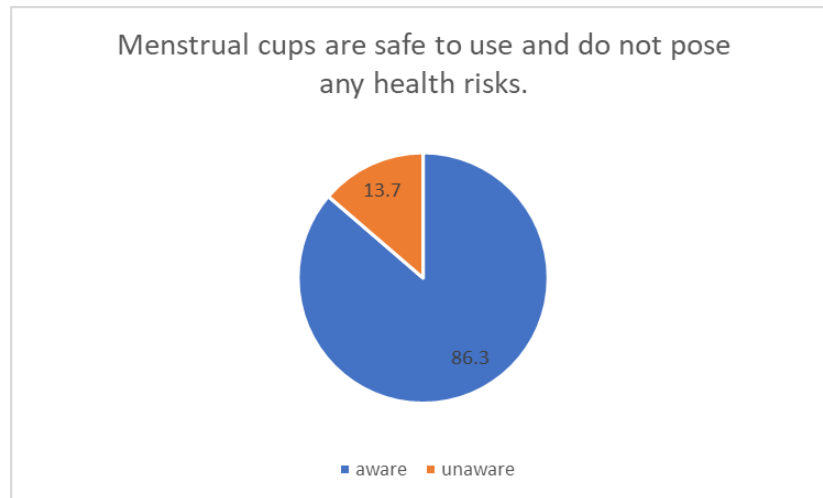


Fig 4.2.9 Pie chart depicting the lack of health risks of menstrual cup

The pie chart in Fig 2.9 illustrates the awareness level of the respondents regarding the lack of health risk associated with it. The majority of the respondents (86.3%) are aware of this and the remaining 13.7% are unaware of it. The significant awareness among the respondents suggests that they have knowledge about the materials used in menstrual cups, their non-toxic nature, and the absence of harmful chemicals that may be present in other menstrual products.

Cost effectiveness

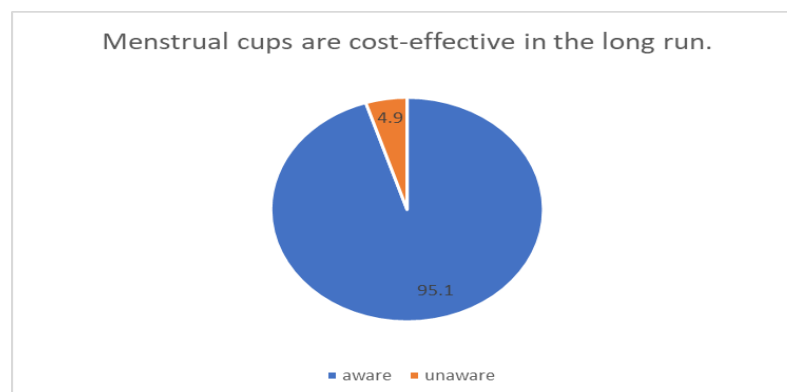


Fig 4.2.10 Pie chart depicting the cost effectiveness of the menstrual cup

The pie chart in Fig 2.10 depicts the awareness level of the respondents regarding the cost effectiveness of the cup. It says that the vast majority (95.1%) are aware that menstrual cups are cost effective in long run while the remaining 4.9% are unaware of it. The significant awareness among the respondents indicates that they have

knowledge about the potential economic benefits of using menstrual cups, such as reduced expenditure on menstrual hygiene products over time.

Availability of the Menstrual cup

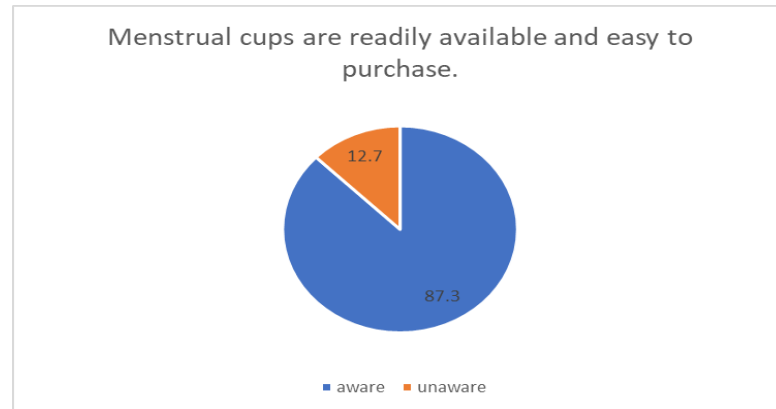


Fig 4.2.11 Pie chart depicting the availability of the menstrual cup

The pie chart in Fig 2.11 illustrates the awareness level regarding the availability and easiness of the purchase of the menstrual cup. It reveals that the majority of the respondents (87.3%) are aware of the readily availability of the cup while the remaining 12.7% are unaware of it. The significant awareness among the respondents suggests that they are knowledgeable about where to find menstrual cups, whether through physical stores, online platforms, or other retail outlets. This awareness may be the result of increased visibility and availability of menstrual cups in recent years, as well as the influence of advertising, social media, and word-of-mouth recommendations.

Cleanliness and Maintenance of the menstrual cup

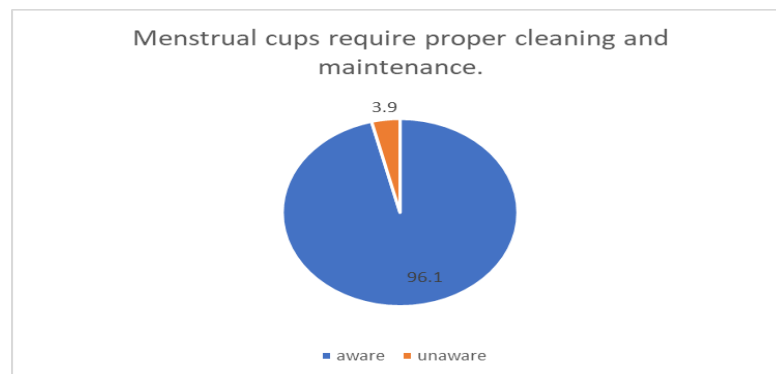


Fig 4.2.12 Pie chart depicting the proper cleanliness and maintenance of the cup

The pie chart in Fig 2.12 illustrates the awareness level of the respondents regarding the maintenance of the cup. It reveals that the vast majority of the respondents (96.1%) are aware that menstrual cup requires regular and proper cleaning and maintenance. Only 3.9% are unaware of it. The significant awareness among the respondents indicates that they understand the necessity of cleaning and maintaining menstrual cups to prevent the risk of infection, maintain product longevity, and ensure optimal performance.

Suitability of menstrual cup

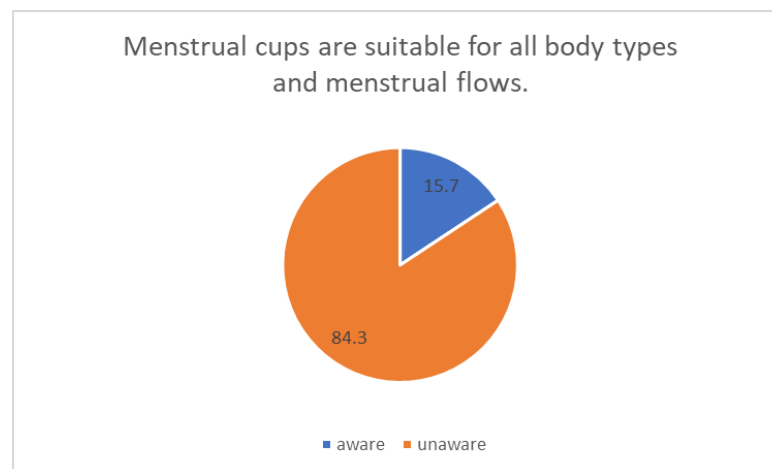


Fig 4.2.13 Pie chart depicting the suitability of menstrual cup

In Fig 2.13, the illustration reveals the suitability of menstrual cup for all body types and menstrual flow. It says that 84.3% are aware that the device is suitable for all body types and all types of menstrual flow. Only the remaining 15.7% are unaware of it. The high percentage of respondents who are aware of the suitability of menstrual cups for all body types and types of menstrual flow suggests that individuals within this emerging adult women demographic understand that menstrual cups are designed to accommodate a variety of body shapes and sizes, as well as different levels of menstrual flow.

Overall Level of Knowledge of the respondents

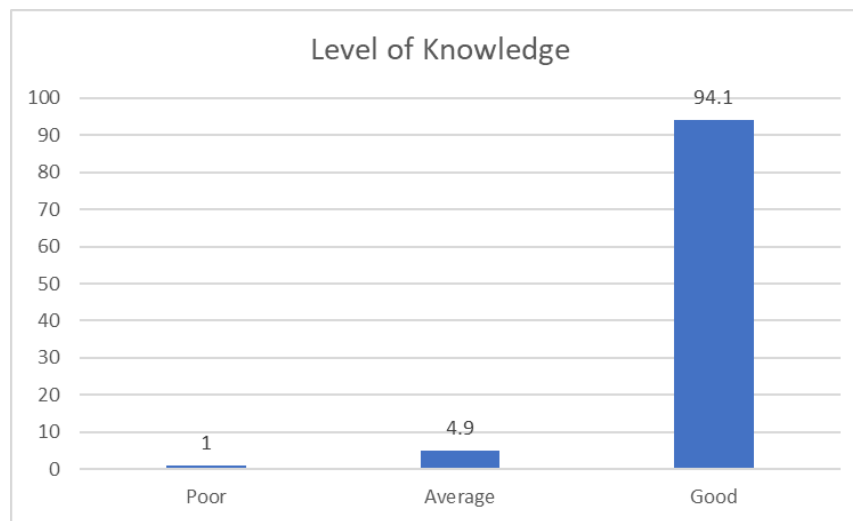


Fig 4.2.14 Bar Graph depicting the level of knowledge of the respondents

The bar graph in the fig 2.14 illustrates the level of knowledge of the 102 respondents based on the 13 questions that were enquired. It is revealed that 94.1% has a good level of knowledge, 4.9 has an average level of knowledge. Only the remaining 1% has a poor level of knowledge. The interpretation of this bar graph suggests that the participants within the emerging adult women demographic possess a generally high level of knowledge regarding the various aspects of menstrual cups. The majority of respondents, with a good level of knowledge, demonstrate a comprehensive understanding of the topics covered in the survey questions, ranging from safety, materials, sizes, maintenance, cost-effectiveness, availability, suitability, and other important attributes of menstrual cups. The proportion of respondents with an average level of knowledge (4.9%) suggests that a small number of participants may have some gaps in their knowledge or may not be fully informed about certain aspects of menstrual cups. This could be due to various factors, such as limited exposure to information, lack of access to resources, or limited personal experience with menstrual cups. It is important to note that a very small percentage of respondents (1%) have a poor level of knowledge. These individuals may have limited or incorrect information about menstrual cups, indicating a need for targeted education and awareness efforts to address their knowledge gaps. Overall, the interpretation of the respondents' level of knowledge based on these questions demonstrates a generally high level of awareness and understanding regarding various aspects of menstrual cup. The participants show knowledge about safety, materials, cleaning methods,

sizes, cost-effectiveness, and other important features of menstrual cups, indicating that they are well-informed about this menstrual hygiene option.

4.3. Objective 2- Attitudes towards Menstrual Cups

Openness to try menstrual cup as an alternative to traditional products

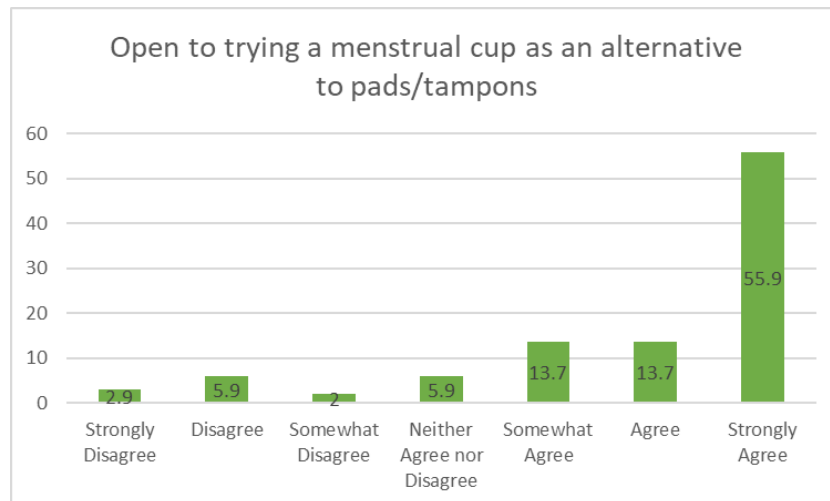


Fig 4.3.1 Bar graph depicting the openness to try menstrual cup as an alternative to tampons or pads

The bar graph (Fig 3.1) represents the attitudes of the respondents toward trying menstrual cups as an alternative to traditional products like sanitary pads or tampons. The data shows the distribution of responses among the participants, indicating their level of agreement or disagreement with the statement. (55.9%) of the respondents strongly agree with the statement, indicating a high level of willingness and openness to trying menstrual cups as an alternative to traditional products. This suggests a positive attitude toward exploring new options for menstrual hygiene management. 13.7% of respondents agree with the statement, demonstrating a positive inclination toward trying menstrual cups. 13.7% of respondents somewhat agrees with the statement, implying a moderate level of openness to trying menstrual cups. 5.9% which is small percentage of respondents take a neutral stance, indicating a lack of strong opinion or preference regarding trying menstrual cups. 2% of respondents somewhat disagree with the statement, suggesting a slight reservation or hesitation toward trying menstrual cups. 5.9% of respondents disagrees with the statement, indicating a clear negative attitude toward trying menstrual cups as an alternative and

the remaining 2.9% of respondents strongly disagrees with the statement, reflecting a firm and unequivocal rejection of the idea of trying menstrual cups. Overall, the bar graph demonstrates a range of attitudes among the participants regarding trying menstrual cups as an alternative to traditional products. While the majority of respondents express positive attitudes or willingness to explore this option, there are varying degrees of agreement, neutrality, and disagreement within the participant group. These attitudes may be influenced by factors such as personal preferences, comfort levels, past experiences, or cultural influences.

Ashamed to talk about menstrual cup

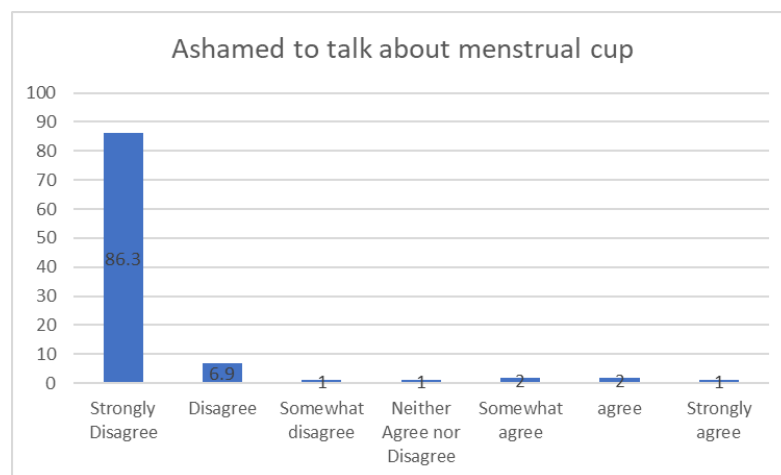


Fig 4.3.2 Bar graph depicting the disgrace in discussing about the menstrual cup

The bar graph (Fig 3.2) represents the degree of agreement and disagreement among the respondents regarding the statement "I am ashamed to talk about menstrual cup." The data shows the distribution of responses, indicating the level of comfort and willingness to discuss menstrual cups openly. (86.3%) of respondents strongly disagree with the statement, indicating that they are not ashamed to talk about menstrual cups. 6.9% of respondents disagree with the statement, suggesting a minor level of discomfort or hesitation in discussing menstrual cups. 1% of respondents somewhat disagree with the statement. 1% of respondents take a neutral stance, indicating a lack of strong opinion or preference regarding discussing menstrual cups. 2% of respondents somewhat agree with the statement, 2% of respondents agrees with the statement and the smallest proportion, i.e. 1% of respondents strongly agrees with the statement, indicating a firm belief in feeling ashamed to talk about menstrual cups. Overall, the bar graph highlights a strong and overwhelmingly positive attitude among

the participants toward discussing menstrual cups openly. The majority of respondents are not ashamed to talk about menstrual cups, reflecting a growing awareness and destigmatization of menstrual hygiene discussions. The small percentages of disagreement and agreement indicate that the vast majority of individuals within the participant group have embraced open dialogue and normalization of conversations related to menstrual cups.

Social acceptance of menstrual cup

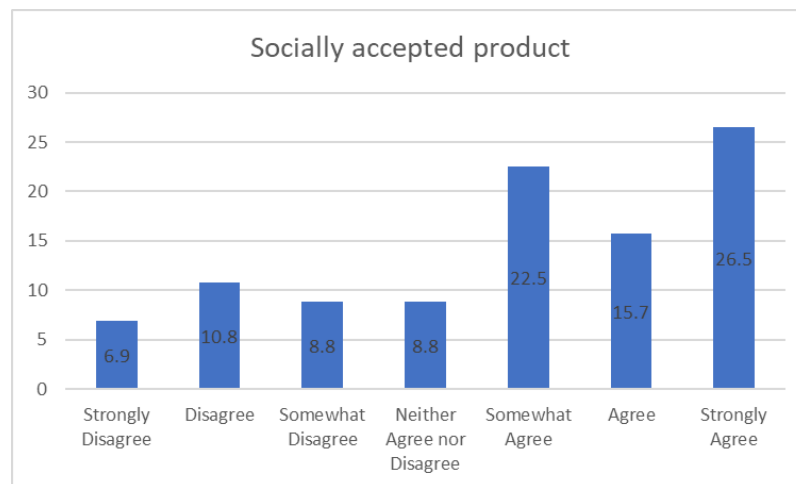


Fig 4.3.3 Bar graph depicting whether menstrual cups are socially accepted product

In Fig 3.3, the bar graph illustrates the social acceptance of the menstrual cup. 26.5% of respondents strongly agree with the statement, indicating a high level of social acceptance of the menstrual cup. 15.7% of respondents agree with the statement. 22.55% of respondents somewhat agree with the statement, indicating a moderate level of social acceptance of the menstrual cup. 8.8% of respondents take a neutral stand, indicating a lack of strong opinion or preference regarding the social acceptance of the menstrual cup. These individuals may not have formed a clear perception about the societal attitudes toward menstrual cups. 10.8% of respondents disagrees with the statement and 6.9% of respondents strongly disagrees with the statement, indicating a firm belief that the menstrual cup is not socially accepted. Overall, the bar graph indicates that a substantial portion of respondents perceive the menstrual cup with varying degrees of social acceptance. The varying attitudes highlight the need for continued awareness efforts to promote the social acceptance of menstrual cups and break down any remaining stigma or misconceptions.

Reduced environmental impact

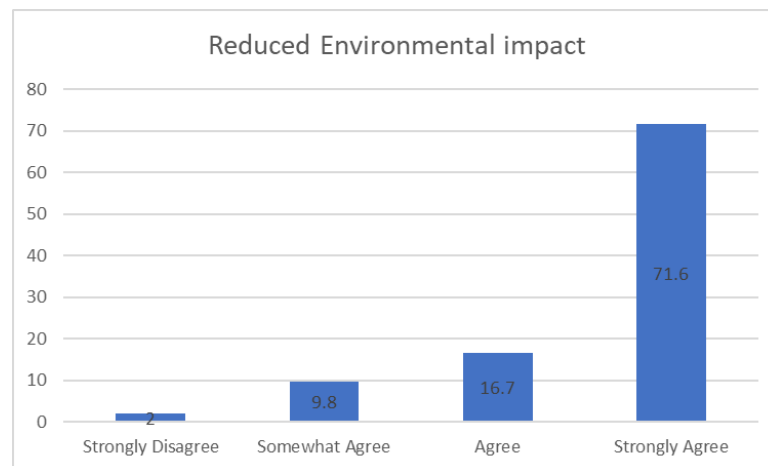


Fig 4.3.4 Bar graph depicting that the menstrual cup can reduce the environmental impact caused by the disposable menstrual products

The bar graph (Fig 3.4) represents the respondents' perceptions regarding the reduced environmental impact of menstrual cup usage when compared to disposable menstrual products. (71.6%) of respondents strongly agree with the statement, indicating a high level of belief that menstrual cups have a reduced environmental impact compared to disposable menstrual products. These individuals are confident in the sustainability and eco-friendliness of menstrual cups. 16.7% portion of respondents agrees with the statement, expressing a positive attitude toward the reduced environmental impact of menstrual cups. 9.8% of respondents somewhat agree with the statement and the smallest percentage (2%) of respondents strongly disagrees with the statement, indicating a firm belief that menstrual cups do not have a reduced environmental impact when compared to disposable menstrual products. Overall, the bar graph indicates a prevailing positive attitude among the participants toward the environmental benefits of menstrual cup usage. The majority of respondents strongly agree that menstrual cups have a reduced environmental impact compared to disposable menstrual products. This perception reflects their awareness and understanding of the potential ecological advantages of using menstrual cups, such as reduced waste generation, decreased resource consumption, and a lower carbon footprint.

Safe to use menstrual cup

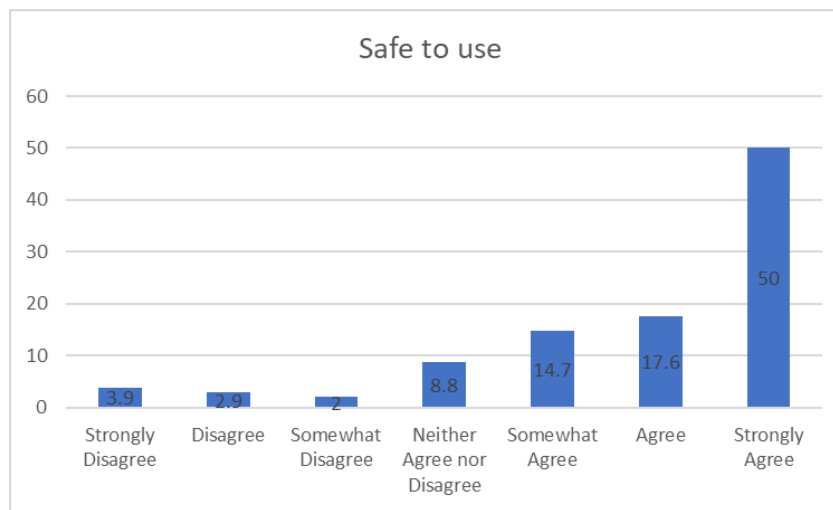


Fig 4.3.5 Bar graph depicting the attitude towards safety of its usage

The bar graph (Fig 3.5) represents the respondents' attitudes toward the safety of using menstrual cups. The data shows the distribution of responses, indicating the level of agreement or disagreement with the notion that menstrual cups are safe to use. 50% of respondents strongly agree with the statement, indicating a high level of belief and assurance that menstrual cups are safe to use. 17.6% segment of respondents agrees with the statement. 14.7% of respondents somewhat agree with the statement, signifying a moderate level of belief in the safety of menstrual cup usage. 8.8% of respondents take a neutral stance, indicating a lack of strong opinion or preference regarding the safety of menstrual cups. 2% of respondents somewhat disagrees with the statement, 2.9% of respondents disagrees with the statement and the remaining 3.9% of respondents strongly disagrees with the statement, indicating a firm belief that menstrual cups are not safe to use. Overall, the bar graph indicates a predominantly positive attitude among the participants toward the safety of using menstrual cups. The majority of respondents have confidence in the safety of menstrual cups, perceiving them as a reliable and secure option for menstrual hygiene management.

Preference of menstrual cup

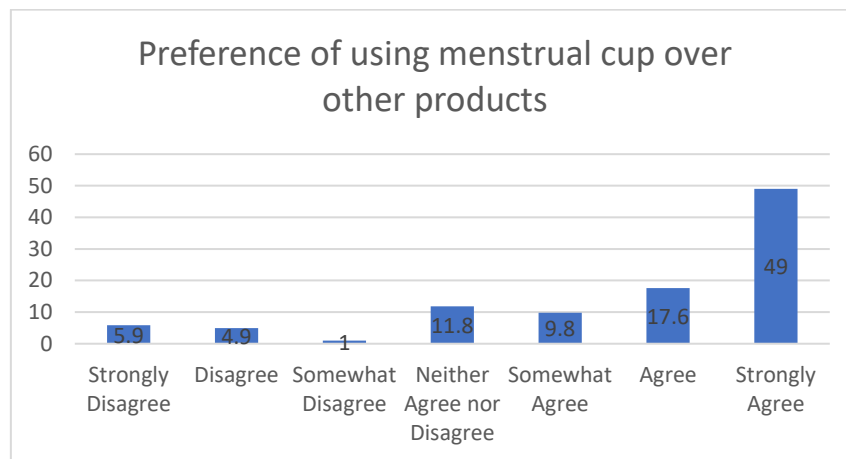


Fig 4.3.6 Bar graph depicting the preference of menstrual cup over other products

The bar graph (Fig 3.6) represents the respondents' attitudes toward whether menstrual cups are preferred over other menstrual products. The data shows the distribution of responses, indicating the level of agreement or disagreement with the idea that menstrual cups are the preferred option compared to other menstrual products. 49% of respondents strongly agree with the statement. 17.6% of respondents agrees with the statement and 9.8% of respondents somewhat agree with the statement. 11.8% of respondents take a neutral stance, indicating a lack of strong opinion or preference regarding whether menstrual cups are preferred over other menstrual products. 1% respondents somewhat disagree with the statement., 4.9% of respondents disagrees with the statement and the remaining 5.9% of respondents strongly disagrees with the statement, indicating a firm belief that menstrual cups are not preferred over other menstrual products. Overall, the bar graph indicates a predominantly positive attitude among the participants toward menstrual cups as a preferred choice over other menstrual products. The majority of respondents have a favorable perception of menstrual cups and consider them a preferred option for their menstrual hygiene needs. The small percentages of neutral, somewhat disagree, disagree, and strongly disagree responses suggest that there are varying opinions among the participants, but the overall trend remains positive in favor of menstrual cups being the preferred choice.

Discussion with family members and friends

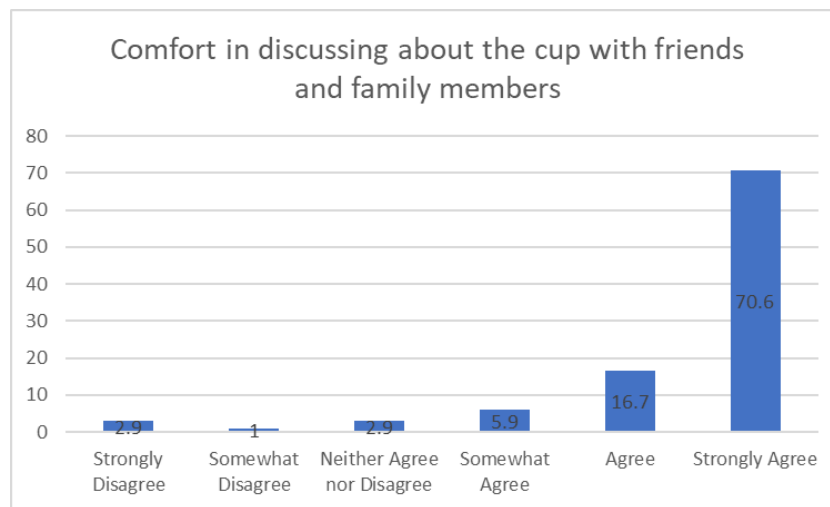


Fig 4.3.7 Bar graph depicting the comfort for discussion of menstrual cup with friends and family members

The bar graph (Fig 3.7) represents the respondents' comfort level in discussing the menstrual cup among their friends and family members. The data shows the distribution of responses, indicating the degree of ease or discomfort in engaging in conversations about menstrual cups within their social circles. 70.6% of respondents strongly agree with the statement, 16.7% of respondents agree with the statement and 5.9% of respondents somewhat agree with the statement. 2.9% of respondents take a neutral stance, indicating a lack of strong opinion or preference regarding discussing the menstrual cup with their friends and family. 1% of respondents somewhat disagree with the statement, 2.9% of respondents disagree with the statement and the remaining 2.9% of respondents strongly disagree with the statement, indicating a firm belief that discussing the menstrual cup with friends and family is uncomfortable for them. Overall, the bar graph indicates a predominantly positive attitude among the participants in discussing the menstrual cup with their friends and family members. The majority of respondents feel comfortable and at ease in having such conversations, indicating a level of openness and destigmatization surrounding menstrual cups within their social circles.

Recommendation of menstrual cup to others

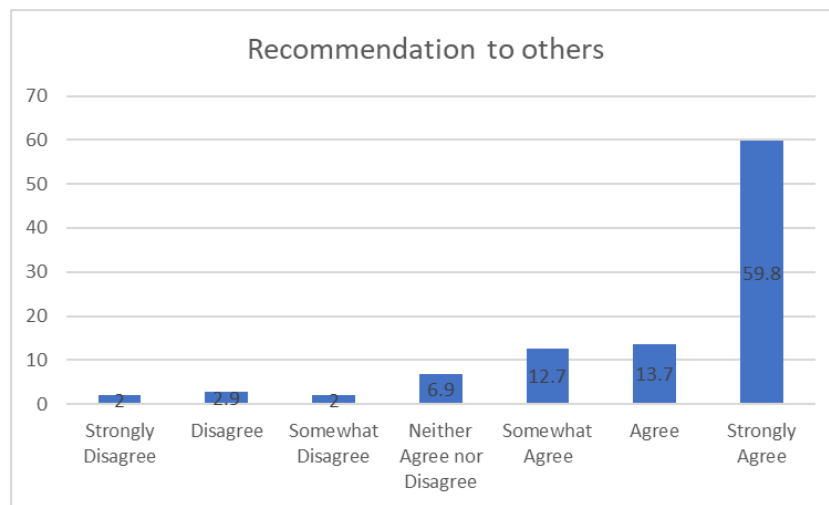


Fig 4.3.8 Bar graph depicting the confidence of the respondents in recommending the menstrual cup to others.

The bar graph (Fig 3.8) represents the respondents' attitudes regarding their confidence in recommending the menstrual cup to others. The data shows the distribution of responses, indicating the level of certainty or hesitation in suggesting the menstrual cups to their peers or acquaintances. 59.8% of respondents strongly agree with the statement. 13.7% of respondents agree with the statement. 12.7% of respondents somewhat agree with the statement and 6.9% of respondents take a neutral stand. 2% of respondents somewhat disagree with the statement, 2.9% of respondents disagree with the statement and the remaining 2% of respondents strongly disagree with the statement, indicating a firm belief that they are not confident in recommending the menstrual cup to others. Overall, the bar graph indicates a predominantly positive attitude among the participants in recommending the menstrual cup to others. The majority of respondents feel confident and comfortable endorsing menstrual cups to their peers, acquaintances, or anyone interested in alternative menstrual hygiene products.

Comfort of using menstrual cup

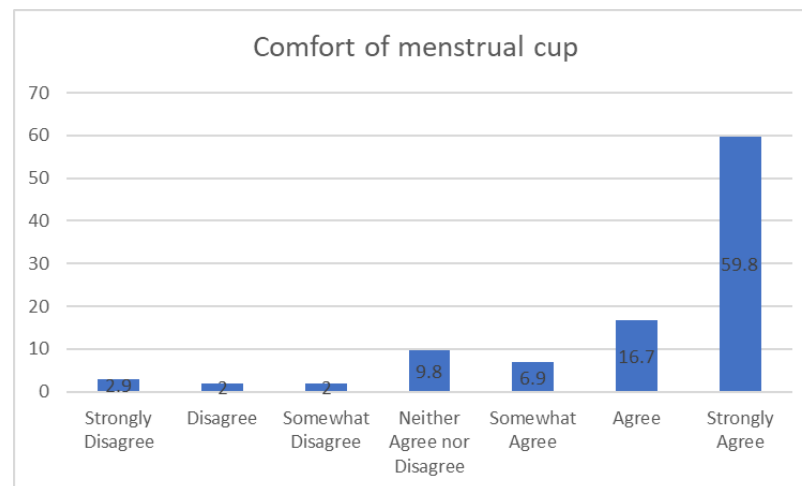


Fig 4.3.9 Bar graph depicting the comfort of using a menstrual cup

The bar graph (Fig 3.9) represents the respondents' attitudes regarding whether the menstrual cup provides a more comfortable and less irritating period experience. The data shows the distribution of responses, indicating the level of agreement or disagreement with the idea that menstrual cups offer a more comfortable and less irritating period experience. 59.8% of respondents strongly agree with the statement, 16.7% of respondents agree with the statement, 6.9% of respondents somewhat agree with the statement, 9.8% of respondents take a neutral stance, 2% of respondents somewhat disagree with the statement, 2% of respondents disagree with the statement and the remaining 2.9% of respondents strongly disagree with the statement. Overall, the bar graph indicates a predominantly positive attitude among the participants in believing that menstrual cups provide a more comfortable and less irritating period experience

Appropriate to use menstrual cup after marriage

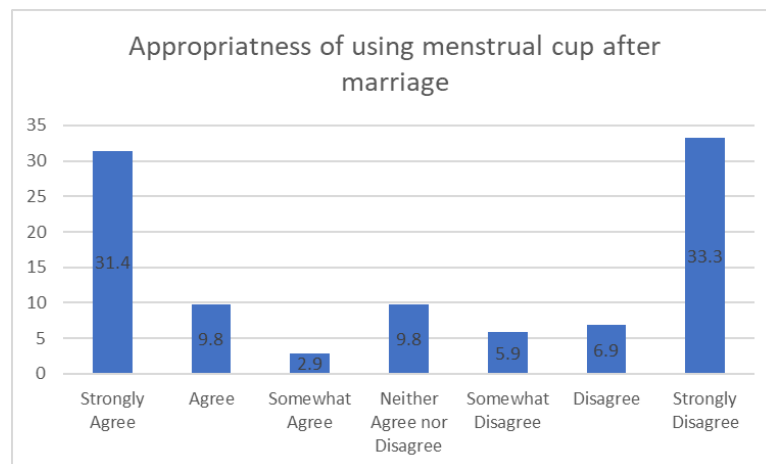


Fig 4.3.10 Bar graph depicting the appropriateness of using menstrual cup after marriage

The bar graph (Fig 3.10) represents the respondents' attitudes regarding whether menstrual cups should be used after marriage. The data shows the distribution of responses, indicating the level of agreement or disagreement with the idea of using menstrual cups after marriage. 31.4% of respondents strongly agree with the statement, 9.8% of respondents agree with the statement, 2.9% of respondents somewhat agree with the statement and 9.8% of respondents take a neutral stance. 5.9% of respondents somewhat disagree with the statement, 6.9% of respondents disagree with the statement and the remaining 33.3% of respondents strongly disagree with the statement, indicating a firm belief that menstrual cups can be used before marriage. Overall, the bar graph indicates a significant divide in opinions among the participants regarding the use of menstrual cups after marriage. While a notable proportion of respondents strongly disagree with the idea, a substantial portion strongly agrees with it.

Promotion of menstrual cup as an alternative to traditional menstrual products

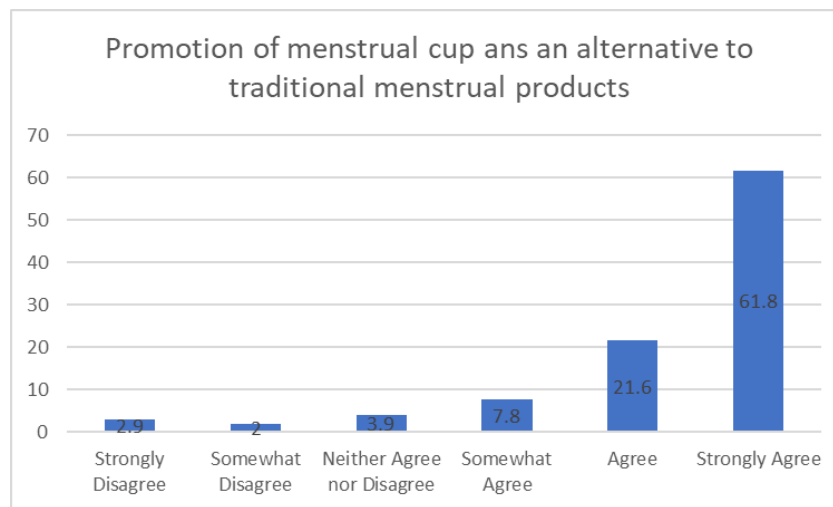


Fig 4.3.11 Bar graph depicting the promotion of menstrual cup as an alternative to traditional menstrual products

The bar graph (Fig 3.11) represents the respondents' attitudes regarding promoting the menstrual cup as an alternative to traditional menstrual products. The data shows the distribution of responses, indicating the level of agreement or disagreement with the idea of advocating for menstrual cups as an alternative option. 61.8% of respondents strongly agree with the statement, 21.6% of respondents agree with the statement, 7.8% of respondents somewhat agree with the statement and 3.9% of respondents take a neutral stance. 2% of respondents somewhat disagree with the statement, 2.9% of respondents disagree with the statement and the remaining 2.9% of respondents strongly disagree with the statement, indicating a firm belief that the menstrual cup should not be promoted as an alternative to traditional menstrual products. Overall, the bar graph indicates a predominantly positive attitude among the participants in promoting the menstrual cup as a viable alternative to traditional menstrual products. The majority of respondents strongly agree with this notion, reflecting their belief in the advantages and benefits of menstrual cups and their support for promoting sustainable menstrual hygiene options.

Using a menstrual cup is a personal choice

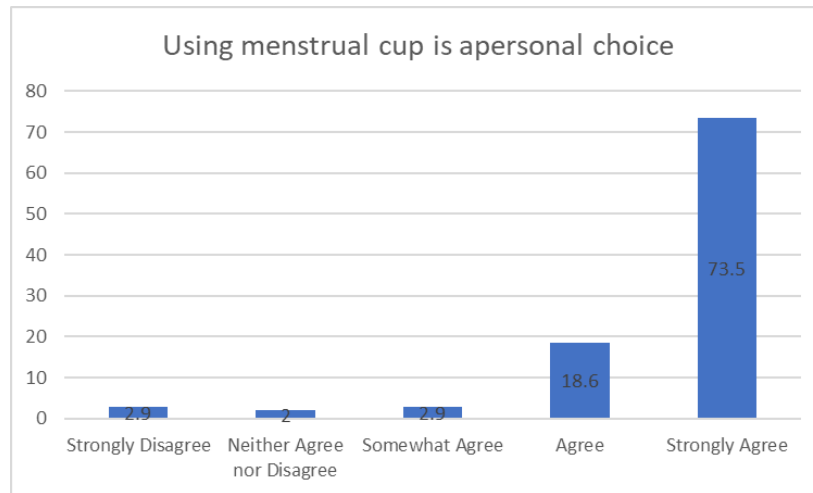


Fig 4.3.12 Bar graph depicting the use of menstrual cup as a personal choice.

The bar graph (Fig 3.12) represents the respondents' attitudes regarding using a menstrual cup as a personal choice. The data shows the distribution of responses, indicating the level of agreement or disagreement with the idea of using a menstrual cup based on individual preference. 73.5% of respondents strongly agree with the statement, 18.6% of respondents agree with the statement, 2.9% of respondents somewhat agree with the statement and 2% of respondents take a neutral stance. 2.9% of respondents strongly disagree with the statement, indicating a firm belief that using a menstrual cup is not a personal choice they would make. Overall, the bar graph indicates a predominantly positive attitude among the participants in considering the use of a menstrual cup as a personal choice. The overwhelming majority of respondents strongly agree with this notion, reflecting their belief in the importance of individual autonomy and the right to make personal decisions regarding menstrual hygiene management.

Overall Level of attitude

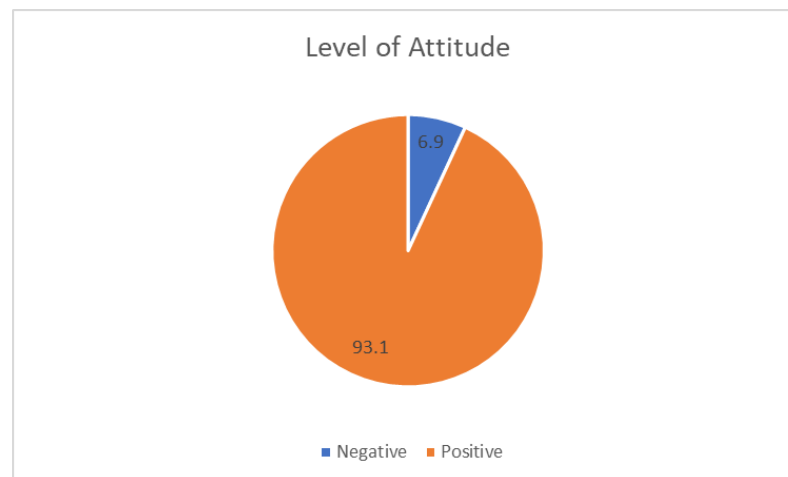


Fig 4.3.13 Pie chart depicting the level of attitude

The bar graph (Fig 3.13) illustrates the level of attitude of the respondents based on the 12 questions that were inquired in the study. It shows the distribution of responses, indicating the overall attitude of the participants towards menstrual cups. The vast majority (93.1%) of respondents have a positive attitude towards menstrual cups. They have expressed agreement, strong agreement, or somewhat agreement with various statements related to menstrual cups, including safety, comfort, eco-friendliness, and cost-effectiveness. The remaining percentage (6.9%) of respondents, a much smaller proportion, has a negative attitude towards menstrual cups. They may have expressed disagreement or strong disagreement with certain statements related to menstrual cups, or they might have shown neutral or somewhat disagree responses. The overwhelmingly positive attitude among the respondents suggests a favorable perception of menstrual cups as a viable and beneficial menstrual hygiene option. Participants have shown agreement and enthusiasm towards various aspects of menstrual cups, such as safety, comfort, environmental impact, and cost-effectiveness. This positive attitude reflects a growing awareness and acceptance of menstrual cups as an eco-friendly, sustainable, and user-centric alternative to traditional menstrual products. The small percentage of respondents with a negative attitude may have reservations or concerns about certain aspects of menstrual cups. These individuals might have expressed disagreement or hesitation towards specific features of menstrual cups or may have remained neutral or somewhat disagree with some

statements. The negative attitude percentage, however, remains minimal compared to the overall positive attitude displayed.

4.4. Objective 3- Practice and Usage Patterns of Menstrual Cups

Have you ever used a menstrual cup?



Fig 4.4.1 Pie chart depicting the percentage of users and non-users of menstrual cup

The pie chart (Fig 4.1) illustrates the percentage of users and non-users of menstrual cup among the 102 respondents. It reveals that, more than half of the respondents (52.9%) accounting for 54 individuals are the users and the remaining 47.1% totaling 48 individuals are non-users of menstrual cup among the total number of respondents. The nearly equal distribution of users and non-users suggests a diverse sample of participants in terms of their menstrual hygiene practices. The presence of a significant number of users reflects a growing acceptance and adoption of menstrual cups among the respondents. On the other hand, the substantial number of non-users indicates a population that may be using other traditional menstrual hygiene products such as sanitary pads or tampons.

How long have you been using menstrual cup (Users)

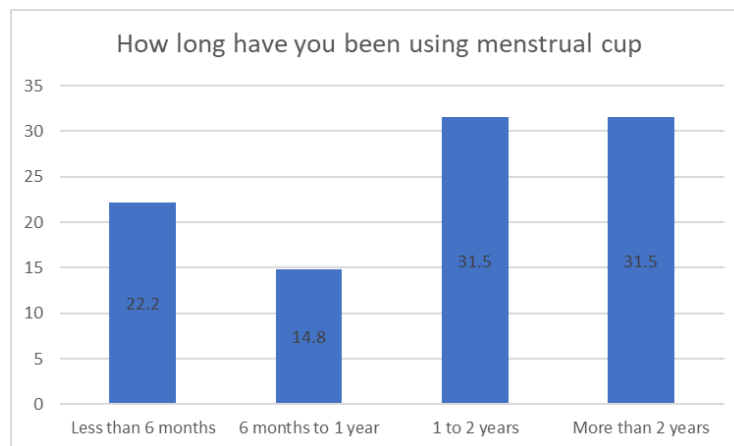


Fig 4.4.2 Bar graph depicting the period of menstrual cup usage

The bar graph (Fig 4.2) displays the period of menstrual cup usage among the 54 users. It provides insights into the duration for which these users have been using menstrual cups as their chosen menstrual hygiene product. 31.5% of the total respondents, have been using menstrual cups for a period of 1 to 2 years. This group consists of individuals who have adopted menstrual cups as their preferred menstrual. Another 31.5% of users have been using menstrual cups for more than 2 years. This group comprises individuals who have been using menstrual cups for an extended period, indicating a high level of satisfaction and sustained usage. A minimum percentage of users, totaling 14.8% of the respondents, have been using menstrual cups for a duration of 6 months to 1 year. The remaining percentage of users, constituting 22.2% of the respondents, have been using menstrual cups for less than 6 months. This group represents individuals who have recently started using menstrual cups and may still be in the early stages of exploring and adapting to this menstrual hygiene option.

How often do you use menstrual cup? (users)



Fig 4.4.3 Pie chart depicting on how often the menstrual cups are used?

The pie chart (Fig 4.3) displays how often the menstrual cup is used by the 54 users in the study. It provides insights into the frequency of usage of menstrual cups among these individuals. The majority of users, accounting for a significant percentage of 94.4%, use the menstrual cup on every menstrual cycle. This indicates that these individuals have fully embraced menstrual cups as their preferred and regular menstrual hygiene option, using it consistently for each menstrual period. A smaller proportion of users, totaling 5.6% of the respondents, use the menstrual cup occasionally. This group consists of individuals who use the cup sporadically, possibly choosing other menstrual hygiene products for specific situations or preferences.

Experience of leakage while using the menstrual cup (users)

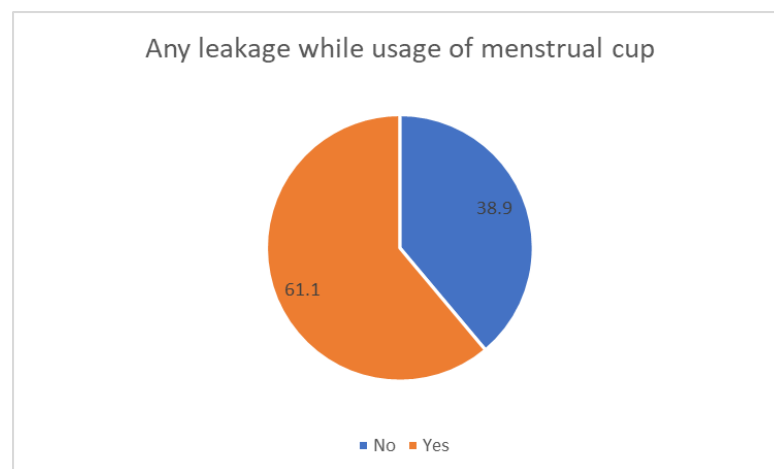


Fig 4.4.4 Pie chart depicting whether the user experienced any leakage while using menstrual cup

The pie chart (Fig 4.4) represents the experiences of users regarding leakage issues while using the menstrual cup among the 54 respondents who are users of menstrual cups. The chart is divided into two segments: those who have experienced leakage and those who have not. The majority of users, constituting 61.1% of the total respondents, have experienced leakage while using the menstrual cup. This indicates that a considerable number of users have faced some challenges or difficulties in achieving a leak-free experience with the cup. Leakage issues can be influenced by various factors, such as cup size, positioning, and individual anatomical differences. For some users, it may take time and practice to achieve a proper fit and prevent leakage. The remaining percentage of users, totaling 38.9% of the respondents, have not encountered any leakage problems while using the menstrual cup. This highlights the potential for a successful and comfortable experience with the menstrual cup when used correctly and according to individual preferences and needs.

Usage of multiple menstrual products at the same time (users)

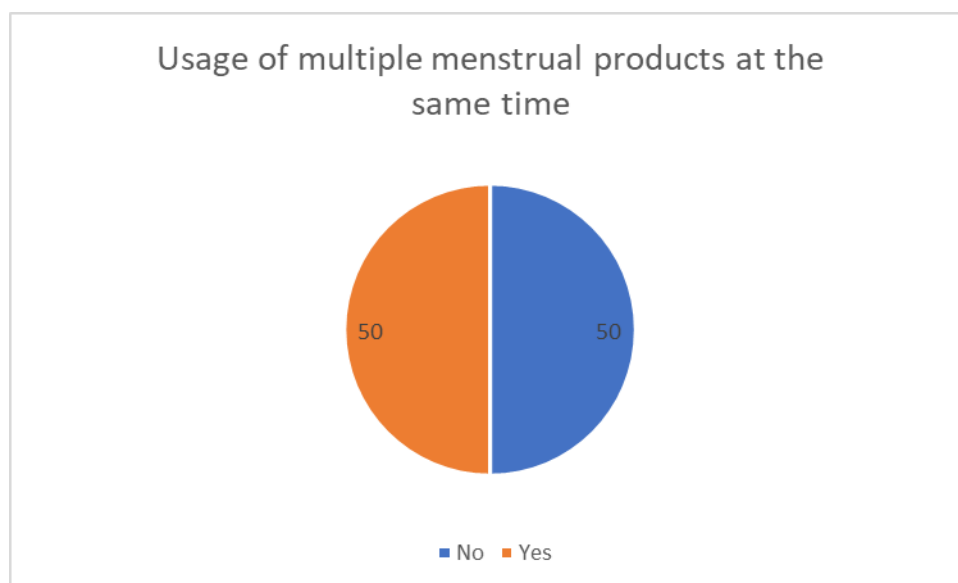


Fig 4.4.5 Pie chart depicting the usage of multiple menstrual products at the same time

The pie chart (Fig 4.5) displays the usage of other menstrual products, such as sanitary pads or tampons, alongside the menstrual cup among the 54 users of menstrual cups. Half of the users, accounting for 50% of the respondents, use other menstrual products like sanitary pads or tampons in addition to using the menstrual cup. This suggests that these individuals may have chosen to combine different

menstrual hygiene products to address their specific needs or preferences during menstruation. The remaining half of the users, totaling 50% of the respondents, do not use any other menstrual products alongside the menstrual cup. They exclusively rely on the menstrual cup as their preferred and sole menstrual hygiene option. The data indicates that there is an equal distribution between users who combine the menstrual cup with other menstrual products and users who solely use the menstrual cup. The reasons for combining different products may vary among the users, such as using pads as a backup during heavy flow days or when they are less familiar with using the menstrual cup. The finding also suggests that the menstrual cup is a self-sufficient and effective menstrual hygiene option for 50% of the users, who rely solely on its use without the need for additional menstrual products.

How long do you typically keep the menstrual cup inserted before emptying? (users)

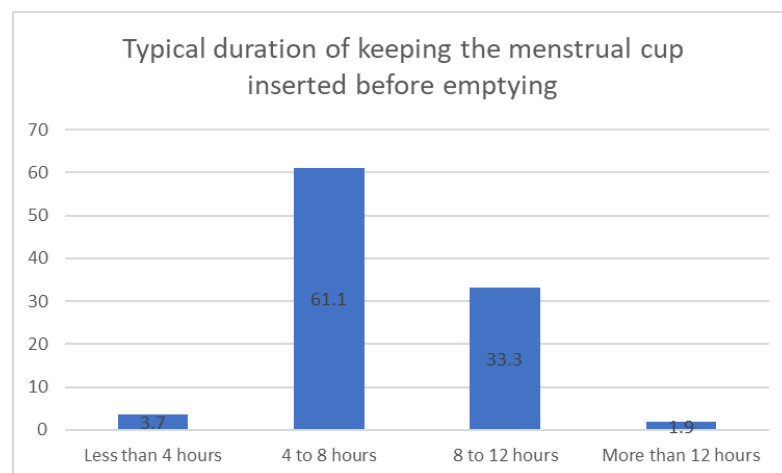


Fig 4.4.6 Bar graph depicting on how long the menstrual cup is kept inserted before emptying.

The bar graph (Fig 4.6) illustrates the duration for which users keep the menstrual cup inserted before emptying among the 54 respondents who are users of menstrual cups. The graph provides insights into the length of time users retain the cup during their menstrual cycle. The majority of users, representing 61.1% of the total respondents, retain the menstrual cup inserted for a duration of 4 to 8 hours. A smaller percentage of users, totaling 13.3% of the respondents, retain the menstrual cup for a duration of 8 to 12 hours. This suggests that some users may have longer-lasting protection and comfort with the cup, allowing them to keep it inserted for a slightly extended period. A minor portion of users, accounting for 3.7% of the respondents, retain the menstrual

cup for less than 4 hours. This could indicate users who have heavier menstrual flow or prefer more frequent emptying to ensure continuous cleanliness and freshness. The remaining percentage of users, constituting 1.9% of the respondents, retain the menstrual cup inserted for more than 12 hours. This represents a small group of users who might unintentionally exceed the recommended usage time, potentially leading to health risks and discomfort.

Factors that promote the practice of menstrual cup

Statement	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I am comfortable while wearing a menstrual cup	1.9%	-	1.9%	-	5.6%	11.1%	79.6%
I find it easy to insert and remove a menstrual cup.	3.7%	1.9%	1.9%	3.7%	14.8%	20.4%	53.7%
I clean and sterilize my menstrual cup properly after each use.	1.9%	-	-	-	1.9%	22.2%	74.1%
I have participated in any community							

initiatives or campaigns promoting menstrual cup usage.	22.2%	18.5%	11.1%	9.3%	3.7%	18.5%	16.7%
I believe that using a menstrual cup has saved me money compared to other menstrual products.	1.9%	-	-	3.7%	5.6%	7.4%	81.5%
I am satisfied with my experience of using menstrual cup over other menstrual products.	1.9%	-	-	3.7%	5.6%	7.4%	81.5%

Table 4.4.7 Table depicting factors that promote the practice of menstrual cup

The bar graph (Fig 4.7) represents the factors that promote the practice of menstrual cup usage among the 54 users. It provides insights into the experiences of these users, influencing their adoption and continued usage of menstrual cups.

For the Comfort While Wearing a Menstrual Cup, 1.9% of users strongly disagree that they feel comfortable while wearing a menstrual cup and another 1.9% of users somewhat disagree with feeling comfortable while using the cup. 5.6% of users somewhat agree that they find comfort while using the menstrual cup. 11.1% of users agree that they feel comfortable wearing a menstrual cup and 79.6% of users strongly

agree that they are comfortable while wearing a menstrual cup, indicating a high level of comfort and satisfaction with the cup.

For the Ease of Insertion and Removal, 3.7% of users strongly disagree that they find it easy to insert and remove the menstrual cup. 1.9% of users disagree with the ease of insertion and removal. 1.9% of users somewhat disagree with the ease of insertion and removal. 3.7% of users neither agree nor disagree with the ease of insertion and removal. 14.8% of users somewhat agree that they find it easy to insert and remove the menstrual cup. 20.4% of users agree that they find it easy to insert and remove the menstrual cup. 53.7% of users strongly agree that they find it easy to insert and remove the menstrual cup, indicating a high level of ease and convenience with the cup.

For the Proper Cleaning and Sterilization, 1.9% of users strongly disagree that they clean and sterilize the menstrual cup properly after each use. 1.9% of users somewhat agree that they clean and sterilize the cup properly. 22.2% percentage of users agree that they clean and sterilize the menstrual cup properly after each use. 74.1% of users strongly agree that they clean and sterilize the menstrual cup properly after each use, indicating responsible hygiene practices.

For the Participation in Community Initiatives, 22.2% of users strongly disagree that they have participated in any community initiatives or campaigns promoting menstrual cup usage. 18.5% of users disagree with participating in such initiatives. 11.1% of users somewhat disagree with their involvement in community initiatives promoting menstrual cup usage. 9.3% of users neither agree nor disagree with participating in such initiatives. 3.7% of users somewhat agree that they have participated in community initiatives promoting menstrual cup usage. 18.5% of users agree that they have participated in such initiatives. 16.7% of users strongly agree that they have actively participated in community initiatives promoting menstrual cup usage.

For the Cost Savings Compared to Other Menstrual Products, 1.9% of users strongly disagree that using a menstrual cup has saved them money compared to other menstrual products. 1.9% of users neither agree nor disagree with cost savings. 3.7% of users somewhat agree that using a menstrual cup has resulted in cost savings. 11.1% of users agree that using a menstrual cup has saved them money compared to

other menstrual products. 81.5% of users strongly agree that using a menstrual cup has resulted in significant cost savings compared to other menstrual products.

For the Satisfaction with Menstrual Cup Usage Over Other Products, 1.9% of users strongly disagree that they are satisfied with their experience of using a menstrual cup over other menstrual products. 3.7% of users neither agree nor disagree with their satisfaction level. 5.6% of users somewhat agree that they are satisfied with their experience of using a menstrual cup over other menstrual products. 7.4% of users agree that they are satisfied with their experience of using a menstrual cup over other menstrual products. The remaining 81.5% strongly agreed that they are fully satisfied with the experience of using of menstrual cup.

If a non-user of menstrual cup, what other product is used? (non-user)



Fig 4.4.8 Pie chart depicting the non-user's menstrual product

The pie chart (Fig 4.8) represents the usage of other menstrual products among the 48 non-users of menstrual cups. It provides insights into the preferred alternatives for menstrual hygiene among this group of respondents. The vast majority of non-users, accounting for 93.8% of the respondents, use sanitary pads as their preferred menstrual hygiene product. A small percentage of non-users, totaling 6.3% of the respondents, use reusable cotton pads as an alternative to menstrual cups. Reusable cotton pads are an eco-friendly and sustainable option, designed to be washed and reused multiple times.

How long do you typically keep the menstrual product (sanitary pads, reusable cotton pads, etc.) on before changing them? (non-users)

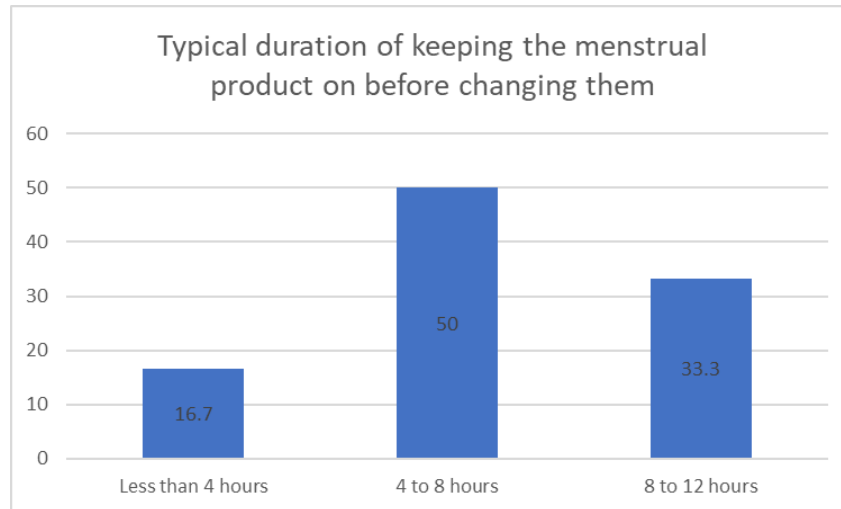


Fig 4.4.9 Bar graph depicting the typical duration of keeping the menstrual product on before changing them

The bar chart (Fig 4.9) displays the typical time period that respondents keep their menstrual products (such as sanitary pads and reusable cotton pads) on before changing them. Half of the respondents, representing 50% of the total, typically keep their menstrual products on for a duration of 4 to 8 hours before changing them. Less than one third of respondents, totaling 33.3%, keep their menstrual products on for a longer period of 8 to 12 hours before changing them. This suggests that a considerable number of individuals may prefer products with higher absorbency or have a lighter menstrual flow, allowing them to go for longer intervals without changing. A smaller proportion of respondents, accounting for 16.7%, change their menstrual products in less than 4 hours. This indicates users who may have heavier menstrual flow or prefer more frequent changes for better comfort and hygiene.

Factors that hinder the practice of menstrual cup

Statement	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I believe that using a menstrual cup would be uncomfortable	14.6%	20.8%	4.2%	18.8%	20.8%	16.7%	4.2%
I am concerned about the hygiene and cleanliness of using a menstrual cup.	25.0%	18.8%	21%	25.0%	18.8%	8.3%	2.1%
I have heard negative experiences from others about using menstrual cups.	22.9%	14.6%	8.3%	12.5%	20.8%	4.2%	16.7%
I believe that menstrual cups are not easily accessible or available in my area.	43.8%	4.2%	6.3%	27.1%	14.6%	4.2%	-

I have fear of insertion and removal of menstrual cup.	14.6%	4.2%	12.5%	18.8%	27.1%	6.3%	16.7%
I am not comfortable with the idea of handling and cleaning a menstrual cup	29.2%	14.6%	4.2%	29.2%	8.3%	8.3%	8.3%
I feel that the convenience of using other menstrual products outweighs the benefits of using a menstrual cup.	14.6%	-	4.2%	29.2%	8.3%	27.1%	16.7%

Table 4. 4.10 Table depicting the factors that hinder the practice of menstrual cup

The table (Fig 4.7) represents the factors that hinder the practice of menstrual cup usage among the 48 non-users. The data provides insights into the concerns of these individuals, which may be contributing to their decision not to use menstrual cups.

For the Comfort Concerns, 14.6% of non-users strongly disagree that they believe using a menstrual cup would be uncomfortable. 20.8% of non-users disagree with the idea of using a menstrual cup due to perceived discomfort. 4.2% of non-users somewhat disagree with the comfort of using a menstrual cup. 18.8% of non-users neither agree nor disagree with the comfort aspect of using a menstrual cup. 20.8% of non-users somewhat agree that using a menstrual cup might be uncomfortable. 16.7% of non-users agree that using a menstrual cup would be uncomfortable. 4.2% of non-

users strongly agree with the belief that using a menstrual cup would be uncomfortable.

For the Concerns About Hygiene and Cleanliness, 25% of non-users strongly disagree that they are concerned about the hygiene and cleanliness of using a menstrual cup. 18.8% of non-users disagree with hygiene and cleanliness concerns. 2.1% of non-users somewhat disagree with hygiene and cleanliness concerns. 25% portion of non-users neither agree nor disagree with hygiene and cleanliness concerns. 18.8% of non-users somewhat agree that they are concerned about the hygiene and cleanliness of using a menstrual cup. 8.3% of non-users agree that they have concerns about hygiene and cleanliness. 2.1% of non-users strongly agree with hygiene and cleanliness concerns.

For the Negative Experiences Shared by Others, 22.9% of non-users strongly disagree that they have heard negative experiences from others about using menstrual cups. 14.6% of non-users disagrees with hearing negative experiences from others. 8.3% of non-users somewhat disagree with hearing negative experiences from others. 12.5% of non-users neither agree nor disagree with hearing negative experiences. 20.8% of non-users somewhat agree that they have heard negative experiences from others. 4.2% of non-users agree that they have heard negative experiences from others. 16.7% of non-users strongly agree with hearing negative experiences from others.

For the Accessibility of Menstrual Cups, 43.8% of non-users strongly disagree that menstrual cups are not easily accessible or available in their area. 4.2% of non-users disagree with the accessibility concern. 6.3% of non-users somewhat disagree with the accessibility of menstrual cups. 27.1% of non-users neither agree nor disagree with the accessibility concern. 14.6% of non-users somewhat agree that menstrual cups are not easily accessible. 4.2% of non-users agree that menstrual cups are not easily accessible.

For the Fear of Insertion and Removal, 14.6%): A small percentage of non-users strongly disagree that they fear to insert and remove a menstrual cup correctly. 4.2% of non-users disagree with fear concerns. 12.5% of non-users somewhat disagree with the fear aspect of using a menstrual cup. 18.8% of non-users neither agree nor disagree with the fear concern. 27.1% of non-users somewhat agree that they have fear to

insert and remove a menstrual cup. 8.3% of non-users agree with the fear concern. 16.7% of non-users strongly agree that they fear to insert and remove a menstrual cup.

For the Comfort with Handling and Cleaning, 29.2% of non-users strongly disagree that they are not comfortable with the idea of handling and cleaning a menstrual cup. 14.6% of non-users disagree with discomfort related to handling and cleaning. 4.2% of non-users somewhat disagree with discomfort related to handling and cleaning. 29.2% of non-users neither agree nor disagree with discomfort related to handling and cleaning. 8.3% of non-users somewhat agree that they are not comfortable with the idea of handling and cleaning a menstrual cup. 6.3% of non-users agree with discomfort related to handling and cleaning. 8.3% of non-users strongly agree that they are not comfortable with the idea of handling and cleaning a menstrual cup.

For the Convenience of Other Menstrual Products, 14.6% of non-users strongly disagree that they feel the convenience of using other menstrual products outweighs the benefits of using a menstrual cup. 4.2% of non-users somewhat disagree with the convenience concern. 29.2% of non-users neither agree nor disagree with the convenience aspect. 8.3% of non-users somewhat agree that they feel the convenience of using other menstrual products outweighs the benefits of using a menstrual cup. 27.1% of non-users agree with the convenience concern. 16.7% of non-users strongly agree that they feel the convenience of using other menstrual products outweighs the benefits of using a menstrual cup.

4.5. Objective 5- Hypothesis testing

Area of living	Usage of menstrual cup	
Urban	Yes	44.10%
	No	55.90%
Rural	Yes	65.10%
	No	34.90%

Table 4.5.1 Area of living * Usage of menstrual cup - Crosstabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.423 ^a	1	.035		
Continuity Correction ^b	3.619	1	.057		
Likelihood Ratio	4.472	1	.034		
Fisher's Exact Test				.045	.028
Linear-by-Linear Association	4.380	1	.036		
N of Valid Cases	102				

Table 4.5.2 Chi-Square test Area of living * Usage of menstrual cup

Among the 59 respondents from urban area, 33 (55.9%) are non-users of menstrual cup and the remaining 26 (44.1%) are users of menstrual cup. This suggests that in urban areas, a higher percentage of respondents are not using menstrual cups. Among the 43 respondents from the rural area, 15 (34.9%) are non-users and 28 (65.1%) are users. This indicates that in rural areas, a higher percentage of respondents are using menstrual cups. The chi square test statistics shows that the P values is equal to 0.035, i.e., less than 0.05. Hence the hypothesis is proved. i.e., there is an association between the usage of menstrual cup and area of living

Level of Knowledge	Level of Attitude	
	Poor	Positive
Negative		100%
Average	Positive	60%
	Negative	40%
Good	Positive	95.80%
	Negative	4.20%

Table 4.5.3 Level of Knowledge * Level of Attitude- Crosstabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.253 ^a	2	.000
Likelihood Ratio	11.030	2	.004
Linear-by-Linear Association	22.525	1	.000
N of Valid Cases	102		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .07.

Table 4.5.4 Chi-Square test Level of Knowledge * Level of Attitude

Among the respondents with poor knowledge (1 respondent), the attitude towards menstrual cups was negative. Among the 5 respondents with average level of knowledge, 3 (60%) has positive attitude towards menstrual cup and remaining 2 (40%) has a negative attitude towards menstrual cup. Among the 96 respondents with good level of knowledge regarding menstrual cup, 96 (95.8%) has a positive attitude and remaining 4 (4.2%) has a negative attitude towards the menstrual cup. The chi square test statistics shows that the P values is equal to 0.0, i.e., greater than 0.05. Hence the hypothesis is rejected. i.e., there is no significant association between the level of knowledge of menstrual cup and level of attitude towards menstrual cup. This means that having a good level of knowledge about menstrual cups does not necessarily guarantee a positive attitude towards using them. Other factors beyond

knowledge, such as cultural beliefs, personal preferences, or accessibility to menstrual cups, may play a role in shaping attitudes towards their use.

Level of Knowledge	Usage of Menstrual cup	
	Yes	No
Poor	Yes	0%
	No	100%
Average	Yes	40%
	No	60%
Good	Yes	54.20%
	No	45.80%

Table 4.5.3 Level of Knowledge * Usage of menstrual cup- Crosstabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.519 ^a	2	.468
Likelihood Ratio	1.902	2	.386
Linear-by-Linear Association	1.358	1	.244
N of Valid Cases	102		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .47.

Table 4.5.4 Chi-Square test Level of Knowledge * Usage of Menstrual cup

The 1 respondent with poor level of knowledge showcased the non-usage of menstrual cup. Among the 5 respondents with average level of knowledge, 3 (60%) are non-users and the remaining 2 (40%) are users of it. Among the 96 respondents with good level of knowledge, 52 (54.2%) are users and the remaining 44 (45.8%) are non-users. The chi square test statistics shows that the P values is equal to 0.468, i.e., greater than 0.05. Hence the hypothesis is rejected. i.e., there is no significant association between the level of knowledge of menstrual cup and usage of menstrual cup. In conclusion, the data suggests that there is no significant association between the level of knowledge about menstrual cups and the usage of menstrual cups among the respondents. This means that having a good level of knowledge about menstrual cups does not necessarily lead to increased usage.

Level of Attitude		Usage of menstrual cup
Negative	Yes	14.30%
	No	85.70%
Positive	Yes	55.80%
	No	44.20%

Table 4.5.5 Level of attitude * Usage of menstrual cup- Crosstabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.508 ^a	1	.034		
Continuity Correction ^b	2.996	1	.083		
Likelihood Ratio	4.886	1	.027		
Fisher's Exact Test				.049	.040
Linear-by-Linear Association	4.464	1	.035		
N of Valid Cases	102				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.29.

b. Computed only for a 2x2 table

Table 4.5.6 Chi-Square test Level of attitude * Usage of menstrual cup

Out of 7 respondents with negative level of attitude towards menstrual cup, it was found that only one (14.3%) was a user and the remaining 6 (85.7%) were non-users. Among the 95 respondents with positive level of attitude, it was found that 53 (55.8%) were users and the remaining 42 (44.2%) were non users of menstrual cup. In the chi-square test, even though the P value is 0.034 which is less than 0.05, 2 cells have expected count less than 5. Thus, the conclusion is that the hypothesis is rejected, ie, there is no significant association between the level of attitude and usage of menstrual cup. This suggests that having a positive attitude towards menstrual cups does not necessarily correlate with a higher likelihood of using them. Several factors may contribute to this observation, such as personal comfort, access to information,

cultural factors, or practical considerations that influence the decision to adopt or not adopt menstrual cups.

Religion	Usage of menstrual cup	
Hindu	Yes	60.30%
	No	39.70%
Christian	Yes	38.50%
	No	61.50%
Islam	Yes	37.50%
	No	62.50%

Table 4.5.7 Religion * Usage of menstrual cup - Crosstabulation

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.429 ^a	2	.109
Likelihood Ratio	4.452	2	.108
Linear-by-Linear Association	3.796	1	.051
N of Valid Cases	102		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.76.

Table 4.5.8 Chi-Square test Religion * Usage of menstrual cup

Out of the 68 respondents belonging to the Hindu religion, 41 (60.3%) were users of menstrual cup and the remaining 27 (39.7%) are non-users. Among the 26 respondents belonging to the Christian religion, 10 (38.5%) were users and 16 (61.5%) were non-users. Out of the 8 respondents belonging to the Islam religion, 3 (37.5%) were users and 5 (62.5%) were non-users. In the chi-square test, the p value is 0.109 which is greater than 0.05, which implies that the hypothesis is rejected and there is not any significant association between the religion of the respondent and their usage of menstrual cup. This interpretation suggests that, based on the data available, the religious background of the respondents does not play a significant role in determining whether they use menstrual cups.

Financial Status	Usage of Menstrual Cup	
	APL	Yes
No		45.55
BPL	Yes	42.90%
	No	57.10%

Table 4.5.9 Financial Status * Usage of menstrual cup

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.662 ^a	1	.416		
Continuity Correction ^b	.276	1	.599		
Likelihood Ratio	.662	1	.416		
Fisher's Exact Test				.566	.299
Linear-by-Linear Association	.656	1	.418		
N of Valid Cases	102				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.59.

b. Computed only for a 2x2 table

Table 4.5.10 Chi-Square test Financial Status * Usage of menstrual cup

Among the 88 respondents belonging to the APL financial status, 48 (54.5%) were users and 40 (45.5%) were non-users. Also, the 14 respondents belonging to the BPL financial status, 6 (42.9%) were users and 8 (57.1%) were non-users. In the chi-square test, the P value is 0.416 that is greater than 0.05 which implies that the hypothesis is rejected and there is no significant association between the financial status of the respondents and the usage of menstrual cup. This interpretation suggests that, based on the data available, the religious background of the respondents does not play a significant role in determining whether they use menstrual cups.

Marital Status	Usage of Menstrual Cup	
	Married	Yes
No		48.40%
Single	Yes	66.70%
	No	33.30%

Table 4.5.11 Marital status * Usage of menstrual cup

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.746 ^a	1	.388		
Continuity Correction ^b	.264	1	.607		
Likelihood Ratio	.763	1	.382		
Fisher's Exact Test				.495	.306
Linear-by-Linear Association	.739	1	.390		
N of Valid Cases	102				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.24.

b. Computed only for a 2x2 table

Table 4.5.12 Chi-Square test Marital Status * Usage of menstrual cup

Among the 93 respondents who are single, it was revealed that 48 (51.6%) were users and 45 (48.4%) are non-users. Out of the 9 married respondents, 6 (66.7%) are users and 3 (33.3%) are non-users. In the chi square test, the P value is 0.388 that is greater than 0.05 which reveals that the hypothesis is rejected and there isn't any significant association between the marital status and usage of menstrual cup. This interpretation suggests that, based on the data available, marital status does not significantly influence the decision to use or not use menstrual cups.

Summary of the Chapter

The data analysis chapter included interpretations of socio demographic details, level of knowledge, level of attitude and usage pattern of menstrual cup among the 102 respondents. Pie charts, bar graph, tables were utilized to illustrate the percentage of the responses to each question. Cross tabulation and Chi square test were also employed to show the association between various variables. Interpretations of graphs and tables were also given below the same.

CHAPTER V: FINDINGS, SUGGESTIONS AND CONCLUSIONS

Chapter V: Findings, Suggestions and Conclusions

Overview of the Chapter

This chapter aimed at summarizing the major findings of the study. The chapter also tried to put forward suggestions according to the findings and to provide a conclusion to whole research

5.1. Findings and Discussion

The study aimed to explore the knowledge, attitude, and practices of menstrual cup usage among emerging adult women (aged 18-29). The major findings of the study, based on the interpretations of the data from the previous chapter are as follows:

Socio-Demographic Details

The socio-demographic profile of the respondents provides valuable insights into the characteristics of the study population. The socio demographic profile enquires about the age, area of living, level of education, financial status, marital status, occupation, religion and type of family of the respondents.

- The majority of the respondents belong to the age category of 22-25 (84.3%), followed by 18-21 (9.8%) and 26-29 (5.9%).
- More than half of the respondents are from urban areas (57.8%) compared to rural areas (42.2%).
- A significant percentage of the respondents have a qualification of post-graduation and above (64.7%).
- The majority of respondents fall under the APL category (86.3%) with a smaller percentage belonging to the BPL category (13.7%).
- The vast majority of respondents are single (91.2%) and the remaining 8.8% were married. 73.5% were students and 26.5% were employees.
- A significant proportion of respondents belong to nuclear families (92.2%).
- In addition to that, all respondents have heard about menstrual cups, indicating high awareness of the product. Social media (62.7%) is the most common source of information about menstrual cups, followed by friends and family members (28.4%) and health care professionals (8.8%)

Objective 1- To assess the level of knowledge about menstrual cups among emerging adult women

Awareness of Menstrual Cups:

- 94.1% of respondents had a good level of knowledge about menstrual cups.
- Only 4.9% and 1% had average or poor awareness, respectively.

Perceived Safety:

- 84.3% of respondents believe that menstrual cups are safe to use.
- Only 15.7% have concerns about safety.
- This finding aligned with that of the study conducted among reproductive women in a rural territory hospital where 84% considered menstrual cup to be a safe device (S, M. et al., 2021)

Knowledge of Materials:

- 93.1% of respondents were aware of the materials (e.g., silicone, rubber, latex) used to make menstrual cups. This indicates a good understanding of the various materials used in manufacturing.

Awareness of Cup Sizes:

- 98% of respondents were aware of the different sizes (small, medium, large) of menstrual cups available in the market. This suggests that participants recognize the importance of choosing the right size for comfort and effectiveness.

Awareness of Individual Variability:

- 97.1% of respondents understood that cup sizes vary from person to person. This demonstrates a good grasp of the need for a personalized fit.

Cost Awareness:

- 89.2% of respondents were aware that menstrual cups typically cost more than Rs 200. This indicates a general understanding of the price range.

Cleaning and Maintenance:

- 100% of respondents were aware of various methods for cleaning menstrual cups (boiling, soap and water, specialized cleaners). This demonstrates thorough knowledge of proper upkeep.

Comprehensive Awareness:

- Respondents showed high awareness of multiple aspects, such as reusability, prolonged usage, eco-friendliness, durability, cost-effectiveness, availability, and general maintenance. This indicates widespread understanding of menstrual cup characteristics and benefits.

These findings highlight that the respondents possess a strong knowledge base about menstrual cups, including their safety, materials, sizing, cost, and maintenance, suggesting a comprehensive understanding of this menstrual hygiene product.

Objective 2- To understand the attitude towards menstrual cups among emerging adult women**Positive Attitude:**

- 93.1% of respondents had a positive attitude towards menstrual cups. This indicates a high level of acceptance and comfort with the concept.

Openness to Alternatives:

- A significant portion (55.9%) are open to considering menstrual cups as an alternative to traditional products. This demonstrates a positive attitude towards exploring new period hygiene options.

Social Acceptance:

- A substantial proportion of respondents find menstrual cups to be socially acceptable to varying degrees. This suggests a decrease in stigma and an encouraging trend towards open discussion about menstrual cups.

Environmental Awareness:

- A majority recognize the smaller environmental impact of menstrual cups compared to disposable products. This reflects their understanding of the potential ecological benefits of using menstrual cups.

Safety and Dependability:

- The majority believe menstrual cups are safe and consider them a reliable alternative for period hygiene. This indicates trust in the effectiveness and safety of menstrual cups.

Preference for Menstrual Cups:

- Most respondents prefer using menstrual cups for their period hygiene needs. This shows a positive preference for this method over traditional products.

Comfortable Recommendations:

- Respondents feel at ease and confident recommending menstrual cups to others. This suggests that they view menstrual cups as a viable option worth recommending.

Post-Marriage Views:

- There's a split opinion on using menstrual cups after marriage, with 33.3% disagreeing and 31.4% agreeing. This indicates some variability in views on the timing of menstrual cup usage.

Support for Promotion:

- The majority strongly support promoting sustainable menstrual hygiene options and individual autonomy in hygiene decisions. This reflects belief in the merits and advantages of menstrual cups.

Positive Factors:

- Participants express agreement and enthusiasm for several aspects of menstrual cups, including cost-effectiveness, comfort, safety, and environmental impact. This overall positive outlook reflects growing understanding and acceptance of menstrual cups as a responsible and user-focused alternative.

These findings collectively demonstrate a positive shift in attitudes towards menstrual cups, with an emphasis on environmental responsibility, safety, comfort, and support for promoting sustainable options.

Objective 5- To determine the practice and usage of menstrual cups among emerging adult women

Usage and Acceptance:

- Over half of the respondents (52.9%) use menstrual cups, indicating an increasing acceptance of this period hygiene product.
- A significant portion (47.1%) do not use menstrual cups, showing a diverse population using other conventional products.

Duration of Usage and Continued Adoption:

- Among the users, a substantial portion (31.5%) have been using menstrual cups for 1-2 years, demonstrating long-term satisfaction.
- An equal proportion (31.5%) have been using them for more than 2 years, indicating consistent use over an extended period.
- A sizable group of users (14.8%) have been using menstrual cups for 6 months to 1 year, and another group (22.2%) for less than 6 months. This suggests ongoing growth in the adoption of menstrual cups, especially among those using them for shorter periods.

Frequency of Use:

- A significant majority of users (94.4%) use menstrual cups every menstrual cycle, making it their primary choice for menstrual hygiene. This demonstrates the reliability and practicality of menstrual cups as a preferred method.

Leakage Issues:

- A considerable percentage of users (61.1%) have experienced leakage while using menstrual cups. This highlights the importance of proper fit, practice, and individual variability in addressing leakage concerns.

Combination Usage:

- An equal distribution (50%) of users either exclusively use menstrual cups or use them along with other menstrual products. This shows flexibility in user preferences and combinations for period management.

Duration of Insertion:

- The majority of users (61.1%) keep their menstrual cups inserted for 4-8 hours, reflecting a common practice. This aligns with the recommended usage duration for menstrual cups.

Factors Encouraging Usage:

- Among the respondents who use menstrual cup, there was a high agreement on several factors that encourage menstrual cup usage, including comfort, ease of insertion and removal, regular sterilization, involvement in community efforts for the product's promotion, cost effectiveness, and general contentment when using a menstrual cup.

Preference for Sanitary Pads:

- Among the non-users, the vast majority (93.8%) prefer sanitary pads as their period hygiene product. This shows the popularity and practicality of sanitary pads among this group.

Duration of Use for Other Products:

- Non-users typically wear their menstruation products for different durations: 50% for 4-8 hours, 33.3% for 8-12 hours, and 16.7% for less than 4 hours before changing them.

Reasons for Non-Usage:

- Non-users cited various reasons for not using menstrual cups, including concerns about comfort and hygiene, negative experiences heard from others, availability of the product in their respective areas, insertion/removal fears, and ease of using other menstrual products.

These findings provide a comprehensive overview of user demographics, usage patterns, duration of use, factors influencing usage, and reasons for non-usage,

shedding light on the pattern of practices of respondents regarding menstrual cups and other products.

While checking the association of area of living and usage of menstrual cup, it was found that there is indeed a significant association between the usage of menstrual cups and the area of living. Respondents from rural areas are more likely to be users of menstrual cups, while respondents from urban areas are more likely to be non-users. No such significant association was visible with other variables.

5.2. Suggestions

Based on the findings of the study, here are some suggestions for further research to improve the knowledge, attitude, and practice of menstrual cup usage among emerging adult women:

To assess the level of knowledge about menstrual cups among emerging adult women:

- Conduct a longitudinal study to track changes in knowledge over time, which can help identify any improvements in awareness and education.
- Explore the impact of various educational interventions (workshops, awareness campaigns, online resources) on increasing knowledge about menstrual cups.

To understand the attitude towards menstrual cups among emerging adult women:

- Conduct qualitative research (focus groups or in-depth interviews) to delve deeper into the reasons behind positive or negative attitudes towards menstrual cups.
- Explore specific cultural and societal factors that may shape attitudes towards menstrual cups, considering different cultural contexts and regional variations.

To determine the practice and usage of menstrual cups among emerging adult women:

- Conduct a follow-up study to track long-term usage patterns and factors that contribute to the continued use or discontinuation of menstrual cups.

General Suggestions:

- Explore the experiences and perspectives of women who transition from non-users to users of menstrual cups and identify the catalysts for this change.
- Assess the effectiveness of different distribution channels (healthcare facilities, community programs, online platforms) in reaching and encouraging the usage of menstrual cups among various demographic groups.
- Conduct cross-cultural studies to understand how knowledge, attitude, and usage of menstrual cups vary in different cultural and geographical contexts.

Implications for Social Work Practice

- **Education and Awareness:** Social workers can conduct workshops, seminars, and awareness campaigns to educate young women about the benefits, usage, and safety of menstrual cups. Addressing misconceptions and promoting accurate knowledge can empower women to make informed choices about their menstrual hygiene.
- **Access and Availability:** Social workers can advocate for increased accessibility to menstrual cups, especially in underserved communities. They can collaborate with organizations to distribute affordable menstrual cups and promote sustainable menstrual hygiene solutions.
- **Policy Advocacy:** Social workers can advocate for policies that promote menstrual health and hygiene, including access to affordable menstrual products in educational institutions, public spaces, and marginalized communities.

5.3. Conclusion

The current study aims to examine emerging adult women between the ages of 18 and 29 in terms of their knowledge, attitudes, and practices regarding the menstrual cups. A thorough study of the information gathered from 102 respondents (users and non-users) yielded some insightful findings that shed light on the present level of knowledge and usage of menstruation cups. The results showed that most of the respondents were familiar with menstruation cups and its advantages. Menstrual cups were also seen favorably by a sizable portion of respondents, who thought they were long-term cost-effective, eco-friendly, and safe. While non-users voiced concerns regarding availability, comfort, and hygiene, the majority of users reported a high

degree of happiness and comfort with menstrual cup usage. To investigate the relationship between certain variables and knowledge, attitude, and practice of menstruation cups, cross-tabulation and chi-square tests were used. The findings indicated that menstrual cup usage varied depending on the area of living.

On the basis of these data, a number of suggestions are put out to improve emerging adult women's understanding, attitude, and habits regarding the use of menstruation cups. Some of the important tactics to encourage their usage include educational campaigns, the involvement of medical professionals, peer education, and better access and availability of menstrual cups. Furthering the promotion of sustainable menstruation habits can be done by modifying information for various demographic groups, incorporating menstrual health education into school curricula, and campaigning for supporting policies.

Overall, this study adds significant knowledge to the area of menstrual health and hygiene by emphasizing the potential of menstrual cups as a practical and environmentally acceptable substitute for conventional menstruation products. Menstrual cups can play an important role in empowering women, minimizing environmental effect, and promoting positive attitudes toward more sustainable practices. However, it is important to be aware of the study's limits, such as the small sample size and time frame, which may affect how generalizable the results are. It is advised to conduct more study to examine the experiences of various demographic groups and fully comprehend the obstacles to the use of menstruation cups. This study's findings emphasize the significance of supporting sustainable menstruation practices while improving menstrual health awareness and shattering taboos. We can build an inclusive, environmentally aware, and empowering society for emerging adult women by working together to achieve these goals.

Summary of the Chapter

This chapter dealt with the summarization of the major findings of the study, certain suggestions put forth by the researcher to promote the knowledge, attitude and practice of menstrual cup and also a brief conclusion for the study.

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ANNEXURES

Annexures

Annexure 1: Consent Form

Hey everyone

I am Arsha N.D., final year MSW (Master in Social Work) student from Loyola College of Social Sciences, Trivandrum. As part of the course demand, I am doing a dissertation on the topic: " A Knowledge, Attitude and Practice Study of Menstrual Cup among Emerging Adult Women" under the guidance of Dr. Jasmine Sarah Alexander. In order for the fulfillment of the study I am conducting a study on analyzing the knowledge, attitude and practice of menstrual cup among its users and non-users belonging to the age category of 18-29. I request the respondents to be part of my study by answering the following question. It will hardly take 15 minutes for answering.

Topic: A Knowledge, Attitude and Practice Study of Menstrual Cup among Emerging Adult Women

Objectives: To assess the level of knowledge, attitude and practice of menstrual cups among emerging adult women

Eligibility: Menstruating women between the age category of 18 to 29 who are either users or non-users of menstrual cup

Informed Consent: If you wish to participate in the study, question related to your subjective knowledge, attitude and practice will be enquired by the researcher. The principle of confidentiality will be strictly followed and the identity of the respondents will not be disclosed under any circumstances. You can withdraw from the study at any point of time and feel free to contact the researcher at arsha.16.6.2000@gmail.com regarding any doubts or clarifications.

Annexure 2: Questionnaire

Socio Demographic Profile

1. Name

2. Age

- 18-21
- 22-25
- 26-29

3. Area of living

- Rural
- Urban

4. District

5. Level of Education

- Illiterate
- Elementary
- Matriculation
- Higher secondary
- Graduation
- Post graduation and above

6. Financial Status

- APL
- BPL

7. Marital Status

- Single
 - Married
 - Separated
 - Divorced
 - Widow
-

8. Occupation

- Student
 - Homemaker
 - Employee
 - Other
-

9. Religion

10. Type of Family

11. Have you heard of Menstrual cup?

- Yes
 - No
-

12. If yes, where did you first hear about menstrual cup?

- Social Media
 - Friends or Family
 - Healthcare Professionals
 - Others
-

Objective 1- To assess the level of knowledge about menstrual cups among emerging adult women

1. Is menstrual cup a safe device?

- Yes
 - No
-

2. Menstrual cup is made of

- Silicone
 - Rubber
 - Latex
 - All of the above
 - Don't know
-

3. What are the different sizes of menstrual cup available?

- Small
 - Medium
 - Large
 - All of the above
 - Don't know
-

4. Which size of menstrual cup do you think is appropriate to use?

- Small
 - Medium
 - Large
 - Depends upon individual
 - Don't know
-

5. How much does menstrual cup typically cost?

- Less than 100/-
- More than 100/-
- Don't know

6. What method have you heard of for cleaning menstrual cup?

- Boiling
- Using soap and water
- Using specialized menstrual cup cleaners
- All of the above
- Don't know

Statements	Aware	Unaware
Menstrual cups are reusable and eco-friendly		
Menstrual cups can be used for a longer duration compared to other menstrual products (e.g., pads, tampons).		
Menstrual cups are safe to use and do not pose any health risks.		
Menstrual cups are cost-effective in the long run.		
Menstrual cups are readily available and easy to purchase.		
Menstrual cups are readily available and easy to purchase.		
Menstrual cups are suitable for all body types and menstrual flows.		

Objective 2- To understand the attitude towards menstrual cups among emerging adult women

On a scale of 1 to 7, where 1 is strongly disagree, 2 is disagree, 3 is somewhat disagree, 4 is neither agree nor disagree, 5 is somewhat agree, 6 is agree and 7 is strongly agree, I think

Statements	1	2	3	4	5	6	7
I am open to trying a menstrual cup as an alternative to traditional pads or tampons							
I am ashamed to talk about menstrual cups.							
Menstrual cups are a socially accepted menstrual product.							
Using a menstrual cup can reduce the environmental impact caused by disposable menstrual products							
I feel safe to use menstrual cup							
I prefer using menstrual cups over other menstrual products.							
I am comfortable in discussing the topic of menstrual cups with my friends and family members							
I feel confident recommending a menstrual cup to others.							
I believe that using a menstrual cup can lead to a more comfortable and less irritating period experience							
I believe that it is appropriate to use menstrual cup after marriage.							
Menstrual cups should be promoted as an alternative to traditional menstrual products							

I believe using a menstrual cup is a personal choice.							
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Objective 3- To determine the practice and usage of menstrual cups among emerging adult women

1. Have you ever used a menstrual cup?

- Yes
- No

2. If yes, how long have you been using the menstrual cup?

- Less than 6 months
- 6 months to 1 year
- More than 2 years
- Not Applicable

3. If no, what other menstrual product are you using?

- Disposable pads
- Tampons
- Menstrual underwear
- Period discs
- Reusable cotton pads
- Others
- Not Applicable

4. If you are a user of menstrual cup, how often do you use menstrual cups?

- Every menstrual cycle
- Occasionally
- Never
- Not Applicable

5. If you are a user of menstrual cup, have you experienced any leakage while using a menstrual cup?

- Yes
 - No
 - Not Applicable
-

6. If you are a user of menstrual cup, do you use other menstrual products (sanitary pads) along with the menstrual cup at the same time?

- Yes
 - No
 - May be
-

7. If you are a user of menstrual cup, on average, how long do you typically keep the menstrual cup inserted before emptying?

- Less than 4 hours
 - 4-8 hours
 - 8-12hours
 - More than 12 hours
 - Not Applicable
-

8. If you are a non-user of menstrual cup, for the menstrual products you use other than menstrual cups, how long do you typically keep them on before changing them?

- Less than 4 hours
 - 4-8 hours
 - 8-12hours
 - More than 12 hours
 - Not Applicable
-

On a scale of 1 to 7, where 1 is strongly disagree, 2 is disagree, 3 is somewhat disagree, 4 is neither agree nor disagree, 5 is somewhat agree, 6 is agree and 7 is strongly agree

Statement	1	2	3	4	5	6	7
I am comfortable while wearing a menstrual cup							
I find it easy to insert and remove a menstrual cup.							
I clean and sterilize my menstrual cup properly after each use.							
I have faced any social stigma or judgment when using a menstrual cup.							
I have participated in any community initiatives or campaigns promoting menstrual cup usage.							
I believe that using a menstrual cup has saved me money compared to other menstrual products.							
I am satisfied with my experience of using menstrual cup over other menstrual products.							

On a scale of 1 to 7, where 1 is strongly agree, 2 is agree, 3 is somewhat agree, 4 is neither agree nor disagree, 5 is somewhat disagree, 6 is disagree and 7 is strongly disagree

Statement	1	2	3	4	5	6	7
I believe that using a menstrual cup would be uncomfortable.							
I am concerned about the hygiene and cleanliness of using a menstrual cup.							
I have heard negative experiences from others about using menstrual cups.							
I believe that menstrual cups are not easily accessible or available in my area.							
I think it would be difficult to insert and remove a menstrual cup correctly.							
I am not comfortable with the idea of handling and cleaning a menstrual cup							
I feel that the convenience of using other menstrual products outweighs the benefits of using a menstrual cup.							