

DATA COLLECTION AND ANALYSIS OF MENSTRUAL HEALTH AND HYGIENE

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Abstract

This study investigate the awareness and practices related to menstrual health and hygiene among individuals aged 16-21. An online survey was conducted with 81 respondents to assess their knowledge, behavior and access to resource concerning menstruation. The result show a strong level of basic awareness, with 96.3% of participants recognizing the concept of menstruation. However, there is a limited specific knowledge about the menstrual cycle, including duration and regularity, highlighting the need for more education. Hygiene practices were generally positive, with most participants reporting adherence to key practices such as changing products frequently (81.5%) and washing hands properly (70.4%). Nevertheless 74.5% reported experiencing rashes or discomfort associated with commercial pads, emphasizing the need for the product safety and awareness. Furthermore, while 92.6% had access to menstrual products, issues of affordability and availability still pose challenge for some individual. This study underscore the necessity of in cooperating menstrual health condition into school curricula and public health initiatives to address the knowledge gaps and encourage better hygiene practices. Tracking issue related to

product accessibility can further promote quality and empower individuals in effectively
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managing their menstrual health.

1 Introduction

Menstruation is a natural biological process that plays a key role in the reproductive health of women and individuals of reproductive age. Throughout a lifetime, the average person menstruates for about five to seven years, underscoring the significance of menstrual health and hygiene for overall well-being. Managing menstruation safely and with dignity is a fundamental right, yet this essential need is often unmet, especially in resource-limited settings. For numerous girls, the arrival of menarche is accompanied by fear, discomfort, or even shame, reflecting the entrenched taboos and biases in society surrounding menstruation [1]. Tackling these barriers is essential to ensuring that menstrual health is acknowledged as a crucial component of public health. By raising awareness, enhancing access to resources, and confronting societal stigma, we can foster an environment where individuals can manage menstruation in a healthy, safe, and dignified way [2-4]. Managing menstruation safely and effectively presents both systemic and societal challenges, particularly in low-income areas where access to essential resources like clean water, soap, and private spaces is limited. Addressing these barriers necessitates improvements in hygiene infrastructure, increased access to affordable menstrual products, and efforts to dismantle the stigma surrounding menstruation [5].

Menstrual health and hygiene (MHH) involves the physical, emotional, and social dimensions of managing menstruation safely and dignifiedly. This includes access to safe and affordable menstrual products, proper sanitation facilities, reliable information about the menstrual cycle, supportive policies, and societal attitudes. As a crucial element of public health, MHH significantly impacts the well-being, education, and productivity of those who menstruate, making it vital for promoting gender equity and empowerment. Despite

its significance, conversations, and initiatives surrounding MHH often have a narrow focus, primarily concentrating on adolescent girls in educational environments. While these studies have highlighted the obstacles young girls face, they overlook women's varied and intricate experiences at different life stages and in various contexts, such as workplaces, rural areas, and crises. This narrow viewpoint creates substantial gaps in our understanding of the diverse challenges of effectively managing menstruation [6].

Efforts to promote menstrual hygiene management (MHM), especially for schoolgirls, offer valuable insights into overcoming these challenges. A coalition of academics, NGOs, social entrepreneurs, United Nations agencies, and public-private partnerships has successfully raised awareness and sparked action on this issue. A key factor in their success has been recognizing the multispectral nature of MHM as a public health challenge engaging sectors like water, sanitation, and hygiene (WASH), education, health, and gender equality. Nevertheless, significant challenges persist, including the lack of quantitative data on the extent of these issues and the necessity for more effective interventions to address the menstrual health needs of women in all contexts [7].

Menstrual health is increasingly acknowledged by the World Health Organization (WHO) as a vital health issue that encompasses a wide range of physical, psychological, and social aspects [8]. This viewpoint highlights that menstruation should not be seen merely as a hygiene concern but as a fundamental part of overall health that deserves attention throughout different life stages from pre-menarche to post-menopause. In support of these initiatives, the Joint Monitoring Programme (JMP) created by WHO and UNICEF defines menstrual hygiene management (MHM) as the practice where women and adolescent girls use clean menstrual management materials while accessing safe and convenient disposal facilities for used products. This definition emphasizes the critical importance of clean and safe menstrual management supplies and the need for adequate infrastructure to support effective menstrual hygiene management [9]. By prioritizing menstrual health in this way, the WHO plays a crucial role in empowering individuals, improving their quality of life, and advancing

gender equity. Ultimately, a society that acknowledges and embraces natural biological processes like menstruation is essential [10]. Addressing menstrual health and hygiene (MHH) requires a dedicated effort to understand and analyze the specific challenges faced by those who menstruate. This study on menstrual health and hygiene aimed to assess the awareness, practices, and challenges encountered by individuals. Through a questionnaire, we explored key areas such as basic awareness of menstruation, knowledge of the menstrual cycle, sources of information, and understanding of hygiene practices. Additionally, it investigated access to clean and safe menstrual products, the types of products used, and awareness of potential health risks linked to improper hygiene.

2 Methodology

This section presents the study design, population, sampling methods, data collection procedures, ethical considerations, and data analysis strategies undertaken to assess menstrual health and hygiene awareness, attitudes, and practices among 16–21-year-old females.

2.1 Study Design and Data Collection

This research utilized a cross-sectional survey design, selected for its effectiveness in gathering data at a single point in time. This approach is particularly beneficial for assessing the current levels of knowledge, awareness, and practices concerning menstrual health and hygiene within the target population. The choice to implement a survey stemmed from the necessity to collect responses from a large group of individuals in a structured way that allowed for comparisons across various demographics.

The survey addressed topics such as:

- Awareness of menstrual health
- Types of menstrual products utilized

- Hygiene practices during menstruation
- Awareness of health risks linked to inadequate menstrual hygiene
- Experiences with societal stigma or restrictions associated with menstruation

Considering the constraints of time and geography, the survey was conducted online using Google Forms, which made distribution and data collection straightforward. The online format ensured accessibility for individuals from various regions and encouraged a wide range of responses. The survey link was disseminated through social media platforms like Facebook, Instagram, and WhatsApp, allowing participants from diverse backgrounds to engage in the study. Participants were encouraged to share the survey with others to boost participation, which helped in gathering a more diverse set of responses.

2.2 Participant Selection

Participants were chosen using a self-selection method, meaning individuals opted in to take part in the survey. The study targeted those aged 16–21 years who menstruate, as this demographic is crucial for understanding menstrual health awareness and practices. During the survey period, which was open for a designated time, a total of 81 responses were collected. While this sample size offers valuable insights, it may be considered small for making broad generalizations about larger populations. Nevertheless, the responses obtained from this group were adequate for identifying trends and patterns within the target age range.

2.3 Data Analysis

The data gathered from the online survey was examined using the graphical tools available in Google Forms. These tools enabled the automatic creation of graphs and charts, offering visual insights into the responses for each question.

2.3.1 Quantitative Analysis:

The multiple-choice and checkbox responses were evaluated using the integrated graphical tools of Google Forms. Each response option was illustrated in pie charts, which facilitated the visualization of answer distribution across various categories. For instance, the responses to questions like "Do you know what menstruation is?" and "Do you have access to clean menstrual products?" were represented through pie charts that displayed the percentage of participants who answered "Yes," "No," or "Somewhat."

2.3.2 Qualitative Analysis:

For open-ended questions, such as those asking about sources of information regarding menstruation, the responses were analyzed for recurring themes and patterns. Although not processed through specific qualitative software, the responses were manually sorted to highlight significant trends (e.g., dependence on family, school, or social media for information). These thematic insights contributed to a better understanding of the qualitative dimensions of the data.

3 Results and Discussions

This section highlights the main findings from the survey conducted on menstrual health and hygiene awareness among individuals aged 16 to 21 years. The results are organized into several key themes, such as awareness, menstrual hygiene practices, and access to menstrual products, to offer a thorough understanding of the topic. The discussion also places these findings in a broader context, comparing them with existing research and pointing out areas that need improvement.

Table 1: Summary of Results on Menstrual Health and Hygiene

Table 1:

| Category | Count | Percentage (%) |
|--|-------|----------------|
| Awareness about menstruation | | |
| Familiar with concept of menstruation | 78 | 96.3 |
| Knowledge about the menstrual cycle | 46 | 56.8 |
| Somewhat Knowledgeable about the cycle | 35 | 43.2 |
| Hygiene practices during menstruation | | |
| Frequently change menstrual products | 66 | 81.5 |
| Wash hand before and after cleaning | 57 | 70.4 |
| Daily cleaning of the genital area | 64 | 79 |
| Proper disposal of used products | 57 | 70.4 |
| Acess to menstrual products | | |
| Always have access to safe products | 75 | 92.6 |
| Face challenges in accessing products | 6 | 7.4 |
| Health outcomes | | |
| Experienced rashes/discomfort/infections | 60 | 74.1 |
| No health issues reported | 21 | 25.9 |
| Sources of information | | |
| Learned from family | 43 | 53.1 |
| Learned from friends | 30 | 37 |
| Learned from schools | 5 | 6.2 |
| Learned from Healthcare providers | 2 | 2.5 |
| Learned from Internet/ Social media | 1 | 1.2 |

3.1 Raising Women's Health Awareness and Knowledge

The survey showed that a significant number of respondents, 96.3%, were aware of menstruation. This suggests that, at a basic level, the understanding of menstruation as a natural biological process is quite strong among individuals aged 16–21 years in the surveyed group. This widespread awareness can likely be linked to efforts aimed at breaking menstrual taboos, which may have occurred through grassroots initiatives, family conversations, or casual discussions among peers. However, when exploring the details of menstrual knowledge, notable gaps emerged. Many respondents demonstrated a limited understanding of the menstrual cycle, including its average duration, phases, and regularity. A considerable number rated their knowledge as only "somewhat knowledgeable" or less. Specifically, just 34 respondents considered themselves very knowledgeable, while 12 felt somewhat knowledgeable, and 23 admitted to lacking sufficient knowledge about menstrual

cycles. These gaps highlight that while menstruation is a familiar topic for most individuals in this age group, more detailed aspects of menstrual health are often overlooked in their education. This observation is consistent with findings from global health organizations like WHO and UNICEF, which stress the importance of standardized, age-appropriate education on menstruation and reproductive health.

Interestingly, the study found that informal sources, such as relatives (53.1%) and friends (37%), were the main channels of information for most respondents. In contrast, formal sources, including schools, healthcare providers, and digital platforms like educational websites or apps, had a minimal impact. This lack of structured and evidence-based education poses a risk, as the information shared through informal networks may not always be accurate or scientifically supported. To address this issue, it is essential to incorporate thorough menstrual health education into school programs. This education should cover important topics such as the biology of menstruation, hygiene practices, and how to recognize unusual symptoms that may need medical evaluation. Furthermore, focused health campaigns can help raise awareness among families and communities, creating supportive spaces for open conversations about menstruation.

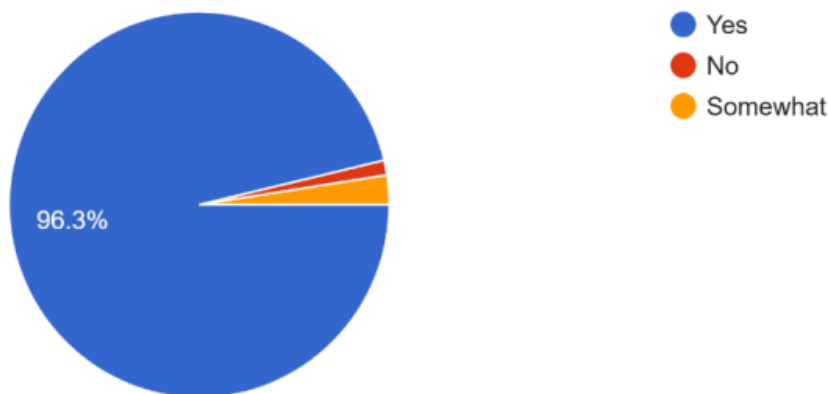


Figure 1:

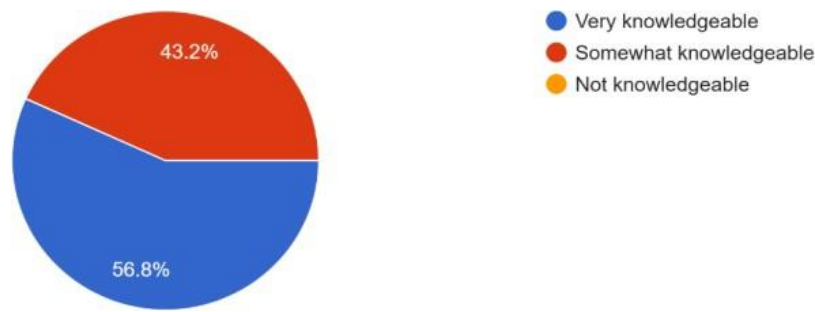


Figure 2: Basic awareness Fig 2: Knowledge of menstrual cycle

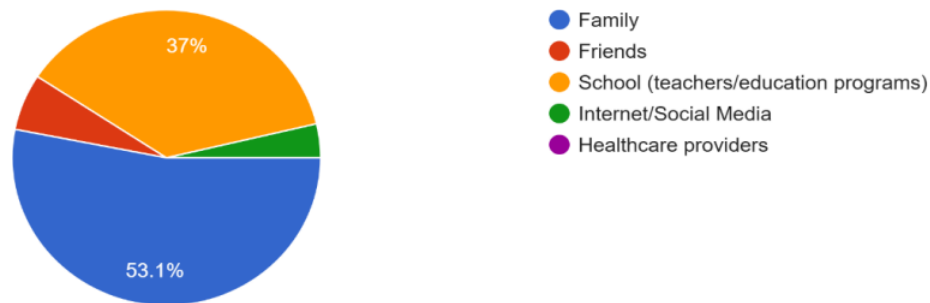


Figure 3: Source of information

3.2 Menstrual Hygiene Practices and Health Outcomes

The survey results revealed positive trends in menstrual hygiene behaviors among participants, indicating that most were knowledgeable about and engaged in basic hygiene practices. These habits are vital not only for physical health but also for improving comfort and self-assurance during menstruation.

Regular Product Changing: 81.5% of participants reported frequently changing their menstrual products throughout their cycles. This habit minimizes the risk of infections and skin irritation, demonstrating an understanding of fundamental menstrual hygiene principles.

Daily Genital Washing: A notable 79% of respondents stated that they washed their genitals daily while menstruating, which is another essential practice for preventing infections and ensuring cleanliness.

Hand Hygiene: 70.4% of participants mentioned that they washed their hands before and after changing menstrual products. Maintaining hand hygiene is particularly crucial in lowering the risk of infections caused by the transfer of bacteria or other pathogens.

Proper Disposal of Products: The survey also indicated that 70.4% of respondents were knowledgeable about and practiced the proper disposal of used menstrual products, which is a key aspect of maintaining both personal and environmental hygiene.

Despite these positive findings, challenges still exist. Notably, 74.5% of respondents reported experiencing rashes, discomfort, or infections while using commercial pads. These issues may arise from prolonged use of products, exposure to irritants in certain brands, or insufficient guidance on how to use and store these items properly. The high occurrence of these problems highlights the need for greater awareness of alternative menstrual products, such as menstrual cups or organic, hypoallergenic pads, which could help alleviate skin-related concerns. This finding also emphasizes the importance of manufacturers focusing on safety and comfort in their designs, as well as the role of healthcare providers in educating individuals about selecting the right products for their needs. Furthermore, campaigns that promote the safe use, storage, and disposal of menstrual products can help reduce health issues.

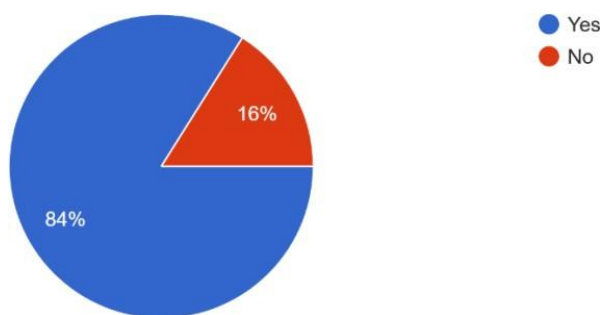


Figure 4:

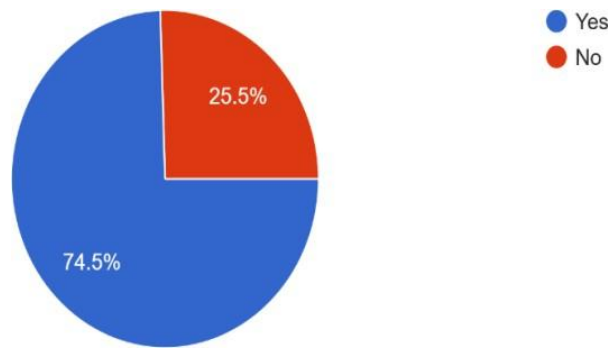


Figure 5: Fig 4: Rashes and discomfort Fig 5: Knowledge of Health risk

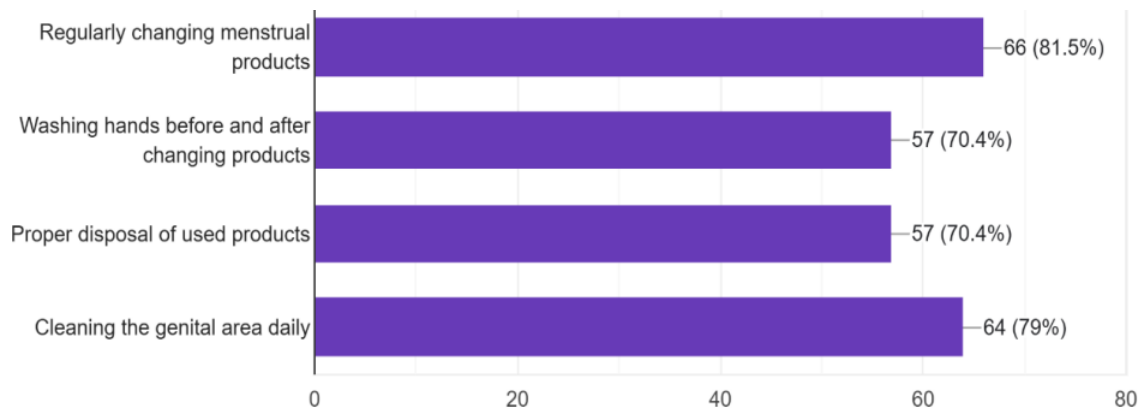


Figure 6: Awareness of Hygiene practices

3.3 Availability of Menstrual Products

Access to clean and safe menstrual products is essential for maintaining menstrual health and hygiene. The survey revealed that 92.6% of respondents had reliable access to these products, indicating significant progress in ensuring their availability. However, 7.4% of respondents encountered difficulties in obtaining these necessities. Barriers to access may include:

Affordability: The high cost of branded menstrual products can prevent individuals from buying enough supplies.

Geographical Constraints: In rural or remote areas, the availability of commercial

menstrual products may be limited, forcing individuals to rely on less safe alternatives.

Lack of Awareness: Some individuals may not know about affordable or reusable options, such as menstrual cups or cloth pads, which can offer long-term solutions for menstrual management.

The survey's findings reflect global concerns about menstrual inequity, which disproportionately affects individuals from marginalized socioeconomic backgrounds. Tackling these barriers requires a comprehensive approach:

1. **Subsidizing Menstrual Products:** Governments and NGOs can provide free or subsidized menstrual products to those in need, especially in disadvantaged communities.

2. **Promoting Reusable Products:** Encouraging the use of sustainable options such as menstrual cups or reusable cloth pads can help lower costs and lessen environmental impact while providing safe and effective solutions.

3. **Improving Distribution Networks:** Making sure menstrual products are accessible in schools, workplaces, and community centers can assist individuals in remote or underserved areas.

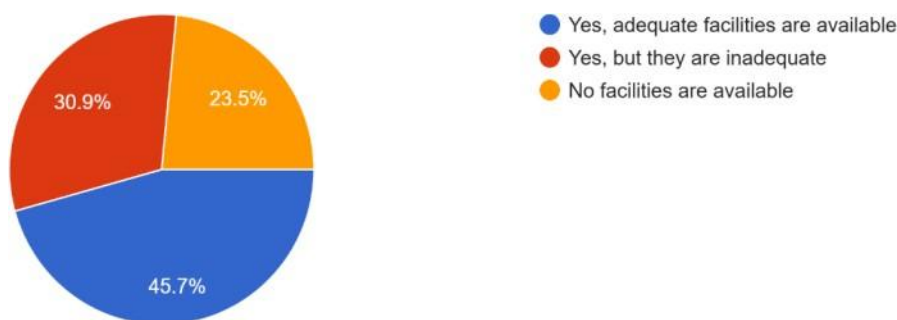


Figure 7:

3.4 Conclusion

The results from this survey offer valuable insights into the awareness, behavior, and accessibility of menstrual health and hygiene among individuals aged 16–21 years. While

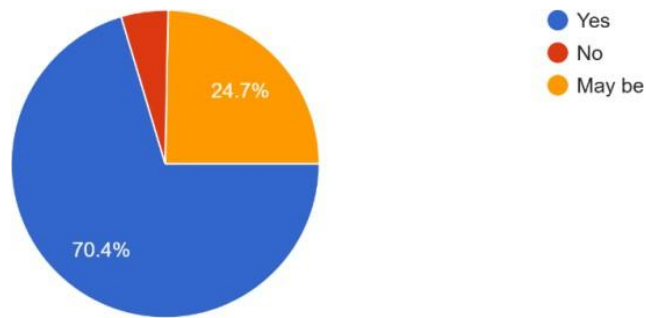


Figure 8: Willingness to learn Fig 8: Menstrual product facilities

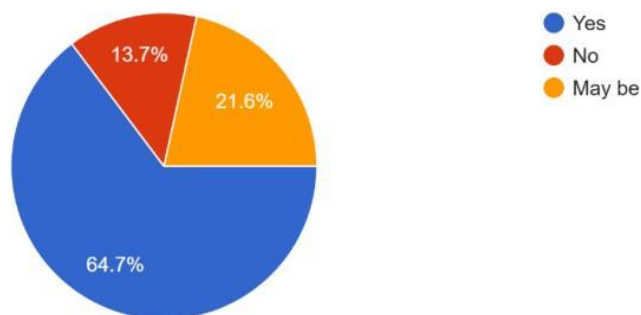


Figure 9: Willingness to Innovate

there are positive trends in basic awareness and hygiene practices, significant gaps still exist in areas like menstrual cycle knowledge and equitable access to products.