



Mapping Awareness and Perception Regarding Menstrual Health Among Adolescents

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Abstract

This research reflects on the understanding and perceptions of “menstrual health” and related outcomes among male and female high school students. It focuses on gender differences and common misconceptions. Recently there have been advances in menstrual health related educational efforts however, the physical and mental experience of menstruation still gets heavily impacted by negative societal parameters and cultural beliefs. A qualitative exploration of perceptions revealed that female students generally demonstrate higher levels of awareness about menstrual health but they exhibit several misconceptions such as menstruation is "unclean" or that conditions such as polycystic ovary syndrome (PCOS) or endometriosis are rare. Male students hesitated to participate in the study. They showed significantly lower awareness as well as understanding of menstruation and its physical and mental health impacts. These results highlight a gendered knowledge gap, which worsen the stigma surrounding menstruation. This study emphasizes the importance of bridging these knowledge gaps to promote healthier menstrual health practices and outcomes. By working on addressing these issues, we can foster a generation of adolescents with greater awareness, inclusive attitudes, and the ability to engage in menstrual health related issues openly, contributing to better health outcomes and gender equity. The research advocates for prioritizing a gender-sensitive curriculum in schools to reduce misunderstandings and normalize menstruation to create diverse equitable space.

Keywords: *Mapping Awareness; Menstrual Health; Adolescents*

1. Introduction

Menstruation has been deeply influenced with social, cultural, and economic challenges. Menstruation has also remained a critical part of the women's rights discourse including educational and economic opportunities. Menstrual health doesn't only include the physical well-being but also the mental and social aspects of an individual's experience with their menstrual cycle. As a complex issue, the

discourse of menstrual health involves accurate information, supportive environment, and resources that enable individuals to fully engage in all aspects of their lives, regardless of their menstrual cycle. Persistent misbeliefs and stigmas continue to surround menstruation across many communities despite significant strides toward the understanding and acceptance of menstrual health. Menstruation challenges can impact an individual's ability to manage their health effectively, influencing their social interactions, school performance, physical and mental well-being.

Development of attitudes and awareness surrounding menstrual health occurs during a critical period of adolescence. However, there is a significant gap in research specifically on how high school students understand and perceive menstrual health. Currently, there is limited data assessing menstrual health awareness and misconceptions thereof within adolescents, a group whose understanding is still in its formative stages and require diligent curation. To address this issue, this study investigates how high school students, both male and female, perceive menstrual health, with a specific focus on the gaps in their understanding and knowledge.

Using a semi-structured questionnaire, this paper qualitatively explores the understanding and perception of high school students on varied aspects related to menstruation. Through the use of a comprehensive survey, this study aimed to capture the gendered differences in knowledge, perception and perspectives on menstrual health. The responses of the study provides a detailed map of the current awareness and perceptions of menstrual health among adolescents and helps us to identify the contributors to the stigma surrounding menstruation, as well as how these perceptions impact social interactions and mental health. This research aims at contributing to the creation of supportive environments where young people have access to accurate and inclusive information to confidently manage their menstrual health with dignity. Ultimately, the research hopes to make a contribution towards the development of educational initiatives, programs and policies that promote a healthier, more informed generation who are comfortable in engaging with menstrual health in a way that fosters understanding, well-being and inclusion.

1.1 Menstrual Health Effects on Everyday Life

A key issue such as menstrual health is often neglected although it affects women's physical, emotional, and social well-being. Access to proper menstrual health resources and education, especially in underprivileged communities can be severely limited by stigma surrounding menstruation. Research has shown that knowledge and viewpoints toward menstrual health are crucial in determining menstrual practices.

A study conducted by the National Institute of Health (NIH) in 2017 aimed to assess knowledge, beliefs, and source of information regarding menstruation, and to assess hygiene among girls from low income families in the United States. This study reported that menstrual hygiene was unsatisfactory among adolescent girls and recommended that girls should be educated about the facts of menstruation and proper hygienic practices early in their lives as part of their school education. In 2006, Amin and Ahmed found that many urban adolescent females have limited knowledge about menstrual health, which can lead to poor menstrual hygiene and negative health outcomes. This lack of awareness, combined with societal restrictions, creates a barrier to embracing proper menstrual health practices. A study by Castro and Mang in 2024 highlighted the importance of breaking this type of silence. Their work showed that group discussions among both genders could significantly reduce menstruation-related stigma and increase the adoption of menstrual health technologies. Similarly, in 2022 Babbar et al. insisted that menstrual health should be recognized as both a public health and human rights issue, emphasizing its impact on women's health, dignity, and ability to participate in daily activities. Furthermore, it was pointed out by Cotropia (2019) that inadequate menstrual health management in schools leads to poor attendance resulting in poor academic performance. The study also highlighted the socio-economic

impacts of menstrual stigma. In 2021, Tomlinson explored that social media plays a crucial role in showing how menstrual memes often support negative cultural attitudes causing menstrual stereotypes to continue. In contrast, initiatives at the UM conference on undergraduate research are targeted to educate and empower individuals in fighting these stigmas, illustrating the critical need for systemic change in both education and healthcare systems. Collectively, these studies underscore the importance of normalizing conversations around menstrual health to globally foster better outcomes for girls and women.

1.2 Myths Surrounding Menstrual Health

Widespread myths and misconceptions around menstrual health continue to generate misinformation and stigma, influencing young peoples' attitudes toward menstruation. The article Amin (2006) in their study of the knowledge, attitudes, and consequences of menstrual health highlighted several myths commonly associated with menstruation, including ideas that menstruation is essentially "unclean" or that discussing it publicly is inappropriate. The study states that these myths contribute to low esteem, negative self-image, detrimental habits, destructive behaviors, and unhealthy actions among the young generation and propose that school education should seek to address such misconceptions through formal education to improve menstrual health practices and encourage a positive stance toward menstruation.

1.3 Public Perception and Beliefs

Societal prohibitions and discomfort widely affect public perception of menstrual health. As an example, young peoples' willingness to discuss menstruation related topics get affected by social stigmas. This can worsen feelings of shame or embarrassment. McHaffie, S. J. (2022) in her paper pointed out that social and cultural factors shape public attitudes toward menstruation. Through interviews with athletes, stakeholders, and adolescents, this study highlighted that while awareness of menstrual health is growing, menstruation is still widely viewed as a taboo topic.

Castro, S., and Mang, C. (2024) in their study underlined how public opinions and the role of community discussions play an important role in questioning menstrual health stigmas. The study states that embarrassment and silence among developing teenagers are triggered by peer pressure and notions around menstruation. They highlight that in some cultures, menstruation is still associated with "uncleanliness" or "impurity," and that generally creates barriers to good health practices and support. They recommend open community discussions which can help alleviate such negative perceptions and lead to acceptance of menstrual health as a natural, healthy part of life. This can empower youngsters with the support and confidence they need.

Gender sensitivity often influences society and support systems. The article written by Casola, et al. (2024) emphasized the gaps in menstrual health education, stating that men and boys demonstrate limited knowledge of menstruation and perpetuate misunderstandings and stereotypical perceptions contributing to a negative or uncomfortable attitude toward the topic. The authors recommend that incorporating menstrual health into broader family health discussions could encourage empathy across genders, promoting a more supportive environment for individuals dealing with menstrual health issues.

Tomlinson (2021) in his paper assessed how media, particularly, social media reinforces gendered stereotypes around menstruation. This study focuses on the portrayal of menstruation in social media as a source of absurdity or emotional instability, which reinforce negative stereotypes among viewers and give rise to a culture of mockery and dismissal that discourages young women from openly discussing their menstrual health. The study emphasizes that gender-sensitive education and accurate media representation could help to strike off the biases that are difficult to change and promote a healthier attitude leading to more compassionate and inclusive communities.

1.4 Associated Health Effects of Menstrual Health Issues

Various physical and psychological health outcomes are connected to menstrual health. Houston et.al. (2006) in their study map the patterns of knowledge accumulation, attitudes and consequences of menstrual health among urban adolescents. They bring to light the health risks associated with limited menstrual health knowledge among adolescents. The lack of understanding about proper menstrual hygiene could lead to not only health issues such as reproductive tract infection but also to poor mental health. Young girls may experience added anxiety, discomfort, and social withdrawal during their menstrual cycles, often due to inadequate support or resources. In such cases, a comprehensive menstrual health education from an early age was recommended. .

Babbar et.al. (2022) in their study on menstrual health technologies discussed the physical and psychological impacts of menstrual health such as pain and infections as well as anxiety and social isolation. The researchers found that initiatives to increase awareness about menstrual products such as reusable pads and menstrual cups, can empower young women to manage their menstrual health more effectively. They nevertheless add that the success of such initiatives heavily depends on cultural beliefs and practices surrounding menstruation. To overcome this barrier, the authors advocate in favour of making menstrual products available in schools and clinics to empower young women in managing their health with ease and dignity.

1.5 Menstrual Health and Its Importance in Public Policy

Menstrual health is gaining significance in public policy due to its intersection with education, public health, human rights, and gender equity. Despite greater societal awareness, many communities still lack access to menstrual health resources, which affects individuals' educational outcomes economic opportunities and quality of life. According to Babbar et.al. (2022) menstrual health should be treated with the same importance as other public health issues, highlighting that inadequate access to menstrual resources can limit one's ability to participate fully in society. Policies that ensure equitable access to menstrual products, accurate information, and adequate facilities in schools and public spaces are recommended as essential steps toward supporting menstruating individuals' rights.

This need for policy-driven support is echoed by several scientists and public policy advocates such as Cotropia, C. A. (2019) who in their research on menstruation management in United States Schools highlight that limited resources and stigmatization around menstrual health in schools can negatively impact attendance, learning and academic performance, specifically among adolescent girls. The research advocates for a policy to include menstrual health education into school curricula and providing access to period products in school bathrooms. This, they add, will also help resolve the problem of absenteeism among young girls due to menstruation and normalize public conversations on the issue and create a more supportive learning environment among adolescents irrespective of their gender identities.

Paul, M., Graham, L., Haynes, M., Ragar, S., & Tucker, K. (2019) presents a similar argument for policy intervention. This research explores the role of public dialogue in transforming menstrual health perceptions and policy particularly for adolescents who are often exposed to stigmatized attitudes about menstruation from an early age. The authors advocate for policies that encourage open discussions about menstrual health in schools and public settings, which would promote a supportive environment for a more inclusive view of menstruation as a natural biological process. This would be foundational for driving a policy-driven change on a larger scale.

2. Research Method

2.1 Research Design

This study utilized a quantitative, cross-sectional survey to research the awareness and perceptions regarding menstrual health among high school adolescents. The survey method was chosen for its efficiency in capturing a wide range of responses and highlighting knowledge gaps, attitudes, and beliefs on menstrual health in a large adolescent sample set.

2.2 Sample Selection

The sample included high school students between 14-18 years of age. This sample represented a typical adolescent population within which menstrual health awareness and perceptions are still developing. The survey was distributed electronically through school and social networks to maximize reach and accessibility. Both male and female students were invited to participate, with questions designed specifically for each gender to capture gender related differences in menstrual health awareness, perception, and associated stigmas.

2.3 Survey Instrument

Existing literature on adolescent menstrual health awareness was leveraged to develop the survey instrument. It was structured to address the specific patterns of knowledge, perception, and attitudes. Questions were divided into sections for both male and female respondents, as outlined below:

The section on “Knowledge and Awareness of Menstrual Health” sought participants' basic understanding of menstrual health. Questions on knowledge about menstruation, the age at which they first heard about menstruation, knowledge about sanitary products, and observed experiences of menstruators, aimed to assess participants' foundational knowledge.

In the section on “Attitudes and Perceptions Toward Menstruation” participants were asked to think about their thoughts, feelings and beliefs about menstruation. Gender-specific questions were added to capture differing views to examine the perceptions of menstruation and gender differences. If they feel shy or uncomfortable during your menstrual cycle and do they avoid activities during the period were among the questions asked to female respondents. Meanwhile, male respondents were asked questions about their comfort levels when talking about menstruation with your female friends or family. They were also asked if they were ever formally educated about the process of menstruation and informed about its associated social and health issues. These questions were set to understand the gendered aspect of menstrual health.

The third section of the survey explored myths and misconceptions to identify common misunderstandings about menstruation. The questions included their understanding about activities such as swimming during their period or if they believe that menstruation is ‘unclean’ or ‘impure’.

Finally, the survey explored school education and awareness sources, asking questions about where they first learned about menstruation and if they think schools should provide more education on menstrual health. These questions focused on the understanding of the role of formal education in forming awareness and attitudes toward menstrual health.

Overall, the survey utilized multiple-choice, Likert-scale, and open-ended questions to obtain both qualitative insights and quantitative data. Likert-scale questions sought responses from “Strongly Agree” to “Strongly Disagree,” providing an understanding of attitudes and perceptions.

2.4 Data Collection

As stated earlier, the study utilized an electronic survey to collect responses from adolescent male and female high school students specifically from Michigan, California, Virginia, Pennsylvania as well as from Hungary. The online format allowed for wide accessibility and minimized social bias in terms of desirability, because respondents were asked to complete the survey anonymously if they chose, at their convenience. A period of three-weeks was provided to collect responses to the survey.

3 Research Analysis

A total of 30 responses including 15 male respondents and 15 female respondents were obtained by using an electronic survey. Survey respondents were first asked general questions such as their age and gender, which were followed by a set of 13 questions that sought to map their awareness, understanding and perception on topics such as menstrual health awareness, menstrual hygiene management, knowledge and myths, and general perceptions.

One of the questions asked in the menstrual health awareness section was “Where (or from who) did you first learn about menstruation?”; approximately 76.7% respondents reported learning about menstruation in school, while 36.7% chose parents as their primary source of information; social media and friends both emerged as the third popular choice (30%) and lastly was health professionals (6.7%). These results make sense as you would generally learn from your community and family, and only when a concern arises relating to menstruation would someone seek out help from a health professional.

When asked about symptoms associated with menstruation, mood swings were the most commonly reported, with 96.7% of respondents mentioning them. Other frequently reported symptoms included abdominal cramps (93.3%), bloating (80%), fatigue (73.7%), and nausea (70%).

Approximately half of the sample reported being unaware of the health disorders associated with menstruation. Among those who were aware, disorders such as Polycystic Ovary Syndrome (PCOS), Premenstrual Syndrome (PMS), and Endometriosis were the most commonly reported. This lack of knowledge of health disorders associated with menstruation is odd since around 56.6% of respondents reported feeling informed or very informed about menstruation.

An intriguing observation emerged from the questions on awareness of menstrual products. Even among adolescents today, 26.7% reported knowing about or using cloths for menstrual hygiene management. This contrasts with the popular perception and the widespread use of modern hygiene products, such as sanitary pads and tampons, which were reported by 86.7% and 93.3% of respondents, respectively.

Table 1: Awareness of Menstrual Products

What type of menstrual hygiene products are you aware of?	Frequency	% Total
Sanitary Pads	26	86.7%
Tampons	28	93.3%
Menstrual Cups	18	60.0%
Cloths	8	26.7%
I do not know	1	03.3%

When asked “How often in a day should menstrual hygiene products be changed?”, 46.7% responded every 4-6 hours, 20% responded every 2-3 hours, and 3.3% reported every 6-8 hours. Important to note that 30% reported not knowing. When asked if any activities should be avoided during menstruation, it was encouraging to see that 63.3% of students argued that there shouldn’t be anything to avoid during menstruation. Although, not surprisingly, 26.7% responded that swimming should be avoided, 6.7% responded with religious activities, and 3.3% responded with strenuous exercises. Important to note that 66.6% reported not knowing/none. These results are interesting. Swimming can be associated with staining, or getting blood in the pool. While the 6.7% of respondents who reported religious activities, they also added that such beliefs are often ingrained early.

Only 20% reported menstruation being a taboo subject in their community, while the rest of the respondents weren’t really sure, or thought it wasn’t. Only 26.7% reported a firm yes on feeling comfortable discussing menstruation with their family.

Count of Do you feel comfortable discussing menstruation (or related topics) with your family?

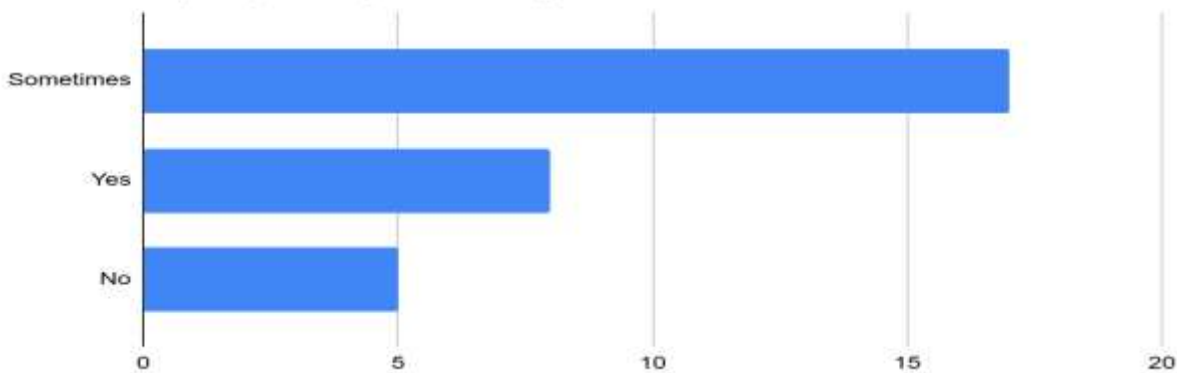


Figure 1: Comfort Level of Discussion

Although many reported menstruations not being a taboo in their communities, we still see evidence of people not feeling comfortable discussing it with friends and family.

When asked, “What changes (if any) do you think are necessary to improve menstrual health awareness in your community?”, many respondents answered “None” or “I don’t know.” However, some suggested increasing access to menstrual products in places like schools and breaking the stigma by normalizing conversations about menstruation, which was encouraging to see.

Respondents were then asked gender-specific questions based on their answers to the gender question. Female respondents were asked about their personal experiences. Among them, 53.3% reported experiencing health issues related to menstruation. The most commonly reported issues included irregular periods (70%), mood swings (60%), and severe abdominal cramping or heavy bleeding (50%). When asked where they seek information or help regarding menstrual health, parents (86.7%), health professionals (53.3%), and friends (46.7%) were the top sources. This aligns with the 53.3% who reported health issues, explaining the significant reliance on health professionals for guidance.

This contrasts with an earlier question about where respondents first learned about menstruation. Approximately 76.7% reported learning about it in school, followed by parents (36.7%). Media and friends tied for third place (30%), while health professionals were the least mentioned source (6.7%).

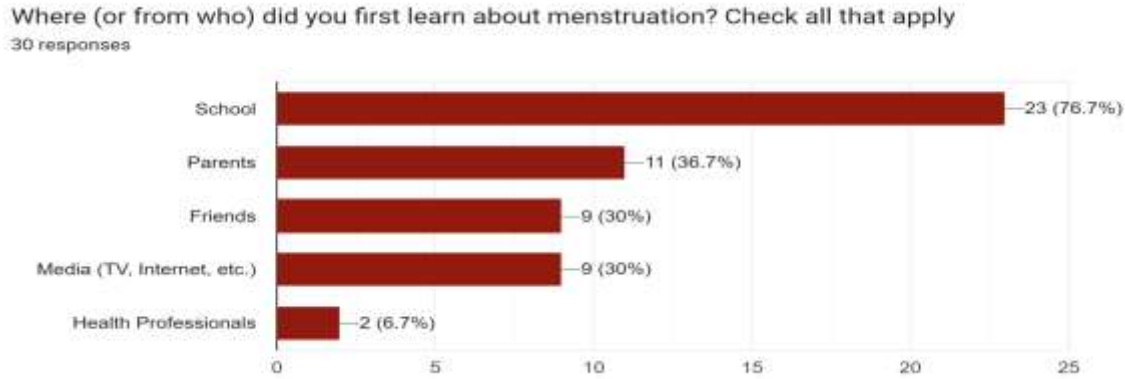


Figure 2: First Learning of Menstruation

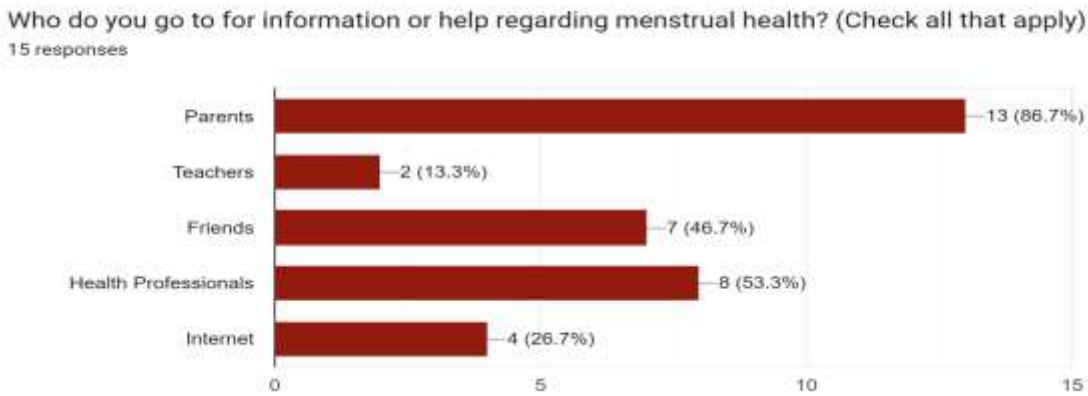


Figure 3: Source of Help Regarding Menstruation

4. Discussion

The analysis of survey data provides key insights into the awareness and perception surrounding menstrual health among adolescents. Although menstrual health is broadly taught in schools, a significant knowledge gap nevertheless persists regarding proper hygiene practices and menstrual disorders. It was reported by over half of the survey respondents that they are unaware of conditions such as endometriosis, premenstrual syndrome (PMS), and PCOS despite having a good general understanding of menstruation. The lack of education on complex menstrual health issues highlights the gap, although education covers basic physiological aspects of menses.

It is common for families to avoid talking about menstruation until their child starts having it. Many respondents stated that they only learn about menstruation at school, which may be explained by this delay in starting conversations. Menstruation is still associated with feelings of shame and disgrace, which makes teenage girls feel more at ease asking family members for advice at home rather than in class or among friends. This interaction emphasizes how, even in more progressive settings, menstruation is still stigmatized in society.

The majority of respondents are familiar with products such as napkins and tampons, however some adolescents reported awareness or use of cloth during menstruation. This highlights surprising insights about menstrual care routines. Among the various types of menstrual hygiene products that are

available in the U.S, clothes are not commonly used or known especially in the present day and age where both governments and private sector companies have introduced several innovations like tampons and sanitary napkins for menstrual use. Although most respondents reported using such products, the fact that some students continue to choose cloth as a menstrual product was unexpected and quite concerning. Such a response can be viewed as a reflection of the cultural and/or personal preferences, or economic limitations among young menstruators. Across the globe, cloth is more commonly used in regions such as parts of Africa due to limited access to modern products. This raises questions about access and education even in parts of the world where most of the population enjoys a relatively higher standard of living.

Although the survey indicated relatively low levels of school absenteeism due to menstruation, many females reported attending school while feeling fatigued or that they experienced cramps during menstruation which affected their focus in class. Some respondents expressed the desire for teachers to be more understanding and to allow them bathroom breaks when needed. These findings reflect the ongoing challenges of stigma and embarrassment that many females face, particularly in academic environments. These observations also bring to light the physical and emotional impact of menstruation on adolescents.

Another key finding has been the gender differences in awareness and viewpoints toward menstruation. A few families who were requested to ask their high schoolers to participate in this study informed that they are not comfortable having a conversation about this topic with their children. Largely, female respondents were observed to demonstrate higher levels of awareness and identified areas needing improvement, however male respondents were inclined towards choosing simpler answers and reported lower comfort levels discussing menstruation with family members and peers. Many males did not think about the need for improving menstrual health perception in their communities, in stark contrast to females, who highlighted the importance of increasing access to menstrual hygiene products in schools, and improving educational efforts in order to normalize menstruation. One female respondent even emphasized the necessity "to inform males in high school," underscoring the gender gap in awareness and the importance of inclusive education.

Overall this study highlights the fact that there is a critical need for extensive menstrual health education among adolescents that includes physiological aspects as well as menstruation disorders, cultural stigma, and gender-inclusive approaches. By addressing these disconnects, the existing cultural perceptions and stigma surrounding menstrual health can be reduced, stimulating empathy, and ensuring that all adolescents are equipped with the knowledge and resources they need for optimal menstrual health outcomes.

Conclusion

This study was aimed at examining and assessing the level of the awareness and perception of menstrual health amongst adolescents. It endeavored to bridge a gap of inquisition that had not been addressed in the past by concentrating on the specific understanding and misapprehension that adolescents have towards menstrual health, especially within the high school environment. The importance of this study is that it seeks to contribute towards educational programs and policies which seek to destigmatize and normalize the discussions surrounding menstrual health.

Major conclusions from the study include a wide awareness of the symptoms of menstrual health, however there was very little understanding of menstrual disorders and hygiene control. Furthermore, despite the extensive education of menstrual health in the school, cultural myths and gendered understanding of menstruation still exist. The study focused on how many adolescent girls have also been educated on menstruation processes, however there was quite a willingness gap to discuss the educated matter among the male students.

A limitation of this study is the relatively small sample size of 30 respondents that can be argued as insufficient to fully represent the diversity of the adolescent experience and knowledge. Future studies should expand on this research by including a larger and more diverse sample, as well as incorporating qualitative interviews to gain deeper insights into the personal beliefs and experiences of adolescents. Despite such shortcomings, the relevance of this study lies in its potential to influence future educational initiatives and public policy. By addressing the knowledge gaps identified in this study and promoting more inclusive, gender-neutral approaches to menstrual health education, which can better equip adolescents to manage their menstrual health confidently and without shame. This research underscores the importance of normalizing menstrual health discussions to foster a more informed, inclusive, and supportive society.

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