



The Knowledge, Attitude And Practice In Menstrual Hygiene Among Females Of Reproductive Age Group: A Systematic Review

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Abstract

Menstruation is a physiological process that all females undergo during their reproductive cycle. During this process, blood and tissues from the uterine lining flow out through the vagina. According to the WHO, Menstrual hygiene is a critical concern for women and children in the reproductive age group. Menstrual hygiene requires access to basic hygiene products and facilities, including suitable clothing, absorbent materials, water, soap, and private restrooms. The search method we used was to discover published papers on menstrual hygiene. The literature search was done in the different databases of English language publications between Jan 2020 – May 2024 (Google Scholar and Scopus). A total of 161 were shortlisted from 1618 articles as per the screening criteria. The search investigated the articles since 2020, full-text articles, open access, and published in English. The three major problems with the menstrual hygiene crisis are a lack of knowledge, supplies, and services. This leads to poor reproductive health and impact on the environment. In low and middle-income countries, there is a lack of knowledge, attitude, and practice regarding menstrual hygiene among females in the reproductive age group. This is related to economic factors, social stigma, shame, and embarrassment that prevent females from maintaining menstrual hygiene, pointing to the need for educational programs.

Keywords: Menstruation, Menstrual Hygiene, Menstrual Hygiene Management, Reproductive age, Knowledge, Attitude, Practice

Introduction

Menstruation is a physiological process experienced by all females during their reproductive period, in which blood and tissues from the uterine lining discharge through the vagina. It can be defined as “periodic discharge of blood from the uterus that happens about once a month throughout the active reproductive life of a female” Fingerson (2012). It usually lasts approximately five days and the volume of blood lost is approximately 30 ml (Hallberg et al., 1996). Although menstruation is a normal process, it is connected with certain misconceptions and practices that could affect menstrual hygiene (Bobhate and Shrivastava, 2011). Furthermore, among the various health issues reported by WHO, menstrual hygiene is a critical concern in females of the reproductive age group. Menstrual hygiene requires access to basic hygiene products and facilities, including suitable clothing, absorbent materials, water, soap, and private restrooms [Majeed, 2022]. It has been

observed in the literature that women and girls experience shame and embarrassment alongside other obstacles, like lack of funds (WHO,2022). Religious and cultural taboos about menstruation are often made worse by beliefs about bad spirits and feelings of shame and embarrassment regarding sexual reproduction. There are ideas, stories, and taboos in many countries about periods. There are usually social norms, or unwritten rules, about how to deal with periods and how to talk to women who are having periods. Some are helpful and some might turn out harmful (Kaiser).

As time changes, from cloth pieces (sometimes combined with hay, leaves, wood shavings, sand, grass, charcoal, ash, or newspapers) to Sanitary Napkins which are disposable, our society has come a long way in terms of getting modern, easy-to-find products that can improve health and hygiene. In India, menstrual hygiene products are divided into three main groups based on how they affect the environment: The options for reusable menstruation products include menstrual cups, cloth pads, and hybrid pads with a non-cloth barrier. Additionally, compostable items such as sanitary pads and tampons are available, made from pulp derived from wood and banana fibre. The non-compostable category includes panty liners and sanitary pads made from cellulose but with plastic barriers or hyper-absorbent polymers [Dasgupta,]. Disposable Sanitary Napkins might be a safe choice for girls and women if they are changed often and used properly, but there are rising concerns about how to properly dispose of and treat sanitary napkins. Due to a lack of understanding of correct disposal methods, women often dispose of their menstrual waste in public spaces, sewer systems, landfills, rural fields, and bodies of water (Kaur et al., 2018).

The practice of menstrual hygiene in low and middle-income countries has posed a significant challenge to many menstruating women due to a lack of awareness or access to menstrual products. (Majeed, 2022; Habtegiorgis, 2021 and Yalew, 2021). Also, it has been reported in the literature that girls and women who want to handle their periods without shame or stigma need to be able to access water, sanitation, and hygiene (WASH) facilities, as well as cheap and suitable monthly hygiene products, knowledge on good practices, and a helpful atmosphere (World bank, 2023). Approximately, 70% of the reproductive health issues in Indian women are caused by not taking care of their menstrual hygiene. However, most of the time, the lack of knowledge among girls and young women, especially adolescents, is the basis for poor menstrual hygiene practices (Yalew, 2021 and Nabwera, 2021). The three major problems with the menstrual hygiene crisis are a lack of knowledge, supplies, and services. This leads to poor reproductive health and impact on the environment (Sivakami. Further, inadequate access to hygienic menstrual products such as clean water, clean toilets, and soaps poses many difficulties to practising menstrual hygiene in many parts of the developing world (Mohammed et al., 2020). Further, the factors that may contribute to menstrual hygiene practices are the age of the girl or woman, the duration of the menstruation cycle, and the education level of the mothers [Neupane et al., 2020]. Girls and women who use sanitary products require proper knowledge about how to dispose of them properly, wash their genitalia, and then wash their hands to practice menstrual hygiene (Torondel et al., 2022). Limited knowledge of menstrual hygiene promotes unhygienic practices that negatively impact young girls' health, reproductive health, and education.8. Furthermore, the low level of knowledge points to the need for policies to improve knowledge and safe, hygienic practices toward menstruation in institutions (Nair et al., 2012).

Literature has reported that over 500 million women and girls globally lack adequate menstrual hygiene management (MHM) facilities. Menstrual hygiene management (MHM) refers to the availability of clean materials for women and girls to absorb or collect menstrual blood. These materials should be easily changed in private as necessary throughout their period each month. In addition, individuals should have the ability to use soap and water as required and have convenient

access to appropriate disposal facilities for discarded menstruation management products (Budhathoki et al., 2018). Often, unhygienic menstrual practices result in minor health issues like rashes or itchiness in the genital area, a bad odour, or major health issues like PID (pelvic inflammatory disease), cervical cancer, poor quality of life, and toxic shock syndrome (Bhusal, 2020). These factors can contribute to a consistent pattern of school absences, a high rate of drop-outs, poor performance in school, and lowered self-confidence among females who menstruate [Bhusal, 2020 and Sahiledengle et al., 2022]. It is important to comprehend medical service quality in rural India (Rana et al., 2023). To prevent the consequences mentioned above of menstrual health issues, girls must know about practising menstrual hygiene. According to this line of conceiving, women and girls in the reproductive age range are surveyed to determine their knowledge, attitudes, and practices about menstrual hygiene management.

Materials and Methods

Search strategy: The search method we used was to discover published papers on menstrual hygiene. The literature search was done in the different databases of English language publications between Jan 2020 – May 2024 (Google Scholar and Scopus). A total of 1618 articles were identified, and 273 articles were shortlisted as per the screening criteria. The screening criteria included articles since 2020, full-text articles, open access, and published in English language only. The keywords used for the search were: menstrual hygiene, menstrual hygiene management (MHM), menstruation, and menstrual hygiene practice (MHP). The studies, not related to menstrual hygiene and the duplicated articles, were eliminated after the review, and finally, 161 were selected for the systematic literature review.

Inclusion Criteria: The papers had to be original primary research that was published in a peer-reviewed magazine, written in English, and in the public domain. The studies that could be included were descriptive, cross-sectional, experimental, observational, and qualitative.

Participants: All papers must include analyses relevant to menstruating females only. The articles related to research on pregnant women and menopausal women were excluded.

Exposures: To be eligible papers clearly describe menstrual hygiene awareness, knowledge and practice.

Outcomes: All of the studies were required to examine the assessment of knowledge, attitude, and practice on menstrual hygiene among women.

Data extraction: For this study, titles and descriptions were first screened online to make sure that the papers that were included generally met the beginning criteria for what to include and what to leave out. It was possible to get as many full-text papers as possible once the list of descriptions was ready. The papers were checked to make sure that they didn't use the same set of data in more than one place. The extracted information from the studies included details such as the research design, the characteristics of the population and sample size, and the practices related to menstruation care.

The design and methods for this systematic review adhere to the guidelines set out by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) as shown in Figure 1

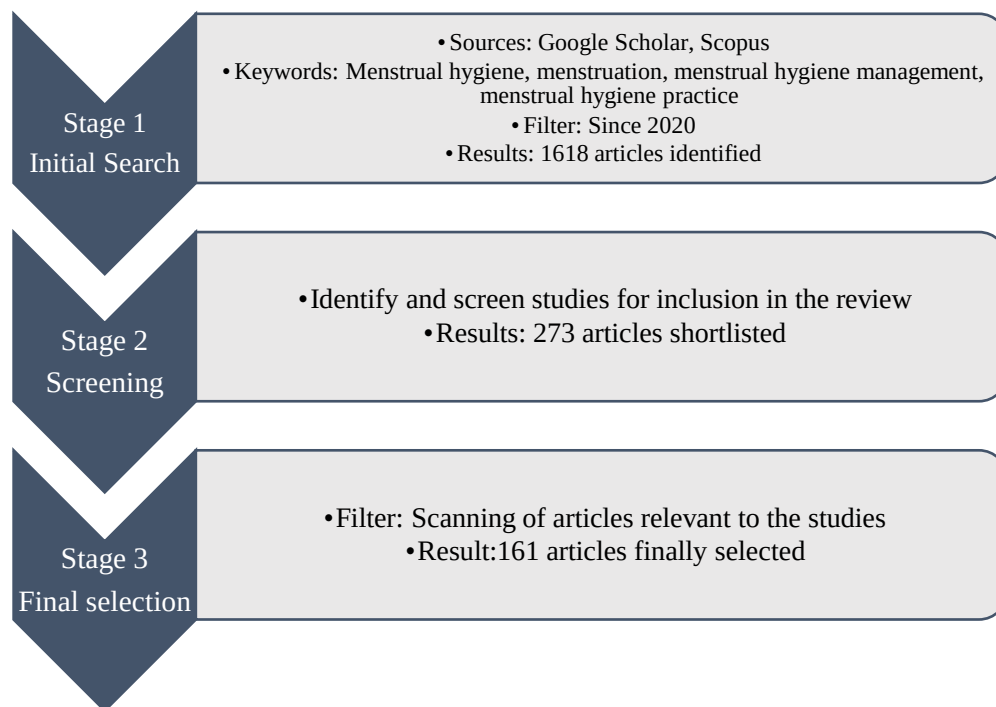


Figure 1: PRISMA Framework

Results

A total of 161 were shortlisted from 1618 articles as per the screening criteria. The search investigated the articles since 2020, full-text articles, open access, and published in the English language. The information retrieved from the various studies data is interpreted under the following headings:

Documents by the subject area: As per the review, it was found that the maximum researches were performed in the area of medicine (58.4%) followed by social sciences (13.5%). The various subject areas in which the studies were published included Environmental Studies (8.2%), Multidisciplinary (6.1%), Nursing (4.5%), Psychology (2.4%), Immunology (2.1%), Biochemistry (1.9%), Pharmacology (1.3%), Health professional (1.1%) and others subject areas (0.5%).

Documents by subject area

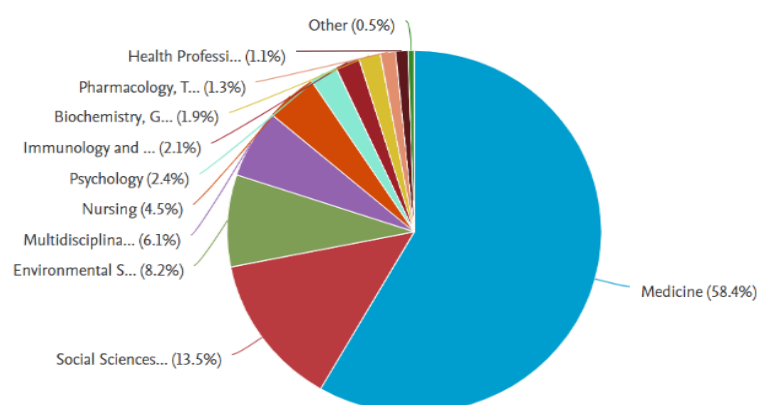


Figure 2: Documents by Subject Area

Documents by year: The documentation of the studies was analyzed as per their year of publication. It was found that there was an increase in the research in the field of menstrual hygiene from 2020 to 2022, however, a decline was observed after 2022 and this decline continued even in 2024.

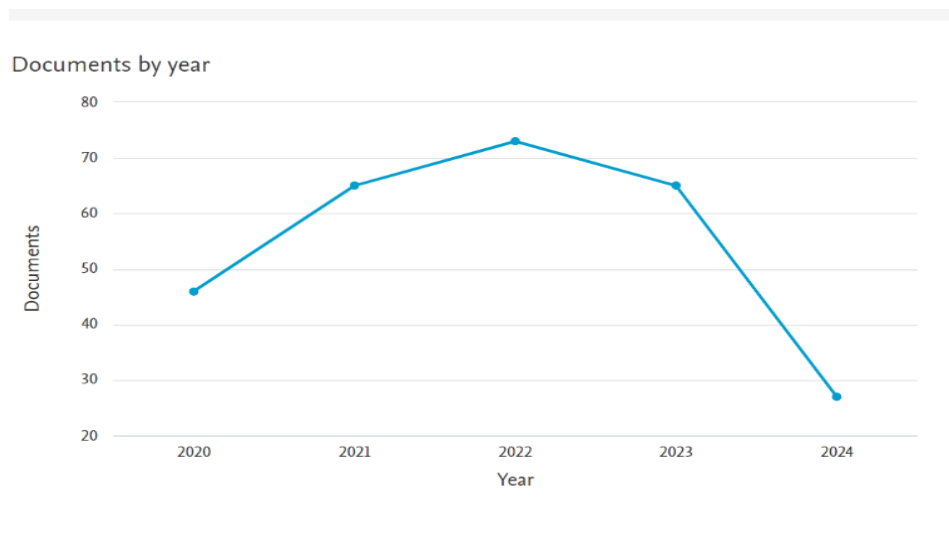


Figure 3: Documents by Year

Documents by Country or Territory: The documents were also classified by country or territory in which the studies related to menstrual hygiene were conducted. The majority of the available literature was conducted in the United States, followed by India, the United Kingdom, and Australia and the rest studies are from Bangladesh, Ethiopia, Canada, Nigeria, Ghana and Nepal.

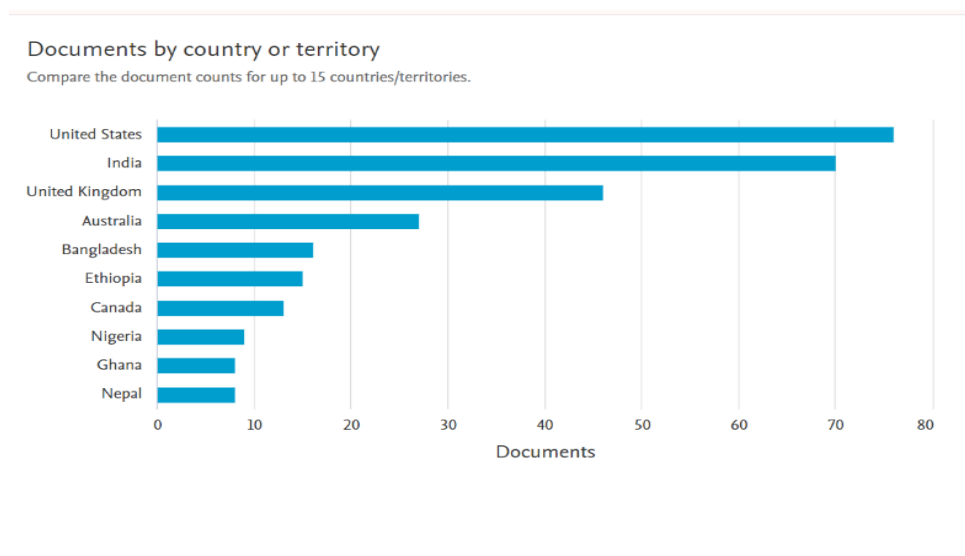


Figure 4: Documents by Country

Documents by the type of studies: The studies were conducted to identify the knowledge, attitude, and practice of girls in menstrual hygiene. The majority of the literature available was conducted on practice followed by knowledge and practice, knowledge, attitude and practice and rest of the literature was conducted on attitude followed by knowledge.

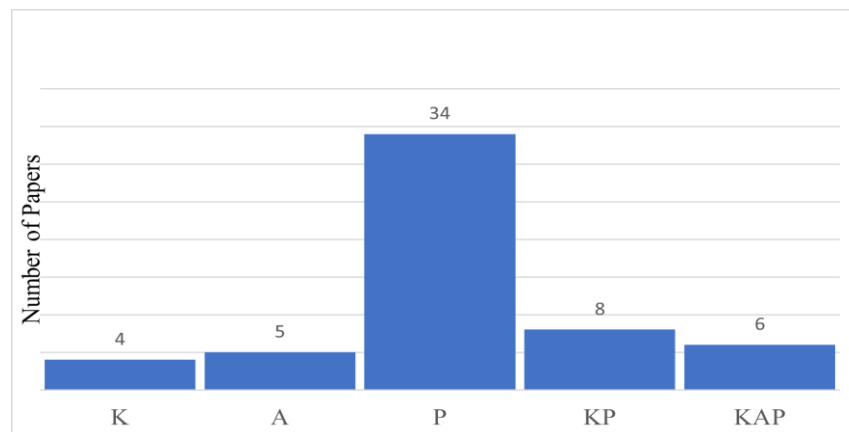


Figure 5: Studies related to knowledge, attitude and Practice only (K=Knowledge, A=Attitude, P=Practice, KP= Knowledge and Practice, and KAP= Knowledge, Attitude and Practice)

Documents by the type of studies: The studies that were conducted on menstrual hygiene and menstrual hygiene management (MHM). The figure 6 explains that this current literature includes maximum studies from menstrual hygiene management followed by menstrual hygiene.

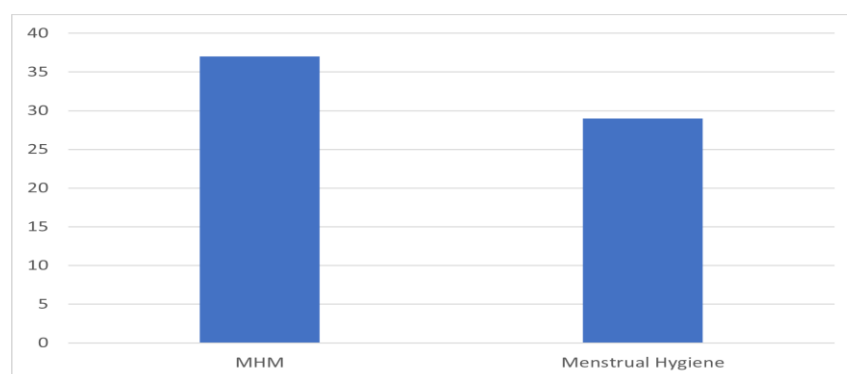


Figure 6: Studies related to Menstrual Hygiene Management and Menstrual Hygiene

Studies related to menstrual products:

The current study includes the literature in which maximum studies were about menstrual cups, pads and tampons followed by studies about pads and tampons, others i.e. overall menstrual hygiene and products and the remaining studies were about menstrual cups, pads and menstrual cups and pads only.

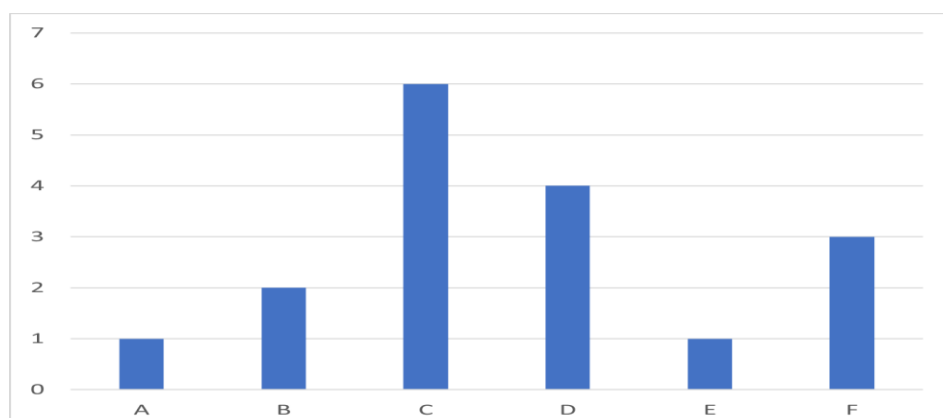


Figure 7: A– Pads, B– Menstrual Cups, C– Menstrual Cups, Pads and Tampons, D–Pads and Tampons, E– Pads and Menstrual Cup, F– Others

Discussion

Menstrual hygiene is the practice of keeping the body clean during menstruation. It requires simple amenities such as suitable clothing, soakage materials, water, soap, and bathroom facilities with privacy. Lack of menstrual hygiene in terms of bad odour, irritation, or rashes in the perineal area might result from poor personal hygiene and ineffective period control techniques (Kumar et al., 2017). The current study has been designed to understand the level of knowledge, attitude, and practice of menstrual hygiene among females of the reproductive age group. The data for this literature review was extracted from Google Scholar and Scopus. While reviewing the literature, it was observed that there was a constant increase in the conduct of studies from 2020 to 2022, but a fall was noted following 2022 and this decline continued even in 2024. As menstrual hygiene is an important area of concern for females, extensive research is required.

According to the current review, most of the research on menstrual hygiene is conducted in the United States, followed by India. In the Indian scenario, menstrual hygiene is a neglected area due to various factors such as societal taboos, and demographic and socioeconomic aspects. Poor menstrual hygiene practices depend on the education and financial conditions of females. In recent years, several government and non-governmental organizations in India have implemented programs to enhance menstrual hygiene management (Meher and Sahoo, 2023).

It has been identified from the literature that maximum studies i.e., 60% have focused on the practice of menstrual hygiene. While other studies i.e., 14% have assessed the knowledge and practice collectively for menstrual hygiene. Furthermore, a significant portion of the literature looked thoroughly into the knowledge, attitudes, and practices related to menstrual hygiene among women in the reproductive age group. The other studies focused on attitude, and knowledge of menstrual hygiene separately as 9% and 7% only. It is important to understand that good menstrual hygiene practices are necessary to avoid urinary and reproductive tract infections during menstruation as it help to maintain the cleanliness of the genital regions, thereby building confidence in daily activities (Hussein et al., 2022). The various reasons for the failure to maintain menstrual hygiene include lack of adequate water, sanitation and hygiene (WASH) facilities and insufficient knowledge on menstruation and menstrual hygiene and these pose feelings of shame and uncomfortable in girls and women (Van et al., 2016). Poor ways to maintain menstrual hygiene may lead to major long-term impacts, including withdrawing from school, being married at a young age, restricted movement, delayed personal development, irregular menstrual cycles, and several kinds of reproductive and mental health problems (Lagana et al., 2017).

Menstrual hygiene management refers to the necessary actions and basic requirements that are crucial for maintaining cleanliness during menstruation. These amenities include a restroom equipped with running water and soap, sanitary pads, and a designated area for the proper disposal of menstrual hygiene products (Davis et al., 2018). The recent study revealed that most research focused on menstrual hygiene management, closely followed by menstrual hygiene. Menstrual hygiene management has been a difficult problem in underdeveloped nations because of water shortages inadequate access to WASH facilities and lack of privacy particularly for in-school female students (Sommer and Sahin, 2013). Menstrual hygiene management is an inconvenient and inappropriate experience for millions of women in India, even though there are more than 355 million girls and women in the country who have menstruation (Geertz et al., 2018).

To practice menstrual hygiene, there are various products used by females to manage menstrual cycles safely and with dignity. The various available commercial goods for women's hygiene during menstruation are sanitary pads, tampons, and menstrual cups (Abor, 2022). As per the literature reviewed in the current study, 17% of the studies examined the various products used in managing

menstruation. Over the last four years, the maximum number of research studies (35%) has been conducted on menstrual cups, pads, and tampons. Further, 24% of the literature included the studies concerned with the utilization of pads and cups and 12% included the usage of menstrual cups only, and 6% sanitary pads and cups. It is surprising to observe that sanitary pads are the maximum choice of usage by females and very less studies are reported in the literature accounting for 6% only. Females encounter various obstacles when it comes to managing menstruation. These include inadequate knowledge of safe methods, restricted access to hygienic supplies and proper sanitation, and a lack of encouragement from family members and teachers. Initiatives to improve the outcomes on the health of females require consistent improvements in knowledge, attitude and practice towards menstrual hygiene and its management.

Conclusion

Females in the reproductive age span, particularly in low and middle-income countries, have limited awareness, perspective, and practice of menstruation hygiene. This is related to economic factors, social stigma, shame, and embarrassment that prevent females from maintaining menstrual hygiene, pointing to the need for educational programs. As menstrual hygiene is the need of every female in the reproductive age group, therefore, providing accurate information on menstrual health and hygiene management through hygiene education is crucial.

Limitations

The source of data extraction is Google Scholar and Scopus only.

Recommendations

There is a need for a collaborative effort between government and non-government organizations to effectively coordinate an awareness campaign for menstrual hygiene and its management for females. Menstrual hygiene requires menstrual materials for management so it is important to make safe menstrual materials affordable and easily accessible to females.

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