



Awareness about Menstrual Hygiene Management among Visually Impaired Adolescent Girls

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Abstract

Menstruation is a physiological process in which females of reproductive age shed their uterine lining each month. Disabled persons may experience several forms of discrimination while they are menstruating since disability has a stigma. The current review aims to evaluate visually impaired adolescent girls' needs for menstrual hygiene, the obstacles they face, and the interventions that can assist them in managing their periods in a sanitation and respectful way. The year 2015 to December 2022, a comprehensive search of relevant previously published articles taken from (PubMed, Google Scholar, and Global Health) provided the basis for this literature review. As per the findings of the present studies, there is very little information available on how to manage the menstrual hygiene of a visually impaired girl. Blind girls face prejudice and limitations, issues related to menstrual hygiene management for the blind are significantly more complex than for other members of the community. From the available literature, it was noted that the braille method, tactile method, audio drama etc., have proved useful in providing information about the management of menstrual hygiene. During the review literature, we found that most of the time girls get information about menstruation hygiene from their mother or their experience and learn. Menstruation hurts their physical, emotional, mental, and social well-being.

Keywords: Adolescent, Health, Menarche, Menstruation Hygiene, Visually Impaired

1. Introduction

Globally around 3.85 billion people do not have access to basic hygiene services at their health care facility, with 688 million receiving care at facilities that do not provide any hygiene services at all¹. Menstruation starts in girls in adolescence, they menstruate 11 to 12 times a year and in their whole life, they must spend 3000 days in menstruation^{2,3}. Disability causes significant behavioural and lifestyle changes in teenage females, resulting in physical, psychological, and social difficulties. Those without vision will probably be unable to determine the beginning or end of their period⁴. Good hygiene practices, such as the appropriate use of sanitary pads and thorough hand and genital cleaning, are crucial for all teenage girls to know and follow during menstruation, but it can be

challenging for visually impaired girls. A double stigma for girls and women is brought on by social conventions regarding gender, menstruation, and disability. Visually handicapped in our society, girls have typically been a socially underprivileged group. A substantial percentage of disabled girls drop out of school. Menstrual-related physiological and psychological symptoms may have an impact on mental health outcomes⁵. Additionally, menstruation is linked to nuseveralchological symptoms, such as emotions of persecution, higher levels of anxiety, dysphoria, and judgements of poor self-esteem⁶. This review paper aims to explore the current state of awareness about menstrual hygiene management among visually impaired adolescent girls, highlighting the challenges they face and potential solutions. Comprehensive research, studies, and interventions in this area are essential to

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promote better menstrual health and overall well-being for visually impaired girls.

1.1 Menstrual Hygiene Management and its Importance

Menstrual hygiene management refers to the practices and measures taken by women and girls to ensure cleanliness and comfort during menstruation. Proper MHM is crucial to preventing infections, and discomfort, and maintaining overall health.

1.2 Menstrual Hygiene Management Among Visually Impaired

Management of menstrual hygiene is a global public health issue that necessitates both local and individual support to get rid of positional restrictions and make it possible to work safely and independently⁷. Despite its importance for women's advancement in the social, economic, and educational spheres, menstrual management is often neglected. According to WHO and UNICEF (2012), menstrual hygiene includes knowing how to manage menstruation with dignity and without discomfort or fear, using clean menstrual management materials to absorb the blood, washing one's body as necessary with soap and water, and having access to dispose of spoiled menstrual materials⁸. The attention on MHM has developed over a decade. A socio-environmental system for MHM was made for students and their families (Emory College, UNICEF, 2013) for instance⁹. Adolescent females with visual impairments must practice basic period hygiene, including using sanitary pads and cleaning their hands and genitalia thoroughly^{4,10,11}. Studies have shown that visually impaired women are more aware of menstruation management and cleanliness, with 73.33% of participants regularly cleaning their genital area and 76.67% taking daily showers. However, blind women do not regularly clean their genitalia or shower, and 66.67% of participants dispose of used menstrual absorbent products properly. Menstrual hygiene management is crucial during menarche and menopause, and tracking one's cycle can help visually impaired adolescent girls determine their period¹². New menstrual products are being developed for disabled women and girls, and education for adolescent girls with vision impairment can transform communities¹³. The braille method is a useful method for providing information about menstrual hygiene and maintaining it. Mental health outcomes may

be influenced by menstruation-related physiological and psychological symptoms.

1.3 Difficulties in Adolescent Girls with Vision Impairment Face during their Periods

About 52% of the world's women, 26% of the population, are reproductively active. For two to seven days every month, most of these women and girls menstruate. Menstruation is a natural part of the reproductive cycle in which blood is expelled from the vagina. However, it is still taboo and rarely discussed in most parts of the world¹⁴. One in two visually impaired women reported having issues with their periods, most often low back, and stomach pain. This study's findings are comparable to those of research done with sighted women. Certain individuals visually impaired face difficulties in dealing with their well-being^{15,16}.

1.4 Psychological Difficulties

Menstruation is a major issue for many adolescent girls in this region, causing anxiety, stress, shame, and confusion. During their monthly cycle, many girls do not attend school. Depending on how each girl sees the coming changes that prepare her for womanhood, the onset of a girl's period is typically accompanied by either a feeling of excitement or fear. But for many girls, it frequently results in a break in their schooling.

According to Brock, Rowse, and Slade, Periods are linked to several psychological indicators, including perceptions of poorer self-esteem, greater levels of anxiety, dysphoria, and sensations of persecution¹⁷. According to van Iersel, Kiesner, Pastore, and Scholte, behavioural signs such as a decline in social interaction throughout the menstrual cycle can lead to depression and feelings of loneliness¹⁸. Most non-disabled adolescent girls take the ability to change a tampon for granted whereas visually impaired girls face shame and stigma during their periods. Adolescent girls who are adequately informed about managing their periods have higher self-esteem¹⁹. Lack of access to sanitary products and other menstruation necessities like water may lead to an increase in discrimination against girls and women with disabilities. Because menstrual products are so expensive, many people who can't afford them utilise materials like bark, paper, or cloth to absorb their monthly blood¹³.

1.5 Physical Difficulties

Roughly 75% of people experience Premenstrual disorder (PMS) during menstruation²⁰. Adolescent females who are blind or visually impaired experience dysmenorrhea during periods in around 40% of cases²¹. Blind girls face many obstacles during menstruation. Rarely are menstrual products designed for people with disabilities. With incorrect information and methods, managing menstruation may be particularly challenging for adolescent girls who are visually impaired. Dysmenorrhea, or physical pain and discomfort, affects 45 to 95 per cent

of women surveyed⁵. Poor menstrual hygiene practices are associated with reproductive and genitourinary tract infections, cervical cancer, and a poor quality of life²².

1.6 Other Difficulties

500 million blind women and adolescent girls around the world are unable to pay for safe period products and birth health care. Statistics show that disabled people are more likely to be poor or have low income¹³. Menstrual product affordability is a problem in many nations, particularly for those from lower socioeconomic classes. To absorb

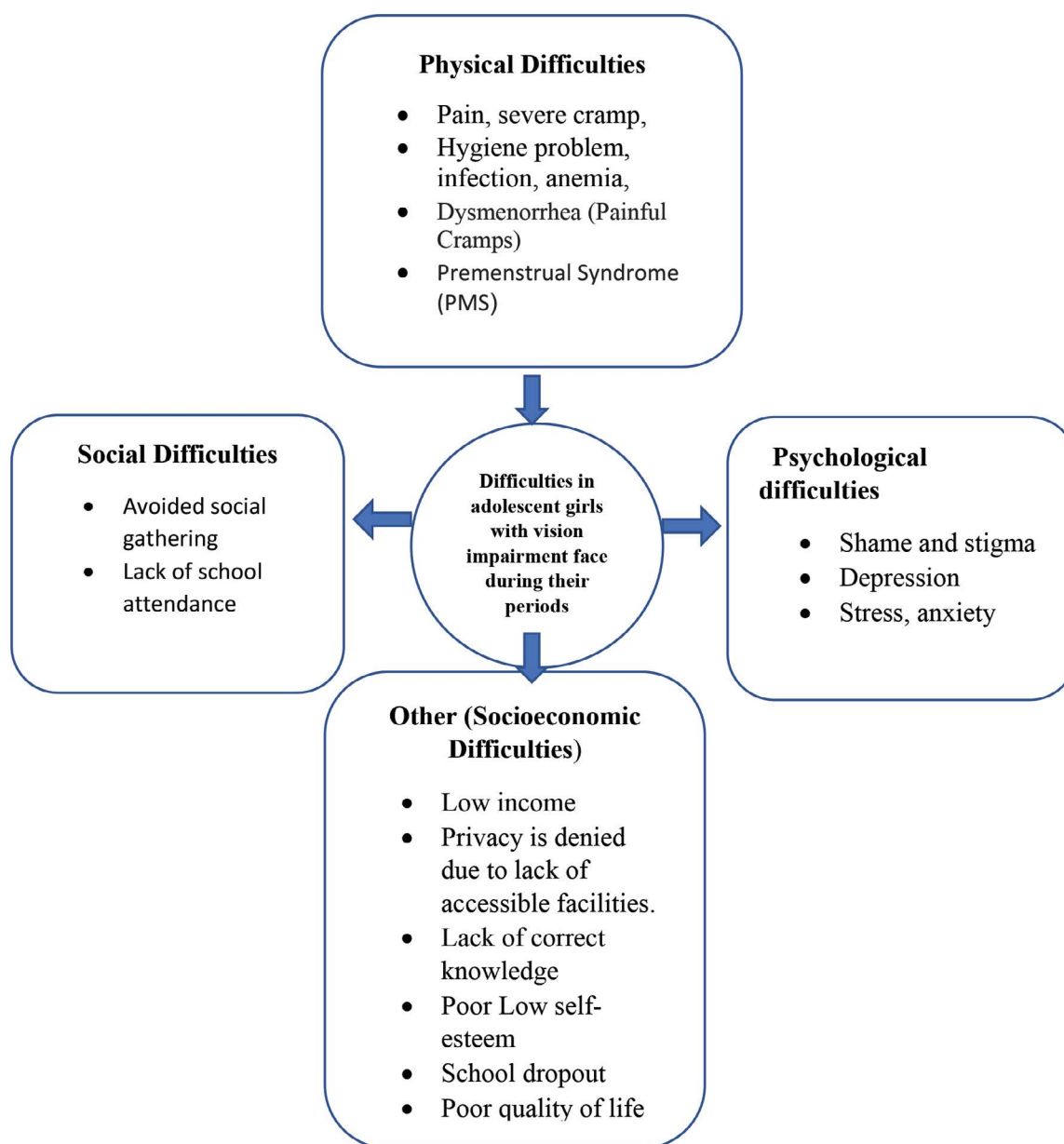


Figure 1. Difficulties adolescent girls with vision impairment face during their periods.

menstrual blood, individuals in many low- and middle-income countries utilize bark, paper, sand, dirt, or linen²³. Numerous bathrooms are inaccessible to the visually impaired girl due to a lack of accessible facilities. Girls with vision impairment are not sufficiently educated about their periods due to cultural taboos around the world. Menstruation is a taboo Menstrual education for visually impaired girls tends to be difficult to understand or access¹³. Poor menstrual hygiene practices are associated with school dropout, poor academic performance, low self-esteem, and a poor quality of life²³. Figure 1 depicts the difficulties adolescent girls with vision impairment face during their periods^{5,13-16,18,19,22,23}.

The current review’s objective is to assess the menstrual hygiene requirements of visually impaired adolescent girls, the challenges they confront, and the interventions that can help them manage their periods hygienically and respectfully.

2. Literature Search

There have been various literature searches done between the years of 2015 and April 2022. In December 2022, a thorough search of already published, pertinent publications from many databases (PubMed, Google Scholar, Global Health) served as the basis for this literature evaluation. The subsequent keywords were employed: Menstruation, menarche, menstrual hygiene, teenage females, information, and cultural and social customs. The Summary of the utilized articles is given in Table 1.

2.1 Inclusion Criteria

- Only full-text versions of English articles are accessible.
- Human subjects were used in the research.
- In studies where different menstrual hygiene practices were used as management in visually impaired females.

Table 1. Summary of literature review

Study	Title	Participant	Methodology	Conclusion
Arunachalam <i>et al.</i> ²⁴	Awareness and Practice of Menstrual Hygiene among Visually Impaired Adolescent Girls: Using Braille Methods	The study was carried out in a public high school and centre for blind girls’ career development. There were thirty samples taken, 14 from the first group and 16 from the second.	In this study cross-sectional research, a structured questionnaire created by Belayneh and Mekuriaw was employed for analysis using the statistical software tool SPSS 18 (Statistical Tool for the Social Sciences).	The teenage females who were blind had no understanding of or experience with menstruation hygiene. Guidance on menarche and menstruation should be given using suitable teaching tools, such as audio drama, braille, and tactile approaches.
Poudel <i>et al.</i> ²⁵	Knowledge and Practice Regarding Menstruation among the Visually Challenged Female Snepaltudents of Westen	The study had been containing 121 Western Nepalese female students who were visually impaired and had reached menarche.	A cross-sectional study analyzed female students with visual impairments in 20 schools in Western Nepal, collecting data using census techniques and conducting semi-structured interviews. questionnaire to get the data.	In this study, it was shown that almost half of the respondents did not have a sufficient understanding of menstruation and practice. The research indicates knowledge and practises are strongly related. Knowledge is a powerful instrument that will impact women’s excellent practises. Therefore, in future, a focus on educating women and raising their awareness of menstrual-related concerns should be made.

Table 1 to be continued...				
Wilbur <i>et al.</i> ²⁶	Qualitative study exploring the barriers to menstrual hygiene management faced by adolescents and young people with a disability, and their careers in the Kavrepalanchok district, Nepal	Twenty disabled people aged 15-24 who were experiencing great difficulty during menstruation were included. purposive sampling was applied to select the participants.	Phenomenological research, qualitative approaches, in-depth interviews, observation and photovoice were some of the several methods utilized to investigate the MHM barrier and NVivo 11 was used to examine the data.	This study revealed that the issues associated with MHM for persons with disabilities are significantly more complex than for others. Menstrual restrictions were generally observed by people, which was common and anticipated; many participants worried about mockery if they didn't. The discomfort of my period was a significant barrier. This is a prime example of the various forms of discrimination present since disability is often viewed as a misfortune.
Asha and Eljo ¹³	Knowledge and practices about Menstrual hygiene management Among adolescent girls with vision Impairment (agave)- a case study	Adolescent girls with vision impairment from the age of 11 to 19 years are interviewed in this study.	To conduct this qualitative study research used five case studies of teenage females with visual impairment. The interview schedule includes inquiries regarding one's personal background, menstrual knowledge, and practises.	The current study explained prevalent myths and misunderstandings about menstruation, and the case study describes the emotional struggles and suffering faced, particularly during menstruation, by adolescent females with vision impairment. There is a difference between the relationships between teachers and students and those between parents and children. Due to their handicap, individuals are kept ignorance about the concept and practice of managing menstrual hygiene
Kurdy <i>et al.</i> ²⁷	Effect of structured audio educational sessions on visual challenges adolescent schoolgirls knowledge and practices regarding menstruation	A convenience sample of fifty-three blind adolescents was taken at the Al-Noor School for the Blind, Mansoura, Egypt.	A one-group pre- and post-test quasi-experimental study design was used.	The audio-educational sessions improved the visually impaired schoolgirls' knowledge and practices regarding menstruation as adolescents.
Dundar and Ozsoy, ²¹	Menstrual hygiene management among visually impaired women	187 visually impaired women using the purposive sampling method.	The descriptive research approach was used for this investigation, which was carried out between 2017 and 2018.	The study found that visually impaired women struggle with Menstrual Hygiene (MHM) and struggle with controlling periods independently. They used various indicators to determine menstruation, and one-fourth struggled to understand the menstrual cycle conclusion. Most women needed assistance from their mothers.

Table 1 to be continued...

Wea <i>et al.</i> ²⁸	The experiences of visually impaired teenage girls on menstrual hygiene management: a qualitative study	This research included six vision-challenged adolescents.	With six visually impaired children qualitative design was used to fulfil their objective and data was collected through structured recorded interviews.	The study's findings show that blind youngsters continue to have both mental and physical disabilities. The results of this study were anticipated to serve as a source of knowledge for the development of psychological support for children who are visually impaired to maintain the health of their reproductive systems.
Kanmani and Ravisankar, ²⁹	Prevalence of Menstrual problems and Treatment seeking behaviour: A study among visually challenged. Women	468 visually impaired women from 16 districts of Tamil Nadu	To find the sample from districts with a consortium of NGOs engaged in providing rehabilitation services for the blind, a qualitative method was used. The research population was selected using snowball sampling techniques.	Disabled women should be mainstreamed by taking specific steps to improve their reproductive health education, which will enable them to practice safe and hygienic menstruation break free from traditional beliefs, misconceptions and restrictions regarding menstruation and break away from prevailing ideas, myths, and limitations.

2.2 Exclusion Criteria

Research on populations that do not relate to visually impaired females.

3. Result and Discussion

Menstruating girls and women have unique health and hygiene needs, and the study of Menstrual Hygiene Management (MHM) highlights these needs as well as the knowledge, information, resources, and facilities required to properly and quietly manage menstruation³⁰.

The study was carried out in a public high school and centre for blind girl's career development. Visually impaired adolescent girls require menstrual hygiene guidance through audio drama, braille, and tactile techniques. Medical carers can promote mindfulness and conceptual well-being²⁴.

It is critical to understand the necessity for appropriate practises and media attention on menstrual hygiene since there is a strong correlation between adolescent education and awareness of menstruation¹². Even the little knowledge they frequently obtain from religious organisations, their classmates, and family members is

frequently biased and surrounded by misconceptions. Keeping this in mind, Asha and Eljo did a study in 2020.

Asha and Eljo's, research explore menstrual hygiene knowledge and practices among adolescent females with visual impairment, addressing myths and misconceptions about menstruation and puberty. The study highlights feelings and suffering experienced during menstruation and emphasizes effective management¹³.

Even the tiniest pieces of information they typically receive from friends, family, and religious institutions are frequently selective and surrounded by lies¹⁹. Additionally, because of the smell, dropping of sanitary products during class times, leakage, and stains on clothing, girls have commonly felt anxiety, uncertainty, and embarrassment during their menstrual cycle³¹. Information on juvenile young ladies regarding the monthly cycle is poor and their menstrual hygiene management is not right¹⁹. Hands were not washed before and after the use of menstrual management products to prevent infection³².

Dundar *et al.*, conducted a study with women who were visually challenged and knew how to maintain their menstrual hygiene in 61.5% of cases. 49.5% of them said their moms taught them this information²¹.

In this context, a different survey on typical women with comparable findings reveals that just 45.9% of girls received their education from their moms³³. Mothers in Taiwan and India don't talk to their daughters much about menstruation-related topics since they regard it to be a private matter^{34,35}.

Self-care is equally crucial throughout the menstrual cycle. When service providers do act, they usually focus on the physical components of intimate and personal care since they are generally left to manage the problems on their own. Use of accommodations and assistance, health, and hygiene concerns such as preventing cross-infection, etc. are a few examples^{36,37}.

In some other studies with concern to family care the mothers, especially in the two studies that looked at the care provided within the family described feeling overloaded and helpless due to the lack of support, information, or direction they received regarding how to manage their daughter's menstrual cycle³⁵. In an Indian study, mothers limited their daughters' physical activity when they were on their periods to keep them from sporting blood-stained attire outside³⁸. 95.7% of women use sanitary pads, with 52.4% changing them four times daily. Only 52.9% entrust menstrual hygiene to others. Teenagers track cycles and use blood smells. Physically restricted women struggle with period management, and only half receive assistance from executives²¹.

The braille system, created in antiquity, aids visually impaired girls in learning essential information. It includes various devices like a panda, refreshable, and rotatable displays³⁹. For tactile learners, multi-sensory learning involves directly touching or experimenting with materials, enhancing their learning experience⁴⁰.

To consider this in mind Subtathra was also conducting a study in the same manner to explore mensural hygiene management in visually impaired girls. Subtathra *et al.*, lead a review to distinguish the connection between information and the practice of feminine cleanliness²⁴. This study was carried out in a government secondary school and centre for blind students. Thirty samples, 14 from the former and 16 from the latter, were gathered his findings show that teenage females with vision impairments have minimal experience with menstruation hygiene. All these conclusions were supported by Wilbur *et al.*, in Nepal. 83.33% of visually impaired adolescent girls agreed that during menstruation, dirty blood left the body and as a result, they were forbidden from going

into the kitchen, touching people, or going to church²⁶. Guidance on menstruation and menstruation should be given with the help of proper training resources like audio drama, braille, and tactile methods. Women and people with disabilities can count on nurses to raise awareness and support for reproductive health.

Audio-based learning effectively informs the illiterate and semi-literate, complementing distance learning. Audio drama inquiry is a dialogic process that allows multiple perspectives to speak, enabling emotional and intellectual separation while bringing listeners closer to the investigated topics⁴¹.

In this context, a study was done by Kurdy *et al.*, on how we can increase our knowledge and awareness about menstruation management using audio drama²⁷. The study investigates the impact of structured audio-educational sessions on menstruation knowledge and practices among visually impaired adolescent girls. Results show significant improvement in knowledge and satisfaction among blind women. These findings agree with those of Jeyanthi⁴². The results of this study are equivalent to those of an experimental study conducted in Egypt in 2015 on 71 adolescent blind schoolgirls at El-Nor and El-Aml institutions to investigate the impact of health education classes on reproductive health among blind adolescents. They discovered that the pupils' performance had improved practises related to reproductive health, exercise, and personal hygiene⁴².

Neelkanth, Singh, and Bhatia's exploratory study on 197 Indian juvenile schoolgirls found that mothers were the primary experts on menstrual hygiene⁴³. In contrast, Gultie, Hailu, and Workineh's cross-sectional study found high school teachers as the primary sources of knowledge, improving students' comprehension of the topic⁴⁴.

Additionally, research by Samantaray *et al.*, examined the knowledge of 40 visually impaired adolescent females on personal hygiene and another investigation conducted in India on 300 students found substantial changes between pre-test and post-test⁴⁵. Statistically significant changes occurred in the level of knowledge in several reproductive health care topics following a periodic health education intervention plan⁴⁶. A study analysed menstruation issues faced by visually impaired women, finding that 57% of monthly issues have not been resolved. To improve reproductive health, mainstream disabled women should receive better reproductive health education, enabling safe and hygienic practices. Raising

awareness of menstruation from an early age could help millions avoid pain^{29,47}. A study examines menstrual hygiene management for visually challenged adolescent females, finding urogenital disease symptoms more prevalent in reusable absorbent pads and period-related problems, particularly low back, and stomach pain^{16,29,48}.

A study by Wilbur *et al.*, found that people with disabilities face barriers to menstrual hygiene management, including unavailability of WASH offices, isolation, and discomfort with menstruation. Caregivers experienced feelings of being overwhelmed and isolated, and many participants feared ridicule. Girls struggled with attendance and limited access to sanitary products due to limited knowledge about menstruation²⁶. In another supportive study conducted by (Mathiyalagen *et al.*) Feminine cycle is an achievement occasion in a young lady's life and the start of a regenerative life⁴⁹. Teenage girls frequently practise poor personal hygiene practices and are unaware of the menstrual cycle, which can result in odour, genital tract infections, and urinary tract infections. Awareness-raising and advocacy programmes should be created for both females and the public to enhance knowledge and safe sanitary practices¹⁹.

4. Conclusion

As per the findings of the present studies, there is very little information available on how to manage the menstrual hygiene of a visually impaired girl. Blind girls face prejudice and limitations, issues related to MHM for the blind are significantly more complex than for other members of the community. In the above studies, we found that the braille method, tactile method, audio drama etc, have proved useful in providing information about the management of menstrual hygiene. During the review literature, we found that most girls get information about menstruation hygiene from their mothers and most girls self-experience and learn. Menstruation hurts their physical, emotional, mental, and social well-being.

Future perspective research on menstrual health awareness among visually impaired adolescent girls should focus on studies, interventions, and policy changes to address cultural and social challenges, enhance knowledge, and ensure exclusivity in menstrual health programs. These programs aim to create a supportive environment, provide counselling, and boost self-confidence.

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