

# Challenges and Coping Strategies in Menstrual Health and Hygiene Management Among Girl Children With Hearing Impairment: A Systematic Review

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## Abstract

Menstrual health and hygiene is an important element of a female's well-being; however, it is often overlooked, particularly among girls with disabilities, with those who are hearing impaired being especially vulnerable. Hearing impairment also called as invisible disability due to the lack of visible symptoms, it is marginalized in communities and neglected by the policy makers. The females with hearing impairment face communication challenges, cultural taboos and a lack of tailored education which results in a gap in understanding and managing appropriate menstrual health and hygiene. This study deals with the challenges and coping strategies experienced by girls with hearing impairment and caregivers regarding menstrual health and hygiene. The objectives of the study include 1) To examine the challenges faced by girls with hearing impairment in managing menstrual health and hygiene, and 2) To identify the challenges faced and strategies employed by caregivers in supporting girls with hearing impairment in menstrual health and hygiene management. The study adopts a systematic review approach by drawing on from existing interdisciplinary literature, including public health, disability studies and inclusive education, to explore the perspectives of caregivers and girls with hearing impairment related to menstrual health and hygiene. Eligible studies were gathered from databases like MEDLINE, PubMed, Global Health, Google Scholar, ResearchGate, DSpace, etc. Data from 21 studies were extracted, organized, and thematically synthesized to highlight the key challenges and strategies reported across studies. The findings reported that girls with hearing impairment and their caregivers faced challenges like communication barrier, lack of information, social stigma, vulnerability, inadequate WASH facilities, and lack of support. The study reveals a major gap in the preparedness and support of caregivers and girls with hearing-impairment, which highlights the need for an inclusive, culturally sensitive interventions. The study recommended for inclusive menstrual health education designed specifically for catering the needs of differently-able females.

**Keywords:** challenges, strategies, menstrual health and hygiene and hearing impairment.

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## INTRODUCTION

Every woman has the right to maintain her dignity, and her menstruation health and hygiene are basic components of her well-being. There is more focus on menstruation public health and gender equity. However, much focus has not been directed to girls and women with disabilities in terms of the gender and public discrimination. There are paradoxes in the gender, disability, and the sociocultural isolation. The girls with hearing disabilities face difficulties with access to proper educational systems. They also lack proper communication tools, and are bound by societal norms which particularly contributes to a gap in their awareness of menstrual hygiene and health.

Hearing impairment has commonly referred to as an invisible disability (Ashraf, Iqbal, and Jahan, 2023). A kind of disability which shown no visible symptoms. Many times, hearing impairment does not occur alone, it affects their cognitive (Kronenberger et al., 2014), social, and family life too (Cruz et al., 2013), these areas often influence one another.

The primary caregivers and educators of these girls are usually their parents especially mothers, elder sisters, relatives, or teachers who have a pivotal role in guiding them throughout their menstrual journey. The parents of children with hearing impairment often face several stereotype and prejudices. Even today in the 21st century the

society excludes hearing impaired individuals from communities and considers them weak (Jha and Singh, 2022). The stigma is further compounded for female hearing-impaired individuals, who face double marginalization which affects them socially, emotionally and their academic performance. The girls also face problems in sequential memory and attention span.

Upbringing hearing impaired girls is a unique challenge for the parents. Their physical, social, and physiological needs differ from other girls. The parents or caregivers are required to give more time and energy and have patience while dealing with them on a day-to-day basis. Due to lack of respect towards inclusive and cultural taboos in our society many parents feel burden and guilty in supporting and caring for their girls. The caregivers may often feel a sense of social isolation and negative self-attitude. Although the caregivers somehow deal with their offspring but the attitude of the society towards them makes them emotionally disturbed.

While dealing with girls with hearing impairment the caregivers play an important role in passing on the correct information, providing emotional support and even demonstrating practical assistance, all this should be personalized according to the needs of the girls. A study mentioned 53.3% parents of hearing-impaired children reported frequent need for respite and other services (Syed, Awan, & Syeda, 2020). The caregivers fulfil their responsibilities through visual pictures, using Indian sign language, engaging the peers and siblings, taking the help of professionals like health professionals and educators, etc. The government also is focusing on the installation of accessible sanitation facilities in schools and public areas so that the girls with any kind of developmental disabilities can manage the health and hygiene with dignity.

Despite all the efforts of the caregivers and government, the caregivers still face many challenges like lack of proficiency in Indian sign language, insufficient training of the professional caregivers, limited access to adequate resources, cost of resources, many public facilities lack disability-friendly sanitation amenities, and even social stigma and taboos. Any kind of psychological disabilities make care giving burdensome, and many time caregivers become hasty and strict. A study revealed higher stress levels due to educational aspect, healthcare, etc., in parents whose children are diagnosed with hearing impairment (Ashraf et al., 2023). The strategies, perspectives, and challenges of the caregivers and educators may differ and remain unexplored in addressing about menstrual health and hygiene.

Girls with hearing impairment go through all the physiological and psychological changes and discomforts along with the communication barrier. Majority of the girls with hearing impairment suffer from dysmenorrhea (Rathod & Gohil, 2022) and have a poor perception regarding puberty and healthy lifestyle (El-Halim et al., 2024). Every female, irrespective of socioeconomic background and any type of impairment, deserves to experience menstruation without fear, confusion, or shame. This is possible only when education, resources, infrastructure, and community care come together in a way that truly supports them.

### **Objectives of the Study**

The objectives formulated to fulfil this study were

- i. To examine the challenges faced by girls with hearing impairment in managing menstrual health and hygiene,
- ii. To identify the challenges faced and strategies employed by caregivers in supporting girls with hearing impairment in menstrual health and hygiene management.

## **METHODOLOGY**

### **Study Design**

The researchers undertook a systematic review by devising a distillation framework to sieve through, analyse and consolidate various pieces of literature regarding the girls with hearing impairment and their caregivers' thoughts and feelings about the menstrual health and hygiene. This review primarily focuses on primary data, testimonies, and narrative data in other works to bring to light not only the barriers and but also the inventive solutions to menstrual health and hygiene management.

### **Search Strategy**

In this research, a search strategy was used to analyse and identify existing literature on menstrual health and hygiene practices of girls with disabilities, particularly hearing impairment. Researchers used various databases and scrutinized various terms and phrases which included, “menstrual health and hygiene,” “menstrual health

strategies for specially-able girls,” “barriers faced by caregivers in managing menstrual health” and “perspective of hearing-impaired girls on menstrual health and hygiene.” To enhance the accuracy of the search, these terms were fused to a Boolean method and adjusted accordingly to the classified style of each database.

**Databases Searched**

To identify suitable studies, a database full text search was carried out. Databases search work included: Directory of Open Access Journals (DOAJ), MEDLINE, PubMed, Global Health, Google Scholar, ResearchGate, Elsevier, Springer, Scopus, and other relevant interdisciplinary repositories for public health, disability study, and inclusive education. These databases were selected for their breadth and depth of coverage for both peer-reviewed and Grey literature on the menstrual health and hygiene of girls who experience hearing impairment and their caregivers. An overall Google.com search was also executed to find out suitable documents and policies of international organizations like World Health Organization, United Nation Sustainable Development Goals, World Bank, etc.

**Inclusion and Exclusion Criteria**

The researchers set an eligibility criteria for the inclusion of papers.

The criteria for inclusion were:

- Studies which focus on menstrual health and hygiene among girls with disabilities, with specific attention to hearing impairment.
- Studies which presented the insights of the carers, who were professional or family members
- Publications in the English language.
- Studies employing qualitative, quantitative, or mixed-method approaches, including case studies and reviews

No exclusion criteria were set on the geographical region or year of publication. Studies that did not provide empirical evidence on menstrual health and hygiene were set aside. Out of 36 papers initially identified through keyword searches, 21 were found relevant after carefully reviewing their titles, abstracts, and full texts, and were therefore included in the review. A total of 15 studies were excluded because they either lacked empirical evidence, did not address girls with hearing impairment, focused on unrelated aspects of disability and health or were inaccessible in full text. The 21 selected studies were reviewed multiple times to gain familiarity with the content and the extracted information was organized thematically to highlight the key challenges and coping strategies reported in the literature.

**Data Extraction**

An information data sheet was created on Microsoft excel to appropriately gather the information pertaining to the chosen research. The author's name, the year on publication, the nation, the specific research design, the size of the sample, and the means of data collection were all included. Moreover, the findings pertaining to the challenges of menstrual health and hygiene of hearing-impaired girls and the strategies used by the girls and their caregivers were documented.

**Table 1. Summary of Selected Studies’ Key Findings**

S. No.	Author (s)	Design	Sample	Key Findings
1.	Ariantini et al. (2019) Indonesia	Qualitative Study	HI students, teachers, school head & carers (n=19)	Limited Sexual and reproductive health knowledge among students with hearing impairment; instructional challenges reported by teachers.
2.	Arunachalam et al. (2025) India	Phenomenological Study	Visual & hearing-impaired girls (n=8)	Basic knowledge from family sources; self-managed hygiene; no formal MHM education.

3.	Ashraf et al. (2023) Pakistan	Qualitative- Exploratory Study	Mother of Girls with HI (n=20)	Communication and social stigma issues; emotional stress for mothers and daughters. Training support for mothers recommended.
4.	Cruz et al. (2013)	Longitudinal Study	Individuals with HI (n=93)	Higher-level strategies predicted growth in expressive and receptive language; recommended for use in early intervention programs.
5.	Davids et al. (2021) South Africa	Qualitative Study	Caregivers (n=13)	Communication barriers, lack of knowledge, and poor support systems among parents.
6.	Dutta & Chakraborti (2022) India	Comment/Polic y Analysis	Girls with disability	Exclusion of disabled girls from Menstrual Hygiene Scheme; study urged inclusive policy measures.
7.	El-Halim et al. (2024) Egypt	Descriptive Study	Girls with HI (n=30)	Girls with HI have poor knowledge and attitudes regarding puberty, and a healthy promoting lifestyle
8.	K Rathod Jagdish (2023) India	Narrative Review	Girls with HI	Menstrual issues led to absenteeism and poor focus; lack of WASH support affected performance.
9.	Kronenberger et al. (2014) United States	Cross-Sectional Study	Children with Cochlear Implants & normal hearing (n=151)	A large proportion of children with Cochlear Impairment are at risk for clinically significant deficits across multiple domains of executive functioning
10.	Mahmoud and Elmahdy (2014) Egypt	Quasi- Experimental Study	Visual & hearing- impaired girls (n=80)	Reproductive Health knowledge rose from 0% to 58.8% post- training; continuous education recommended.
11.	Maky and Alngery (2025) Egypt	Quasi- Experimental Study	Girls with HI (n=91)	Program enhanced MHM knowledge, attitude, and practices among deaf-mute girls.
12.	Mprah (2013) Ghana	Qualitative Study	Individuals with HI (n=26)	Communication, attitudinal, and service-related barriers faced by deaf individuals.
13.	Mprah et al. (2022) Ghana	Mixed-Method Study	Girls with HI (118 girls, 15 boys, 7 school heads, 6 teachers & 6 mothers)	Limited sanitary resources, unsuitable WASH facilities, health and academic difficulties, and stigma from male peers.
14.	Natarajan (2023) India	Descriptive Study	Girls with HI (n=60)	Minimal knowledge of RTIs among deaf-mute girls due to poor menstrual hygiene awareness.
15.	Rathod and Gohil (2022) India	Cross-Sectional Study	Girls with HI (n=66)	Dysmenorrhea was reported in 63 (95.5%) out of 66 deaf and mute girls.
16.	Sommer et al. (2016)			Schoolgirls in low- and middle- income countries lack guidance, facilities, and materials for managing menstruation; Poor

				menstrual hygiene management increases inequities, risks, and negatively affects education and health.
17.	Syed at al. (2020) Pakistan	Cros-Sectional Study	Caregivers (n=162)	Parents of children with disabilities, including hearing impairment, experience significant stress; those with HI children reported moderate stress levels.
18.	Jha and Singh (2022) India	Experimental Study	Individuals with HI (n=100)	Poor self-esteem in hearing-impaired adolescents, linked to communication-related social challenges.
19.	Wilbur et al. (2021) Nepal	Qualitative Study	People with Disability (20 PWD & 13 caregivers)	WASH barriers for disabled individuals; caregivers lacked support and felt overwhelmed.
20.	Wilbur et al. (2022) Vanuatu	Qualitative Study	Women with Intellectual Disability (17 women & 17 caregivers)	Caregivers reported fear of gender-based violence, income loss during support, and need for more menstrual materials for families with disabled members.
21.	Wilbur et al. (2019)	Systematic Review	NA	Lack of guidance/training, poor symptom awareness, high cost, and unsuitable MHM options.

### Data Analysis and Synthesis

Analysis of the data obtained was thoroughly approached with the use of narrative synthesis approach. The data which was previously separated and gathered from various research was revisited and examined to find patterns, oppositions, and unusual insights. The findings were organized into two main themes – the challenges faced by the girls with hearing impairment and their caregivers in managing menstrual health and hygiene, and the coping strategies adopted by both the girls and their caregivers. This thematic organization allowed the evidence to be presented in a coherent and rich manner while still maintaining the context of the authentic research.

### FINDINGS

The researchers identified the following challenges faced by girls with hearing impairment in managing menstrual health and hygiene:

**1. Communication Practices and Challenges:** Communication emerged as the central barrier to effective MHM education for girls with hearing impairments. The lack of culturally sensitive and age-appropriate visual materials, such as sign language-based videos or pictorial guides, limited the effectiveness of information transfer. Caregivers and girls reported that even when they attempted to communicate about menstruation, they struggled to find the right signs, which led to misinformation or complete omission of the topic. Therefore, more people should be encouraged to learn and understand sign language. Furthermore, studies noted that stigma and embarrassment around menstruation contributed to communication avoidance (Mprah, 2013). This communication gap often left girls confused, fearful, and ill-prepared for menarche and menstrual self-care.

**2. Access to Right Information:** A recurrent theme across the studies was the limited awareness and preparedness of caregivers regarding menstrual health. While many parents, particularly mothers, expressed a general understanding of menstruation, they lacked the resources and training to explain it effectively to a child with hearing impairment. Families still believe in the myths regarding menstrual health and hygiene, they restrict the girls from worshipping, entering the kitchen, cooking to even touching plants. They make them sleep separately as they feel menstrual blood is dirty and contaminating (Wilbur et al., 2021).

**3. Social Stigma and Cultural Restrictions:** Widespread menstrual taboos dictate restrictions such as sleeping separately, and prohibitions on worshipping, entering the kitchen, cooking, or touching plants, stemming from beliefs that menstrual blood is dirty. Girls with disabilities may fear being "doubly cursed" if they do not adhere to these restrictions, as disability is sometimes viewed as a curse itself. Shame and disgust surrounding menstruation, driven by taboos, can lead to feelings of humiliation and guilt for girls relying on carers for menstrual product changes.

**4. Vulnerability and Safety Risks:** Girls with hearing impairment may face increased susceptibility to violence; for instance, they may not hear an intruder approaching if secluded in menstrual huts. One deaf-and-dumb girl in India disclosed experiencing sexual abuse from a neighbour during menstruation management. Carers express concerns about individuals with intellectual impairments (and potentially other disabilities) not following cultural norms, leading to public display of blood-stained clothes, which can result in verbal and physical abuse from the community.

**5. Inappropriate WASH facilities:** Another significant concern was the lack of accessible and disability-friendly WASH (Water, Sanitation, and Hygiene) facilities available at school and in the community. Inadequate infrastructure like absence of clean toilets, disposal mechanism for sanitary products becomes a barrier in managing the menstrual health and hygiene of girls with hearing impairment. The girls with hearing impairment do not feel the WASH facilities in the public are hygienic and comfortable to use (Mprah and Dourinaah, 2021). These challenges are even more severe in special or inclusive schools, where WASH provisions often fail to account for the unique communication and support needs of girls with hearing impairment (Sommer et al., 2016).

To present the challenges and strategies employed by the caregivers in addressing menstrual health and hygiene the researchers developed a structured table:

S.No.	Challenge	Strategy used by Caregivers
1.	Communication Barrier	They use gestures or draw on papers to explain about menstruation and its products. They even use coloured cloth to indicate menstruation.
2.	Difficulty in understanding about menstrual hygiene	They demonstrate how to use sanitary napkins or cloth themselves privately at home. They also help them with cleaning and changing in the initial cycles.
3.	Shyness, embarrassment, and fear during onset of menstruation	They make them stay at home during initial days due to fear of teasing or leakage accidents. Tell them to avoid talking about their menarche to their relatives.
4.	Lack of accessible menstrual hygiene education	They take help of ASHAs, Anganwadi workers, peer group of girls, or any elder women in the community
5.	Inadequate WASH (Water, Sanitation, and Hygiene) facilities	They mostly use and wash reusable cloths but space for washing and drying them was inappropriate; however, commercial sanitary napkins are also preferred but its disposal is not done properly due to privacy at home and hygiene issues. Disposal units missing in schools and centres.
6.	Social stigma and isolation	When girls try to isolate themselves, and avoid meeting their peer groups, the caregivers, try to comfort them by sharing their experiences.
7.	Lack of Support Systems	Caregivers often experience feelings of being overwhelmed and isolated due to a lack of social support and networks for MHM, as menstrual care is considered a very private matter not openly discussed, even with medical professionals. Caregivers may become frustrated repeatedly explaining practices to individuals with multiple impairments who struggle to retain information.

The findings underline a strong demand for an inclusive menstrual health and hygiene scheme involving barrier free technologies, universal teaching designs and training of caregivers (Dutta & Chakraborti, 2022). There is a false notion that the people with disabilities have a different kind of reproductive system, that is why they receive even less information (WHO, World Bank, 2011). Studies mentioned that the educators faced difficulty to provide menstrual health education to girls with hearing impairments even though modules are already developed (Ariantini, Kurniati, and Duarsa, 2019).

The studies done in the concerned area recommend the development of an inclusive, multilingual and sign-language based menstrual health curricula. Apart from this, organization of parental workshops focused on menstrual health and hygiene practices, and implementation of school-based menstrual education sessions (Osman, Zakherah and Bayomi, 2014) led by trained health professionals or counsellor and collaboration with community health workers to promote culturally sensitive and inclusive education materials. There was also a consensus on the importance of involving hearing-impaired girls themselves in the development of MHH programs to ensure their voices and preferences are represented.

## CONCLUSION

The study highlights a critical gap in inclusive health education policies that accommodate the unique needs of hearing-impaired girls. Policymakers must recognize the intersectionality of disability and gender in public health planning. Integrating menstrual education into existing special education curricula, training caregivers in accessible communication, and promoting community awareness are essential steps toward building an inclusive MHH framework. School administrations, NGOs, and health departments should work collaboratively to fund and pilot context-specific interventions that should include provision of accessible sanitary products and menstrual tracking tools, safe and private school sanitation facilities, and teacher-parent communication platforms for ongoing support.

Menstrual health among girls with hearing impairments is not only a health concern but also a matter of dignity, empowerment, and rights. Teachers and parents play a vital role in shaping the menstrual experiences of these girls, yet they often lack the resources, training, and systemic support to do so effectively. This conceptual study reveals that inclusive, culturally appropriate, and communication-sensitive interventions are urgently needed to bridge the gap in MHH support. Addressing these challenges through interdisciplinary and community-driven strategies will ensure that all girls, regardless of disability, can manage their menstruation safely and with confidence.

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