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Menstrual Hygiene Awareness and Management Practices among Visually Impaired Girls: A Case Study of Bhabagrahi Model School for the Sightless in Khordha.

Abstract:

Menstrual hygiene management is essential for the health and well-being of teenage females, especially those with visual impairments who encounter further obstacles in obtaining information and upholding personal cleanliness. This study investigates the awareness, knowledge, and habits about menstruation among visually impaired teenage females at Bhabagrahi Model School for the Sightless in Khordha, Odisha. A descriptive study approach was employed, and primary data were gathered from 15 respondents via a scheduled interview schedule. The results indicate that the majority of participants had a fundamental understanding of menstruation and menstrual hygiene, with parents and guardians being the primary source of information. The majority indicated the utilization of sanitary pads and the implementation of consistent hygiene practices during menstruation. Nonetheless, deficiencies in awareness, communication, and access to menstrual health information were observed among certain groups. The research highlights the necessity for disability-inclusive menstrual health education, parental engagement, and institutional backing to guarantee safe, dignified, and educated menstrual hygiene management for visually impaired teenage girls.

Keywords: Menstrual Hygiene Management, Visually Impaired Adolescent Girls, Menstrual Health Awareness, Menstrual Hygiene Practices,Bhabagrahi Model School for the Sightless, Odisha.

1. Introduction:

Menstruation is a normal biological phenomenon that indicates the commencement of reproductive maturity in teenage girls and women. Although menstruation is a typical natural occurrence, it is encumbered by social stigma, cultural taboos, misconceptions, and insufficient understanding in several regions globally. Efficient menstrual hygiene

management (MHM) is crucial for safeguarding the physical health, psychological well-being, dignity, and social inclusion of teenage girls. Sommer et al. (2016) define menstrual hygiene management as the utilization of hygienic menstrual absorbents, the availability of sufficient water and sanitation facilities, safe disposal methods, and a comprehensive understanding of menstrual health. Nevertheless, millions of girls globally persist in facing challenges in managing menstruation safely and hygienically owing to poverty, insufficient sanitary infrastructure, gender discrimination, and poor reproductive health education. Adolescence is a pivotal phase of transition [1] from childhood to adulthood, marked by substantial physical, emotional, and social transformations. Menarche, the initial menstrual occurrence, is a significant developmental milestone necessitating sufficient preparation, education, and support. Research has shown that insufficient understanding of menstruation and inadequate menstrual hygiene practices can result in reproductive tract infections, urinary tract infections, school absenteeism, diminished self-esteem, and social ostracism (Sumpter & Torondel, 2013; Hennegan et al., 2019). Thus, menstrual health has been progressively acknowledged as a significant public health concern, as well as an issue of gender equality and human rights.

Menstrual hygiene management poses significant challenges for many teenage females, particularly for those with impairments. Disability may impede access to health information, sanitary facilities, and support networks, thereby heightening susceptibility to adverse menstrual health outcomes. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006) underscores the entitlement of individuals with disabilities to equitable access to healthcare, education, and information. Nonetheless, the menstrual health requirements of girls with disabilities have frequently been overlooked in policies, programs, and research endeavors. Their experiences are influenced by several intersecting disadvantages associated with gender, age, disability, poverty, and social exclusion (Kett & Lang, 2015).

Visually impaired teenage females have distinct obstacles in menstruation management across other impairment categories. In contrast to their sighted counterparts, they are

unable to utilize visual indicators to track menstrual flow, recognize stains, evaluate personal hygiene, or autonomously handle menstrual absorbents. Moreover, information on menstrual and reproductive health is frequently conveyed through visual media, therefore restricting accessibility for females with visual impairments. As a result, several visually impaired girls rely on moms, caretakers, instructors, or classmates for support during menstruation, potentially impacting their autonomy, privacy, and self-esteem (Wilbur et al., 2019).

Despite the significant growth in academic interest in menstrual hygiene management over the past decade, research explicitly addressing visually impaired teenage females is still scarce, especially in poor nations like India. Most current research has focused on the menstrual experiences of non-disabled adolescent girls, creating a notable deficiency in comprehending the unique obstacles encountered by girls with vision impairments. Given the growing focus on inclusive health policies and disability-sensitive treatments, it is imperative to investigate menstruation awareness, hygiene behaviors, and support systems for visually impaired teenagers.

This study examines the understanding and behaviors about menstruation hygiene among visually impaired girls enrolled at Bhabagrahi Model School for the Sightless in Khordha district, Odisha. The study aims to integrate menstrual health into the wider context of disability, gender, and adolescent well-being, thereby contributing to the evolving discussion on disability-inclusive menstrual hygiene management and supplying evidence for the creation of accessible and equitable reproductive health interventions.

2. Global Scenario of Visual Impairment among Adolescent Girls

Menstrual hygiene management has become a global issue in public health, gender equality, education, and human rights. UNICEF (2021) reports that over 800 million women and adolescents menstruate daily worldwide. Nonetheless, a significant percentage still encounter obstacles in managing menstruation safely and with dignity. Studies indicate that insufficient menstrual hygiene management adversely impacts physical health, emotional well-being, educational involvement, and social participation (Sommer et al.,

2016). Research [1] in low- and middle-income countries demonstrates that inadequate menstrual hygiene practices correlate with reproductive tract infections, urinary tract infections, stigma, school absenteeism, and diminished self-esteem among adolescent girls (Sumpter & Torondel, 2013; Hennegan et al., 2019).

The complexities of menstrual hygiene management are exacerbated when considered in the context of disability. The World Health Organization (WHO, 2023) estimates that almost 2.2 billion individuals globally have some degree of visual impairment or blindness. Adolescent females represent a notably vulnerable demographic due to the intersection of gender-based discrimination, age-related reliance, and exclusion stemming from disabilities. Mactaggart et al. (2018) contend that girls with disabilities often face obstacles in obtaining health information, sanitation facilities, and reproductive healthcare services, leading to their marginalization from conventional menstrual health programs.

Visual impairment poses unique challenges in menstruation management. In contrast to sighted females, visually impaired teenagers face challenges in observing menstrual flow, detecting leakage, monitoring stains, and evaluating personal cleanliness. Studies conducted by Mason et al. (2013) and Wilbur et al. (2019) have shown that visually impaired girls frequently have difficulties in autonomously managing menstruation due to insufficient access to disability-appropriate information and support networks. Consequently, several individuals rely on caretakers, educators, or relatives during menstruation, thereby diminishing their privacy and autonomy.

In addition to physical obstacles, menstruation can pose considerable emotional concerns for girls with sight impairments. Kett and Lang (2015) noted that females with disabilities often encounter worry, humiliation, social isolation, and diminished self-confidence during menstruation. Wilbur et al. (2021) also observed that insufficient access to disability-sensitive sanitary facilities and menstruation products undermines the dignity and well-being of girls with disabilities. The lack of period education materials in accessible formats, such as Braille and audio resources, exacerbates these issues.

Data from underdeveloped nations indicate that visually impaired females frequently face a

"double disadvantage," stemming from both menstruation stigma and prejudice linked to their handicap (Groce & Kett, 2014). Research in Nepal, Uganda, Kenya, and India has demonstrated that inadequate sanitation infrastructure, insufficient access to health information, social stigma, and reliance on caregivers substantially impede effective menstrual hygiene management for girls with disabilities (Wilbur et al., 2019; Hennegan et al., 2021). These obstacles often lead to inadequate hygiene habits, educational interruptions, psychological turmoil, and social exclusion.

Despite the growing global acknowledgment of menstrual health as a critical development and human rights concern, the experiences of visually impaired adolescent girls are still inadequately represented in research. Hennegan and Montgomery (2016) contend that the majority of menstrual health research predominantly targets the general teenage demographic, frequently neglecting the particular requirements of girls with disabilities. Consequently, there is an urgent need for disability-inclusive menstrual health research to guide the development of accessible health education programs, inclusive sanitation infrastructure, and supporting institutional frameworks that enhance dignity, autonomy, and well-being for visually impaired teenage girls.

3. Menstrual Hygiene Challenges among Adolescent Girls in India

Despite substantial advancements in period health awareness in India, menstrual hygiene management remains a critical public health and gender equity issue. Menstruation is frequently enveloped in silence, misunderstandings, cultural taboos, and restrictive social standards that adversely affect the health, education, and psychological well-being of teenage girls. These issues are more pronounced in girls from rural, economically impoverished, and socially excluded groups, where access to menstrual products, sanitation facilities, and reproductive health information is severely restricted.

Recent national data demonstrate incremental advancements in the utilization of sanitary menstruation protection measures. The National Family Health Survey (NFHS-5, 2019–21) indicates that roughly 77.3 percent of women aged 15–24 reported using hygienic menstruation protection measures, such as sanitary napkins, locally manufactured sanitary

pads, tampons, and menstrual cups. Nonetheless, this advancement is inconsistent across various locations and socio-economic strata. Rural teenage girls consistently report less utilization of sanitary menstruation products compared to their urban peers, highlighting ongoing gaps in pricing, accessibility, and awareness.

Van Eijk et al. (2016) conducted a thorough [1] systematic review and meta-analysis encompassing 138 studies and over 97,000 teenage girls in India, revealing significant deficiencies in menstruation awareness and hygiene habits. The research indicated that just 48 percent of girls have knowledge about menstruation prior to the onset of menarche. The utilization of commercial sanitary pads was markedly greater among urban girls (67%) compared to rural girls (32%). The analysis indicated that around 23 percent of girls discarded menstrual absorbents in unsanitary manners, while nearly one-fourth reported absenteeism from school during menstruation. These data indicate that menstrual hygiene issues transcend mere availability to goods and are intricately associated with insufficient information, inadequate sanitation infrastructure, and socio-cultural obstacles.

Alongside infrastructure constraints, socio-cultural norms persist in influencing menstruation experiences throughout India. Menstruating girls often have limitations concerning religious involvement, food preparation, social engagement, and mobility. Such behaviors perpetuate concepts of impurity and foster sentiments of shame and humiliation. Research indicates that around 77 percent of teenage females encounter at least one type of limitation during menstruation (Van Eijk et al., 2016). The findings suggest that menstrual health issues in India are fundamentally entrenched in gendered social norms and cultural beliefs that restrict free discourse and precise comprehension of menstruation.

The discussion on menstrual health in India has progressively acknowledged the influence of societal disparities on menstrual experiences. Nevertheless, the particular requirements of girls with disabilities are predominantly overlooked in reproductive health programs, legislative initiatives, and scholarly studies. Disability overlaps with gender, age, socio-economic position, and cultural norms, resulting in numerous layers of disadvantage that

profoundly affect menstrual hygiene management.

Menstruation in India remains exaggerated by entrenched cultural beliefs and patriarchal behaviors that frequently characterize it as dirty or contaminating. Such attitudes foster quiet, concealment, and insufficient communication around menstrual health. Studies demonstrate that several girls have insufficient knowledge before menarche, leading to dread, bewilderment, and anxiety during their first menstrual experiences (Van Eijk et al., 2016). For females with disabilities, these issues are sometimes exacerbated by obstacles in obtaining reproductive health information and support services.

International disability academics have characterized this situation as "double discrimination," in which girls face exclusion both as females and as individuals with impairments (Kett & Lang, 2015). As a result, females with disabilities often have challenges in acquiring menstrual products, utilizing accessible sanitary facilities, and obtaining suitable reproductive health information. Such obstacles might negatively impact their health, dignity, and social engagement.

Visually impaired adolescent females encounter distinct obstacles in autonomously managing menstruation across different impairment categories. Due to their inability to utilize visual indicators for tracking menstrual flow, detecting stains, or evaluating hygiene, many require supplementary assistance from caretakers or family members. Moreover, menstrual health information is frequently conveyed using visual media, including posters, charts, textbooks, and demonstrations, which are often not accessible to visually impaired persons. The absence of accessible information may restrict their comprehension of menstruation processes and suitable hygiene habits.

Empirical data from India underscores these issues. Arunachalam et al. (2025) revealed that family members were the primary source of menstruation information for vision and hearing-impaired adolescent females in Odisha. Despite several participants exhibiting the capacity to autonomously manage menstruation, they persisted in seeking assistance and emotional support from caregivers, educators, and peers. The research highlighted the significance of accessible menstruation education and disability-aware support systems in

educational institutions.

Additional research from Odisha demonstrates the ongoing disparities in menstrual health. Panda et al. (2024) discovered that around 46 percent of teenage girls and women had not been informed about menstruation before menarche. Mothers were recognized as the primary source of knowledge for 74.3 percent of respondents, although only 61 percent indicated consistent usage of sanitary pads. The authors emphasized insufficient awareness, inadequate sanitation facilities, socio-cultural constraints, and restricted availability to menstruation products as significant obstacles to successful menstrual hygiene management.

Mishra (2020) did research among tribal teenage girls in Odisha and found that over 64 percent of participants had insufficient information about menstruation and menstrual hygiene management. Only 38 percent indicated regular utilization of disposable sanitary napkins. The data indicate that menstruation stigma, insufficient awareness, and poor access to menstrual services persistently impact teenage females, especially those from underprivileged areas.

These studies collectively illustrate that menstrual health in India transcends biological processes and necessitates comprehension within wider social, cultural, and structural frameworks. The combination of menstruation stigma and disability-related obstacles can profoundly impact the health, dignity, autonomy, and educational engagement of girls with disabilities, especially those with visual impairments. Consequently, disability-inclusive menstrual health interventions are crucial to provide equal access to information, hygiene facilities, and reproductive healthcare services.

4. Context of Odisha: Menstrual Hygiene for Girls with Disabilities

Odisha has experienced significant initiatives to enhance knowledge of adolescent reproductive health and menstrual hygiene. Nonetheless, current research demonstrates that menstrual hygiene management continues to present considerable difficulty, especially for underrepresented groups, including girls with disabilities. Ongoing deficiencies in menstruation education, restricted availability of sanitary goods, insufficient sanitation

facilities, and deep-rooted socio-cultural views persistently impact teenage females throughout the state.

Panda et al. (2024) conducted comprehensive research with 921 teenage girls and women in Odisha, revealing that around 46 percent of participants were unaware of menstruation prior to menarche. The study indicated that insufficient awareness, absence of disposal facilities, and socio-cultural constraints adversely affected menstrual hygiene behaviors. These situations elevate the likelihood of reproductive health issues, psychological anguish, and diminished educational engagement.

Research concentrating on disability uncovers more aspects of exclusion. Choudhury (2018) noted that females with disabilities frequently encounter inadequate sanitary facilities, reliance on caretakers, financial obstacles in acquiring menstruation products, and restricted access to menstrual health information. These issues severely limit their capacity to manage menstruation safely and autonomously. In support of these findings, Arunachalam et al. (2020) indicated that while differently abled teenage females in Bhubaneswar exhibited reasonably excellent hygiene behaviors, their understanding of menstruation was insufficient. The authors underscored the necessity for thorough reproductive health education customized to the specific needs of females with disabilities.

Patnayak, Nallala, and Patel (2023) similarly discovered that menstrual hygiene management for teenage girls with disabilities in rural Odisha was negatively impacted by poverty, social stigma, cultural constraints, and inadequate support systems. The study emphasized that misunderstandings about menstruation and unsuitable food habits during this period adversely affected girls' physical and mental health.

Research collaboratively executed by UNFPA-India and WaterAid (Singhania & Muralidharan, 2022) offered more evidence about the menstrual experiences of girls with disabilities. The survey indicated that girls with disabilities face significant barriers in obtaining menstrual health information, sanitation facilities, and institutional support services. Girls with visual impairments specifically indicated challenges in tracking menstrual flow, upholding personal cleanliness, and autonomously handling menstruation

products due to a lack of accessible information and disability-friendly facilities.

Singh and Agarwal (2023) contended that visually impaired teenage females often endure a "double stigma" stemming from both their handicap and menstruation. This combined marginalization frequently leads to less autonomy, limited access to knowledge, and heightened reliance on caretakers. The authors underscored the pressing necessity for period education materials in accessible formats, including Braille, audio learning tools, and inclusive school health programs.

While this researchhas greatly enhanced the comprehension of menstrual hygiene and disability in Odisha, the majority have analyzed diverse groups of individuals with disabilities or concentrated mostly on auditory and speech impairments. Research specifically focusing on the awareness, menstrual hygiene practices, and lived experiences of visually impaired adolescent girls is markedly scarce. Thus, the convergence of vision impairment and menstrual health remains a largely unexamined domain in public health and disability studies in Odisha.

5. Research Gap:

A review of the current literature indicates that much research has been undertaken on menstrual hygiene management among teenage girls at global, national, and state levels. Research has recorded the impact of socio-cultural views, insufficient menstruation knowledge, inadequate sanitary facilities, and restricted access to menstrual items on menstrual health outcomes. Correspondingly, recent studies have underscored the distinct difficulties encountered by females with disabilities in menstruation management. Nonetheless, most existing research concentrates either on the overall teenage demographic or on expansive classifications of impairment. Limited research has particularly explored menstruation hygiene knowledge and behaviors in visually impaired teenage females. In Odisha, current research has predominantly focused on menstrual hygiene among rural girls, tribal communities, or mixed disability groups, resulting in a lack of exploration about the experiences of visually impaired girls.

Furthermore, there is a paucity of scientific knowledge concerning how visually impaired

teenage girls acquire menstruation information, autonomously manage period hygiene, traverse educational settings, and engage with accessible support networks. The absence of disability-specific evidence results in considerable deficiencies in policy development and program execution. Consequently, there is a necessity for targeted research that investigates menstrual hygiene knowledge and behaviors among visually impaired teenage females in institutional environments. This study aims to fill this gap by examining the experiences of visually impaired girls enrolled at Bhabagrahi Model School for the Sightless in Khordha, Odisha.

6. Rationale of the Research

Menstrual hygiene is crucial for the health, dignity, and general welfare of teenage females. Visually challenged females frequently have supplementary obstacles in obtaining menstrual health information, upholding personal cleanliness, and autonomously managing menstruation. Notwithstanding these limitations, research about menstrual hygiene in visually challenged teenagers in Odisha is limited. Comprehending their experiences is essential for recognizing current deficiencies in awareness, accessibility, and support services.

This study is significant as it provides empirical information regarding a neglected group whose menstrual health concerns are often disregarded in research, policy, and practice. The results may aid educators, health professionals, policymakers, and disability rights organizations in developing inclusive menstrual health education programs, accessible sanitation facilities, and supportive interventions that enhance the health, dignity, independence, and social inclusion of visually impaired adolescent girls.

7. Objective of the Study:

To investigate the awareness, experiences, and menstrual hygiene management behaviors of visually impaired teenage girls enrolled at Bhabagrahi Model School for the Sightless in Khordha, Odisha.

8. Specific Objective of the Study:

 To evaluate the awareness and understanding of menstruation and menstrual hygiene

among visually impaired teenage females.

 To investigate the menstrual hygiene practices employed by visually impaired females during menstruation, encompassing the utilization of sanitary items, maintenance of personal cleanliness, and management of menstrual care.

 To ascertain the primary sources of menstrual health information and assistance accessible to visually impaired teenage females.

 To investigate the obstacles encountered by visually impaired females in the management of menstruation and the maintenance of menstrual hygiene.

 To examine the contributions of parents, educators, caregivers, peers, and educational institutions in fostering knowledge of menstrual health and managing menstrual hygiene for visually impaired girls.

 To provide disability-inclusive strategies and policy initiatives aimed at enhancing menstrual hygiene management and reproductive health services for visually impaired teenage females.

9. Research Question:

 What is the extent of awareness of menstruation and menstrual hygiene among visually impaired teenage females?

 What menstrual hygiene routines do visually impaired females adhere to?

 What are the main sources of menstrual health information for visually impaired girls?

 What obstacles do visually impaired females have in independently managing menstruation?

 In what ways do family members, educators, caregivers, and peers influence menstrual health management?

 What strategies can be implemented to enhance disability-inclusive menstrual hygiene management?

10. Research Methodology:

10.1. Nature of Study:

This study is exploratory and qualitative. The objective is to comprehend the awareness

and practices of menstrual hygiene among visually impaired teenage girls, as well as to investigate their experiences, problems, and coping strategies concerning menstrual hygiene management.

10.2. Area of the study:

The research was carried out at Bhabagrahi Model School for the Visually Impaired, situated in Kharavela Nagar, Bhubaneswar, Odisha. The institution is a residential special school offering education and support services to visually impaired pupils from various areas within the state. The school was intentionally chosen as it provided a suitable environment to investigate the understanding and practices of menstrual hygiene among visually impaired adolescent girls, as well as to comprehend the obstacles they face in managing menstruation within an institutional context.

10.3. Sample Size and Sampling Methodology

Fifteen visually impaired adolescent females who had reached menarche were chosen as participants for the study. The participants were chosen by purposive sampling, based on their significance to the study's aims. The sample was selected to provide comprehensive insights into the menstrual hygiene awareness, habits, and issues faced by visually impaired teenagers.

10.4. Data Sources

The research employed both primary and secondary data sources.

Primary Data: Primary data were obtained directly from respondents via semi-structured, in-depth interviews. The interview technique allowed the researcher to investigate the participants'

experiences, views, and behaviors of menstrual hygiene are comprehensively.

Secondary Data: Secondary information was obtained from books, research papers, government reports, policy documents, journal publications, UNFPA reports, WHO publications, and other pertinent material concerning menstrual hygiene management, disability, adolescent health, and visual impairment.

10.5 . Data Collection Methods

Data were gathered via in-person interviews employing a semi-structured interview framework. The interview schedule encompassed inquiries on period awareness, information sources, menstrual hygiene habits, obstacles encountered during menstruation, facility accessibility, and support from family members, educators, and caregivers.

10.6. Data Analysis Methodology

The gathered qualitative data were examined by theme analysis. The participants' responses were meticulously transcribed, classified, and analyzed based on emergent themes and patterns. The analysis concentrated on comprehending the respondents' experiences, awareness, hygiene habits, problems, and support systems related to menstrual hygiene management.

10.7. Ethical Considerations

Prior authorization was secured from the school administration prior to performing the study. The participants were apprised of the research's objective, and confidentiality and anonymity were preserved throughout the investigation. Participation was optional, and the information supplied by respondents was utilized exclusively for scholarly reasons.

This approach is appropriate for a journal article and corresponds with qualitative research founded on 15 comprehensive interviews.

11. Socio-demographic profile of the respondent:

11.1. Respondent Age

Age is a significant demographic variable in menstrual health research, affecting the beginning of menarche, menstrual experiences, awareness, and hygiene behaviors. From the perspectives of gender and disability, age gains further importance as visually impaired adolescent girls navigate menstruation among the intertwining problems of gender-based societal norms and disability-related issues.

Table 1: Age-wise Distribution of Respondents

Age Group

No. of Respondents

Percentage (%)

12–15 years

5

33.33

16–19 years

9

60.00

Not Menstruating (12–15 years)

1

6.67

Total

15

100.00

Source: Field work

The age distribution of responses reveals that the predominant group of visually impaired females (60%) was aged 16–19 years, whilst 33.33 percent were aged 12–15 years. Among the responders, one girl (6.67%) in the 12–15 age group had not yet experienced menarche. Therefore, despite her inclusion in the study's demographic profile, she was omitted from inquiries on menstrual hygiene habits due to her lack of firsthand experience with menstruation.

Adolescence is a pivotal phase during which females experience substantial [1] biological, psychological, and social changes linked to puberty and reproductive maturity. Menstruation signifies a crucial step in the life trajectory of teenage females and is frequently accompanied by emerging gendered expectations, social constraints, and cultural standards. In several regions of India, menstruation is enveloped in silence and shame, influencing girls' conceptions of their bodies and reproductive health.

The majority of replies in the 16–19 year age group indicate that most participants had

already undergone menstruation and held direct knowledge of menstrual hygiene management. Their experiences offer significant insights into the interplay between gender norms and disability, including menstruation awareness, hygiene routines, autonomy, and access to support systems. Consequently, comprehending the age distribution of the respondents is crucial for analyzing the overarching connection between adolescence, handicap, and menstrual health management.

11.2. Education profile of the respondent

Education is essential in developing individuals' knowledge, awareness, confidence, and capacity to make informed health and well-being decisions. For visually challenged teenage girls, educational achievement is crucial as it affects access to knowledge, social engagement, and possibilities for personal growth. In the realm of menstrual hygiene management, education may elevate understanding regarding reproductive health and promote the implementation of appropriate hygiene habits.

Table 2: Educational Status of Respondents

Educational Status	No. of Respondents	Percentage (%)
Primary	5	33.33
Upper Primary	4	26.67
High School	6	40.00
Total	15	

100.00

Source: Field work

The educational profile of the respondents reveals that 40 percent of the visually impaired girls were enrolled in high school, being the predominant educational group within the sample. Additionally, 33.33 percent of respondents were engaged in elementary education, and 26.67 percent were pursuing upper primary studies.The statistics indicate that a significant percentage of visually impaired females have successfully advanced their education beyond the elementary level to secondary education. This illustrates the beneficial impact of inclusive educational institutions, nurturing family circumstances, and governmental efforts designed to enhance educational chances for children with disabilities. Access to school enhances academic growth and fosters understanding of health, hygiene, and reproductive matters, especially pertinent throughout adolescence. The mix of responders across various educational levels underscores both advancements and persistent obstacles in providing fair educational options for visually impaired girls. The significant number of respondents at the high school level indicates positive developments in educational inclusion; however, the results highlight the necessity for ongoing institutional support, accessible educational resources, and inclusive policies to promote the educational advancement of girls with visual impairments. Enhancing these support networks is crucial for educational success, as well as for improving awareness, autonomy, and general quality of life for visually impaired teenage females.

11.3. Caste of the respondent

The social category is a significant socio-demographic feature that affects access to education, healthcare, social opportunities, and general quality of life. Caste-based disparities persist in India, significantly influencing the experiences of underprivileged people, especially women and individuals with disabilities. Consequently, analyzing the social context of visually impaired teenage females is crucial for comprehending the interplay of gender, disability, and social exclusion.

Table 3: Category of Respondents

Category of Respondents

No. of Students

Percentage (%)

General

6

40.00

Other Backward Class (OBC)

3

20.00

Scheduled Caste (SC)

6

40.00

Scheduled Tribe (ST)

0

0.00

Total

15

100.00

Source: Field Data

The distribution of responses by social category indicates that an equal percentage of visually impaired females, 40 percent each, belonged to the General and Scheduled Caste (SC) groups. Individuals from the Other Backward Class (OBC) constituted 20 percent of the sample, there were no respondents from the Scheduled Tribe (ST) group.

The significant percentage of responses from the Scheduled Caste category underscores the inclusion of females from historically marginalized socioeconomic groups within the educational institution. From a gender and disability standpoint, these girls frequently encounter various dimensions of marginalization due to caste-based discrimination, gender inequity, and limitations associated with disability. These overlapping obstacles may affect

their access to educational opportunities, healthcare services, menstrual hygiene resources, and social support networks.

The involvement of females from the General and OBC groups signifies a level of social diversity within the research population. Nonetheless, variations in socio-economic position, familial history, and resource accessibility within socioeconomic groups may influence personal experiences about menstruation health awareness and cleanliness behaviors. Studies indicate that social location frequently influences access to reproductive health information, sanitation facilities, and health-seeking behaviors, especially among teenage females.

A significant observation is the lack of responses from the Scheduled Tribe (ST) group. This absence may indicate the restricted enrollment of indigenous females in specialized educational institutions, geographical obstacles, socio-economic problems, less educational engagement, or difficulties in obtaining disability-related services. Tribal girls with disabilities frequently encounter multifaceted exclusion resulting from the convergence of tribal identity, gender, poverty, and disability, which may limit their access to educational and healthcare services.

The findings indicate that the experiences of visually impaired adolescent females cannot be comprehended only via the perspective of disability. Their lives are influenced by the interplay of several social identities, such as caste, gender, and handicap. Comprehending these overlapping dimensions is crucial for formulating inclusive educational policies, equitable healthcare services, and disability-sensitive menstrual hygiene programs that cater to the needs of girls from varied socioeconomic backgrounds.

11.4. Religion of the respondent

Religion is a significant socio-cultural attribute that influences an individual's socialization, values, and cultural customs. In adolescent health research, religious background offers contextual insights into the respondents' familial and communal settings. For visually impaired females in a residential educational institution, everyday experiences concerning education, health, and menstrual hygiene are predominantly shaped by the school's

atmosphere, resources, and support systems rather than only by religious rituals.

Table 4: Religion of Respondents

Religion	Total Number of Respondents	Percentage (%)
Hindu	12	80.00
Islam	3	20.00
Christianity	0	0.00
Other	0	0.00
Total	15	100.00

Source: Field Data

The religious distribution of respondents indicates that the predominant group of visually handicapped females was from the Hindu faith, comprising 80 percent of the entire sample. Twenty percent of the respondents identified as Muslims. No participants were affiliated

with Christian or other religious communities. The prevalence of Hindu responses mirrors the overall demographic trend of Odisha, where Hinduism is the predominant religion. The inclusion of Muslim respondents signifies a level of religious diversity among the research group. The lack of participants from Christian and other religious groups indicates insufficient religious representation in the sample.

The results indicate that despite the respondents' affiliation with various religious organizations, their collective experiences as visually impaired adolescent girls residing in a residential educational environment engender similar obstacles and support requirements. Consequently, initiatives to enhance menstrual hygiene management must prioritize inclusive health education, accessible information, sufficient sanitation facilities, and supportive institutional frameworks that uphold dignity, autonomy, and well-being for all students, regardless of their religious affiliations.

11.5. Family size of the respondent

The family serves as the fundamental social structure tasked with delivering care, emotional support, socialization, and direction to children and adolescents. For visually impaired females, familial support is crucial in influencing their educational experiences, self-esteem, health consciousness, and capacity to navigate everyday tasks. The size of a family can affect resource availability, parental attention, caregiving arrangements, and access to health-related information, including understanding of menstruation and menstrual hygiene management.

Table 5: Family Size of Respondents

Family Size

Total Number

Percentage (%)

2–4 Persons

8

53.33

5–6 Persons

6

40.00

7–9 Persons

1

6.67

Total

15

100.00

Source: Field work

The distribution of respondents by family size reveals that over half of the visually impaired females (53.33%) were part of families with two to four individuals. A significant percentage (40%) originated from families with five to six individuals, whereas just 6.67 percent of respondents were part of bigger households consisting of seven to nine members.

The results indicate that most respondents come from relatively tiny family groups. A reduced family size may enhance parental focus, personalized care, and improved distribution of resources for the educational and health requirements of children with disabilities. Support is especially crucial for visually impaired females during adolescence, a phase marked by shifts in physical, emotional, and reproductive health.

The more diminished percentage of responders from bigger families may indicate wider demographic shifts linked to decreasing family size, heightened educational awareness, and evolving socio-economic circumstances. Regardless of family size, the quality of familial support is a crucial element in enhancing the health, dignity, and overall development of visually impaired adolescent females.

The data reveal that the majority of respondents originate from small to medium-sized families, implying the probable presence of closer familial support networks. This support, along with the institutional aid offered by the residential school, can enhance the understanding and management of menstrual hygiene for visually impaired teenage

females.

12. Awareness and practices regarding menstruation and its hygiene: -

Adolescence is a pivotal phase of human development marked by substantial physical, psychological, and social transformations. Menarche, the commencement of menstruation, is a pivotal biological occurrence for females during this era, indicating reproductive maturity. Menstruation is a natural physiological phenomenon encountered by teenage girls and women; nevertheless, the degree of understanding and management of menstruation among girls is frequently affected by their access to information, familial support, educational possibilities, and socio-cultural context.

Notwithstanding the growing understanding of menstrual health, menstruation remains enveloped in secrecy, myths, and societal shame in several nations. Consequently, some teenage girls start menarche with little knowledge and minimal readiness, thereby undermining their confidence, health, and hygiene routines. Proper understanding of menstruation and menstrual hygiene management is crucial for safeguarding the physical health, dignity, and social engagement of teenage females.

The difficulties related to menstrual hygiene management are frequently more evident in females with visual impairments. Access to menstrual health information often relies on visual communication methods, including textbooks, charts, posters, and demonstrations. As a result, visually impaired females may have challenges in acquiring precise and accessible information on menstruation, reproductive health, and hygiene habits. Insufficient access to disability-friendly educational resources, along with societal stigma about menstruation, might further restrict their understanding and readiness for autonomous menstrual management.

Visually impaired teenage females frequently encounter various disadvantages due to the interplay of gender norms, disability-related obstacles, and restricted access to reproductive health information. These characteristics may affect their comprehension of menstruation, perspectives on menstrual health, and the sanitary behaviors they employ during their menstrual cycle. Consequently, assessing their awareness and menstrual

hygiene behaviors is crucial for comprehending their distinct demands and obstacles.

To evaluate the degree of menstruation awareness and cleanliness behaviors among visually impaired adolescent females, a set of questions was posed to the participants. The gathered information offers significant insights on their understanding of menstruation, information sources, attitudes regarding menstrual health, and hygiene management habits. These findings are crucial for formulating disability-inclusive health education programs, enhancing institutional support systems, and advocating for safe and dignified menstrual hygiene management for visually impaired teenage females.

12.1. Age of Respondents at Menarche

Menarche, the initial onset of menstruation, is a crucial developmental milestone in a teenage girl's life, signifying the shift from infancy to reproductive adulthood. The onset of menarche is affected by a confluence of biological, dietary, environmental, genetic, and socio-economic variables. Comprehending the beginning age of menstruation in visually impaired teenage girls is crucial as it offers insights into their reproductive health experiences and the necessary readiness for efficient menstrual hygiene management.

Table -6: Age of the Respondents at Which Menstruation Started

Age at Menarche

No. of Students

Percentage (%)

11 Years

3

20.00

12 Years

3

20.00

13 Years

3

20.00

14 Years

2

13.34

15 Years

3

20.00

Not Menstruating (Age 16)

1

6.66

Total

15

100.00

Source: Field Data

The findings reveal that the initiation of menstruation among the respondents predominantly transpired between the ages of 11 and 15 years. Twenty percent of respondents reported having menarche at ages 11, 12, 13, and 15 years, while 13.34 percent experienced menarche at age 14 years. One responder (6.66%), aged 16 at the time of the survey, had not yet had menarche.

The results indicate that most visually impaired teenage females underwent menarche within the age range typically regarded as normal for adolescent development. Comparable results have been documented in research involving Indian teenage girls, indicating that the average age of menarche generally ranges from 11 to 14 years (Van Eijk et al., 2016; Panda et al., 2024). The onset age reported by the respondents corresponds with established biological trends noted in teenage health studies.

From a disability standpoint, the commencement of menstruation may provide further difficulties for visually impaired females. Restricted access to comprehensive reproductive

health information, reliance on caregivers for direction, and challenges in comprehending physical changes may influence their readiness for menarche. Studies by Wilbur et al. (2019) and Arunachalam et al. (2025) indicate that girls with visual impairments frequently require further assistance and disability-aware health education to navigate menstruation with confidence and autonomy. The existence of a respondent who had not yet reached menarche by age 16 signifies individual variability in the onset of puberty. Delayed menarche may result from genetic, dietary, hormonal, or health-related causes, highlighting the necessity of delivering suitable reproductive health information and counseling to adolescents, irrespective of the onset of menstruation. This assistance can alleviate anxiety and enhance comprehension of typical variances in teenage growth.

The data indicate that the majority of respondents experienced menarche within the anticipated age range for teenage females. The experiences of visually impaired girls underscore the necessity for accessible, gender-sensitive, and disability-inclusive reproductive health education to ensure they are well-prepared for menstruation and able to manage menstrual hygiene with confidence and dignity.

12.2. Duration of Menstrual Period

The length of monthly bleeding is a significant predictor of menstrual health and reproductive wellness in teenage females. Fluctuations in the duration of menstrual cycles are prevalent during adolescence due to hormonal and physiological transformations in the body. Comprehending the duration of menstruation in visually impaired teenage girls is crucial for evaluating their menstrual experiences and the assistance necessary for efficient menstrual hygiene management.

Table-7: Duration of Menstrual Period

Period Duration

No. of Students

Percentage (%)

3 Days

3

20.00

4 Days

2

13.33

5 Days

1

6.67

6 Days

3

20.00

7 Days

5

33.33

Not Applicable

1

6.67

Total

15

100.00

Source: Field Data

The statistics indicate discrepancies in the length of menstrual bleeding among the participants. One-third (33.33%) of visually impaired females indicated that their menstrual cycles last for seven days. An equal percentage of respondents (20% each) reported menstruation lasting three days and six days, respectively. A lesser proportion indicated menstruation lengths of four days (13.33%) and five days (6.67%). One responder (6.67%) was classified as “Not Applicable” as she had not yet reached menarche at the time of the research.

The results demonstrate that the majority of participants had menstrual durations ranging

from three to seven days, aligning with the normative data presented in teenage reproductive health studies. Research among teenage females in India indicates that menstruation length often spans from three to seven days (Van Eijk et al., 2016; Panda et al., 2024). Consequently, the menstrual patterns reported by the interviewees often align with recognized biological standards.

From a gender viewpoint, the length of menstruation can substantially affect teenage girls' daily activities, educational engagement, mental health, and hygiene management habits. Prolonged menstrual cycles may necessitate enhanced access to sanitary products, heightened focus on personal hygiene, and supplementary emotional and practical assistance. Menstruation is linked to stigma and limitations in several social situations, perhaps exacerbating the difficulties faced by females during prolonged bleeding episodes.

From a disability standpoint, managing menstruation over several consecutive days may provide significant challenges for visually impaired females. Upholding personal hygiene, tracking menstrual flow, replacing absorbent materials at suitable intervals, and ensuring cleanliness may necessitate increased effort and assistance, especially when accessible facilities and resources accommodating disabilities are scarce. Wilbur et al. (2019) assert that girls with disabilities frequently have difficulties in autonomously managing menstruation due to insufficient access to knowledge, supportive infrastructure, and accessible healthcare services.

The inclusion of a responder who had not commenced menstruation emphasizes the inherent variability in adolescent development and reinforces the necessity of delivering menstrual health education to all teenage girls, irrespective of their menarche status. Timely and accessible reproductive health education can alleviate anxiety, enhance readiness, and foster good attitudes about menstruation.

The data indicate that the duration of menstruation among the respondents predominantly aligns with the anticipated biological range. The variety of menstrual experiences among visually impaired adolescent girls underscores the necessity for gender-sensitive and

disability-inclusive menstrual health education, sufficient sanitation facilities, and supportive institutional frameworks to guarantee safe and dignified menstrual hygiene management.

12.3. Awareness of Sanitary Napkins among Respondents

Awareness of sanitary napkins serves as a crucial indication of menstrual health awareness and menstrual hygiene management among teenage females. Understanding sanitary menstrual products allows girls to implement safe and hygienic habits during menstruation, thereby diminishing the risk of infections and enhancing reproductive health. For visually impaired teenage girls, understanding of sanitary products is crucial due to the constraints imposed by disability-related hurdles and the restricted availability of accessible educational materials about menstrual health information.

Table -8: Awareness of Sanitary Napkins

Heard of Sanitary Napkins	No. of Students	Percentage (%)
Yes	15	100.00
No	0	0.00
Total	15	100.00

Source: Field Data

The findings indicate that all respondents (100%) were familiar with sanitary napkins, demonstrating universal awareness of this period hygiene product among the visually impaired adolescent females in the research. All respondents indicated awareness of sanitary napkins.

The results indicate a significant degree of fundamental menstrual health awareness among the participants. This may be ascribed to the educational milieu of the residential school, engagements with educators and caregivers, peer learning, health awareness initiatives, and information obtained from family members prior to enrollment. Comparable research among teenage girls in India has indicated a rise in knowledge of sanitary napkins attributable to government initiatives, school-based health education programs, and menstrual hygiene campaigns (Van Eijk et al., 2016; Panda et al., 2024).

This conclusion is particularly noteworthy as visually challenged girls frequently encounter obstacles in obtaining reproductive health information. Studies indicate that period health education materials accommodating disabilities are often insufficient, hindering girls with visual impairments from obtaining a thorough understanding of menstrual hygiene management (Wilbur et al., 2019). The universal awareness demonstrated by the responders signifies the beneficial impact of the residential school and its support structures in conveying menstrualhealth information. Nevertheless, awareness alone does not inherently result in appropriate menstrual hygiene management. Understanding of sanitary napkins should be coupled with consistent availability, affordability, accessibility, and the capacity for safe and autonomous usage and disposal of menstruation products. Prior research has highlighted that despite elevated awareness levels, obstacles concerning product accessibility, privacy, sanitation facilities, and menstrual hygiene practices frequently endure, especially among girls from underprivileged backgrounds and those with disabilities (Hennegan et al., 2019).

Access to sanitary napkins for all respondents, residing in a residential educational institution, may be contingent upon the assistance given by school officials, hostel administration, caretakers, and health staff. Therefore, a thorough investigation of the utilization, accessibility, disposal methods, and obstacles related to sanitary napkins is essential to get an in-depth understanding of menstrual hygiene management among visually impaired teenage girls.

The data demonstrate a notable knowledge of sanitary napkins among the respondents.

This indicates favorable advancement in menstrual health education and underscores the necessity of perpetuating disability-inclusive awareness initiatives that enhance understanding and guarantee equal access to menstrual hygiene resources and services.

12.4. Informed or Told by Parents/Guardians about Menstruation

The results indicate that of the 15 respondents, 11 (73.33%) claimed having been informed about menstruation by their parents or guardians, whilst 4 (26.67%) said they had not received such knowledge.

Table -9: Informed or Told by Parents/Guardians about Menstruation

Informed or Told by Parents/Guardians about Menstruation	Number of Respondents	Percentage (%)
Yes	11	73.33
No	4	26.67
Total	15	100.00

Source: Field Data

The findings suggest that parents and guardians significantly contribute to the dissemination of knowledge about menstruation among adolescent females. A significant proportion of respondents (73.33%) indicated that they obtained information about menstruation from family members, implying that the family is the primary source of menstrual education. Timely communication within the family can assist girls in comprehending menstruation as a natural biological phenomenon and mentally preparing

them for menarche. This guide may facilitate the adoption of appropriate menstrual hygiene habits and alleviate emotions of fear, anxiety, and humiliation related to menstruation.

Nevertheless, the survey indicates that 26.67% of respondents were not educated about menstruation by their parents or guardians. This discovery underscores the enduring cultural taboos and communication obstacles related to menstruation among certain households. The lack of prior knowledge may render females unprepared for menarche, resulting in uncertainty, fear, misunderstandings, and inadequate menstrual hygiene habits. Sommer et al. have highlighted that insufficient communication around menstruation might adversely impact girls' confidence, well-being, and engagement in educational pursuits.

The findings indicate that although familial support in menstruation education is positive, there is a necessity to enhance knowledge among parents and guardians about the significance of candid talks about menstrual health. Educational institutions, healthcare practitioners, and community awareness initiatives can augment familial efforts by guaranteeing that all teenage girls have precise and prompt knowledge regarding menstruation and menstrual hygiene management.

12.5: Hygiene Precautions During Menstruation

Ensuring adequate menstrual hygiene is crucial for protecting the physical health, comfort, and well-being of teenage females. Proper hygiene habits, including the utilization of sanitary absorbents, frequent replacement of menstrual products, and upkeep of personal cleanliness, mitigate the risk of infections and enhance favorable menstrual health outcomes. Visually impaired teenage females may encounter heightened problems in menstrual hygiene management due to obstacles in monitoring menstrual flow, accessing hygiene facilities, and acquiring disability-friendly reproductive health information. Consequently, analyzing the hygiene measures used by the respondents yields significant information into their menstrual health habits.

Table 10: Hygiene Precautions During Menstruation

Hygiene Precautions During Periods

Yes

No

Yes (%)

No (%)

Bath daily and clean properly

10

5

66.66

33.33

Change pad every 4–6 hours

9

6

60.00

40.00

Use sanitary pads

14

1

93.33

6.67

Source: Field Data

The results demonstrate that most respondents implemented significant menstrual hygiene routines during their menstrual cycles. Almost all participants (93.33%) indicated the use of sanitary pads, although a solitary responder (6.67%) claimed to abstain from their use. The extensive use of sanitary pads indicates a commendable understanding of contemporary period hygiene products, perhaps facilitated by the assistance of residential schools, family members, caretakers, and menstrual health awareness initiatives. Panda et al. (2024) and

Arunachalam et al. (2025) have reported analogous findings, noting a rise in the utilization of sanitary pads among teenage females, including those with impairments.

Concerning personal hygiene, 66.66 percent of respondents indicated they bathe every day and uphold cleanliness throughout menstruation, and 33.33 percent did not regularly adhere to this practice. Daily bathing and adequate genital cleanliness are essential elements of menstrual hygiene management, since they enhance physical comfort and decrease the likelihood of infections. The data indicate that while most girls adhere to proper personal hygiene, a significant number still require further instruction and assistance with the necessity of menstrual cleanliness.

The survey indicates that just 60 percent of respondents reported changing their sanitary pads every four to six hours, whilst 40 percent did not adhere to this advised practice. Frequent replacement of menstrual absorbents is crucial to avert pain, malodour, dermal irritation, and infections of the reproductive system. The very low percentage of responders practicing this behavior signifies a disparity between awareness and actual hygiene practices. This may be affected by variables like restricted access to period products, insufficient awareness of suggested practices, personal discomfort, or difficulties in managing menstruation autonomously owing to visual impairment.

The data indicate that the respondents had a fundamental comprehension of menstrual hygiene routines. Nevertheless, societal taboos, feelings of embarrassment, and restricted possibilities for candid discourse around menstruation may persist in hindering the adoption of good hygiene practices. Menstrual hygiene management is not only a concern of personal cleanliness; it is intricately connected to girls' dignity, health, confidence, and engagement in scholastic pursuits.

Visually challenged females may face distinct obstacles in managing menstrual hygiene. Challenges in tracking menstrual flow, assessing whether a pad necessitates replacement, and independently utilizing sanitary facilities may impact the regularity of hygiene routines. Wilbur et al. (2019) observed that girls with disabilities frequently encounter obstacles in adopting recommended menstrual hygiene practices due to insufficient access to disability-

inclusive information, supportive infrastructure, and enough help. Consequently, the hygiene practices exhibited by the respondents must be interpreted within the wider framework of disability-related obstacles and support mechanisms.

The findings indicate that the awareness and implementation of menstrual hygiene habits among the respondents are predominantly favorable, especially with the utilization of sanitary pads. Nonetheless, deficiencies persist in some facets of menstrual hygiene management, particularly in daily personal cleanliness and the prompt replacement of sanitary pads. These findings highlight the necessity for ongoing, disability-inclusive menstrual health education and supportive institutional frameworks to guarantee safe, sanitary, and dignified menstruation management for visually impaired teenage girls.

12.6. Managing Menstruation Despite Visual Impairment

The ability to manage menstruation independently is an important indicator of personal autonomy, self-confidence, and effective menstrual hygiene management among adolescent girls. For visually impaired girls, menstrual management may involve additional challenges related to monitoring menstrual flow, changing absorbent materials, maintaining personal hygiene, and accessing appropriate information and support. Therefore, assessing whether respondents are able to manage menstruation independently provides valuable insights into their level of preparedness and the effectiveness of existing support systems.

Table-11: Managing Menstruation Despite Visual Impairment

Managing Periods Being Visually Impaired	No. of Students	Percentage (%)
Yes	12	80.00

No

3

20.00

Total

15

100.00

Source: Field Data

The findings indicate that 80% of participants reported well managing their menstrual periods autonomously despite their visual impairment, whilst 20% admitted facing difficulties in this area. This suggests that most visually impaired teenage females have the knowledge, confidence, and skills necessary for efficient menstrual hygiene management. The findings are notably promising from a disability standpoint, as visually challenged girls frequently experience obstacles that sighted girls may not face. Challenges in identifying menstrual stains, evaluating menstrual flow, accessing hygiene products, and sustaining personal cleanliness autonomously might undermine their confidence and menstrual experiences. Wilbur et al. (2019) indicate that females with visual impairments often have difficulties in managing menstrual hygiene due to insufficient access to disability-inclusive information, poor support services, and inaccessible sanitation facilities. The capacity of a significant majority of responders to autonomously manage menstruation demonstrates the beneficial influence of supportive surroundings and adaptive learning experiences.

12.7. Problems Experienced During Menstruation

Menstruation is often accompanied by a range of physical, emotional, and psychological symptoms that may affect the daily lives of adolescent girls. Common menstrual problems include abdominal cramps, back pain, fatigue, headache, mood changes, excessive bleeding, and discomfort. These challenges can influence girls' educational participation, social interactions, and overall well-being. For visually impaired adolescent girls, menstrual

difficulties may be compounded by disability-related barriers in accessing health information, support services, and appropriate menstrual hygiene facilities.

Table-12: Problems Experienced During Menstruation

Problems During Menstruation	No. of Respondents	Percentage (%)
Yes	9	60.00
No	6	40.00
Total	15	100.00

Source: Field Data

The results reveal that 60% of respondents had one or more issues during menstruation, whilst 40% reported no substantial menstrual-related challenges. The findings indicate that menstrual pain is a prevalent occurrence among visually impaired teenage females in the research.

The prevalence of menstrual issues among over fifty percent of the respondents aligns with findings from other research on teenage menstrual health. Hennegan et al. (2019) indicated that menstrual discomfort, exhaustion, and mental distress are prevalent difficulties encountered by teenage females globally. Panda et al. (2024) similarly discovered that several teenage girls in Odisha had menstrual pain that impacted their daily activities and general well-being.

Menstrual pain and discomfort are frequently underreported because of societal stigma and cultural conventions that inhibit candid discourse around menstruation. Consequently,

numerous girls may persist in their regular routines despite enduring physical discomfort, which can adversely impact their focus, engagement in educational pursuits, and emotional well-being. The treatment of menstrual issues may provide more challenges for visually challenged girls. Challenges in autonomously obtaining healthcare information, articulating menstruation issues, and recognizing signs for medical intervention may heighten their susceptibility. Wilbur et al. (2019) highlighted that girls with disabilities frequently face supplementary obstacles in obtaining reproductive health treatments and support systems, potentially hindering their capacity to manage menstrual discomfort efficiently.

The respondents' residence in a residential school underscores the significance of institutional support from educators, caregivers, hostel staff, and healthcare workers. Prompt instruction, emotional assistance, and access to healthcare resources can enhance teenagers' ability to manage menstruation challenges more effectively. The findings emphasize the necessity for disability-inclusive menstrual health programs, consistent health counseling, and supportive educational environments that tackle the physical and emotional difficulties related to menstruation.

The findings reveal that a significant number of respondents encounter menstrual-related issues, underscoring the necessity for comprehensive menstrual health education, counseling services, and accessible healthcare support for visually impaired adolescent girls.

12.8. Discussion Regarding Menstrual Problems

Transparency dialogue about menstruation is essential for enhancing menstrual health knowledge, diminishing stigma, and empowering teenage girls to seek assistance when encountering period challenges. Family members, educators, peers, and caregivers frequently act as vital providers of knowledge, emotional support, and practical aid during menstruation. Supportive communication networks are crucial for visually impaired teenage girls, as they provide access to assistance and assist in overcoming disability-related issues linked to menstrual hygiene management.

Table-13: Discussion Regarding Menstrual Problems

Persons with Whom Respondents Discuss Menstrual Problems

Number of Respondents

Percentage (%)

Friends about body pain and irritation

12

80.00

Irritation and the normal menstrual process

12

80.00

Mother about menstrual pain

9

60.00

The teachertalks about pain

8

53.33

Sister about irritation and body pain

5

33.33

No One / Not Applicable

2

13.33

Source: Field Data

The results indicate that most respondents engaged in discussions on menstruation and related issues with diverse support sources. Approximately 80% of respondents indicated that they conversed about menstrual irritation and the typical menstrual cycle, while the same percentage engaged in discussions regarding bodily pain and discomfort with their peers. This signifies that peer networks are crucial in offering emotional support and enabling talks concerning menstrual health.

Sixty percent of respondents indicated that they consulted their moms with menstruation discomfort, highlighting mothers as a significant source of support. This conclusion aligns with research undertaken in India and Odisha, which identifies mothers as the primary source of menstrual health knowledge and advice for teenage girls (Panda et al., 2024; Arunachalam et al., 2025). Educators had a significant role, with over half of the respondents (53.33%) indicating that they discussed menstruation discomfort with them. This illustrates the supporting function of the residential school setting in treating menstrual health issues.

The findings suggest a somewhat favorable communication climate about menstruation, which is not wholly regarded as a taboo issue from a gender viewpoint. Engaging in open dialogues with moms, educators, and peers can improve menstrual health knowledge, alleviate anxiety, and promote appropriate hygiene behaviors. This communication is crucial for confronting menstruation stigma and promoting favorable attitudes towards reproductive health.

From a disability standpoint, access to reliable persons is especially crucial for visually impaired females, who may need supplementary assistance with menstruation management and cleanliness routines. Supportive interactions with caregivers, educators, and peers can enhance confidence and foster independence in menstruation management. Wilbur et al. (2019) found that robust social support networks markedly enhance menstruation experiences for girls with disabilities by alleviating feelings of loneliness and augmenting access to practical help.

Menstrual HygieneNotably, 13.33 percent of respondents refrained from discussing menstruation concerns with anybody. This may signify sentiments of humiliation, distrust, fear of stigma, or restricted access to helpful connections. Such girls may have an elevated risk of misinformation, anxiety, and insufficient menstrual hygiene habits. Consequently, focused counseling and the establishment of secure and inclusive environments for dialogue are crucial.

Case Study 1: Utkalini Samal: Promoting Menstrual Dignity for Visually Impaired

Adolescent Girls

Utkalini Samal, a science educator at Bhabagrahi Model School for the Visually Impaired in Khordha, has been actively engaged in advancing menstrual health awareness among visually impaired teenage females. A significant example was Muskan Behera (name altered), a visually handicapped student who suffered from irregular and extended menstrual periods. Muskan's humiliation and insufficient understanding of menstrual health led to her reluctance to share her illness, resulting in repeated absences from courses. Noticing her diminishing attendance and involvement in school activities, Utkalini Samal started regular interactions with the student and progressively cultivated a relationship of trust. Through ongoing counseling and supportive dialogue, Muskan was motivated to express her menstrual health issues. Utkalini acknowledged the necessity for professional aid and arranged a consultation with a local Accredited Social Health Activist (ASHA) worker, ensuring that Muskan obtained suitable medical advice and menstrual hygiene treatment. To augment her comprehension of period health, Utkalini supplied accessible educational resources, encompassing Braille-based materials and auditory knowledge pertaining to menstruation and menstrual hygiene management. These approaches facilitated Muskan's confidence, enhanced her comprehension of menstrual health, and reinstated her regular engagement in academic pursuits.

Moreover, Utkalini interacted with Muskan's family to enhance understanding of her health requirements and promote supportive behaviors at home. This case study illustrates the crucial role educators should assume in tackling menstrual health issues faced by visually impaired teenagers. It underscores the significance of accessible information, emotional support, familial engagement, and prompt health interventions in fostering menstrual dignity and inclusive reproductive healthcare for students with disabilities.

Case Study 2: Ashish Behera : Facilitating Menstrual Hygiene Management via Familial Care and Social Support

Ashish Behera, a visually challenged pupil of Bhabagrahi Model School for the Sightless in Khordha, Odisha, lives in the school dormitory and visits his family during holidays.

Notwithstanding his sight disability, Ashish exhibited a profound sense of duty and care for the welfare of his younger sister, Radha Behera.

Upon returning home, Ashish noted significant alterations in his sister's demeanor. She seemed reclusive, emotionally troubled, and physically uneasy. After the premature demise of their mother, Radha missed sufficient female mentorship about menstruation and reproductive health. Consequently, she had challenges in managing menstruation and had restricted access to reliable information and menstrual hygiene supplies. Owing to embarrassment and existing societal taboos about menstruation, she was hesitant to address these issues with her father.

Acknowledging her anguish, Ashish fostered open conversation and offered emotional support, facilitating Radha's sharing of her experiences. Recognizing the difficulties she encountered, Ashish solicited help from a reliable educator at his institution. The instructor facilitated the family's connection with a local non-governmental organization (NGO) that offered sanitary pads, menstrual hygiene instruction, and counseling help.

Subsequently, Radha acquired vital menstrual hygiene resources and information, empowering her to manage menstruation more securely and confidently. The intervention also enhanced understanding among family members, especially her father, who became more supportive and engaged in addressing her health-related issues. This instance underscores the significance of familial support, inclusive education, and community-based initiatives in advancing menstrual hygiene management. It illustrates that persons with disabilities may significantly contribute to raising awareness, enhancing access to resources, and promoting the health and well-being of family members. The example highlights the difficulties encountered by adolescent females due to insufficient menstrual health education and a lack of parental assistance.

Case Study 3: Laxmi Mohanty: A Caretaker's Role in Menstrual Health Assistance for Visually Impaired Students

Laxmi Mohanty, a caretaker at Bhabagrahi Model School for the Sightless in Khordha, Odisha, plays a crucial role in fostering the physical and mental welfare of the kids at the

school. In addition to her regular caregiving duties, she offers counsel and support to students with personal and health-related difficulties. An instance included Kalyani Das, a visually challenged adolescent student with worries about her menstrual health.

Kalyani had not menstruated for two straight months and was increasingly apprehensive about her situation. Her discomfort and lack of understanding about menstrual health had her hesitant to address her issues with her parents, instructors, or peers. As a result, she underwent inner turmoil and social isolation.

Laxmi saw significant alterations in Kalyani's behavior, including anxiousness, less engagement in everyday activities, and indications of emotional distress. Acknowledging the necessity for assistance, she began a sympathetic dialogue and urged Kalyani to express her apprehensions. Kalyani expressed her concerns about the lack of menstruation and her apprehension that a significant issue may be present.

Laxmi assured the student and underscored the necessity of obtaining competent medical counsel. She coordinated a meeting with a local Accredited Social Health Activist (ASHA) and aided in organizing a health assessment at a nearby health center. Laxmi always ensured that Kalyani experienced respect, support, and a lack of judgment throughout the process.

Subsequent to the session, Kalyani obtained pertinent health advice and counseling concerning menstrual health. Consistent follow-up assistance from Laxmi alleviated her worry and motivated her to embrace a more optimistic attitude in addressing her health issues. Kalyani gradually restored her confidence, became more involved in school activities, and indicated enhanced emotional well-being.

This instance exemplifies the vital function of caregivers in managing menstrual health issues for visually impaired teenagers. It illustrates how prompt intervention, emotional assistance, and access to healthcare services may substantially enhance the well-being of students with impairments. This story underscores the necessity of establishing supportive institutional environments that enable adolescent females to communicate sensitive health-related matters without fear of stigma.

The case studies together illustrate that menstrual hygiene management for visually impaired teenage girls is affected by individual awareness, the presence of supporting social networks, accessible information, and prompt healthcare interventions. Educators, caregivers, relatives, colleagues, and community health professionals significantly contributed to overcoming menstrual health difficulties by offering emotional support, guidance, and access to vital resources. The results indicate that stigma, insufficient knowledge, communication obstacles, and restricted access to menstrual health information frequently impede efficient menstrual hygiene management for visually impaired girls. Nonetheless, empathetic treatments and inclusive educational methodologies markedly enhanced their confidence, health-seeking behaviors, school engagement, and general well-being. These case studies underscore the necessity of developing disability-inclusive menstrual health programs and enhancing collaboration among families, educational institutions, and healthcare systems to guarantee menstrual dignity, social inclusion, and reproductive health rights for visually impaired adolescent girls.

Conclusion

This study examined the awareness and habits related to menstruation and menstrual hygiene among visually impaired teenage females at Bhabagrahi Model School for the Sightless in Khordha, Odisha. The results indicate that despite facing many problems related to adolescence, gender, and handicap, the respondents have a significant understanding of menstruation and menstrual hygiene management. The majority of respondents had menarche between the ages of 11 and 15 years, recognized sanitary napkins, and indicated adherence to fundamental menstrual hygiene practices. A majority successfully managed menstruation autonomously despite visual impairment, highlighting the beneficial influence of family support, institutional care, peer networks, and educational interventions in promoting menstrual health awareness.

From a sociological standpoint, menstruation transcends mere biological occurrence; it is a socially created experience influenced by cultural beliefs, gender norms, power dynamics,

and institutional frameworks. Feminist researchers contend that menstruation has historically been enveloped in silence, shame, and perceptions of impurity, leading to the marginalization of women's reproductive experiences. These socio-cultural norms frequently inhibit candid discourse on menstruation, fostering ignorance, shame, and exclusion. The results of this study indicate that, even among visually impaired girls in a supportive school environment, menstruation experiences are nevertheless affected by prevailing social attitudes around gender and reproductive health.

The findings also endorse the notion of intersectionality, which highlights that social inequities are encountered through the interplay of several identities and kinds of disadvantage. Adolescent females with visual impairments have a distinctive social position at the intersection of gender and disability. They encounter menstruation stigma, reproductive health taboos, and gender-based discrimination as females. Individuals with disabilities have supplementary obstacles in obtaining information, healthcare, and support services. This combined marginalization frequently positions them at a heightened disadvantage relative to both non-disabled females and boys with impairments. Consequently, the menstrual health difficulties faced by visually impaired girls cannot be comprehended exclusively via the perspectives of gender or disability; they require analysis through an intersectional framework that acknowledges the intricate interaction of both elements.

The study underscores that understanding of menstrual hygiene is especially crucial for children with disabilities due to the sometimes uneven access to information and health resources. Disabled girls are often excluded from conversations about sexuality, reproductive health, and menstruation because of assumptions that they do not need this knowledge. Such attitudes not only infringe upon their reproductive rights but also heighten their susceptibility to inadequate hygiene habits, health difficulties, mental discomfort, reliance, and social marginalization. The absence of menstruation awareness in visually impaired females may lead to worry, anxiety, diminished self-esteem, school absences, and challenges in preserving personal dignity. Consequently, menstrual health education

for impaired children should be seen not just as a charity initiative but as a critical matter of health fairness, human rights, and social justice.

The results underscore the significance of communication and social support in the management of menstrual health. The majority of respondents said that they conversed about menstruation issues with their moms, instructors, and peers, underscoring the influence of social networks in mitigating stigma and fostering healthy behaviors. Nonetheless, the hesitance of certain responders to address menstrual matters signifies that silence and shame over menstruation continue to endure. This highlights the necessity of establishing secure, inclusive, and supportive environments where teenage girls with disabilities may openly address reproductive health issues without fear of judgment or prejudice.

The study suggests that visually impaired teenage females may manage menstruation with confidence and dignity when given accessible information, supportive surroundings, and suitable resources. Their issues stem not only from visual impairment but from social marginalization, insufficient disability-sensitive health education, and the ongoing stigma around menstruation. Therefore, it is imperative to incorporate disability-inclusive menstrual health education into school curricula, enhance accessible sanitation infrastructure, offer reproductive health information in Braille and audio formats, and advocate for gender-sensitive and disability-responsive health policies. Such treatments are crucial for guaranteeing that visually impaired females have equal opportunity to attain optimal health, educational engagement, personal autonomy, and social inclusion. Enhancing menstrual hygiene awareness and behaviors among girls with disabilities is essential for public health and a vital measure for promoting gender equality, disability rights, human dignity, and inclusive social development.

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