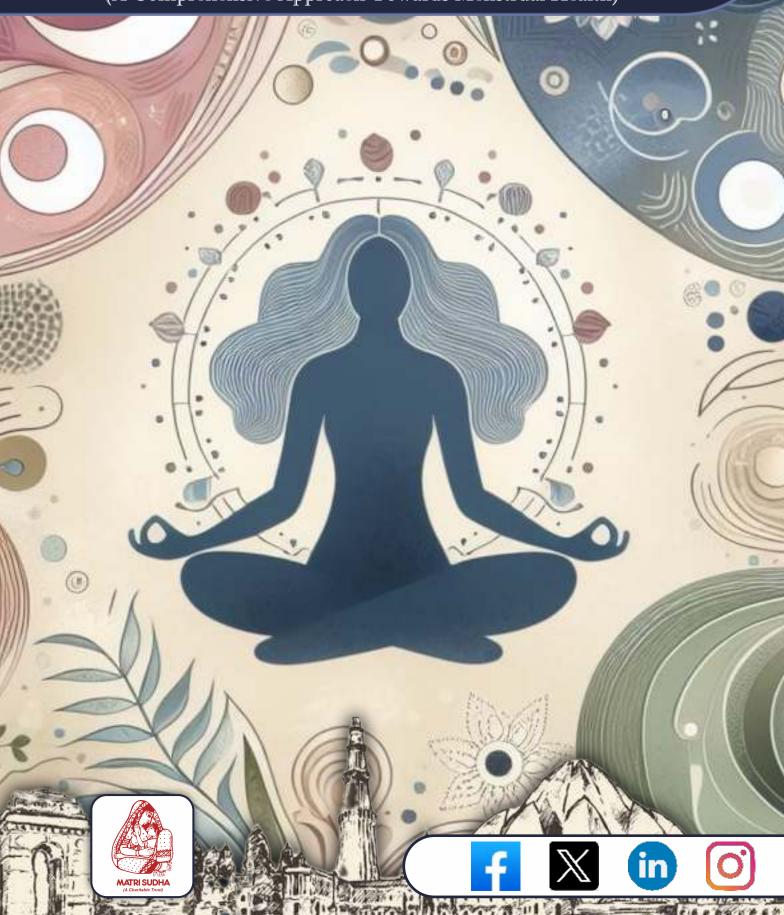
# A Step Up - For Period Positive DE La Comprehensive Approach Towards Menstrual Health)



# A Step Up - For Period Positive DELH

(A Comprehensive Approach Towards Menstrual Health)



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# Foreword

In recent years, Delhi has witnessed a significant step forward in fostering a period-positive culture. Breaking through societal taboos surrounding menstruation, this initiative marks a crucial shift toward greater awareness and inclusivity.

Matri Sudha through the research report: The "Step Up for Period Positive Delhi" under its umbrella project: Rising for Reproductive Health Rights (RRR) that aims to



dismantle stigma, creating an environment where conversations about menstruation are open and supportive. Its multifaceted approach involves educational

programs, community workshops, awareness drives, generating evidences all geared towards dispelling myths and promoting a healthy dialogue around menstrual health.

One notable aspect of this initiative is its focus on inclusivity, recognizing the diverse experiences of individuals menstruating. By engaging with various communities, the campaign aims to address unique challenges faced by different groups and ensure that period positivity is accessible to all.

Moreover, it emphasizes the importance of providing accessible and eco-friendly menstrual products. Through collaborations with government, like-minded institutions, civil society, donor agencies, lawmakers, the initiative seeks to make sustainable menstrual hygiene options readily available, contributing not only to individual wellbeing but also to environmental sustainability.

As "Step Up for Period Positive Delhi" gains momentum, it sparks a cultural shift, encouraging schools, workplaces, and public spaces to adopt periodfriendly policies. By normalizing discussions around menstruation, the initiative lays the foundation for a more informed and empathetic society, where menstrual health is not a source of shame but a subject of open conversation and understanding. This step forward is not only for the present generation but is a legacy of progress for the generations to come, shaping a period-positive Delhi for the future.

[Surender Singh, President,] Matri Sudha - A Charitable Trust

# Acknowledgment

Achieving the Sustainable Development Goals, advancing gender equality, and upholding human rights all depend on menstrual health. While knowledge of menstruation-related issues has grown over the last ten years, more multi-sectoral partnership is essential to fully meet the needs of all menstruating individuals.

This research study is a step up to build a comprehensive approach on menstrual health and to work together to realize one common dream of an inclusive policy in NCT of Delhi.

On behalf of entire team of Matri Sudha, we would like to give our special thanks to Dr. Karan Babbar, Assistant Professor, Department of Social Sciences & Humanities, Jindal Global Business School, Sonipat, Haryana; Dr. Har Ashish Jindal, Assistant Professor, Community Medicine & SPH PGIMER, Chandigarh Satellite Centre Sangrur; Dr Bharti Sharma Assistant Professor, Dept of Gynaecology and Obstetrics, PGIMER, Satellite Centre, Sangrur; Dr Mamta Gupta, Lead Epidemiologist, Alchemist Research & Data Analysis; Dr. Priyanka, Director, Mission Sewa Foundation Trust, Uttarakhand for reviewing the report; Dr. Amod P Borle, Associate Professor, Department of Community Medicine, Maulana Azad Medical College, GNCTD for his valuable guidance; Mr. Arvind Singh, Technical Head, Health & Nutrition, Matri Sudha and RISE UP Leader; Mr. Ravi Shanker Rai, Lead Researcher, Rising for Reproductive Health Rights Project, Matri Sudha and Ms. Pinki, Programme Manager, Matri Sudha for helping in designing the research tools and initiating the data collection.

We would like to extend our thanks to Ms. Reena Bannerjee, Navsrishiti; Ms. Kamala Suyal, ASOJ; Mr. Santlal, Saksham; Ms. Jyoti Shukla, Swati Project; Mr. Praveen Verma, ISHAN; Ms. Chhaya, Data Analyst; Ms. Babita, Ms. Himanshi and Ms. Sita (Matri Sudha); Ms. Rashmi, Ms. Vijay Sharma, Ms. Aashma, Ms. Sakshi (Swati Project); Ms. Suman Lata (ASOJ); Mr. Santosh Kumar, Ms. Rukshana (Navsrishti); Ms. Shalu Chawariya, Ms. Anjali (Saksham).



"The moon does not hide, despite its phases. Why should we?" - Rupi Kaur "The moon knows all the things that are hidden in the darkness." - Rumi

or an extended period, the natural and indispensable phenomenon known as menstruation, symbolized by the crimson tide, has been veiled in secrecy, shame, and discreet conversations. This biological process, intrinsic to womanhood, has been marginalized, labelled a taboo rather than being recognized as a potent facet of female existence. However, a transformative shift is underway.

Simone de Beauvoir's assertion, "Blood is the watermark of life," reverberates profoundly within the cyclic heartbeat of feminine existence. Nevertheless, this essential tide, the very source of womanhood, has long lingered in the shadows. It remains as a secret veiled in shame and societal taboos even in the era of artificial intelligence, and exploration of life on new planets. Menstrual health, an intersection of biology, culture, and philosophy, remains veiled in ignorance and stigma, its repercussions stretching far beyond physical discomfort.

This is not a clinical exposition, a sterile enumeration of symptoms and treatments. It is an impassioned exploration, a philosophical sojourn that ventures into the fertile ground where the moon's ebb and flow entwine with the fabric of womanhood. Here, we strive to uncover the wisdom concealed beneath layers of misinformation and cultural burdens, reclaiming the narrative not with clinical facts but with the genuine vulnerability of shared stories and the poetic resonance of lived experiences.

The discourse surrounding menstrual health transcends the mere realm of hygiene, venturing into the fertile soil of holistic well-being. It encompasses the physical, emotional, and spiritual dimensions of people (women, adolescents and transgenders) who

menstruate, their experiences, acknowledging the intricate interplay between menstrual practices, cultural conditioning, and personal agency.

Across the globe, women navigate a kaleidoscope of menstrual experiences, shaped by cultural norms, societal expectations, and access to resources. From the remote villages of India, where menstrual huts whisper tales of seclusion, to the bustling metropolitan area of Delhi, where stigma surrounds menstruation, the fabric of menstrual health and hygiene reveals various aspects.

Understanding these varied experiences is crucial to dismantling the barriers that impede menstrual equity. Through open dialogue, informed education, and access to safe and sustainable menstrual products, we can empower women to navigate their cycles with dignity, confidence, and a sense of self-compassion.

In the following chapters of this study, we embark on a journey that delves into the real-life experiences of women and girls, uncovering a spectrum of cultural practices and beliefs entwined with menstruation. We scrutinize the difficulties faced by those contending with insufficient access to menstrual products, sanitation facilities, and education.

This research study has explored the ways in which communities of Delhi are practicing, advocating, and reclaiming their dignity in the face of menstruation. The voices of individuals and organizations demanding safe and sustainable MHH resources, breaking taboos, and ensuring menstrual equity resound with celebration.

This study has emphasized that menstruation is not an aberration but a fundamental facet of human health and well-being. It is a call to acknowledge the infringement of human rights when individuals are denied health, education, and dignity due to menstruation.

We invite you all to join us on this transformative journey. Together, let us redefine the narrative. Let us converse openly and authentically about menstruation, devoid of shame but filled with understanding and empathy. Let us deconstruct the barriers preventing individuals from experiencing their periods with safety, comfort, and empowerment. This preface is not a conclusion but a commencement. It is a seed sown in fertile soil, a commitment to cultivate a world where menstruation is not concealed but celebrated as the formidable, life-sustaining force that it genuinely represents.



# Understanding menstrual physiology and health

enstrual physiology forms the foundation of menstrual health. A normal menstrual cycle, which lasts approximately 28 days, involves complex hormonal interactions. During menstruation, the uterine lining is shed, marking the beginning of a new cycle. Menstrual health includes regular, predictable cycles, manageable flow, and minimal discomfort. Irregularities in menstrual cycles can be indicative of underlying health issues. Conditions such as Polycystic Ovary Syndrome (PCOS) and endometriosis can disrupt normal menstruation patterns (World Health Organization, 2018).

To understand menstrual physiology, it is important to know menstrual cycle phases. Menstrual cycle phases can be divided into several phases, each characterized by specific physiological events:

### Menstrual cycle phases

**Menstrual Phase:** The menstrual phase, also known as menstruation, is the shedding of the uterine lining. It typically lasts 3-7 days and marks the beginning of the menstrual cycle.

**Follicular Phase:** This phase occurs concurrently with menstruation. Follicle-stimulating hormone (FSH) stimulates the growth of ovarian follicles, each containing an immature egg.

**Ovulation:** Around the middle of the menstrual cycle, a surge in luteinizing hormone (LH) triggers the release of a mature egg from the

dominant follicle. This is known as ovulation, which typically occurs on day 14 in a 28-day cycle.

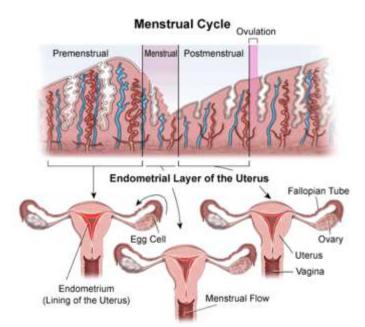
**Luteal Phase:** After ovulation, the remaining follicle transforms into the corpus luteum, which produces progesterone to prepare the uterine lining for potential pregnancy.

### **Hormonal Regulation**

The menstrual cycle is intricately regulated by hormones, primarily estrogen and progesterone. Key hormonal events include:

**Estrogen:** Produced by the developing follicles, estrogen stimulates the thickening of the uterine lining during the follicular phase and is responsible for secondary sexual characteristics.

**Progesterone:** Secreted by the corpus luteum, progesterone maintains the uterine lining and prepares the body for pregnancy. If pregnancy does not occur, progesterone levels drop, leading to menstruation.



Source: britanica.com



# Menstrual Irregularities And Health Implications:

While the menstrual cycle follows a general pattern, variations are common. Menstrual irregularities can signal underlying health conditions:

Amenorrhea: The absence of menstruation can result from factors such as pregnancy, stress, low body weight, or hormonal imbalances. Amenorrhea can have implications for fertility and bone health (Kulkarni, et al., 2019).

**Dysmenorrhea:** Painful menstruation, known as dysmenorrhea, is common. However, severe pain can be indicative of conditions like endometriosis or fibroids (Kulkarni, et al., 2019).

**Menorrhagia:** Menorrhagia, or excessive menstrual bleeding, can be caused by bleeding disorders or uterine fibroids, which can affect daily life and cause anaemia ("Abstracts," 2015).

Polycystic Ovary Syndrome (PCOS): PCOS is a common hormonal disorder characterized by irregular periods, elevated androgens, and ovarian cysts. It can affect fertility and increase the risk of other health issues, such as diabetes (DiPiro JT, Talbert RL, Yee GC, et al., 2011).

### **Health Management and Implications:**

Understanding menstrual physiology is critical for women's health management:





**Fertility:** A regular menstrual cycle is essential for reproductive health. Irregularities may impact fertility, and tracking the menstrual cycle is often a component of family planning (Hickey et al., 2016).

**Bone Health:** Amenorrhea or irregular menstruation can affect bone health due to reduced estrogen levels, potentially leading to osteoporosis (Hickey et al., 2016).

**Mental Health:** Severe menstrual symptoms, such as premenstrual dysphoric disorder, can impact mental well-being. Treatment options, including hormonal and non-hormonal interventions, exist to alleviate symptoms (Pizzo, Laganà, & Barbaro, 2017).

### DID YOU KNOW?



Indian women is the cultural and societal influence on women's health-seeking behaviours and the stigma associated with discussing menstrual issues openly.

### enstrual health is garnering increased attention and is being increasingly acknowledged as vital for advancing gender equality and meeting the Sustainable Development Goals like SDG-5 (gender and equality), SDG-3 (good health and wellbeing) and SDG-6 (Clean water sanitation). When we prioritize menstrual health, we unleash a transformative power for women and girls. Imagine a world where they have unrestricted access to safe and dignified hygiene practices, including clean water, proper sanitation facilities, and affordable menstrual products. This empowers them to maintain good health, avoid infections, and manage their cycles with confidence. Imagine healthcare systems responsive to their needs, providing regular check-ups, accurate information, and readily available medical help when needed. Finally, imagine schools free from periodrelated stigma and equipped with necessary infrastructure, allowing girls to stay in education and pursue their full potential. This isn't just about menstrual hygiene; it's about unlocking the collective potential of half the world's population and building a future where every woman and girl thrives in an equitable and inclusive society. By investing in menstrual health, we invest in their dreams, their voices, and their limitless possibilities. Additionally, prioritizing menstrual health contributes to breaking down societal taboos and stigma surrounding menstruation, ultimately empowering individuals to manage their reproductive health with dignity and autonomy. Despite this, millions of women, adolescent girls, and transgenders who menstruate struggle to achieve it. There is increasing recognition that this natural process is experienced negatively and presents a barrier to health and gender equality (Hennegan et al., 2019).

India is a country of contrasts, with extreme socio economic status and gender disparities, resulting in significant variation in health and social indicators among girls, women and other genders who menstruate (van Eijk AM, Sivakami M, Thakkar MB, et al., 2015). The challenge, of addressing the sociocultural taboos and beliefs in menstruation, is further compounded by lower – literacy levels the low girls' knowledge levels and understandings of puberty, menstruation, and reproductive health among girls and women.

Previously studies among adolescent girls have shown that menstruation was experienced with

# Introduction

discomfort and fear. Access to clean, reliable materials to absorb menses, supportive sanitation infrastructure, and biological and pragmatic information about menstruation were highlighted as core challenges. Also, fewer studies among adult women have highlighted that they too lack resources and support during menstruation which may contribute to stress and absence from employment. The understanding of gender in binaries (male and female) is a barrier for transgender persons to access menstrual health services. Currently, the menstrual health discourse in most countries excludes genderdiverse people, and this is particularly true in low and middle-income countries (LMICs), including India. There is evidence that sexual and reproductive health (SRH) is strongly linked to menstrual health and hygiene (MHH). It is being argued that without improving menstrual health the world stands farther from realizing sexual and reproductive health rights. Further, a lack of clarity around core concepts, or terminologies, in menstrual research has further complicated the development of problem theory. Early efforts were united around 'menstrual hygiene'. This was defined as 'women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials' providing a target for improving the effective and hygienic management of menses. However, because this definition does not include other menstrual needs highlighted by qualitative studies, more recent versions have expanded the definition, adding that '[women and adolescent girls] understand the basic facts linked to the menstrual

cycle and how to manage it with dignity and without discomfort or fear'.

It is suggested as 'an encompassing term that includes both menstrual hygiene management (MHM) as well as the broader systemic factors that link menstruation with health, well-being, gender, education, equity, empowerment, rights and to facilitate the consideration of menstrual disorders (e.g., dysmenorrhea, PCOSs). Therefore, effective interventions are needed across contexts; to improve menstrual health and associated outcomes. It is essential to co-develop menstrual health management/program, research, and policies based on diverse needs. To provide menstrual health, we must advocate for products, spaces, education, and services suitable for women, adolescent girls and others who menstruate (transgender men and nonbinary individuals) across age groups and sociopolitical contexts so that they can manage their periods with safety and dignity. Combining conceptual understanding with practical knowledge can ignite the motivation of key stakeholders to contribute positively to promoting safe, comfortable, and healthy menstrual practices at individual, family, and community levels.

Safe menstrual health practices require a united front from a diverse group of stakeholders. Adolescent males must be educated about menstruation to break taboos and foster respectful behaviour. Older men in communities and families can champion open dialogue and advocate for resources. ASHAs and AWWs, frontline healthcare workers, play a crucial role in dispelling myths, providing information on hygiene and products, and ensuring access to proper facilities. School teachers and principals can weave menstrual health education into curriculums, creating safe spaces for girls to ask questions and learn about their bodies. By working together, this network of stakeholders can empower girls and women to manage their periods with dignity and confidence, contributing to a more inclusive and supportive environment for all.

### 5.1. Problem statement

There are over 355 million menstruating women and girls in India. About 50 per cent of women aged 15-24 years do not have safe menstrual health practices. UNICEF says in addition to girls and women, transgender men and non-binary persons are also unable to manage their menstrual cycle in a dignified and healthy way.

### .5.2. Menstrual health framework

It is crucial to map the journey of individual's experiences as well as practices on menstrual flow management with the help of an appropriate framework.

The way we navigate and address menstruation is influenced by a multifaceted interplay of factors extending beyond our biological aspects. Employing a socio-ecological framework enables us to scrutinize these factors at various levels, providing a comprehensive comprehension of the issues and prospects associated with menstrual health and hygiene (MHH). The framework is structured as follows:

### 1. Individual Level:

- Biological factors: Elements such as age, puberty onset, menstrual cycle regularity, and underlying medical conditions play a role in shaping an individual's menstrual experience.
- Personal knowledge and attitudes: The accessibility of accurate information about menstruation, cultural beliefs, and personal understanding of the process can impact hygiene practices and emotional well-being.

### 2. Interpersonal Level:

- Family and peers: Support from family, open communication, and positive attitudes toward menstruation within peer groups contribute to creating a safe and supportive environment.
- Gender norms and roles: Socially constructed gender roles can influence perceptions and management of menstruation, potentially leading to stigma and exclusion.

### 3. Community Level:

• Water, sanitation, and hygiene (WASH) facilities: Adequate access to clean water, private sanitation facilities, and safe disposal options for menstrual waste are crucial for proper MHH. • Community attitudes and practices: The beliefs and customs within a community regarding menstruation can impact individual experiences and access to resources.

### 4. Societal Level:

- Education and awareness programs: Inclusive sexuality education that incorporates menstruation is vital for dismantling stigma and promoting healthy practices.
- Government policies and programs: National policies on menstrual health, affordable access to menstrual products, and investments in WASH infrastructure can significantly influence MHH outcomes.

### 5. Environmental Level:

Accessibility and affordability of menstrual products: The availability of safe, hygienic, and sustainable menstrual products is essential, particularly for marginalized communities.

**Environmental impact of menstrual waste:** The disposal of disposable menstrual products can pose environmental challenges. Sustainable alternatives and proper waste management practices are crucial.

Socio-ecological framework will help us to navigate the menstruation, a natural biological process experienced by half the population, remains shrouded in silence and stigma in many societies. This is particularly true in Delhi, where cultural beliefs, socioeconomic disparities, and inadequate infrastructure can significantly impact menstrual health experiences. Addressing these issues requires a comprehensive understanding of the knowledge, attitudes, practices, and challenges surrounding menstruation in this context. Understanding these diverse challenges and their interconnectedness is crucial for creating effective interventions and promoting equitable MHH in Delhi. This research aims to delve deeper into the multifaceted factors influencing MHH experiences within this unique context, ultimately informing policy recommendations for a more inclusive and sustainable future. To bridge the gaps, this research aims to navigate the nuanced landscape of menstrual health in India through a multifaceted lens.

### 5.3. Objectives of the research study

# Objective 1: To Assess Knowledge, Attitudes, and Practices on Menstruation

a. What is the level of knowledge regarding the

biological aspects of menstruation, and how does this knowledge vary across different age groups and genders?

- **b.** How do societal attitudes and cultural beliefs influence perceptions of menstruation, and to what extent does this impact their attitudes toward safe menstrual health practices?
- c. What are the prevailing menstrual health practices and how do these practices differ among

### Objective 2: To investigate the impact of unsafe menstrual health practices on reproductive health of adolescents and women

- **a.** What are the common unsafe menstrual hygiene practices and how do these practices correlate with the incidence of reproductive health issues?
- **b.** To what extent do inadequate menstrual health practices contribute to fertility-related concerns or complications among menstruators?

# Objective 3: To explore cultural and societal influences on safe menstrual health practices

- **a.** How do cultural beliefs, traditions, and societal norms impact the menstrual health practices and experiences of adolescents?
- **b.** What are the strategies employed by menstruators to navigate cultural taboos and restrictions related to menstruation?

# Objective 4: To assess the psychological and emotional impact of menstruation

**a.** How does menstrual stigma affect the self-esteem and emotional well-being of adolescents, and what coping mechanisms do they employ to manage emotional challenges?

# Objective 5: Availability and accessibility of menstrual health products

- **a.** What is the availability and accessibility of menstrual products within school settings, and how does this availability affect the overall menstrual health of girl's students?
- b. How do school facilities cater to the diverse needs of menstruating students, including those with disabilities?

# Objective 6: To investigate the socioeconomic factors influencing menstrual health practices

- **a.** How do socioeconomic factors, including income and access to resources, influence adolescents' choice of menstrual health products and practices?
- **b.** What are the economic barriers that hinder adolescents' access to affordable and quality menstrual products and services?

### Objective 7: To map the awareness and utilization of healthcare services to address menstrual health disorders

**a.** To what extent are adolescents, women and others who menstruate aware of available healthcare services for menstrual health, and how does this awareness impact their utilization of these services?

**b.** What are the primary barriers that prevent the menstruators from seeking medical assistance and how can these barriers be addressed?

### Objective 8: To understand the perspectives of duty-bearers on menstrual health

a. How do teachers, school administration, populations in Delhi?

# Objective 9: To formulate suitable recommendations for the development of a State Policy on Mens -trual Health

**a.** What evidence-based recommendations can be made to ensure the development of a comprehensive state policy on menstrual health that addresses the unique sociocultural, economic, and geographic factors within the state?

**b.** How can the proposed policy prioritize inclusivity, accessibility, and sustainability to ensure equitable access to menstrual health support and education for all adolescents?

By addressing these research questions, the study gathered comprehensive data and insights to inform evidence-based interventions and policy recommendations for improving menstrual health practices among all menstruators in NCT of Delhi.





# Literature Review

### Menstruation a significant milestone

enstruation, also known as a period, is the monthly bleeding that occurs in people during their menstrual cycle. It is the first significant milestone in the reproductive history of a woman's life. According to the World Health Organization (WHO, n.d.), menarche typically occurs "between 10 and 16 years," acknowledging its variability. Girls experience fear, shame and anxiety as they are not aware about menstruation prior to menarche. Although menarche may occur at different ages for different girls, adolescent girlhood is always a critical time of identity formation and a period of transition from childhood to womanhood (Pranita Ghalay et al., 2019)

# Achieving menstrual health – A fundamental right to equality, rights and dignity

Before the COVID-19 pandemic, globally of the 1.9 billion individuals who menstruate, an estimated 500 million were unable to attain menstrual health. In India, which has approximately 35.5 crore women who menstruate (almost a quarter of the country's population), 89.6% women in urban areas have some or complete access to hygienic

menstrual products and this figure stands at 72.6% in rural areas (National Family Health Survey- V, 2019-21).

Menstrual health is still not considered a priority by all. Millions of girls, women, transgender men and non-binary persons are unable to manage their menstrual cycle in a dignified, healthy way (UNICEF). A group of researchers believe that menstrual health is an important public health entity where menstrual health management remains poor among adolescent girls in lower-middleincome countries including India. Instead of being an indicator of health and vitality for women and girls, menstruation is surrounded by a veil of silence and shame. A citation analysis has observed that there is a lack of research pertaining to menstrual health. Millions of women and girls worldwide experience period poverty, described as limited access to period products, menstrual education, or adequate water sanitation and hygiene facilities. In addition, cultural norms, stigma, and taboos surrounding menstruation create further barriers to achieving menstrual health (Hennegan et al., 2021).

However, achieving menstrual health is fundamental to the equality, rights, and dignity of all individuals who menstruate (Babbar et al., 2022). It is also integral to improving global population health, achieving the Sustainable Development Goals (Babbar et al., 2022b), and realizing gender equality and human rights (Hennegan et al., 2021). Achieving good menstrual health is not just a matter of ensuring access to menstrual products but also relies on individuals having the resources they need to participate fully in all spheres of life during their menstrual cycle (Babbar et al., 2022b).

# Menstrual health in context to sexual and reproductive health

The Programme of Action from the 1994 International Conference on Population and Development defines sexual and reproductive health as "...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes".

Menstruation, a key function of the reproductive system, is fundamental to sexual and reproductive health and rights (Outlook on Reproductive Health, PATH, 2016).

The government of India (GOI) launched the Reproductive, Maternal, Newborn, Child and Adolescent Health Strategy (RMNCH+A) in 2013. These programmes focus exclusively on reducing maternal and child morbidity and mortality. An additional dimension of adolescent health was added to ensure lifecycle coverage. The predecessors of this strategy – Reproductive and Child Health (RCH) and RCH – II were launched in 1997 and 2005, respectively. The strategies focused solely on reproductive and child health. In 2014, Rashtriya Kishor Swasthya Karyakram (RKSK) was put in motion to expand the narrow focus of RMNCH+A, "limited to sexual and reproductive health." It now includes nutrition, injuries and violence, non-communicable diseases, mental health,



and substance misuse. The Adolescent Reproductive Sexual Health (ARSH) Clinic was initiated in 2006 under RCH-II, and the clinic exclusively provided counselling on sexual and reproductive health issues. These ARSH clinics were rebranded as Adolescent Friendly Health Clinic Services (AFHCS) under RKSK in 2014 to include the expanded objectives. The Menstrual Health Scheme programme under RKSK disproportionately focuses on sanitary napkins, has inadequate training modules and reading information for Auxiliary Nurse Midwives (ANMs) and adolescents. The Adolescent Friendly Health Clinics, on the other hand, do not cater to the menstrual health disorders observed in the adolescent population. Adolescents under the MHS are unequipped to understand menstrual symptoms, hindering their menstrual health-seeking behaviour. Among the reasons for not seeking treatment, a perception that their symptoms were normal or a lack of perception about the severity of symptoms were notable. Thus, the MHS programme and AFHCS under RKSK take a narrow approach to menstrual health.

Experts agree that the promotion of sexual and reproductive health (SRH) is among the keys to addressing this massive challenge. However, women—especially those with disability and those caught in conflict or disasters, transgender and nonbinary people continue to face massive challenges in accessing sexual and reproductive healthcare. Achieving global targets on SRH, in turn, greatly depends on a collective commitment to improve menstrual health and hygiene (MHH). There is a need to make SRH programme gender-transformative, first by recognizing the link between MHH and SRH. The study argues that gaps in targets for promoting menstrual health must be filled, if the global community is to achieve the Sustainable Development Goals on health and well-being, education, and gender equality. (Babbar & Sivakami, 2023).

### Menstrual disorders or irregularities

Where menorrhagia has a direct implication on the health of an adolescent girl leading eventually to anaemia, the other components indirectly affect adolescent girls' health. A cross-sectional study on menstrual problems among adolescent school girls in East Delhi highlighted that 76.1% girls reported and the body ache was experienced by 30.4%. Adolescent girls withstand their pain and think it as a normal phenomenon. The analysis highlighted the need for more research in the areas of menstrual health in low-

income countries like India to generate evidence to address challenges regarding menstrual health.

Menstrual irregularities, which consist of dysmenorrhea and abnormal uterine bleeding (AUB), are associated with SRH and can also affect the lifestyle of menstruating people. Studies have shown that the exclusion of menstrual health from government schemes targeting reproductive health has dire consequences. 17% of adolescent girls in India reported missing school due to dysmenorrhea. The study further observed 60.2% of adolescent girls seek help. While 43.4% sought advice from family members, 39.2% visited doctors, and 22.5% asked friends. On average, 22.1% to 43% exhibited help-seeking behaviour for menstrual symptoms (Indian School of Public Policy, 2021).

Matteson & Zaluski in their research on menstrual health as a part of preventive health care found that menstrual health assessment facilitates identification of pathologic conditions (e.g., abnormal uterine bleeding). They further stated that heavy bleeding, pain, fatigue, and mood changes significantly affect a woman's physical, social, and emotional quality of life. Promptly identifying and treating these disorders by incorporating their assessment into routine well — woman care has the potential to positively affect the lives of a substantial number of women (Matteson et al., 2019). seeking behaviour for menstrual symptoms (Indian School of Public Policy, 2021).

### Gender and menstrual health

A study on gender and menstrual health found that gender influences adolescents' menstruation-related experiences, understanding, and beliefs. It unpacks the various layers explaining how menstruation becomes a gendered experience in different social domains for girls and influences their health. The research further suggests that gender is an important determinant of sexual and reproductive health among adolescents; operating through unjust roles, norms, and expectations.

On the other hand, there is a need for inclusive menstrual health programming that supports gender-diverse people, such as transgender men and non-binary individuals (Weiselberg, 2022). In India, menstruation is still taboo - socially and culturally crafted with patriarchal notions and surrounded by myths (Sommer & Şahin, 2013). The inclusivity starts with language. A common term used in academia to account for adolescent girls, women, transgender

men, non-binary and agender people, and other gender minorities who menstruate is 'menstruators.' It was suggested to use the term women, adolescent girls and people who menstruate (Babbar et al., 2023). This sweeping language also extends to period products, frequently categorized as "women's hygiene products", indicating that the products are only for women and that menstrual health is only a "hygiene" issue. Multiple transgender and non-binary individuals have suggested this induces higher gender dysphoria during menstruation (Lowik A.J., 2022) Products should be labelled "period products," and terms that indicate they are unclean should be avoided.

### Box 1. Definition of menstrual health

Menstrual health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle.

Achieving menstrual health implies that women, girls, and all other people who experience a menstrual cycle, throughout their life-course, are able to:

- · access accurate, timely, age-appropriate information about the menstrual cycle, menstruation, and changes experienced throughout the life-course, as well as related self-care and hygiene practices.
- · care for their bodies during menstruation such that their preferences, hygiene, comfort, privacy, and safety are supported. This includes accessing and using effective and affordable menstrual materials and having supportive facilities and services, including water, sanitation and hygiene services, for washing the body and hands, changing menstrual materials, and cleaning and/or disposing of used materials.
- · access timely diagnosis, treatment and care for menstrual cycle-related discomforts and disorders, including access to appropriate health services and resources, pain relief, and strategies for self-care.
- · experience a positive and respectful environment in relation to the menstrual cycle, free from stigma and psychological distress, including the resources and support they need to confidently care for their bodies and make informed decisions about self-care throughout their menstrual cycle.

decide whether and how to participate in all spheres of life, including civil, cultural, economic, social, and political, during all phases of the menstrual cycle, free from menstrual-related exclusion, restriction, discrimination, coercion, and/or violence

### Towards a more inclusive definition

Menstrual hygiene management (MHM) has also become a globally recognized public health topic. The researcher drew on Gusfield's sociological analysis of the culture of public problems to analyse the factors that have shaped and influenced the shifting of menstrual management from an individual-level experience to a political problem worthy of government-level attention (Sommer et al., 2015). In Indian context the government level attention could be seen in terms of favourable menstrual health policies at the national level and in states and union territories The term "menstrual health" has seen increased use across advocacy, programming, policy, and research, but has lacked a consistent, self-contained definition (Henne gan et al., 2021). The group acknowledges that menstrual-related discomforts and disorders, consequences for mental well-being, and social exclusion are not restricted to the menstrual period.

Whilst the majority of those who experience a menstrual cycle are women and girls, this approach also communicates the relevance of menstrual health for all those who experience a menstrual cycle, regardless of their gender identity. Further, it recognizes that many who experience a menstrual cycle may not experience regular bleeding and the absence of menstruation can be a source of anxiety and distress (Hennegan et al., 2021). Research and practice have developed a nuanced understanding of menstrual experiences, and their intersections with physical, mental, and social health (Marcatili et al., 2020 & Hennegan et al., 2019).

Therefore, "menstrual health" is aligned with the WHO's definition that describes 'menstrual health a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle'. This definition reflects the multifaceted nature of menstruation and the many ways the lives of those who menstruate can be affected by their ability to properly manage their menstrual health.

It is crucial to recognize that the right to health does not only encompass the right for healthcare and medicine. But also, to have "access to health-related education and information, including on sexual and reproductive health. Therefore, enabling women, girls and others to have a safe, healthy and effective access in managing their menstrual health is crucial. It goes without saying that the lack of attention of MHH in policy level contributed to the fact that public discussion regarding menstruation being regarded as a taboo.

The present research is undertaken in the light of the new definition on "menstrual health" and "social-ecological theory".

### The menstrual health as per its new definition has the following characteristics:

- **1.** *Information:* Practical knowledge hygiene, nutrition, and self-care, equips those who menstruate to make informed decisions. The provision of this information must be timely to support mental well-being and equip people who experience a menstrual cycle to determine which changes are normal and which might require medical attention. For example, information about menstruation must be provided prior to menarche.
- 2. Materials, facilities, and services: To support menstrual health, individuals must be able to select care practices that are preferable and comfortable for them, and be able to afford the resources required for self-care. These practices should support hygiene and minimize the risk of infection and harm. Women, girls, and others who menstruate must be able to care for their body with the level of privacy they desire such that they feel free from unwanted observation or disturbance, and in safety such that they are protected from risk of physical, emotional or social harm. Safety must be considered in the location of infrastructure and services, the quality of menstrual materials, infrastructure, and disposal practices. The menstrual health of the individual requires that disposal practices protect from emotional and social harm, while disposal practices are also contributors to environmental heal. Difficulties managing menstruation are a source of distress, irritation and discomfort, have been identified as barriers to education and employment, have been linked to potential reproductive tract infections, and can compromise social well-being.
- **3. Diagnosis, care and treatment for discomforts and disorders:** By addressing menstrual health needs there is significant opportunity to improve the health of those experiencing discomfort and disorders related to menstruation. Treatment and care for discomforts and disorders may range from clinical care to advice for self-care or access to resources such as medication, counselling, exercise, or heat therapy.

**4.** A positive and respectful environment: A positive and respectful environment is needed across all levels, including the interpersonal, community and societal, for individuals to attain and maintain menstrual health. This means menstrual health must be considered in decision-making to ensure policies and programmes support a safe and positive environment.

## **Menstrual Health Products**



### Scope and purpose of the study

This research study delves into the multifaceted realm of menstrual health in Delhi, expanding beyond the mere focus on hygiene and sanitation prevalent in past research. We adopt a holistic approach, embracing the World Health Organization's definition of menstrual health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle." This definition encompasses five key pillars:

**Information and Education:** Access to comprehensive and age-appropriate knowledge about the menstrual cycle throughout life.

*Materials, Facilities, and Services:* Availability of hygienic, safe, and comfortable menstrual products, sanitation facilities, and healthcare services that cater to menstrual needs.

**Timely Diagnosis and Care:** Access to prompt diagnosis and management of menstrual cycle-related discomfort and disorders.

**Supportive Social Environment:** Freedom from stigma, discrimination, and psychological distress associated with menstruation.

**Non-discrimination and Participation:** Equal opportunity to participate in all aspects of life without restriction due to menstruation.

Our research addresses the pressing need for evidence-based policy actions in the area of menstrual health. We explore both sides of the coin- the experiences of those who menstruate and the perspectives of those who can support safe and healthy menstrual practices. By filling this crucial knowledge gap, we hope to provide valuable insights for policymakers and stakeholders to navigate beyond immediate outcomes and adopt a more integrated approach towards menstruation in Delhi.

### Study Design Study Type:

This was a mixed-method, cross-sectional study aimed at understanding menstrual health issues, practices, and challenges in diverse communities of Delhi, India. The study employed quantitative and qualitative data collection methods across multiple groups. These groups were selected on the basis following characteristics like age group, menstruating individuals, school going, out of school adolescent girls, working and non-working women and the duty



bearers. This study had been conducted between October, 2023 to November, 2023 in the selected districts of Delhi

### **Target Population:**

- Adolescent Girls (11-19 years): To understand menstruation knowledge, attitudes, and practices among young individuals.
- Women of Reproductive Age (19-49 years): To capture the experiences and perspectives of menstruating women during their prime reproductive years.
- Men (19-49 years): To explore men's understanding and involvement in menstrual health issues.
- Adolescent Boys (15-19 years): To understand knowledge, attitude and practices among young boys.
- Transgender individuals who menstruate: To ensure their unique experiences and challenges are captured within the study.
- Frontline Workers, School Teachers, and School Principals: To assess their roles in creating supportive environments for menstrual health management.

### Sample Size and Location:

- · A total of 838 participants were recruited from 7 districts in NCT of Delhi (See Table 1)
- · The distribution of participants across each group had been maintained to ensure representativeness of sample.

### Rationale for Group Selection:

- · Adolescent girls: This age group marks the onset of menstruation and forms crucial knowledge and practices.
- Women of reproductive age: This group experiences menstruation throughout their reproductive years and faces diverse challenges.
- *Men:* Their understanding and involvement can significantly impact menstrual health awareness and

### support.

- · Transgender individuals: Including this group ensures inclusivity and captures their unique experiences and challenges.
- · Frontline workers and educators: They play a key role in shaping menstrual health knowledge and support in schools and communities.

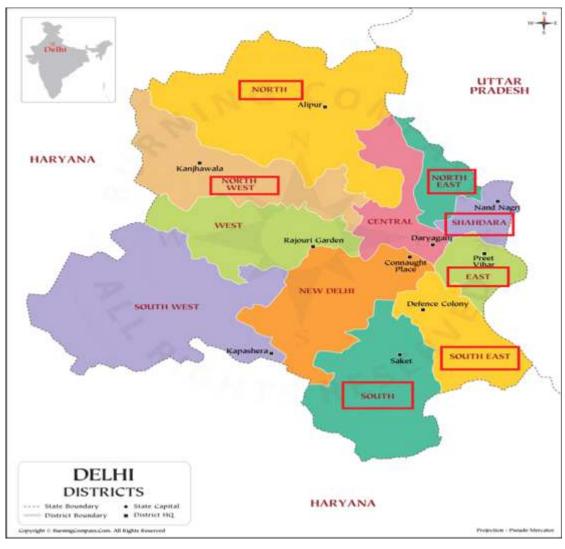
### Study area profile and sampling method

### a. Menstrual health and hygiene in Delhi: A Complex Landscape

Delhi, grapples with a complex landscape regarding menstrual health and hygiene (MHH). While positive developments exist, significant challenges require attention to ensure equitable access to safe and dignified menstrual experiences for all women and girls. While surveys suggest around 85% of adolescent girls in Delhi use sanitary napkins, affordability and accessibility remain key concerns (WASH United, 2022). Only 64% of Delhi households have access to improved sanitation facilities, and significant disparities exist across districts (WASH United, 2022). Studies indicate limited knowledge about menstrual health and hygiene among adolescent girls, highlighting the need for educational interventions (MHM India Coalition, 2022).

### Select Districts' Profile

**North Delhi:** This densely populated district faces challenges similar to the city as a whole. While the MHS program provides subsidized sanitary napkins, affordability remains a concern (Dasra, 2022). Socioeconomic disparities create unequal access to safe disposal facilities and WASH infrastructure (WASH United, 2023). Stigma persists, impacting open discussions and hindering knowledge about menstrual health (Menstrual Hygiene Hub, 2023).



Source: www.burningcompass.com

South Delhi: Comparatively better socio-economic conditions offer marginally improved access to menstrual hygiene products and WASH facilities (WASMO, 2018). However, stigma and taboos around menstruation continue to be a hurdle (WASH United, 2023). School infrastructure disparities persist, potentially affecting girls' education (WASH United, 2023).

North West Delhi: This district struggles with inadequate WASH facilities, particularly in urban slums (WASH United, 2023). While government programs aim to improve access to sanitary napkins, affordability remains an issue (Dasra, 2022). Stigma surrounding menstruation hinders open discussions and awareness among girls (Menstrual Hygiene Hub, 2023).

North East Delhi: Similar to North West Delhi, WASH facilities are inadequate, especially in informal settlements (WASH United, 2023). Affordable access to sanitary napkins remains a challenge despite government programs (Dasra, 2022). Deep-rooted stigma surrounding menstruation creates barriers to education and information (Menstrual Hygiene Hub, 2023).

Shahdara: This district faces significant disparities in WASH facilities and access to hygienic menstrual products (WASMO, 2018). Socioeconomic factors contribute to challenges in managing periods safely and hygienically (WASH United, 2023). Stigma and limited knowledge about menstrual health further complicate the situation (Menstrual Hygiene Hub, 2023).

South East Delhi: While relatively better positioned than some districts, concerns remain regarding unequal access to WASH facilities and affordable menstrual hygiene products (WASMO, 2018). Stigma and lack of comprehensive menstrual health education continue to impact girls and women (Menstrual Hygiene Hub, 2023). East Delhi: WASH facilities are insufficient, particularly in densely populated areas, creating challenges for menstrual hygiene management (WASH United, 2023). Affordability of sanitary napkins remains a concern despite government programs (Dasra, 2022). Stigma surrounding menstruation hinders open discussions and awareness among girls (Menstrual Hygiene Hub, 2023).

### b. Sampling method

This study used convenience and purposive sampling method. In convenience sampling participants are chosen based on their availability and ease of access, often for practical reasons like time or budget constraints. On the other hand, participants are chosen intentionally based on specific characteristics or experiences relevant to your research question. The goal is to gather in-depth information from individuals who can offer valuable insights. The sample were selected on the basis of following characteristics:

### Individuals who menstruate

- a. Adolescent girls aged 11-19 years
- b. Working women aged 19-49 years
- c. Trans men
- d. Non-working women (19-49 years)

### **Other stakeholders**

- a. Adolescent boys (15-19 years)
- b. Male (19-45 years)

### Duty bearers involved in implementing menstrual hygiene schemes

- a. ASHAs
- b. Anganwadi workers
- c. School teachers
- d. School Principals
- c. Sample districts selection

The sample districts were chosen on the basis of NFHS-5 survey sample: Out of the 11 districts, the districts were divided into two groups:

- 1. Districts where number of women age 15-49 years interviewed were lesser than 1000 by NFHS-5. These districts were called D-1. D-1 refers to those districts where NFHS has selected less than 1000 female for their NFHS-5 survey sample.
- 2. Districts where number of women age 15-49 years interviewed were above 1000. These districts were called D-
- 2. D-2 refers to those districts where NFHS has selected more than 1000 female for their NFHS-5 survey sample For both D-1 & D-2 "% of women age 15-24 years who use hygienic methods of protection during their menstrual

Census 2011 were given preference over other districts with similar data. Those districts were Shahdara and Southeast districts.

Table 1: Sample districts based on NFHS sample data.

S.No.	Name of Districts	% of Women age 15-24 years who use hygienic methods of protection during their menstrual period	Sample districts selected in this research	
1.	North	80.8%	Selected	
2.	South 83.5%		Selected	
3.	North West	84.2%	Selected	
4.	Central	84.4%	Not Selected	
5.	New Delhi	85.9%	Not Selected	
6.	North East	82.7%	Selected	
7.	Shahdara	83.1%	Selected	
8.	West	83.3%	Not Selected	
9.	South East	83.9%	Selected	
10.	East	84.4%	Selected	
11.	South West	86.6%	Not Selected	

### a. Sample population

### The sample population divided into two groups:

Active menstruators age 11-49 years

For this research study a sample size of 10% of women and girls for each district was randomly picked. Respondents were taken from all the seven selected districts for withdrawing sample of female age group of 11-49 years at a random basis from respective selected districts. It means this study had selected each respondent on the basis of random sampling method, keeping in mind that each respondent had equal chance of selection. This study has selected respondent from an identified area (based on convenience sampling area were identified for sample withdrawal) on the basis of certain characteristics like age, school going, non-school going, working and non-working women.

### Stage 1: Stratification:

- 1. Geographical: The seven districts under investigation were considered strata.
- 2. Socioeconomic: Within each district, further stratification based on sociodemographic characteristics like school enrolment and working status (working/non-working) may have been implemented.

### Stage 2: Sample Selection:

- 1. Proportionate Allocation: A 10% random sample of women and girls aged 11-49 years was drawn from each district, ensuring proportional representation across strata.
- 2. Simple Random Sampling: Within each stratum, individual participants were randomly selected using simple

random sampling, giving each woman an equal probability of being included.

Justification:

- $\cdot$  Multi-stage stratification ensures representativeness across geographic and potential socioeconomic variations within the population.
- · Random sampling at each stage minimizes selection bias and promotes generalizability of findings.

Table 2: Sample population.

S.No.	Name of Districts	Number of women age 15-49 years interviewed (NFHS-5)	Number of women age 11-49 years in this research			
1.	East	897	90			
2.	New Delhi	1055	105			
3.	North	924	92			
4.	North East	929	93			
5.	North West	1057	106			
6.	Shahdara	996	99			
7.	South East	1151	115			

### 1. Other groups of respondents

This research aimed to comprehensively investigate the diverse perspectives on menstruation management within a varied stakeholder group, encompassing school teachers, school principals, ASHAs, Anganwadi Workers (AWWs), adolescent boys aged 15-19 years, adult males aged 19-49 years, and individuals who menstruate. The district-wise sample size was determined, and the selection of respondents employed a combination of random and purposive sampling methods.

**Total: 700** 

### Random selection method:

**District-Wise Sample Size:** The sample sizes for each district were predetermined to ensure adequate representation (i.e. sample size in each district were selected as a 10 % of NFHS-5 sample survey in respective district).

**Random Selection:** Respondents from the groups of school teachers, school principals, ASHAs, Anganwadi Workers (AWWs), adolescent boys aged 15-19 years, and adult males aged 19-49 years were selected using a random sampling method within the chosen districts. This approach ensured an unbiased representation of various stakeholders involved in menstruation management.

### Convenience Sampling Technique:

**Selection Rationale:** For certain groups, such as ASHAs, Anganwadi Workers (AWWs), adolescent boys aged 15-19 years, and adult males aged 19-49 years, a convenience sampling technique was employed. This method was chosen to efficiently capture the perspectives of these key stakeholders, considering the practicality of their involvement in the study.

### **Purposive Sampling Method:**

**Selection Criteria:** Specifically, for individuals who menstruate, a purposive sampling method was utilized. This targeted approach ensured the inclusion of voices directly relevant to menstruation experiences, contributing unique insights to the research.

### Disproportionate Sample Size:

**Strategic Allocation:** The sample sizes for different stakeholder groups, such as ASHA, AWW, adolescent boys aged

Table 3: Sample size of other stakeholders in the study.

S.No.	District Name	School Principals	School Teachers	ASHAs	AWWs	Adolescent Boys	Adult male 19-45 years	Total
1.	East	1	2	2	2	10	3	20
2.	New Delhi	1	2	2	2	10	3	20
3.	North	1	2	2	2	10	3	20
4.	North East	1	2	2	2	10	3	20
5.	North West	1	2	2	2	10	3	20
6.	Shahdara	1	2	2	2	10	3	20
7.	Southeast	1	2	2	2	10	3	20
	Total							140

15-19, adult males aged 19-49, and others who menstruate, were intentionally disproportionate. This strategic allocation was made to recognize and highlight the varying roles and contributions of each stakeholder group in menstruation management. The selected numbers for each group were ASHAs (14), AWWs (14), adolescent boys aged 15-19 years (70), adult males aged 19-49 years (21), and others who menstruate were 10.

### **Data Collection Tools & Stages**

The data collection tools (scheduled interviews) were prepared separately for adolescent girls and boys age 11-19 years, women age 19-49 years, frontline workers (herein ASHAs and AWWs), school teachers, school principals and others who menstruate. These interviews were conducted at home, work place, schools and at common places of community as well.

Similarly, focussed-group discussions (5 FGDs with Women in the reproductive age group, 6 FGDs with Adolescent Girls and 1 FGD with others who menstruate) were conducted. There were 6-7 participants in each focussed group discussion. These FGD (Focus group Discussion) were conducted at common places of community as well.

### Data Analysis Techniques

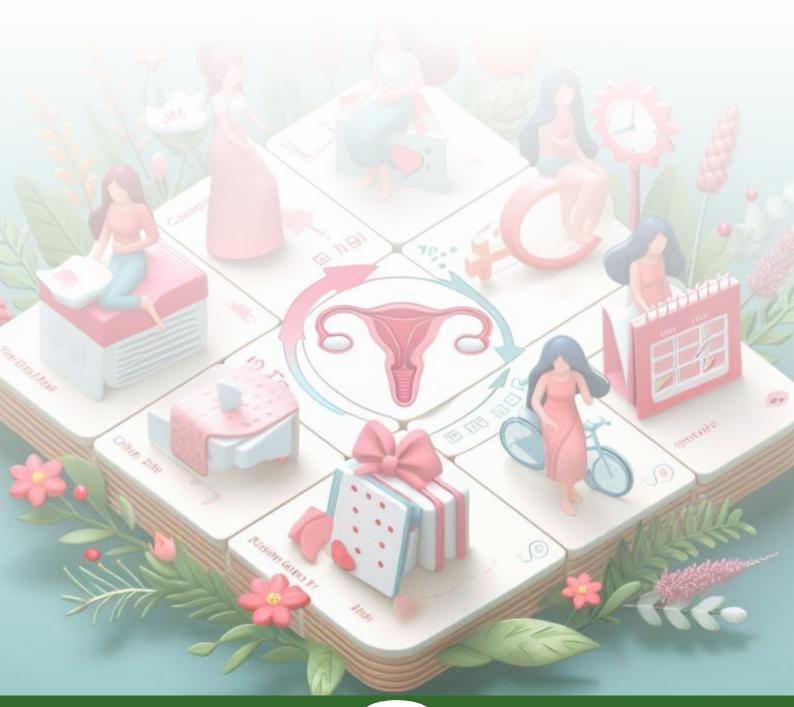
The data thus collected were entered into Microsoft Excel version 19 and analysed using the same software with advanced Microsoft Word version 19 for qualitative data analysis.

In order to arrive at conclusion, it was very important that the data that was gathered by the researcher would be organized systematically and properly. The quantitative response was coded, tabulated for preparation of tables and charts using advanced Excel Techniques. The qualitative response was written separately and the data analysis recorded all similar responses.

### **Ethical Considerations**

- 1. This research tools that were developed for field investigators as a part of a research study name "Building a Period-Positive Delhi: A Comprehensive Approach to Menstrual Health" he Institutional Ethics Committee of Matri Sudha A Charitable Trust (December 2013, MS/-IEC-02/23), reviewed the protocol and approved the study.
- 2. That all potential participants were free to choose whether they wanted to participate, and they could withdraw from the study anytime without any negative repercussions.

- 3. Data collectors took the informed consent and recorded it on paper after explaining the purpose of the study. In case of minor girls, we took consent from parents were taken.
- 4. The data collectors considered all possible sensitive questions that could triggered negative emotions such as shame or anxiety and to mitigate them.
- 5. The information collected during the field visits was kept confidential and all personnel assigned the task of collecting the data and supervising the work adhered to the guidance and policies of Matri Sudha A Charitable Trust.
- 6. Confidentiality of all participants was be assured during the data collection and analysis.
- 7. The information collected during the field visits was kept confidential and all personnel assigned the task of collecting the data and supervising the work adhered to the guidance and policies of Matri Sudha A Charitable Trust.





### Chapter 1: Adolescent girls (11-19 years)

This section delves into various factors influencing the lives of 350 adolescent girls aged 11-19, who participated in the study. It explores family structure, caste dynamics, socioeconomic status, parental education and occupation, and family income to gain insights into their menstrual health experiences. Family structure, ranging from nuclear to extended households, shapes their support systems and perspectives. Caste dynamics are examined to understand cultural influences on menstrual health. Socioeconomic status contextualizes the challenges these girls face, while parental education and occupation impact their access to information. Family income affects the availability of menstrual hygiene products and healthcare resources, shaping their overall well-being.:

### Qualitative analysis

Methodology: thematic analysis of menstrual health FGD data

Understanding their experiences and practices of adolescent and women through qualitative research methods like focus group discussions (FGDs) is crucial for designing effective menstrual health interventions. In this context, thematic analysis emerges as a powerful tool to unravel the key themes present within the rich data gathered from FGDs.

Thematic analysis is a flexible and widely used qualitative data analysis method that helps identify, analyse, and report patterns or themes within qualitative data, such as transcripts from FGDs. It aims to capture, explore, and describe important recurring meanings and experiences conveyed by participants. Unlike quantitative methods that seek numerical outcomes, thematic analysis delves into the subjective, nuanced narratives inherent in qualitative data.

Theme selection in thematic analysis involved a systematic yet iterative process, often characterized by the following steps:

- **1.Deep Dive:** First, deep dived into the transcripts, reading like detectives and highlighting interesting bits. This helped us understand the girls', women's' and other menstruator experiences as a whole.
- **2. Code Quest:** Next, we became data explorers, looking for key ideas and experiences related to our research question. We identified these sections of text and gave them clear labels, like "fear during first period" or "challenges getting pads."
- 3. Connecting the Dots: Like detectives finding clues, grouped similar labels together. As we compared them, we saw bigger patterns emerge, hinting at the main themes hidden within the data.
- **4. Theme Detectives:** With careful examination, we evaluated each potential theme to make sure it made sense and matched what the girls said. We also wanted to show how important these themes were to their experiences. For each theme, we picked words and sentences from the transcripts to explain it clearly.
- 5. Refining Our Story: We went back and forth, changing and improving the themes until we were sure they accurately reflected what the girls had shared. We even showed our work to others for feedback to make sure it was strong and well-done.

The focus group discussions (FGDs) were conducted with adolescent girls age11 - 19 years provided rich insights into various aspects of menstrual health, encompassing onset experiences, awareness, challenges, menstrual practices, support systems, and recommendations.

### 1. Onset of Menstruation

It was found that the onset of menstruation varied between the ages of 10 to 16 years across different groups. This variability might be influenced by factors such as genetics, nutrition, and environmental factors. Understanding this range is crucial for tailoring menstrual health education to diverse age groups within the adolescent spectrum.

### 2. Menstrual Symptoms

The reported symptoms during menstruation were diverse, encompassing physical, emotional, and psychological aspects. Common experiences included weakness, pain in various body parts, mood swings, stomach pain, and headaches. This broad range of symptoms emphasized the need for comprehensive menstrual health education that addresses not only the physical but also the emotional well-being of adolescent girls.

### 3. Awareness and Education

The primary source of information about menstruation was informal education at home, provided by mothers, elder sisters, aunties, and friends. While this familial education was crucial, the data also indicated an increasing role of formal education, particularly through teachers in schools. However, a significant proportion of participants were not aware of menstruation before experiencing it, highlighting gaps in formal education that need addressing.

### 4. Challenges and Concerns

### 4.1. Availability of menstrual products

Availability of menstrual products, especially in school settings, emerged as a major concern. Participants reported problems with accessing sanitary pads or other menstrual materials, often leading to unplanned solutions. This emphasized the need for improved infrastructure in schools and increased accessibility to menstrual products.

### 4.2. Taboos and stigmas

Taboos and stigmas associated with menstruation were prevalent across groups. Participants mentioned restrictions on various activities during menstruation, indicating the deeply ingrained cultural perceptions surrounding menstruation. Addressing these taboos requires targeted community interventions and education campaigns.

### 4.3. Cultural variances

The diverse cultural practices were found reported taboos and practices, suggesting cultural variations in how menstruation is perceived and managed. Understanding these cultural nuances is crucial for designing culturally sensitive menstrual health programs that respect local beliefs and traditions

### 4.4. School facilities

The broken toilet gates in schools emerged as a specific infrastructural challenge, making it difficult for girls to change sanitary pads. This issue not only affected safe menstrual practices but also highlighted the importance of creating supportive environments in schools for menstrual health management.

### 5. Menstrual Practices

### 5.1. Sanitary pad usage

The consistent use of sanitary pads during menstruation was a positive finding. Majority of these sanitary pads would be available in schools. However, issues related to the quality of available sanitary pads, such as leakage, poor glue quality, and smaller sizes, were reported. This pointed to the importance of not only promoting usage but also ensuring the accessibility and quality of menstrual products, especially in school settings.

### 5.2. Disposal practices

Various methods of sanitary pad disposal were reported, including wrapping in newspaper or plastic bags and direct disposal into dustbins. The diversity in disposal practices highlighted the need for comprehensive menstrual health education that covers proper disposal methods and waste management.

### 6. Support and Resources

### 6.1. Support of male family member

The data indicated a lack of support from male family members during menstruation. While some participants reported discussing menstruation with their brothers, communication with fathers and uncles was limited. Encouraging open conversations within families, including male members, is crucial for breaking down barriers and fostering a supportive environment.

### 6.2. Information sources

Participants reported diverse sources of information, including the internet, health centres, NGOs, TV, and female teachers. The reliance on digital platforms underscores the importance of utilizing technology for disseminating accurate and reliable information. However, it also emphasizes the need for ensuring the credibility of online sources.

### 7. Future actions and suggestions

### 7.1. Government intervention

The participants expressed a clear need for government subsidies on sanitary pads and other menstrual materials to enhance accessibility. This recommendation aligns with the broader goal of making menstrual products affordable and available to all socioeconomic groups.

### 7.2. Educational initiatives

The call for educational sessions in schools, communities, and street plays (Nukkad Natak) reflected a recognition of the pivotal role of education in challenging and changing societal norms. Integrating menstrual health education into formal and informal settings can contribute significantly to breaking the silence surrounding menstruation.

### 7.3. Product improvement

Participants provided specific recommendations for improving sanitary pads, including a preference for specific brands and a call for appropriate sizes and better absorption capacity. These insights offer valuable guidance for product development and quality enhancement to meet the diverse needs of adolescent girls for in-school and out of school girls.

### 7.4. Regular distribution and availability

The recommendation for regular distribution of pads in schools and public places emphasized the importance of not only making products accessible but also ensuring a consistent supply. Integrating menstrual hygiene into broader health initiatives can contribute to normalizing the conversation around menstruation and ensuring continuous support.

### 7.5. Inclusive facilities

Suggestions for making sanitary pads available in public washrooms and schools align with the broader goal of creating inclusive and supportive environments. This recommendation calls for infrastructural changes and policy initiatives to integrate menstrual health considerations into public spaces.

### 7.6. Male involvement

Encouraging male family members' involvement in conversations around menstruation is a key recommendation for fostering a supportive environment at home. Breaking the silence and encouraging open discussions contribute to dispelling myths and reducing stigma.

### 7.7. Fostering partnerships

The girls mentioned the help received from NGOs in the form of menstrual products, especially, sanitary pads. They also acknowledged government efforts and other entities. The discussion emphasized the significance of collaborations between NGOs, government bodies, and private entities to create a synergistic approach to menstrual health

### **Quantitative Analysis**

*Demographic Profile of respondents:* Adolescent girls (11-19 years)

### Age group

The present study covers adolescents age 11-19 years (N=350) in which 11-13 years were 13.4%, 13-15 years were 29.2%, 15-17 years were 34% and 17-19 years were 23.4%.

### 1. Onset of Menstruation

It was found that the onset of menstruation varied between the ages of 10 to 16 years across different groups. This variability might be influenced by factors such as genetics, nutrition, and environmental factors. Understanding this range is crucial for tailoring menstrual health education to diverse age groups within the adolescent spectrum.

### 2. Menstrual Symptoms

The reported symptoms during menstruation were diverse, encompassing physical, emotional, and psychological aspects. Common experiences included weakness, pain in various body parts, mood swings, stomach pain, and headaches. This broad range of symptoms emphasized the need for comprehensive menstrual health education that addresses not only the physical but also the emotional well-being of adolescent girls.

### 3. Awareness and Education

The primary source of information about menstruation was informal education at home, provided by mothers, elder sisters, aunties, and friends. While this familial education was crucial, the data also indicated an increasing role of formal education, particularly through teachers in schools. However, a significant proportion of participants were not aware of menstruation before experiencing it, highlighting gaps in formal education that need addressing.

### 4. Challenges and Concerns

### 4.1. Availability of menstrual products

Availability of menstrual products, especially in school settings, emerged as a major concern. Participants reported problems with accessing sanitary pads or other menstrual materials, often leading to unplanned solutions. This emphasized the need for improved infrastructure in schools and increased accessibility to menstrual products.

### 4.2. Taboos and stigmas

Taboos and stigmas associated with menstruation were prevalent across groups. Participants mentioned restrictions on various activities during menstruation, indicating the deeply ingrained cultural perceptions surrounding menstruation. Addressing these taboos requires targeted community interventions and education campaigns.

### 4.3. Cultural variances

The diverse cultural practices were found reported taboos and practices, suggesting cultural variations in how menstruation is perceived and managed. Understanding these cultural nuances is crucial for designing culturally sensitive menstrual health programs that respect local beliefs and traditions.

### 4.4. School facilities

The broken toilet gates in schools emerged as a specific infrastructural challenge, making it difficult for girls to change sanitary pads. This issue not only affected safe menstrual practices but also highlighted the importance of creating supportive environments in schools for menstrual health management.

### 5. Menstrual Practices

### 5.1. Sanitary pad usage

The consistent use of sanitary pads during menstruation was a positive finding. Majority of these sanitary pads would be available in schools. However, issues related to the quality of available sanitary pads, such as leakage, poor glue quality, and smaller sizes, were reported. This pointed to the importance of not only promoting usage but also ensuring the accessibility and quality of menstrual products, especially in school settings.

### 5.2. Disposal practices

Various methods of sanitary pad disposal were reported, including wrapping in newspaper or plastic bags and direct disposal into dustbins. The diversity in disposal practices highlighted the need for comprehensive menstrual health education that covers proper disposal methods and waste management.

### 6. Support and Resources

### 6.1. Support of male family member

The data indicated a lack of support from male family members during menstruation. While some participants reported discussing menstruation with their brothers, communication with fathers and uncles was limited.

Encouraging open conversations within families, including male members, is crucial for breaking down barriers and fostering a supportive environment.

### 6.2. Information sources

Participants reported diverse sources of information, including the internet, health centres, NGOs, TV, and female teachers. The reliance on digital platforms underscores the importance of utilizing technology for disseminating accurate and reliable information. However, it also emphasizes the need for ensuring the credibility of online sources.

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### Age of adolescents (in years)

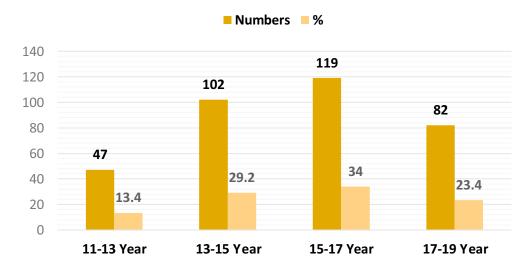


Figure 2: Age of adolescents (in years).

*Family structure:* Majority of girls lived in nuclear families (89%) while 11% lived in joint families. Only 2.3% (age 18 above) were married and 1.3% were employed.

Caste composition of adolescent girls in Delhi: Delhi is a heterogenous state with existence of people from different socio-econmomic, caste, language and ethnicity. In this research, 38.2% adolescent girls belonged to general caste, 22.6% belonged to other-backward caste, 27.1% belonged to schedule caste, 9.72% belonged to minorities (especially Muslim) and only 2.38% belonged to schedule tribes.

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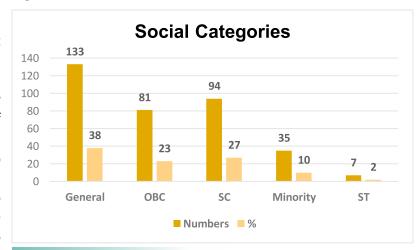


Figure 3: Social Categories.

**Regional origins of adolescent girls in Delhi:** Similarly, 39.7% adolescent girls originally belonged to Uttar Pradesh, 1.4% belonged to Odisha, 8% belonged to West Bengal, 17.4% belonged to Bihar, 4.% belonged to Madhya Pradesh, 3.5% belonged to Rajasthan while 25.7% belonged to states like Himachal Pradesh, Chhatisgarh and Haryana.

Socio-demographic profile of respondent parents A Divide: Mothers vs. Fathers in Literacy Rates:

- · All the respondents were having their parents alive. 153 out of 350 mothers 43.7% were illiterate. In comparison, 104 out of 350 fathers (29.7%) were illiterate. There is sharp difference in the literacy level of both parents.
- · Parents, especially the mother, has the most important role in the education, transformation of information, and health behaviours of girls in order for girls to have a healthy transition from the critical stage of puberty. Therefore, it would be interesting to understand any association between parent's education and menstruation awareness among their daughters.

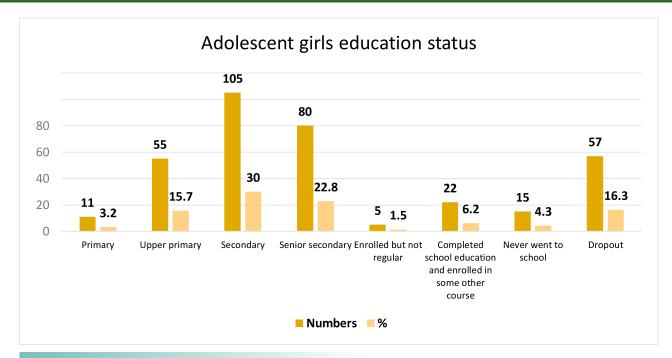


Figure 4: Adolescent girls education status.

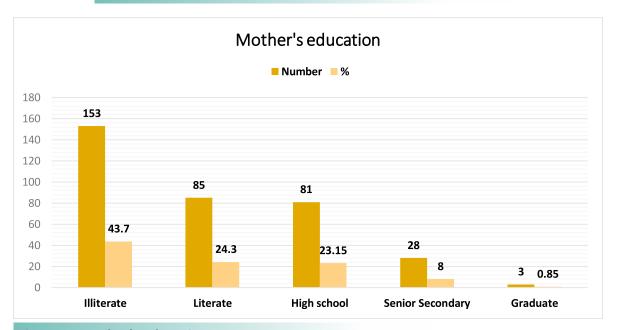


Figure 5: Mother's education.

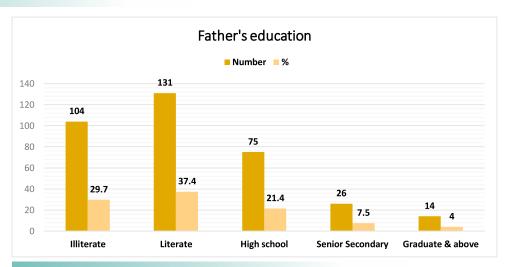


Figure 6: Father's education.

### Diverse role of mother: Homemakers, daily wage earners, and domestic workers

As far as the mother's occupation is concerned, 130 out of 350 mothers (37.1%) were homemakers, 70 out 350 (20%) were daily wage earners employed in informal settings, 79 out of 350 (22.5%) were domestic workers. Thus, in total 279 out of 350 mothers (79.6%) were a part of informal workforce.

### Diverse role of father: Homemakers, daily wage earners, and domestic workers

In contrast, 190 out of 350 fathers (54.2%) were daily wage earners like plumber, labourer, vegetable seller, carpenter etc. It is seen above that 79.6% mothers and 54.2% fathers were employed as daily wage earners.

### Limited family income

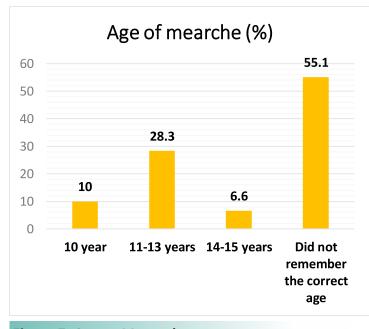
134 out of 350 families (38.2%) were having monthly income <Rs.10000 and 133 out of 350 families (38%) were having montly income between Rs.10000-15000. It is, therefore, important to see if family income impacts the overall menstrual practices of girls.

### Entering adulthood: Growth, change, and reproductive Power

Puberty is a critical juncture between childhood and adulthood and is a time of growing, changing, and gaining reproductive power. Sudden and obvious changes in teenagers in all cultures despite the difference in its meaning are an effective and significant event in the lives of girls. Without adequate guidance, transition from this stage of life can create numerous challenges for adolescent girls, families, and communities.

### Menarche: when does it begin and knowledge about it

The mean age of menstruation varies from 10 years to 15 years. The mean age of menarche was 12.5 years. Only 51.7% girls knew about menarche before it happened to them while 42% did not have any prior knowledge or information and 6.3% did not remember about it.



# Beyond Biology: The Social Landscape of Menstrual Support For Girls

This research found that 77.1% girls reported about menarche to their mothers or mothers were the first educators on menstruation for their daughters, 7.4% reported to their close friends (all girls) and 15.4% girls shared the information with their sisters. 45% girl reported that they took help from their mothers during menstrual periods, 35% took help from their teachers and 10% took help from their sisters.

From threads to feasts: unpacking the variety of menarche rituals This research study found that families of 13.7% celebrated rituals at the time of their menarche. Some of the rituals reported by girls are as follows:

Figure 7: Age at Menarche.

<sup>&</sup>quot;5-meter-long thread was taken to put the first menstrual blood on it with finger. Then the thread was pasted on the wall as it is"

<sup>&</sup>quot;My mother had put water on my head when I had period for the first time"

<sup>&</sup>quot;During the menarche food was given to goat"

<sup>&</sup>quot;Wet turmeric was put on the whole body and bath was taken. After that people from neighbours were invited to eat food at our home"

<sup>&</sup>quot;All family members had given yellow coloured food to Goddess Durga and at the same afterwards"

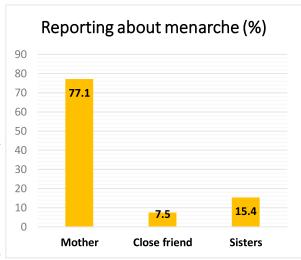
"I was being dressed like a bride after the bath"

### Exclusion and misconceptions: unveiling the widespread taboos surrounding menstruation

Menstruation is a phenomenon unique to women in the reproductive age group. However, it has always been surrounded by myths and taboos that exclude women from many aspects of socio-cultural life.

Religious Restrictions: This research found that in 83.1% family, prayer to God is not allowed and this was common in all religion (Hindu & Muslims).

Social Segregation: In 11.5% families talking to males is prohibited. This may lead towards social segregation from male to Figure 8: Reporting about menarche. female and is great concern for.



Hygiene and Cleansing: There are 21.5% girls reported that they could not wash their hairs during menstrual periods. 19.1% girls informed that there were not allowed to touch any flower pot in their homes.

Dietary and Practical Limitations: There are 49.7% girls reported that their food utensils would be separated during menstrual periods and it would happen in every month. 11.7% girls reported that they would do away complete make-up.

### From limited to informed: examining the age-based trajectory of menstrual awareness

The chart shows the age-wise information about menstruation among adolescent girls. With increase in age the percentage of information about menstruation also improved among them.

To further understand the level of information about menstruation among the respondents (girls) that responded affirmatively, a scale of (1-10) having three categories were created.

### Relationship between age and awareness about menstruation

Only 2.32% in 11-13 years, 6.5% in 13-15 years, 8% in 15-17 years and 9.1% in 17-19 years had complete information about menstruation. Overall, with increase in age as seen in the previous analysis, there is increase in percentage of information among the respondents. However, the overall number regarding menstrual awareness remains very poor.

### Relationship between education and awareness about menstruation

This research did not find any correlation among adolescent's education status and awareness about menstruation.

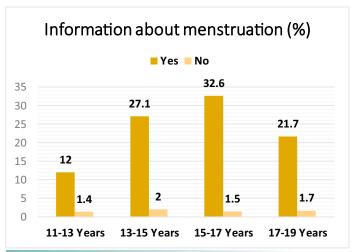


Figure 9: Information about menstruation.

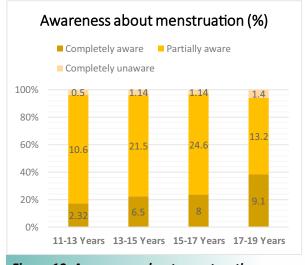


Figure 10: Awareness about menstruation.

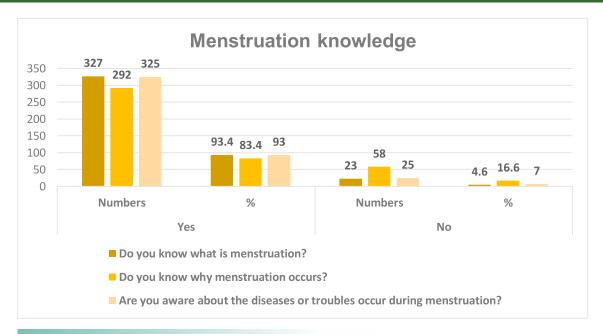


Figure 11: Menstruation knowledge.

### Self-care for menstrual periods

### Girls' education status vis-à-vis menstrual practices

Understanding the interplay between education and menstrual practices: This research assessed the association of menstrual period practices vis-à-vis educational status of girls. As a result, girls were classified according to their education status to understand the common levers and variations in the practices. Irrespective of their education status this research study found that the foremost category for self-care of menstrual periods among girls was sanitation and hygiene.

# Girls education status vs self-care menstrual periods (%)

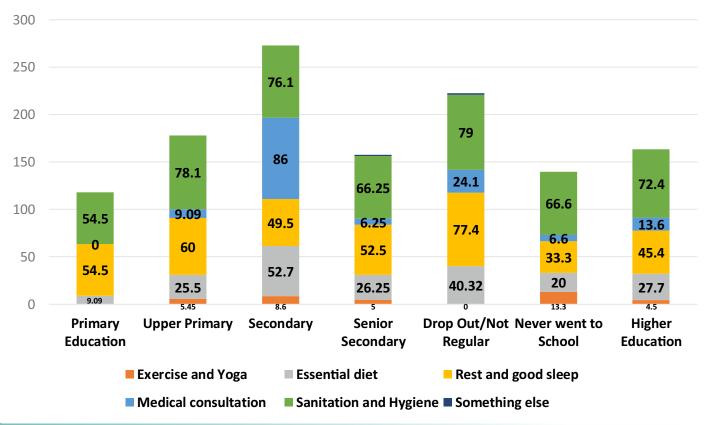


Figure 12: Girl's education status vs self-care menstrual periods.

*Individuals focus on sanitation and hygiene:* The sanitation and hygiene practices included using single-use sanitary pads to absorb or clean menstrual blood, cleaning of body, hand washing and safe disposable of menstrual products. Ability to manage menstruation hygienically is fundamental to the dignity and well-being of women and constitutes an integral component of basic hygiene, sanitation, and reproductive health services.

**Rest, sleep as a tool of menstrual health management:** Rest and sleep during menstrual periods was the next essential self-care method followed by essential diet. Exercise and yoga were not a common practice among girls to manage their periods.

**Role of mothers' education in daughter's menstruation management:** This research study found strong correlation between the knowledge of mothers and their daughters to manage menstrual periods. Irrespective of qualification and occupation, mothers were also aware about sanitation and hygiene as a tool for management menstrual periods.

**Table 4: Mother's education and its association with menstruation awareness.** 

Mother's Education	Exercise and Yoga	Essential diet	Rest and good sleep	Medical Sanitation consultation and		Something else
	Yes (%)	Yes (%)	Yes (%)	Yes (%)	Yes (%)	Yes (%)
Illiterate	2.5	13.7	26.8	5.4	36	0.3
Literate	1.1	8	13.6	3.4	20.5	0
High School	0.5	0.5	12.2	1.7	12	0
Senior Secondary	1.1	1.1	3.1	0.3	4.2	0.3
Graduate	0	0.3	0	0	0	0
Post Graduate	0	0	0	0	0.5	0

**Table 5: Mother's occupation and its association with menstruation awareness.** 

Mother's Occupation	Exercise and Yoga	Essentia l diet	Rest and good sleep	Medical consultation	Sanitation and Hygiene	Something else
	Yes (%)	Yes (%)	Yes (%)	Yes (%)	Yes (%)	Yes (%)
Home Maker	2.5	12.2	22.2	4	27.1	0.3
Daily Wage Earner	1.4	3.4	10.5	2.3	14	0
Domestic Worker	0.8	5.4	11.1	2	18.2	0.3
Professionals	0.3	3.4	4.8	0.3	6.3	0
Self Employed	0.3	1.7	3.7	0.9	2.9	0
Sales Employee	0	0	0.3	0	1.1	0
Any Other	0	2	3.1	5	3.7	0

Menstrual period experience at home: -turning your menstrual period into a self-care spectacle Family Structure and living condition: This research found that 89% girls lived in nuclear families with 59% living in single-rented room accommodation with common toilet in the building.

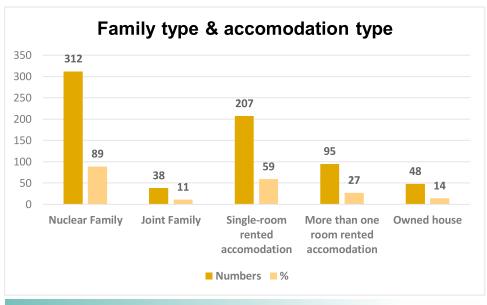


Figure 13: Family type and accommodation type.

#### Menstrual hygiene and management-challenges

**Sanitation facilities:** The girls reported that due to unavailability of appropriate place to change their menstrual products, 31.4% feared that someone might have watched them while changing the menstrual products. "The door of toilet in my building was broken and could not be locked properly. For changing menstrual product, I needed a private space, this is very painful", reported a girl.

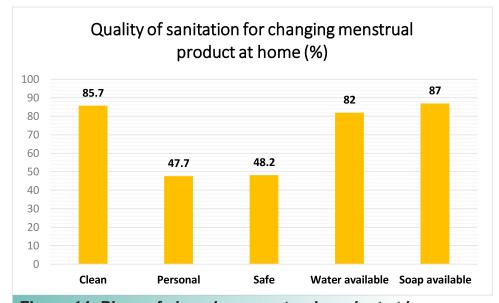


Figure 14: Place of changing menstrual product at home.

*Undergarments Drying practices:* Further, 71.4% girls reported that they dried their undergarments in sunlight, 8.8% girls dried them in the room and 19.7% dried them under other garments respectively.

*Menstrual product availability and usage:* Only, 67.1% girls reported that they had sufficient menstrual product during their periods and could change it whenever the need would be felt. Further, 27.4% girls reported that the menstrual products were reusable.

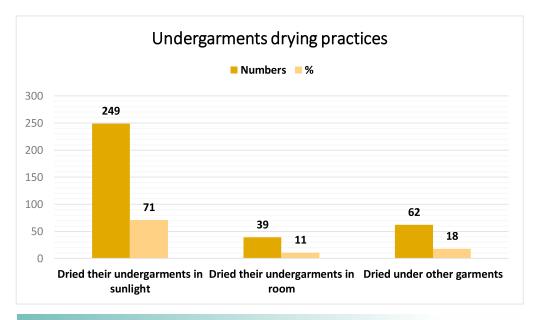
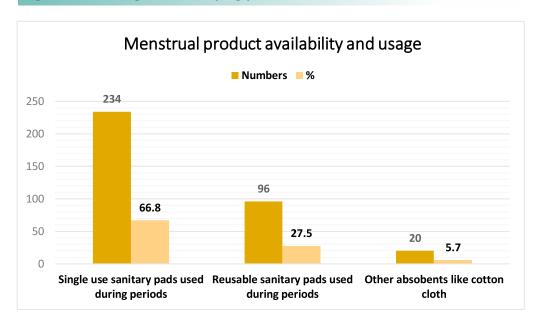


Figure 15: Undergarments drying practices.



#### Balance diet and menstrual period

**Health and dietary practices during menstruation:** This research study found that 69.4% girls reported weakness during and after menstruation while 52% consumed iron and folic acid supplementation and only 47.1% girls took extra nutritional support in the form of jaggery, milk with turmeric powder, nuts when they felt weakness.

**Awareness about importance of balance diet:** Interestingly, only 58.2% adolescent girls were aware about the importance of balance diet during menstrual periods.

#### Social support for menstrual practices

Based on the inputs from the respondents it was found that father/brother or any other male counterpart had largely been absent in supporting safe menstrual practices among adolescents. A research study on gender and menstruation found that gender influences adolescents' menstruation-related experiences, understanding, and beliefs. It further highlighted the gender differences in knowledge, beliefs, receipt of information in schools and also in opinion on 'whether boys should know about menstruation'. The study brings forth that gender inequality was produced and sustained as menstruation was viewed as a biosocial marker to differentiate what girls and boys can/ not do (Gundi & Subramanyam, 2020).

#### Menstrual period experience outside home

**Lack of Preparedness:** This research found that 72.9% girls when outside their home around their menstrual period girls did not keep any menstrual product. 15.1% out of 27.1% girls who changed their menstrual product in public toilets constructed a cross roads, at petrol pumps and in metro stations shared their experiences.

*Limited Infrastructure:* Only 10.9% girls reported that some public toilets were safe, while 8.9% were clean, hygienic and were having soap for handwashing.

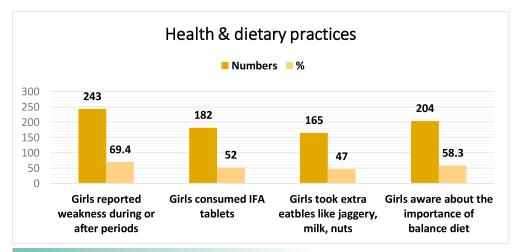


Figure 16: Health & dietary practices.

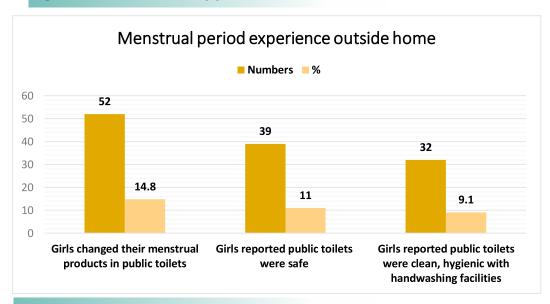


Figure 17: Menstrual period experience outside home.

### Menstrual Products – Choice or a Compulsion Impact of Family Income on Menstrual Product Access:

This research study found that family income is directly linked to access menstrual products.

*Inequity in affordability:* Girls in 88.2% families with monthly income of INR 25000 and above purchase sufficient quantity of menstrual products to absorb their menstrual blood.

**Cost Barrier for Low-Income Families:** Only in 57.5% families with monthly income less than INR 10000, hence they sometime preferred cotton cloth or other similar material to manage their menstrual blood.

**Previous Research Corroborates the Findings:** Similar research among adolescents on menstruation corroborated the findings of this research that many women and girls who consistently could not afford the

monthly cost of disposable menstrual products reverted to less hygienic solutions when facing cash constraints (Hoffman et al 2014).

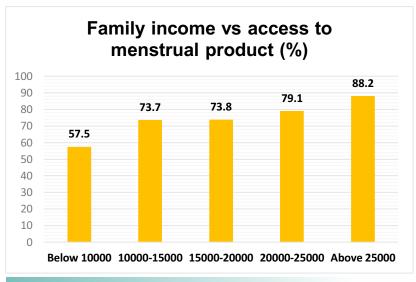


Figure 18: Family income vs access to menstrual product.

#### Types of menstrual products used

In terms of menstrual products to absorb or clean menstrual blood, this research found that single-use disposable sanitary pad (88.9%) was the most used item among all respondents.

**Dominance of single use pads:** Although, single-use disposable sanitary pads were the most common menstrual products being used by adolescent girls, ironically, it is the second most unaffordable menstrual products. The girls reported that they prefer single-use disposable sanitary pads due to its awareness, availability and comfortability. The girls further reported that free sanitary-pads distribution programme (Kishori Shakti Yojana) in their schools help to compensate the requirement of monthly single-use sanitary pads to adolescent girls.

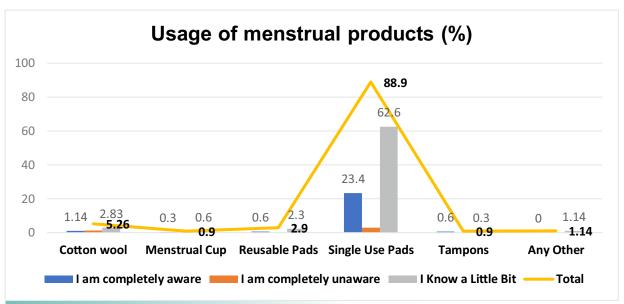


Figure 19: Usage of menstrual products.

**Monthly Distribution:** The adolescent girls in schools reported that every month they get a packet of sanitary pads from school. The girls who reported availability of single-use sanitary pads in schools had given multiple responses with respect to their availability. 67% girls reported that they get disposable sanitary pads in schools every month. **Inconsistent Supply:** There were 13.3% reported sometimes, 7% reported in every three-months, 5.5% school girls reported no regularity in distribution and 4.3% reported that so far, they did not receive any sanitary pads in their schools.

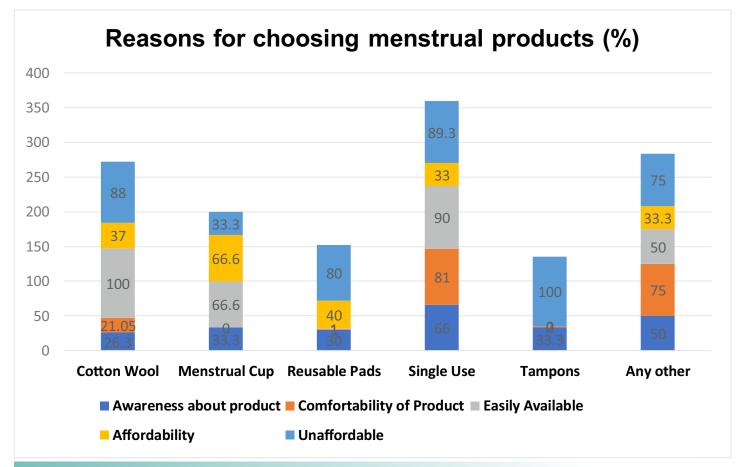
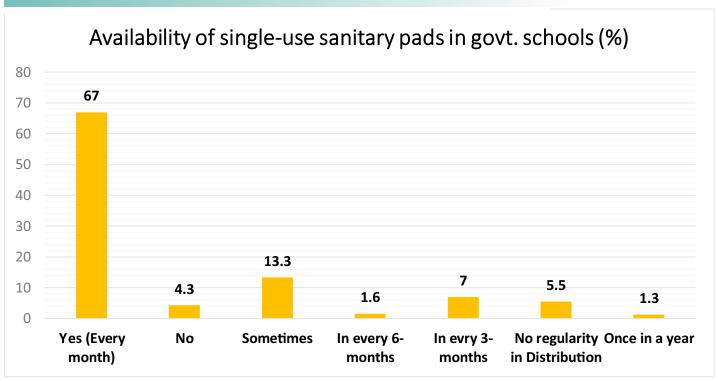


Figure 20: Reasons for choosing menstrual products.

Figure 21: Availability of single-use sanitary pads in govt. schools.



**Flow matters diverse pad requirements among girls:** This research report also found variations in the usage of menstrual products (herein single-use sanitary pads) among school going girls. This is typically due to different volume of menstrual blood flow each month.

*Unpacking variations in daily pad usage:* There were 85% girls use 3 pads a day whereas 10% use 4 pads and 5% use 5 and more pads in a single day during their menstrual periods.

The mismatch between school supply and menstrual reality: The girls further reported that the monthly single-use disposable sanitary pad packet (6-8 pads) that school going girls receive in school is insufficient for them to manage their menstrual periods. They require 15-30 pads in five-days, depending upon their blood flow.

**School pads only cover 50% of girls' needs:** The single-use sanitary pads from school meet only 50% of their monthly requirement. As a result, they have to be dependent on market to purchase them, reported girls.

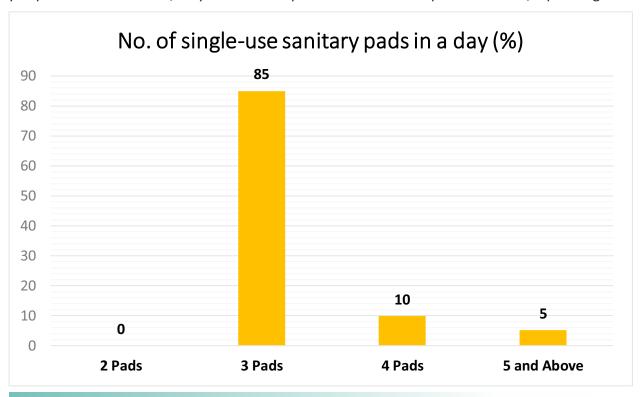


Figure 22: Volume of sanitary pads used in a single-day.

Beyond quality one size fits all addressing diversity in menstrual flow among schoolgirls:

Further, the girls reported about the quality and size issues with single-use sanitary pads that they receive from schools.

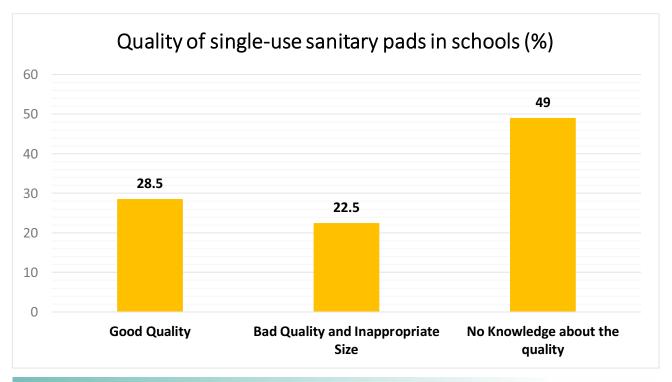


Figure 23: Girl's response on quality of sanitary pads in schools.

It is important to know that for in-school girls studying in class 6th-12th in government and government aided schools, the govt. of NCT of Delhi runs a Kishori Shakti Programme on menstrual hygiene. Through this programme more than 7.7 lac in-school girls are provided a packet of single-use sanitary pads every month. However, the continuity of the programme has always been in discussion.

Impact of menstruation on school attendance Period presence puzzle: This research study found that only 62% girls went to school during their period.

**Staying home from school:** Only 27% did not go to school (completely absent) and 11% went sometime.

**Fear of the Unmentionable** Girls who had either remained completely absent or went to school sometime fear of extreme pain, shame, anxiety, leakage, staining on school dress.

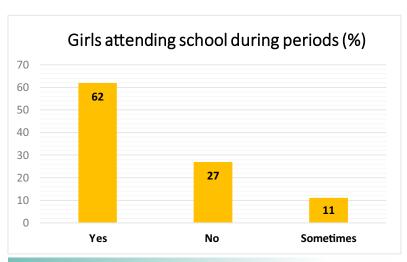


Figure 24: School education during periods.

#### 62% brave the halls: exploring girls' experiences with menstrual practices in school

Out of 62% girls (N=218) that went to school during their menstrual periods informed that they changed their menstrual product in schools. Therefore, recording the girls' experiences to manage their menstrual periods at school was crucial.

*Cleanliness and privacy:* In this research 80% respondents (school going girls) reported to have clean toilets, 71% reported that toilets were personal (private), 76% reported them safe and clean.

**Essential amenities:** 75% reported the availability of handing washing soap/liquids and 94% reported availability of water. School infrastructure is an important determinant to have safe menstrual health practices. Therefore, it is necessary to have safe, hygienic and personal spaces for adolescent girls to change their menstrual products. Also, menstrual product waste disposable is a very important aspect from the health and environment point of views.

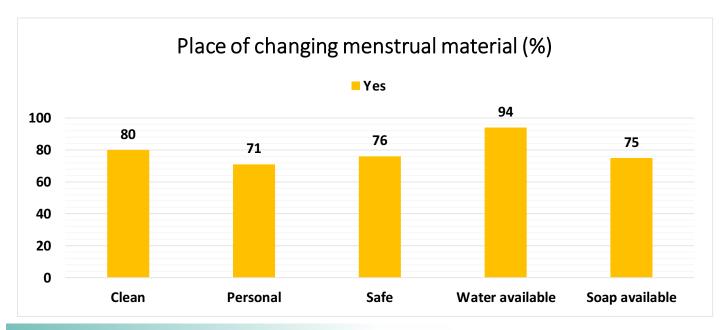


Figure 25: Girl's experiences menstrual facilities in schools.

# Table: Menstrual waste disposable methods Challenges in menstrual product disposal:

90.8% girls reported that they used dustbin/dustbin bags as the preferred method of disposing sanitary pads in schools. However, this is possible only in schools where such disposal mechanism is available. However, still 7.5% used unsafe/unhygienic methods of disposal.

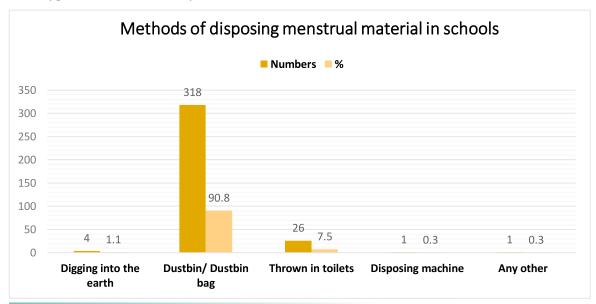


Figure 26: Methods of disposing menstrual material in schools.

Bullying/teasing is an another hinderance in creating safe spaces to discuss menstruation. This research study found that 93.4% girls did not report any kind of bullying/teasing related to their menstruation/menstrual periods while 6.6% girls reported some form of bullying/teasing from their peer groups when they were in schools during menstrual periods.

*Menstrual disorders overview:* Menstrual disorders such as dysmenorrhea, menorrhagia, and irregular cycles are common among women in reproductive age group and they are responsible for physical, behavioural, and emotional changes around the time of menstruation. These disorders affect the normal functioning and social life of women and limit their daily activities. They are also an important cause of college/school absenteeism among adolescents ((Van Eijk et al., 2016).

Quality of Life (QOL): Quality of life (QOL) of women with these disorders is compromised. The World Health Organization (WHO) defines QOL as "the individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns." The Global Burden of Diseases study has also not estimated the disability-adjusted life-years for menstrual disorders (Hay et al., 2017). In India, due to cultural reasons menstrual problems often get unreported (Laksham, et al., 2019).

**Specific symptoms and conditions:** This research found that 59.1% girls reported itching in vaginal area during their menstrual periods. Vaginal itching during a period can occur as a result of normal hormonal changes during menstruation. It may also signal a sensitivity or allergy to sanitary pads, tampons, or other menstrual products a person may use during their period. The itching, however, might be the sign of a condition that should be diagnosed and treated by the doctor.

Further, menstrual cycle includes hormonal changes that can create an imbalance in vaginal pH. When this occurs, bad bacteria can flourish, potentially resulting in infections such as bacterial vaginosis (BV). Along with vaginal itch, symptoms of BV may include (1) discomfort during pee (2) watery or foamy vaginal discharge and (3) bad odour. 43.7% girls reported white discharge during menstrual periods, 6.6% girls reported fungal infection and

#### 17.7% girls reported to have breast pain.

**Dysmenorrhea and associated symptoms:** This study found symptoms of dysmenorrhoea among adolescent girls. Dysmenorrhoea that is defined as recurrent cramping in lower abdominal pain is one of the common problems experienced by many adolescent girls. This research study also found that 53.1% girls reported strong pain in their lower abdomen while 4.3% felt unconsciousness due to pain. The most common associated physical symptoms of dysmenorrhoea were tiredness (24%), back pain (46.6%). The other symptom of dysmenorrhoea is irritation which was reported by 41.7% girls as given in 33.4% girls reported weakness during the menstrual periods. This research study did not assess the causes of weakness during menstrual periods.

**Common symptoms during menstruation:** A research study on menstrual disorders reported had written that three most common symptoms present on both days, that is, the day before and first day of menstruation were lethargy and tiredness (first), depression (second), and inability to concentrate on work (third).

**Additional reported symptoms:** There are possible reported symptoms like nausea or vomiting, excess perspiration, loose stools, increase in the frequency of urination, dizziness, loss of appetite, mood swings, and uneasiness (Monawara et al., 2016). The present research study found similar symptoms among the girls.

#### Premenstrual symptoms identified

The research study found premenstrual symptoms among girls. The girls also reported the psychological symptoms during their menstrual like depression (17.7%), anger (58.3%), irritation (41.7%), mood swings (39.7%), worriedness (30.3), stress or tension (17.1%), problem in concentration (29.1%) and desire of eating something else than regular meal diet (18.8%).

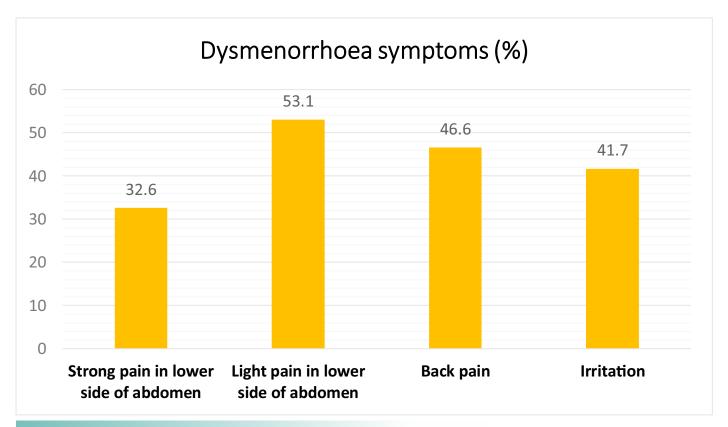


Figure 27: Dysmenorrhoea symptoms.

## Other menstrual disorder symptoms (%)

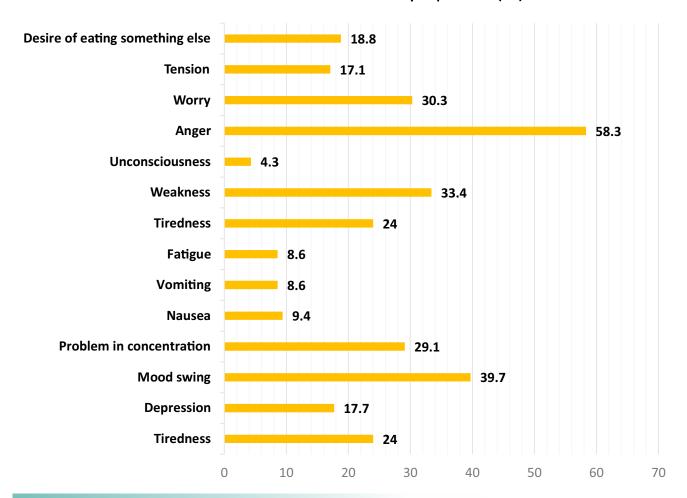


Figure 28: Other menstrual disorder symptoms.

*Irregular Menstruation:* This research found that 12.9% girls (Fig) did not have regular periods. The infrequent periods are a typical sign of oligomenorrhea which means "abnormal menstruation that involves infrequent periods".

*Medical Consultation Patterns:* Only 45.7% girls in the present research visited to a doctor in case of any problem faced by them during menstrual periods.

**Perceived Normality:** This is astonishing fact about period abnormalities. Despite facing issue 54.3% believed it to be a normal thing happened to them.

**Attitudes towards menstrual problems:** 54.3% girls reported that there were no facilities to discuss menstruation related problems in health centres (dispensary, primary health centre), therefore, they were never referred or reported their problems to a medical practitioner. The remaining 45.7% reported to visit a medical practitioner to discuss their menstrual health problems.

**Conclusion:** This exploration into the social and demographic landscape of the 350 adolescent girls participating in the study sets the stage for a deeper understanding of the multifaceted factors influencing their menstrual health experiences. By unravelling the complexities of family structure, caste dynamics, socioeconomic status, parental education and occupation, and family income, we aim to foster a more holistic comprehension of the challenges and opportunities that shape the menstrual health narratives of these young individuals.

#### Chapter 2: Women 19-49 years

Menstruation is a natural process, and disposal should be just as dignified and sustainable. Let's break the silence, champion safe practices, and ensure every woman has access to the resources she needs to manage her flow with confidence and care.

This section delves into the intricate web of factors that encapsulate the lives of the 350 women aged 19-45 years, who actively engaged in the study. By exploring elements such as family structure, socioeconomic status, education and occupation, this research aims to gain profound insights into the contextual backdrop that may influence women's menstrual health experiences.

The data presented in this chapter reveals a fascinating tapestry of menstrual material preferences women across different age groups and the factors that influence the age to menstrual material choices.

Going further this chapter navigated menstrual health discussions to unravel the intricacies of information. There was a strong recall to menarche that holds personal significance for many people, despite potential discomfort or social stigma surrounding menstruation.

This section highlighted the impact of menstruation on socio-economic life of women and also their participation in social life during menstrual periods. As this report moves forward, promoting menstrual health requires acknowledging the diverse needs and preferences across generations. By fostering open conversations and providing accessible options, we can empower women of all ages to navigate their periods with confidence and dignity.

This chapter showed a concerning picture of the accessibility of menstrual materials in workplaces. It was clear that many women face unexpected challenges managing their periods at work. The vast majority lacking access highlighted a glaring gap in corporate support for menstrual health. A significantly high percentage of respondents do not prioritize proper nutrition during menstruation.

#### Qualitative analysis

#### 1. Participants' Experience

- 1.1. Age of menarche: First menstruation occurred between 12 to 16 years in all FGDs.
- 1.2. Emotional responses: Initial feelings included shyness, panic, confusion, and nervousness. Over time, participants became more comfortable as their

knowledge expanded.

#### 2. Knowledge and Education

- 2.1. Pre-menstrual awareness: Participants generally lacked awareness before experiencing menstruation.
- 2.2. Primary sources of knowledge: Informal education from family members (particularly mothers, elder sisters, friends, sister-in-law and aunties).
- 2.3. Awareness Evolution: There was limited awareness in adulthood of the participants but now a days increased exposure through sources like YouTube, Internet, social media and NGOs have helped participants in creating awareness.

#### 3. Challenges and concerns

- 3.1. Physical symptoms: Common symptoms reported include waist pain, stomach pain, headache, mood swings, and restlessness, irritation, mood to eat sour items.
- 3.2. Taboos and stigma: Participants use to face restrictions related to religious activities, cooking for others, and touching certain items like pickle, murabba and ghee during menstruation. This restriction has been imposed on them because their mother believed that these items will be impure/rotten.

#### 4. Menstrual Practices

- 4.1. Materials used: Participants uses only old clothes, sanitary pads, cotton, and reusable clothes.
- 4.2. Affordability issues: Economic constraints led to the preference for old clothes due to the cost of menstrual products.

#### 5. Support and Resources

- 5.1. Male family support: Lack of support from male family members during menstruation. But some participants told their husband helps in household chores.
- 5.2. Information sources: Participants obtained information from YouTube, PHC, NGOs, and television.
- 5.3. Need for guidance: Participants expressed the need for proper guidance on menstrual health management.

#### 6. Future actions and suggestions

- 6.1. Education programs: Develop and enhance formal and informal education programs on menstruation in schools and communities.
- 6.2. Government intervention: Advocate for government support in subsidizing sanitary pads and menstrual materials to ensure affordability and accessibility.
- 6.3. Community awareness: Conduct awareness campaigns to challenge and eliminate taboos and stigmas associated with menstruation.

- 6.4. Menstrual product improvement: Collaborate with manufacturers to improve the quality, size, and distribution of sanitary pads.
- 6.5. Healthcare support: Establish separate healthcare services or personnel at the primary health care level to address menstrual health-related issues.
- 6.6. Community engagement: Involve communities in discussions and initiatives to create a supportive environment for girls during menstruation.

#### 7. Interpretation

- 7.1. Awareness gap: There is a notable gap in awareness before menstruation, emphasizing the need for formal education on menstrual health.
- 7.2. Economic barriers: Affordability issues highlight the economic challenges faced by participants, leading to the use of alternative materials like old clothes.
- 7.3. Social stigma: Taboos and restrictions indicate the existence of social stigma, impacting participants' participation in various activities during menstruation
- 7.4. Common experiences: Shared experiences were identified across diverse localities, emphasizing the universality of certain aspects of menstrual health.
- 7.5. Knowledge disparities: Despite increased information availability, persistent knowledge gaps, particularly in adulthood, warrant targeted awareness initiatives.
- 7.6. Affordability challenges: Economic factors significantly influence menstrual hygiene practices, necessitating government intervention through subsidies.
- 7.7. Social stigma: Cultural taboos continue to impact daily activities, indicating a need for comprehensive community-based awareness programs.
- 7.8. Support systems: The lack of support from male family members underscores the importance of fostering understanding within familial structures.

# 8. Key emerging concerns (potential research questions)

- 8.1. How can comprehensive menstrual health education be incorporated into programs targeted at housewives to address the lack of formal education on this subject?
- 8.2. What strategies are most effective in challenging social stigmas and taboos related to menstruation within the context of housewife communities?
- 8.3. What role can male family members play in supporting the menstrual health practices of housewives, and how can awareness among male family members be increased within this demography? 8.4. How can community-based interventions

effectively challenge and mitigate menstrual taboos

and stigmas among housewives, considering the unique socio-cultural contexts within this demographic?

8.5. How can technology, such as mobile apps or online platforms, be leveraged to provide menstrual health education and awareness to housewives, and what challenges and benefits are associated with these approaches?

# Quantitative analysis Demography of respondents

This report reveals a significantly younger population, with nearly 40% falling within the 19-24 age bracket. Notably, the proportion of individuals steadily declined with age, culminating in a very small group aged 45 and above.

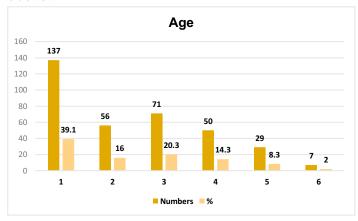


Figure 30: Age of respondents (women 19-49 years).

#### Marital status of respondents

The data shows the marital status of 350 people. The majority of people are married (68.57%), while 29.43% of people are unmarried. A very small percentage of people are divorced (0.57%) and widowed (1.43%) in the data set. It is interesting to note that the percentage of married people is quite high, especially compared to the percentage of divorced or widowed people

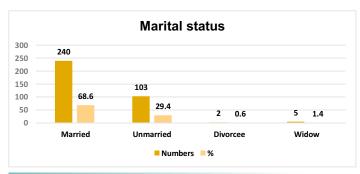


Figure 31: Marital status of respondents (women age 19-49 years).

# Understanding family dynamics No. of children in the family

The data-set reveals that 45.34% couples have 1-2 children, followed by 43.7% couples that have 2-4 children. Only 10.53% couple do not have the children.

#### Size of family

The data describes the number of members in a family. Some key observations can be made — it includes families with 2-4 members, 4-6 members, 6-8 members, and 8 or more members. The largest group is families with 4-6 members, representing 55% of the total families.

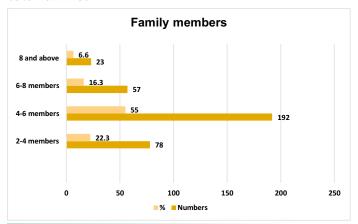


Figure 32: Family members.

This suggests that this might be the most common family size in the group being studied. The smallest group is families with 8 or more members, representing only 6.6% of the total families.

# Living Large Or Living Lean: Unpacking Housing Trends

*Ownership:* Of the 350 houses, 262 (74.9%) are owned and 88 (25.1%) are rented. Space: Of the 350 houses, 327 (93.4%) have one bedroom and only 23 (6.6%) have more than one bedroom.

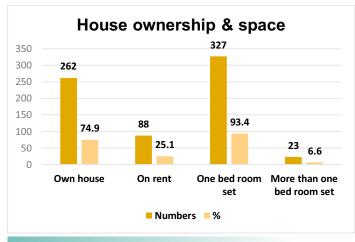


Figure 33: House ownership & space.

Cracking the code: Decoding decades - How age shapes menstrual choices?

# Analysis of the relationship between age group and menstrual material used

The provided table presents interesting data on the relationship between age and menstrual material used by women aged 19-49 and above. Here are some key observations and potential interpretations:

*Single-use pads:* Across all age groups, single-use disposable pads remained the most popular choice, representing 70.6% for 19–29-year-olds, 73.9% for 29–39-year-olds, and 80.6% for 39-49 and above. This suggests convenience, availability, familiarity, awareness and preference as the key factors that influence their choice.

**Age-related shifts:** Younger women (19-29 years) exhibit a higher preference for reusable options like menstrual cups (70.6% vs. 0% for 39-49 and above) and reusable pads (3.9% vs. 0%). This could be due to increased awareness of sustainability and cost-effectiveness among younger generations.

Clothes as a fallback: Clothes, particularly old clothes, remained a significant option for all age groups, suggesting accessibility and affordability play a role. However, the percentage decreased with age, potentially indicating a shift towards more hygienic and comfortable options.

# From teens to grandmas: A snapshot of menstrual product choices across generations

The data presented reveals a fascinating tapestry of menstrual material preferences women across different age groups. While single-use pads remained the dominant thread, a closer look unveils intriguing nuances.

#### Age Group: 19-29

Clothes and Single-use pads: The majority of respondents in this age group (60.7%) opted for single-use pads, indicating a preference for convenience. Clothes also seemed to be a popular choice (10.9%), which could be due to affordability or easy accessibility.

**Variety in choices:** Reusable pads (10.4%) and cotton clothes (8.09%) also showed notable percentages, suggesting a diverse range of preferences within this age group.

Low usage of menstrual cup and tampons: Menstrual cups (1.1%) and tampons (0.0%) were chosen by a very small percentage, indicating a lower adoption rate in this age range.

#### Age Group: 29-39

High preference for single-use pads: Similar to the younger age group, single-use pads dominated (81.3%). There was a notable drop in the percentage of clothes usage (8%) compared to the previous age group. Reusable pads (6.6%) and menstrual cups (1.3%) had a presence but were not as popular, while tampons had a slight increase in usage (1.3%).

#### Age Group: 39-49

Consistent dominance of single-use pads: Single-use disposable sanitary pads remained the most chosen product (72.2%), indicating a sustained preference for convenience.

**Decrease in overall usage:** The overall number of respondents using any menstrual product seemed to decrease in this age group, with a lower total count (36).

**Limited usage of other products:** Reusable pads (5.6%), cotton clothes (11.1%), and menstrual cups (0.0%) had limited representation.

General Observations

Consistent trend: Across all age groups, single-use

pads were the most popular choice, demonstrating their widespread acceptance.

**Decrease in cloth usage with age:** The percentage of respondents choosing clothes as a menstrual product decreased with age, suggesting a shift towards more traditional or conventional products.

The relationship between age and menstrual material choices is a dynamic dance, reflecting a delicate balance between convenience, cost, comfort, and environmental consciousness. As this report moves forward, promoting menstrual health requires acknowledging the diverse needs and preferences across generations.

By fostering open conversations and providing accessible options, we can empower women of all ages to navigate their periods with confidence and dignity.

# Factors influencing the age to menstrual material choice interrelation

Availability and product knowledge were the top reasons for choosing a menstrual product across all age groups, suggesting practicality and ease of use are key concerns.

However, there are some interesting differences by age.

**Table 7: Relation with age to menstrual material choice.** 

Relation between age to menstrual material used (%)									
Age group	Type of menstrual product								
	Absorbing underwear	Clothes	Cotton clothes	New clothes	Old clothes	Reusable Pads	Single use pads	Menstrual cup	Total
19-29	0.49	16.2	3.9	2.5	1.9	3.9	70.6	0.49	100
29-39	0.0	4.4	7.8	5.2	0.9	7.8	73.9	0.0	100
39-49	0	12.9	6.5	0.0	0.0	0.0	80.6	0.00	100

Table 8: Factors influencing the age to menstrual material choice interrelation.

Factors Influencing the age to menstrual material choice interrelation (%)							
Age group	Reasons behi	Reasons behind menstrual product choice					
	It is easily	t is easily Comfortability Know about Know about					
	available	with product	product	how to use it			
19-29	16.1	4.6	51.8	27.5	100		
29-39	16.6	6.7	52.6	24	100		
39-49 and	8.3	13.9	36.2	41.6	100		
above							

### Age Group: 19-29 years

**Knowledge and availability are crucial:** The majority of respondents in this age group cite awareness about the product (51.8%) and its availability (16.1%) as significant factors influencing their choice.

**Comfortability is a consideration:** About 4.6% of respondents prioritize the comfortability of the product.

#### Age Group: 29-39 years

**Similar factors as the younger age group:** The trends in this age group are quite similar to the 19-29 group. Knowledge about the product (52.6%) and its availability (16.6%) remain the top influencers.

**Comfortability is slightly higher:** The percentage of respondents considering comfortability increases slightly to 6.7%.

#### Age Group: 39-49 and above

**Shift in influencing factors:** For this age group, the most prominent factor influencing product choice is knowledge about how to use it (41.6%). Availability (8.3%) and comfortability (13.9%) also play significant roles.

**Lower emphasis on product knowledge:** While the awareness of the product itself remains important, the focus shifts toward practical knowledge about how to use it.

#### **General Observations**

**Knowledge is a key driver:** Across all age groups, having knowledge about the menstrual product is consistently one of the top factors influencing choice.

**Availability matters:** The ease of access to the product is also crucial, particularly for the younger age groups.

#### **Considerations**

**Educational initiatives:** There seems to be a need for educational campaigns, especially targeting the older age group, focusing not just on the existence of products but also on practical usage.

**Accessibility:** Ensuring the availability of menstrual products is crucial, particularly for the younger age groups who prioritize this factor.

#### **Overall Implications**

Understanding these factors can guide product development, marketing strategies, and educational campaigns. For instance, emphasizing ease of use and practical knowledge may be more effective for older age groups, while younger individuals may respond well to campaigns highlighting product awareness and availability.

#### Influence of marital status on use of favourite menstrual material product

#### **Marital Status: Married**

*High adoption rate:* The majority of married individuals (69.6%) prefer to use their favourite menstrual materials, indicating a significant adoption of preferred products within this demographic.

**Comparatively lower percentage of non-users:** About 30.4% of married individuals do not use their favourite menstrual materials, suggesting a notable minority that may have reasons for not using their preferred products.

#### Marital Status: Unmarried/Separated/Divorcee/Widow

**Even higher adoption rate:** A higher percentage of unmarried, separated, divorced, or widowed individuals (84.5%) use their favourite menstrual materials. This group shows a more pronounced preference for their chosen products.

*Minority of non-users:* Only 15.5% of this group does not use their favourite menstrual materials, indicating a strong inclination toward using preferred products.

#### **General Observations**

Marital status influences adoption: Both married and unmarried individuals show a high preference for their

favourite menstrual materials. However, the unmarried group exhibits a slightly stronger preference.

*Minority of non-users:* In both categories, the percentage of individuals not using their favourite menstrual materials is relatively low, underscoring the importance of product preference in menstrual choices.

Table 9: Influence of marital status on use of favourite menstrual material product.

Influence of marital status on use of favourite menstrual material						
product						
Variables	Yes	No	Total			
Married	167	73	240			
%	69.6	30.4	100			
Unmarried /separated /divorcee/widow	93	17	110			
%	84.5	15.5	100			

Relationship between marital status and regularity in menstruation in last one year

Marital Status: Married

*Higher instances of regular menstruation:* A significant majority of married individuals (86%) experienced regular menstruation in the last year.

*Minority with irregular menstruation:* Only 14% of married individuals reported irregular menstruation, indicating that the majority within this group have a consistent menstrual cycle.

### Marital Status: Single/Separated/Divorcee/Widow

**Slightly lower instances of regular menstruation:** While the majority of individuals in this category (87%) also experienced regular menstruation, the percentage is slightly higher than that of the married group.

Low percentage of irregular menstruation: Only 13% reported irregular menstruation, indicating that a significant portion of this group also maintains regularity in their menstrual cycles.

Relation between marital status and regularity in menstruation in last one year					
	Yes	No	Total		
Married (No.)	202	33	235		
%	87	13	100		
Single/separated /divorcee/widow (No.)	100	15	115		
%	87	13	100		
Relation between marital status and regular	ity in menst	ruation in la	st one year		
	Yes	No	Total		
Married (No.)	202	33	235		
%	87	13	100		
Single/separated /divorcee/widow (No.)	100	15	115		
%	87	13	100		

**Table 10: Relation between marital status and regularity in menstruation in last one year.** 

#### **General Observations:**

**High regularity overall:** Both married and single/separated/divorced/widowed individuals demonstrate a high percentage of regular menstruation, indicating a general trend of menstrual regularity in the sampled population. **Similarity in regularity:** The difference in regularity between the two groups is relatively small, suggesting that marital status might not be a significant determining factor in menstrual regularity.

#### Relation between marital status and consulting issue related to period with doctor

Table 11 examines the relationship between marital status and the likelihood of consulting a doctor for issues related to menstruation. It provides the following key findings:

Table 11: Relation between marital status and consulting issue related to period with doctor.

Relation between marital status and consulting issue related to period with doctor					
	Yes	No	Total		
Married	27	40	67		
Percentage	40.3	59.7	100		
Single/separated /divorcee/widow	15	18	33		
Percentage	45.4	54.6	100		

#### Marital Status:

*Married:* Among married individuals, 40.3% have consulted a doctor for issues related to menstruation. The remaining 59.7% did not seek medical advice for menstrual issues.

*Marital Status: Single/Separated/Divorcee/Widow:* In this group, a higher percentage (45.4%) have consulted a doctor for menstrual issues. The remaining 54.6% did not seek medical advice for menstrual concerns.

#### **General Observations**

**Moderate consultation rates:** Both married and single/separated/divorced/widowed individuals show moderate percentages of seeking medical advice for menstrual issues, indicating a willingness to consult healthcare professionals.

*Slightly higher consultation rate for the single group:* The percentage of individuals consulting a doctor is slightly higher among the single/separated/divorced/widowed group.

**Overall Implications:** The findings suggest that both married and single/separated/divorced/widowed individuals are open to seeking medical advice for menstrual issues. This information can be valuable for healthcare professionals and policymakers in tailoring healthcare services and awareness campaigns to address the specific needs of different demographic groups. It also highlights the importance of promoting open conversations about menstrual health and encouraging individuals to seek timely medical advice when needed.

Relationship between marital status and consulting issue related to period with doctor, nurses or health worker
The data presented suggests a potential association between marital status and the likelihood of seeking professional medical advice for menstrual issues.

**Table 12:** Relationship between marital status and consulting issue related to period with doctor, nurses or health worker.

# Relation between marital status and consulting issue related to period with doctor, nurses or health worker

	Yes	No	Total
Married	202	33	235
%	86	14	100
Single/separated /divorcee/widow	100	9	109
%	91.7	8.3	100

While married women appear to consult healthcare professionals more frequently (86% vs. 91.7% for unmarried women), it's crucial to interpret this finding with caution and consider several influencing factors:

- 1. Access to healthcare: Married individuals might have better access to healthcare due to spousal health insurance or greater financial stability. This could facilitate seeking medical attention for concerns like menstrual irregularities.
- **2. Communication and support:** Marriage often provides a supportive environment for discussing sensitive health issues. Spousal encouragement and open communication might empower women to seek professional help for menstrual concerns they might hesitate to address otherwise.
- **3. Socio-cultural factors:** Cultural norms and stigma surrounding menstruation can vary based on marital status. In some societies, unmarried women might face greater social pressure to conceal menstrual problems, leading to underreporting and reduced consultation rates.

#### Relationship between marital status and consulting issue related to period with doctor

The data shows a clear positive association between being married and consulting a doctor for menstrual issues.

Table 13: Relationship between marital status and consulting issue related to period with doctor.

# Relationship between marital status and consulting issue related to period with doctor

	Yes	No	Total
Married [No.]	126	74	200
%	63	37	100
Single/separated /divorcee/widow [No.]	47	48	95
%	49.4	50.6	100

- A significantly higher percentage of married women (63%) consulted a doctor for menstrual issues compared to unmarried women (49.4%).
- This difference is even more stark when looking at the raw numbers: 126 married women have consulted a doctor, compared to only 47 unmarried women.

- Possible explanations
- Access to healthcare: Married individuals might have better access to healthcare due to spousal health insurance or greater financial stability. This could facilitate seeking medical attention for concerns like menstrual irregularities.
- **Social factors:** Cultural norms and stigma surrounding menstruation can vary based on marital status. In some societies, unmarried women might face greater social pressure to conceal menstrual problems, leading to underreporting and reduced consultation rates.
- **Age and family planning:** Married women, on average, tend to be older than unmarried women. Age can play a role in the frequency and severity of menstrual issues, potentially prompting more frequent consultations among married women. Additionally, married women might be more likely to seek medical advice due to concerns about menstrual irregularities impacting fertility or family planning.
- *Underlying health conditions:* Certain health conditions, like endometriosis or polycystic ovary syndrome, can be more prevalent among married women due to hormonal changes associated with pregnancy and childbirth. These conditions often manifest through irregular or painful periods, leading to increased consultations with healthcare professionals.

Overall, the data suggests that there is a strong association between being married and consulting a doctor for menstrual issues. However, more research is needed to determine the cause of this association and to understand the role of other factors.

#### Relationship between space availability with under-garments drying practices

The data shows a clear relationship between the number of bedrooms in a household and the method used for drying undergarments.

Regardless of space, sunlight remains the most popular drying method, with 66.6% of respondents overall using it. This highlights its potential benefits like energy efficiency, natural disinfection, and odour control. Space influence on alternative methods- People with one bedroom rely more heavily on alternative drying methods compared to those with multiple bedrooms.

- **Fan usage:** One-bedroom residents use fans for drying undergarments significantly more (36.6% vs. 26.1% in multiple bedrooms). This suggests space constraints drive the need for faster drying alternatives.
- *Under-garment drying:* Both groups use this method to some extent (around 19%), but it might be more necessary for one-bedroom dwellers due to limited dedicated drying space.

**Table 14: Relation between space availability with under-garments drying practices.** 

Relation between space availability with under-garments drving practices

Relation between space availability with under garments arying practices					
	One bed room	More than one bed room			
Sunlight	218	13			
%	66.6	56.5			
Under fan	44	6			
%	36.6	26.1			
Under other garments	64	4			
%	19.5	17.3			
Any other	1	0			
%	0.3	0			
Total	327	23			

• *Minimal "any other" category:* The very low usage of other methods (0.3%) indicates that sunlight, fans, and under-garment drying cover most common practices.

#### **Interpretations**

- The data confirms a clear link between space availability and undergarment drying practices. People with limited space are more likely to adopt alternative methods due to practical considerations.
- Sunlight remains the preferred choice across all groups because of its potential advantages, suggesting energy efficiency and hygienic concerns might be important factors for undergarment drying.

# Harmony of Cycles: Navigating menstruation, embracing menarche and unravelling the intricacies of information

- **Strong recall:** A significant majority of respondents (74%) report remembering their first period. This suggests that this event holds personal significance for many people, despite potential discomfort or social stigma surrounding menstruation.
- **Remaining uncertainty:** A quarter of respondents (26%) do not remember their first period. This could be due to various factors, such as young age at the time, personal preference to not dwell on the experience, or simply the passage of time impacting memory.

#### Another interesting angle on how people experienced their first menstruation:

- Lack of prior awareness: A surprising majority (60%) of respondents were unaware of menstruation when it happened for the first time. This highlights the potential gap in education and open communication about this important bodily function.
- **Some prior knowledge:** A significant no. of respondents (32%) did have some level of awareness about menstruation before experiencing it themselves. This suggests varying degrees of preparedness and exposure to information about the topic.
- *Uncertain memory:* A small percentage (8.3%) doesn't remember their awareness level at the time of their first period. This could be due to young age, emotional distress surrounding the event, or simply the passage of time.

#### Implications of unawareness:

- **Confusion and anxiety:** Experiencing menstruation without prior knowledge can be a source of confusion, fear, and even shame for young individuals. This highlights the importance of early and accessible education about this natural bodily process.
- **Negative impact on self-esteem:** Unpreparedness for menstruation might contribute to feelings of isolation, embarrassment, and low self-esteem, especially if surrounded by misinformation or stigmatizing attitudes.
- **Potential health consequences:** Lack of awareness about symptoms, hygiene practices, and possible medical issues related to menstruation could lead to neglect or inappropriate management of menstrual health.

**Decoding the sources of menstrual knowledge:** A deep dive Figure 30 reveals fascinating insights into where people learned about their first periods:

- **Parental power:** Parents remain the leading source of menstrual knowledge (42%), highlighting the crucial role families play in educating their children about this important topic.
- **Friend factor:** Sharing information with friends is also significant (23%), showcasing the importance of peer support and open communication among young people.
- **Teacher tales:** Educators contribute meaningfully (18.75%), emphasizing the value of incorporating comprehensive menstrual education into school curriculums.
- **Beyond the mainstream:** Sources like siblings, other family members, television, and even "any other" category (totalling 14%) reveal diverse pathways to gaining information, highlighting the need for varied and accessible resources.

Out of 74% that remembered the menarche (first period). It was interesting to note that 42% received information about menstruation by their parents, 19% by school teachers, 23% by school friends, 7% received information

from brothers-sisters, 3% from any other family member like grandmother, 4% by television and 2% were the other sources.

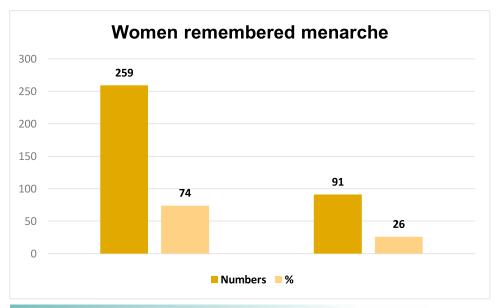


Figure 34: Remembering menarche.

#### Access to menstrual health facilities at individual level

Table 15 paints a picture of the availability and quality of menstrual health facilities, revealing both promising aspects and room for improvement:

- *High overall cleanliness:* Over 92% of respondents reported clean facilities, highlighting a positive focus on hygiene in menstrual management.
- **Privacy concerns:** While access to clean facilities is good, only 58% considered them "personal" or private, indicating a potential need for dedicated and separate spaces for menstrual hygiene needs.
- **Focus on safety:** Nearly 67% felt the facilities were safe, suggesting they meet basic requirements for physical security and comfort.
- *Water availability:* The vast majority (over 90%) have access to water, a crucial element for proper menstrual hygiene practices.

#### Deeper reflections

- Privacy matters: While cleanliness is essential, the lack of perceived privacy in almost half the responses suggests a need for further investment in facilities that offer individual compartments, lockable doors, or designated spaces for menstrual management.
- **Beyond basic safety:** Expanding the definition of "safe" could include factors like adequate lighting, ventilation, and waste disposal options to ensure user comfort and hygiene.
- Water access is key: High water availability is a positive sign, but further research could explore the adequacy of water quality and pressure for effective menstrual hygiene practices.

T 11 45			c
Table 15:	Wenstru	ai neaith	tacilities.

Variables of menstrual health facilities	Yes (Availability)	%	No (Unavailability)	%
Clean	324	92.6	26	7.4
Personal (privacy)	205	58.6	145	41.4
Safe	236	67.4	114	32.6
Water available	316	90.3	34	9.7
Soap available	291	83.1	59	16.9
Away from home during menstruation	94	26.9	256	73.1

#### Menstrual products: Exploring choices and dispose-off mechanism

## 1. Menstrual materials choice to manage red flow

**Dominance of single-use pads:** The most striking observation is the overwhelming prevalence of single-use pads, accounting for over 73.4% of the data. This highlights the convenience and accessibility of these products, but also raises concerns about environmental impact and potential cost burden over time. **Limited adoption of reusables:** Reusable options like cloths, cotton cloths, menstrual cups, and reusable pads are used by a significantly smaller percentage, ranging from 0.2% to 17.1%. This could be due to factors like initial cost, learning curve, access to clean water for washing, or cultural stigma surrounding reusable.





Figure 35: Menstrual product used for absorption of menstrual blood.

Overall, figure 35 provides a glimpse into menstrual product usage patterns, but it also highlights the need for further research and advocacy to ensure everyone has access to safe, affordable, and sustainable menstrual hygiene products and information.

#### 2. Decoding the intriguing factors that shape the selection of menstrual products

Periods are our monthly companions, and choosing the right menstrual material feels like finding your confidante – someone who's comfortable, reliable, and knows your flow. But what whispers in our ears when we're picking our perfect period partner? This little table holds some interesting secrets.

**The knowledge tree:** A whopping 50.6% of us choose what we know. Familiarity breeds confidence, like a wellworn path through the forest. We gravitate towards products we've seen, heard about, or used before. Knowing the options and how to use them empowers us to make informed decisions.

**The comfort canopy:** Feeling good matters, 5.7% prioritize comfort above all else, seeking materials that feel like a gentle embrace. Who wants stress during that time of the month? Softness and a just-right fit are the holy grail for comfort seekers.

Table 16: Basis for selection of menstrual material.

Basis for selection of menstrual material	N=350	%
It is easily available	54	15.4
You feel comfortable with it	20	5.7
You know about it	177	50.6
You know how to use it	99	28.3

**The Availability Avenue:** Convenience is king for 15.4%. Finding readily available products, saves time and stress. No need to trek long distances or wait for elusive supplies when the flow strikes.

**The Skilful Stream:** While some rely on familiarity, others crave mastery. 28.3% choose what they know how to use. We can handle whatever Mother Nature throws our way. Feeling confident in our skills translates to feeling confident in our choices.

**Dismantling the disposal dilemma:** where does our flow absorbing material go Figure 28 paints a revealing picture of the often-unspoken aspect of menstruation - disposal. While the majority seems straightforward, a closer look reveals a complex landscape with whispers of both convenience and concern.

**The Dustbin Dominates:** With over 87.1% opting for dustbins or dustbin bags, it's clear convenience reigns supreme. But let's not forget the environmental repercussions of plastic-laden pads and liners filling landfills.

**The Burning Battleground:** While only 0.6% opt for burning, it's a practice raising concerns. Burning menstrual waste not only releases harmful toxins but also poses respiratory risks for communities at large.

**The Discreet Dethronement:** Toilets might seem like the natural go-to, but with only 6.3% using them specifically for menstrual waste, we see a surprising disconnect. This could be due to cultural taboos, lack of proper facilities, or fear of clogging.

**The Whispers of Other Options:** Digging into the earth and disposal in bushes/fields, while representing a small percentage, highlight socio-economic disparities and lack of access to proper sanitation facilities.

**Remarks:** Menstruation is a natural process, and disposal should be just as dignified and sustainable. Let's break the silence, champion safe practices, and ensure every woman has access to the resources she needs to manage her flow with confidence and care.

#### Menstrual material: Dispose-off mechanism 350 305 300 250 200 150 87.1 100 50 22 9 2.6 6.3 2 0.6 4 1.1 1 0.3 0 Any other By burning Digging into Dustbin/ In Toilet In Bush/ field **Toilet** the earth **Dustbin bag** ■ Numbers ■ %

Figure 36: Menstrual material: Dispose-off mechanism

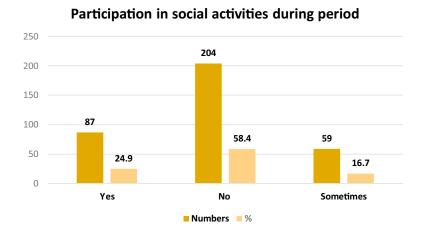


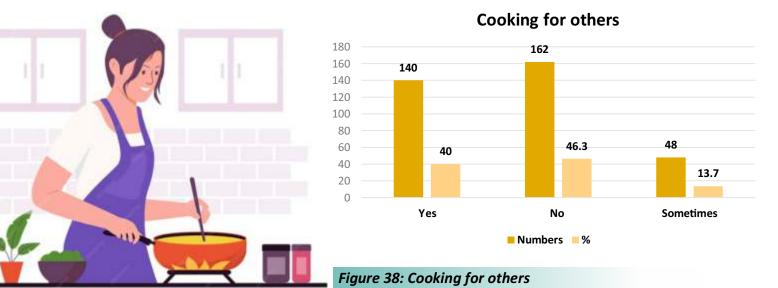
Figure 37: Impact of menstruation on socio-economic life of women

## Impact of menstruation on socioeconomic life of women Participation in social activities during period

Figure 37 sheds light on the fascinating dance between social life and periods. While over half (58.4%) choose to abstain from some or all social activities during their periods, a significant number (24.9%) participate fully, and nearly 16.7% navigate in between.

#### **Cooking for others**

Figure 33 represents a picture of the diverse landscape of cooking for others. While 40% regularly do cook dishes for loved ones, nearly half (46.3%) choose not to do so, and a sizable 13.7% navigate in between.



#### Eating with others during period

Figure 35 delves into the complex dance between periods and social eating situations. While over half (53.4%) choose not to eat with others during their period, a significant number (34.6%) embrace shared meals, and 12% navigate a flexible approach.

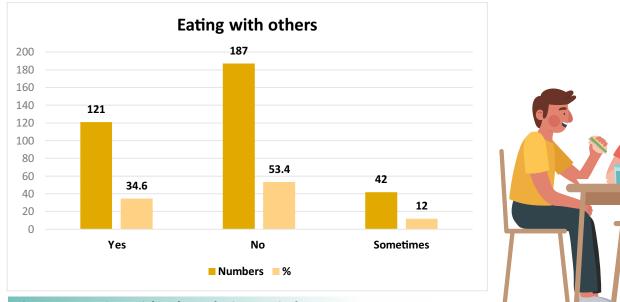


Figure 39: Eating with others during period

#### Regular bathing during period

Figure 36 sheds light on the fascinating relationship between periods and bathing routines. With over three-quarters (74.6%) opting for regular bathing during their period, a smaller chunk (13.1%) chooses to avoid it, and 12.3% navigate a middle ground.

#### Access to menstrual material in office premises

Figure 37 paints a concerning picture of the accessibility of menstrual materials in workplaces. With a staggering 79.14% having no access on-site, it was clear that many women face unexpected challenges managing their periods at work.

**The Accessibility Abyss:** The vast majority lacking access highlights a glaring gap in corporate support for menstrual health. This gap can lead to stress, anxiety, and even productivity loss as women scramble to find supplies when their period arrives unexpectedly.

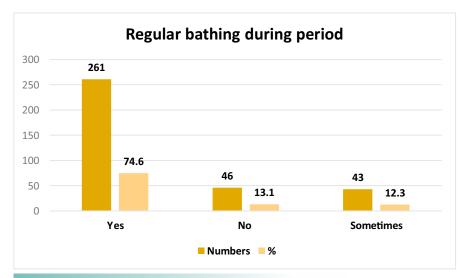


Figure 40: Regular bathing during period

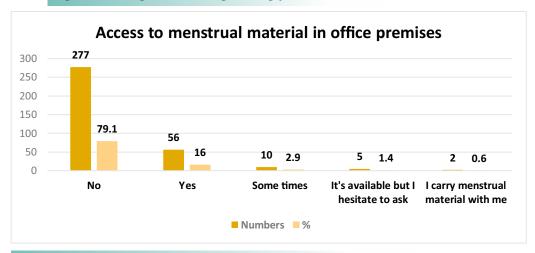


Figure 41: Access to menstrual material in office premises

**The Accessibility Abyss:** The vast majority lacking access highlights a glaring gap in corporate support for menstrual health. This gap can lead to stress, anxiety, and even productivity loss as women scramble to find supplies when their period arrives unexpectedly.

*Islands of Availability:* The 16% with access offer a beacon of hope, demonstrating that providing menstrual materials is both feasible and necessary. These workplaces deserve recognition for prioritizing the well-being of their female employees.

The Hesitation among working women: Even in environments with available supplies, 1.4% hesitate to ask, indicating lingering stigma and discomfort surrounding menstruation. Normalizing open conversations about periods and fostering a supportive environment is crucial to eliminate this hesitation.

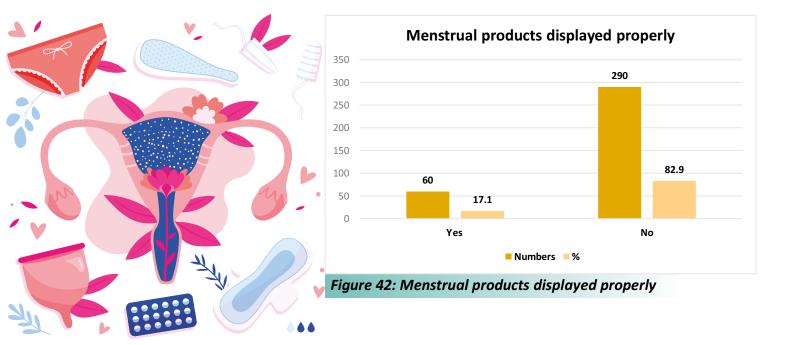
**Self-Reliant warrior:** The 0.6% who carry their own supplies showcase the proactive approach some women take. While this demonstrates personal responsibility, it shouldn't replace corporate

responsibility to provide basic necessities like menstrual materials.

Menstrual products in the office: beyond visibility, towards normalization Figure 38 shows a concerning picture, only 17.1% of offices properly display menstrual products. While visibility is a step towards accessibility, it's only the first step on a longer journey towards menstrual equity in the workplace.

The Visibility Vacuum: With over 80% of offices lacking proper product displays, it's clear that stigma and discomfort still shroud menstruation. Tucking away supplies in locked cabinets or hidden corners sends a subtle message - that periods are something to be ashamed of, hidden, and dealt with in secrecy.

**Beyond Visibility, Normalization:** Simply making products visible isn't enough. Proper display means integrating them seamlessly into restrooms, alongside other everyday hygiene products like tissues and hand soap. This sends a powerful message – menstruation is normal, natural, and deserves space in our shared environments.



Access to menstrual materials is not a luxury, it's a basic necessity. By addressing the gaps highlighted in this table, we can create workplaces where women feel comfortable, confident, and empowered to navigate their periods with dignity and ease.

# Nourishing your cycle from cramps to celebration Weakness during and after menstruation

High percentage affected: A concerning 67.1% of respondents experience weakness during and after their periods. This underscores the widespread impact of menstrual-related symptoms on energy levels and daily life.

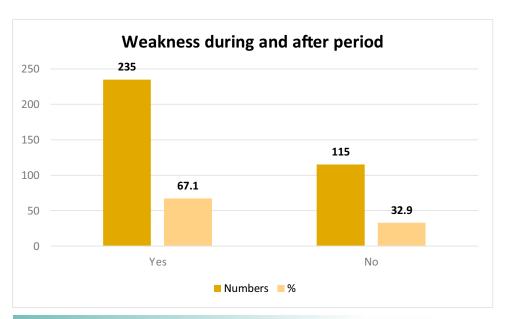




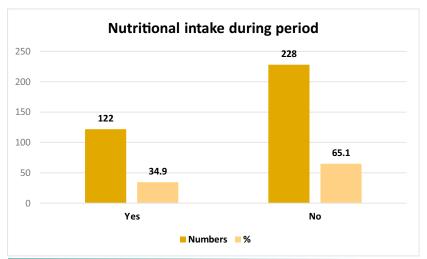
Figure 43: Weakness during and after period

*Impact on well-being:* Feelings of weakness can significantly affect physical and mental well-being, potentially impacting work, education, and daily activities.

#### Management of proper nutritional intake during menstruation

The data in the table 40 shows that only 34.9% of respondents reported taking proper nutrition during menstruation. This is a concerningly low number, suggesting that many people may not be aware of the importance of nutrition for managing menstrual symptoms. A significantly high percentage (65.1%) of respondents do not prioritize proper nutrition during menstruation. This highlights a need for increased

awareness and education about managing menstrual discomfort through dietary choices. Proper nutrition is essential for managing menstrual symptoms, such as cramps, fatigue, and mood swings. It can also help to regulate the menstrual cycle and improve overall health.



E 12 MAIN VITAMINS B3

C B12 B9 B6

Figure 44: Nutritional intake during period

### High IFA uptake: Scope for improvement

**Positive trend:** A substantial 81.1% of respondents reported taking iron-folic acid (IFA) supplements during their periods. This indicates strong awareness about the importance of IFA for managing potential iron deficiency, a common concern during menstruation.

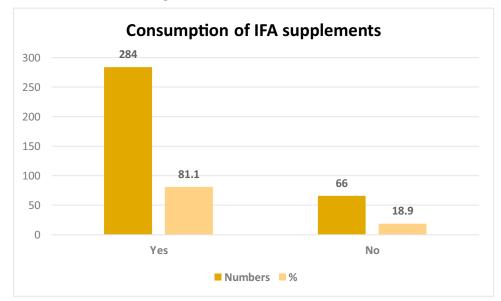


Figure 45: Nutritional supplements consumption

**Remaining gap:** However, 18.9% still do not take IFA. This signifies the need for continued efforts to educate and encourage those who have not yet adopted this essential practice.

#### Possible reasons for not taking IFA:

- Lack of awareness: Some individuals might not be informed about the benefits of IFA or potential consequences of iron deficiency.
- Accessibility and affordability: Access to IFA supplements may be limited in certain regions or due to socioeconomic factors.

 Side effects and misconceptions: Misconceptions about potential side effects or fear of adverse reactions could deter some from taking IFA.

The findings highlight the need for greater awareness and understanding of the common symptoms associated with menstruation, including weakness. Education and resources are crucial to empower individuals to recognize and manage menstrual symptoms effectively. This can include addressing

potential iron deficiency through IFA supplementation, managing pain through medication or alternative therapies, and prioritizing rest and self-care during this phase.

Normalizing open conversations about menstrual health and advocating for access to healthcare and support services can help individuals navigate their cycles with less physical and emotional burden. Further research is needed to investigate the specific causes of weakness during and after periods and develop targeted interventions to improve menstrual health outcomes for all. It could be further explored the relationship between weakness and specific menstrual cycle phases (e.g., premenstrual, during period, post-period).

Investigating the effectiveness of different interventions, such as dietary modifications, exercise, and stress management techniques, in managing menstrual weakness could offer practical recommendations for individuals.



#### **Chapter 3: Transgenders**

Living in a society that does not accept gender identity and trying to navigate reproductive health information that does not acknowledge the existence and is not designed for unique needs of certain genders. Would not they feel invisible, wouldn't they?

This chapter navigated through the challenges faced by people from transgender communities who were active menstruators. The firs and the foremost was their identity issue and they used to conceal their identity due to stigmatization and safety reasons.

This chapter found that participants were not very much open about menstruation and their responses were very ambivalent. At the last this chapter further reflected upon their menstrual related health care needs.

#### Qualitative analysis

Menstruation has long been viewed as an important aspect of women's health, and scholars and healthcare providers have begun to recognise that transgender men and people with masculine gender identities also menstruate.

An important caveat must be highlighted, however, before the trajectory of this study continues. Menstruation is not a uniquely female experience. "Not all women menstruate, and not only women menstruate" (Bobel 2010, 11). Menopause and external factors that can alter the menstrual cycle, such as contraception, body weight, and stress create a large group of women who do not menstruate ((Davis et al., 2015). In contrast, transgender men and intersex people are not female, yet can still menstruate (Bobel 2010, 11).

This research study also conducted a focus-group discussion with transgender men to highlight few insights about their menstrual health practices.

#### 1. Identity issue

The discussion brought out the issue concealment of identity for safety reasons, and stigmatization. Discussing menstrual flows with the transgender community revealed a complex web of intersecting stigma around identity, occupation, class, age, caste, and ethnicity. The silence and taboo around periods are further exacerbated for trans men, who report stigma, discomfort, annoyance, disgust, and pain linked to menstrual periods. The persistent menstrual stigma among trans men underlining the value of a human, holistic approach to sexual reproductive health and rights.

#### 2. Menstrual experience

Participants were not very much open about menstruation and their responses were very ambivalent. They felt that menstruation is perceived as women issue, however, transgender men and people with masculine they reported that it was easy to manage menstruation at home. It becomes difficult outside the home due to absence of gender inclusive

public toilets and other safe spaces. As a result, they feel unsafe and uncomfortable.

It was shared by a participant that sometime NGOs who work with MSM (men having sex with men) distribute sanitary pads. They also get the chance to get those sanitary pads that would be used by them as well during menstruation. In some cases, the participants reported to take medicines to supress their menstrual periods.

Participants informed that they did not feel confident to discuss about menstruation, and in many cases, they were hesitant to discuss it with people they did not know well, including healthcare professionals. They showed their discomfortness to ask for menstrual products from pharmacies.

#### 3. Menstruation related health care needs

During the discussion it was brought into the picture that trans and non-binary people have menstruation-related health care needs that must be met. Instead, the health and social inequities that trans and non-binary experience are rooted in gender-based discrimination, violence, and systemic oppression. As a result, they felt uncomfortable to discuss their experience with health care professional. However, one participant informed that the health care professionals also needed to be sensitized towards this issue, especially in transgender case.

During the discussion it was realized that public health efforts to declare menstruation a vital sign and indicator of the state of bodily health could only succeed if everyone who menstruates is comfortable discussing menstruation and cycle-related changes with their healthcare providers.

### Chapter 4: Other stakeholders

Role of boys during adolescents age is an important stage to kickstart the discussion on sexual and reproductive health, including menstrual health. Therefore, this chapter would navigate through the role of boys in menstrual health.

In order for girls to negotiate menstruation during adolescence, schools and teachers are crucial. To promote health, wellbeing, and equitable learning opportunities, schools have an important role to play in order to address the need for adequate menstrual hygiene facilities, free sanitary pads or other menstrual health products to fulfil the need of girls in schools and timely information on period health to both boys and girls.

Similarly, the role of the Accredited Social Health Activists (ASHAs) under the Menstrual Hygiene Scheme is similar in all States/ UTs. ASHAs hold monthly meetings with the adolescent girls in their area to talk about health issues including menstrual hygiene management. The sanitary napkin packs are provided to the adolescent girls at subsidized rates by the ASHAs.

#### A. Adolescent boys (11-19 years)

This section delves into the association of age of boys and their knowledge and awareness related to menstruation. This chapter further analyses as how the education level of boys influences their understanding on menstruation.

Secondly, it analysed how often the open discussion takes place in families about menstruation, their misconceptions towards menstruation. This section further deep dived into boys' sensitivity towards girls/women when they were in periods.

Going further into this chapter it will be found that boys are open to change the stigmatization and taboos around menstruation. They themselves want to be the changemakers and to help overcome this challenge at all levels of society.

The high percentage of boys who were willing to critically evaluate and improve social norms and traditions can lead to a more equitable and progressive society.

#### **Findings**

#### Relationship between age group and awareness about period

The percentage of boys in the 15-17 age group who were aware of periods was 44.9%, while the percentage of people in the 17-19 age group who were aware of periods was 55.1%. This suggests that there is a positive relationship between age group and awareness about periods. There are a number of possible reasons for this trend.

- 1. Increased access to information and education about periods in older age groups: Older teenagers may have more access to information about periods from friends, family, books, neighbours and the internet. They may also be more likely to take sex education classes in school.
- **2.** Greater openness to discussing periods among older teenagers: Older teenagers may be more open to discussing periods with their friends and family, which can help them to learn more about this topic.

Table 17: Relationship between age group and awareness about period

Relationship between age group and awareness about period				
Age group	Yes	%	No	Percentage %
15-17	22	44.9	15	71.4
17-19	27	55.1	6	28.6
Total	49	100	21	100

#### Influence of level of education on awareness about menstruation

The data shows a positive correlation between the level of education and awareness about menstruation. As the level of education increases, the percentage of people aware of menstruation also increases. This could be due to a number of factors, such as:

Table 18: Influence of level of education on awareness about menstruation



Influence of level of education on awareness about menstruation				
Level of education	Yes	%	No	%
Graduate	1	2.04	0	0
Senior secondary	29	59.18	6	30
High school	11	22.45	5	25
Illiterate	8	16.33	9	45
Total	49		20	100

- 1. Education systems often include sex education classes that cover menstruation.
- 2. Individuals with higher levels of education may have greater access to information and resources about menstruation through the internet, libraries, or healthcare professionals.
- 3. Higher education may foster a more open and informed environment where individuals feel more comfortable discussing menstruation

#### Family members talk about menstruation openly

The data in Table 19 reveals a surprisingly low level of open discussion about menstruation within the family. Only 11 out of 70 members, which translates to roughly 15.7%, are comfortable talking about this natural biological process openly.

Table 19: Family members talk about menstruation

Family members talk about menstruation openly	N=70	%
Yes	11	15.71
No	59	84.29

- 1. Cultural/societal taboos: Menstruation has been historically shrouded in stigma and silence in many cultures and societies. These ingrained social norms might be hindering open communication within the family.
- **2.** Lack of education or understanding: Familiarity with the biological aspects and normal fluctuations of menstruation can foster acceptance and openness. Limited knowledge might be leading to discomfort or even fear surrounding the topic.
- **3. Generational differences:** Older generations might have been raised in even more restrictive environments surrounding menstruation, impacting their willingness to discuss it openly. Younger generations might feel more comfortable, but he sitant due to a perceived lack of receptiveness from older family members.

### Received education on menstruation with respect to educational grade

The data in Table 22 reveals a concerning gap in menstrual education. Nearly 60% individuals have not received any formal education on menstruation in school. The remaining 41.43% received some form of education:

- **1.** *Middle school is the most common point of education (27.1%):* This suggests a focus on puberty education during teenage years, but potentially neglecting earlier awareness building.
- **2.** Only 7.14% received education in both primary and middle school: This indicates an inconsistency in how menstrual education is integrated into the curriculum across different stages.

#### Table 20: Received education on menstruation

Received education on menstruation	N=70	%
No have not got education on menstruation in school	41	58.57
Yes, Middle school	19	27.14
Yes, Primary and Middle both	5	7.14
Yes, Primary school	5	7.14

#### Women get affected during menstruation

The data in Table 23 presents an interesting perspective on the perceived impact of menstruation on women/girls. While 70% boys believe they are "mostly affected" during menstruation, it's important to consider this alongside other factor to avoid perpetuating harmful stereotypes or creating unnecessary anxiety.

- **1.** Women/girls "navigate" menstruation: This framing acknowledges the challenges while highlighting the agency individuals possess in managing their cycle and maintaining their well-being.
- **2.** *Menstruation is a "natural experience":* Emphasizing the biological normalcy of menstruation can help combat stigma and promote acceptance.
- **3. Focus on "menstrual health and education":** Shifting the focus towards promoting knowledge and resources empowers women/girls to understand their bodies and make informed choices about their menstrual health.

### Table21: Women get affected during menstruation

Women /girls get affected mostly during	N=70	<b>%</b>
menstruation – perceived by boys		
Yes	49	70
No	21	30

#### Period Taboo: Unveiling the Myths

The data in the Table 24 shows that nearly half (47.1%) of the respondents reported having misconceptions around menstruation. This highlights the need for education and awareness campaigns to dispel myths and promote menstrual health literacy. Here are some of the misconceptions about menstruation that are mentioned by respondents-

- **1. Menstruating women are unclean or impure.** This is a common misconception that is often based on religious or cultural beliefs. There is no scientific evidence to support this claim. Menstruation is a natural and healthy biological process.
- **2.** Menstruating women cannot participate in religious activities. This misconception is also often based on religious beliefs. There is no reason why menstruating women cannot participate in religious activities. In fact, some religions have specific rituals or ceremonies for menstruating women.
- **3. Menstruating women should not touch food or cook.** This misconception is based on the belief that menstruating women are unclean or impure. There is no scientific evidence to support this claim. Menstruating women can safely touch food and cook.
- **4. Menstruating women should not exercise.** This misconception is based on the belief that exercise can make cramps worse. There is no scientific evidence to support this claim. In fact, exercise can actually help to relieve cramps.

**Table 22: Having misconception around menstruation** 

Having misconception around menstruation (Like not	N=70	%
allowing to work; not participating in work)		
Yes	33	47.1
No	37	52.9

#### Boys helping during menstruation

The data shows only a small percentage (4.3%) of boys reporting they helped any girl or woman during her period. This is a very low percentage and suggests that there may be barriers preventing boys from offering support or being informed about how they can help.

Table 23: Boys helped any girl or women during her period

Boys helped any girl or women during her period	N=70	%
Yes	3	4.3
No	67	95.7

Possible reasons of above trends-

- **1.** Lack of awareness: Boys might not be aware of how to help or what kind of support is needed during menstruation. Educational programs that include boys could be beneficial.
- **2. Social stigma:** There may be a stigma surrounding boys helping girls during their periods, making them hesitant to offer assistance. Open and supportive conversations about menstruation could help break down these barriers.
- **3. Gender roles:** Traditional gender roles might discourage boys from taking on caregiving or supportive roles. Rethinking gender roles and promoting shared responsibility could be helpful.

Some boys played crucial role in supporting girls and women as follows-

- **4.** Offering practical help with chores: As mentioned in the table 25, boys can help with household tasks like cooking, cleaning, or running errands to ease the burden on menstruating girls and women.
- **5.** Showing understanding and empathy: Boys can be supportive by simply acknowledging and understanding the physical and emotional challenges that menstruation can bring. Creating a safe space for open communication about these experiences can be very helpful.
- **6. Providing emotional support:** Sometimes, a listening ear and words of encouragement can be the most valuable support. Boys can offer emotional support by being patient, understanding, and offering words of comfort.
- **7. Challenging negative attitudes and stigma:** Boys plays a crucial role in breaking down the stigma surrounding menstruation by speaking out against negative attitudes and promoting open and honest conversations about the topic.

#### Awareness among boys about menstruation

The data in Table 26 is quite compelling, showing that a vast majority (94.29%) of respondents believe that boys should be aware about menstruation. This suggests a growing shift towards recognizing the importance of menstrual literacy for everyone, not just girls and women. Here are some potential comments and interpretations:

#### Implications of awareness among boys

• **Strong consensus:** The overwhelming support for boys' awareness indicates a positive movement towards inclusivity and open communication about menstruation.

- **Combating stigma:** Increased awareness among boys can contribute to breaking down the stigma surrounding periods and creating a more supportive environment for everyone.
- **Empowering allies:** Educating boys fosters understanding and empathy, enabling them to become better allies and supporters of girls and women experiencing menstruation.

#### Table 24: Boys should be aware about menstruation

Boys should be aware about menstruation	N=70	%
Yes	66	94.29
No	4	5.71

#### Misconception and ritual need to be changed in society

The data in Table 27 shows that a significant majority (77.1%) of respondents believe there are misconceptions and rituals that need to be changed in society. This suggests widespread recognition that some aspects of our cultural norms and practices may be outdated, harmful, or hindering progress. However, without further details about the specific misconceptions and rituals, it's difficult to provide comprehensive comments.

### **Table25:** Misconception and ritual need to be changed in society

Misconception and ritual need to be changed in society	N=70	<b>%</b>
Yes	54	77.1
No	16	22.9

The data in Table 24 shows that a significant majority (77.14%) of respondents believed there are misconceptions and rituals that need to be changed in society. This suggests widespread recognition that some aspects of our cultural norms and practices may be outdated, harmful, or hindering progress. The misconceptions and rituals have been discussed earlier in this report.

#### Positive aspects:

- 1. Openness to change: The high percentage suggests a willingness to critically evaluate and improve social norms and traditions. This can lead to a more equitable and progressive society.
- **2.** Addressing harmful practices: Recognizing the need for change can pave the way for dismantling harmful misconceptions and rituals that perpetuate inequality or discrimination.
- **3. Promoting cultural evolution:** Societies evolve over time, and adapting their norms and practices reflects a healthy willingness to respond to changing circumstances and values.

#### B. Adult male (19 years and above)

In this chapter we will find that there was a relatively high level of awareness about periods among the male respondents. This suggests a positive trend in terms of education and openness about reproductive health.

The respondents believed that women's participation in social and family activities gets affected during their periods. This suggested that majority of male believed that menstruation could indeed pose challenges and limitations for some women in terms of their social and family engagements. Encouragingly, more than half of the respondents helped women when they were in periods and they were willing to offer support and assistance during menstruation.

This chapter underscores a strong consensus about the importance of male understanding towards menstrual health issues. They believed that increased awareness among males can contribute to breaking down taboos, facilitating open communication, and fostering inclusivity around menstruation.

With such strong support for change, there is an opportunity to implement effective strategies for addressing the specific misconceptions highlighted and creating a more informed and inclusive society regarding menstruation.

#### **Findings**

#### Respondents profile

Age group respondents: The provided table 28 outlines the distribution of respondents across different age groups.

Table 26: Age group of respondents

#### 1. Dominance of 19-24 age group

Nearly half (47.62%) of the respondents fall within the 19-24 age group, indicating a relatively higher representation from younger demographic. This might influence the overall findings, as the perspectives of younger individuals may differ from those of older age groups.

Age group	N=21	%
19-24	10	47.62
25-28	4	19.05
29 and above	7	33.33

- **2.** Moderate representation of **29** years and above: The 29 and above age group represents 33.33% of the total respondents. While not as dominant as the 19-24 age group, it still contributes significantly to the overall sample, allowing for a more balanced representation across different age brackets.
- **3.** Limited representation of **25-28** age group: The 25-28 age group comprises 19.05% of the respondents, indicating a relatively lower representation compared to the other age categories. Insights from this group might be limited, and any conclusions drawn should consider this lower representation.

#### **Educational background of respondents**

The Table 29 illustrates a diverse educational background among the respondents, ranging from illiterate to post-graduate and above. This diversity is crucial for capturing a comprehensive array of perspectives.

#### 1. Significant representation in high school and senior secondary

A substantial portion of the respondents falls within the high school and senior secondary education levels, comprising 28.57% each. This indicates a balanced representation of individuals with education up to the secondary level. (See Table: 27)

Table 27: Educational background of respondents

Education	N=21	%
Illiterate	1	4.76
Literate	3	14.29
High school	6	28.57
Senior Secondary	6	28.57
Graduate	2	9.52
Post Graduate and Above	3	14.29

#### 2. Significant representation in high school and senior secondary

A substantial portion of the respondents falls within the high school and senior secondary education levels, comprising 28.57% each. This indicates a balanced representation of individuals with education up to the secondary level.

#### 3. Moderate representation in graduate and post-graduate Categories:

The graduate and post-graduate categories account for 9.52% and 14.29% of the respondents, respectively. While these percentages are lower than high school and senior secondary, they still contribute meaningfully to the overall educational diversity.

#### Awareness about period among respondents

The Table 30 indicates a relatively high level of awareness about periods among the male respondents, with 85.71% acknowledging awareness. This suggests a positive trend in terms of education and openness about reproductive health.

There were significant number of respondents who were not aware about periods, (14.29%) indicate a lack of awareness. Understanding the reasons behind this lack of awareness and addressing potential misconceptions could be valuable for educational initiatives.

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Awareness about periods among males	N=21	%
Yes	18	85.71
No	3	14.29

#### Source of information

- 1. School: Information gathered from educational institutions, indicating a formal and structured source of knowledge.
- **2. Friend:** Insights obtained through personal connections, suggesting informal and interpersonal exchange of information
- **3.** *Internet:* Knowledge acquired through online sources, reflecting the influence of digital platforms in accessing information.
- **4. Community Resource Centre:** Information obtained through community-based sessions, highlighting the role of local resources and community engagement.
- **5. Books:** Knowledge gained from written materials, emphasizing the importance of traditional and authoritative sources.
- **6. News:** Information sourced from news media, indicating an awareness of current events and mainstream information channels.
- **7. Encountering People Around:** Insights collected from interactions with people in the immediate surroundings, suggesting informal community-based knowledge sharing.
- **8. TV:** Knowledge obtained from television, showcasing the impact of visual and audio media in information dissemination.
- **9.** *Wife:* Information learned through spousal communication, underlining the significance of interpersonal relationships in sharing knowledge.
- **10. NGO Session:** Insights gained from sessions organized by non-governmental organizations, highlighting the role of organized initiatives in education and awareness.

#### Openness on menstruation among family members of respondents

*High prevalence of open discussion:* Over 70% of respondents reported open discussions about menstruation within their families. This is encouraging, as open communication plays a crucial role in normalizing menstruation, reducing stigma, and providing needed support.

Table 29: Family members talk about menstruation openly

Family members talk about it openly	N=21	%
Yes	15	71.43
No	6	28.57

**Potential for knowledge sharing and positive attitudes:** Open family discussions create opportunities to share accurate information about periods, address anxieties and misconceptions, and build positive attitudes towards menstruation. This can empower both menstruating individuals and their families.

**Breaking taboos and fostering comfort:** Talking openly about menstruation challenges societal taboos and normalizes it as a natural bodily function. This can foster comfort and confidence in individuals experiencing menstruation and encourage more open communication across generations.

#### Awareness on providing help to women during menstruation

The Table 30 reveals the trend of awareness about how to help women or girls during their period. It was encouraging to see that over 95% of respondents were aware of ways to help women during menstruation. This indicated a growing understanding of the challenges and needs associated with this natural experience.

#### Table 30: Awareness on providing help to women during menstruation

Awareness on providing help to women during	Total N=21	%
menstruation		
Yes	20	95.23
No	1	4.76

#### Women's participation gets affected during periods

As Table 31 suggest that the majority (81%) of respondents believe women's participation in social and family activities gets affected during their periods. This suggests that majority of male do believe that menstruation can indeed pose challenges and limitations for some women in terms of social and family engagement.

### Table 31: Women's participation gets affected during periods (participation in social and family activities)

Women's participation gets affected during periods	N=21	%
(participation in social and family activities)		
Yes	17	80.95
No	4	19.04

#### Males having myths around menstruation

Minimal prevalence of myths: It was encouraging to see that only 4.8% of respondents admitted to holding
myths about menstruation. This suggests a positive trend towards increased awareness and understanding
among males.

#### Table32: Women's participation gets affected during periods

Males having myths around menstruation	N=21	%	
Yes		1	4.76
No		20	95.23

• **Promotes further education:** While the low prevalence is positive, even one individual harbouring myths highlights the need for continued education and open communication.

#### Male helped any girl or women during her period

- Roughly half (52%) of respondents reported having helped a girl or woman during their period.
- This suggests that many males are willing to offer support and assistance during menstruation, which is a positive step towards understanding and inclusivity.

#### Table33: Male helped any girl during her period

Male helped any girl or women during her period	N=21		%
Yes		11	52.38
No		10	47.61

#### Male should be aware about menstruation

Table 34 reflects that with 95% of respondents agreed that males should be aware of menstruation, this table underscores a strong consensus about the importance of male understanding and engagement. Increased awareness among males can contribute to breaking down taboos, facilitating open communication, and fostering inclusivity around menstruation.

Table 34: Male should be aware about menstruation

Male should be aware about menstruation	N=21	%
Yes	20	95.24
No	1	4.76

#### Misconception and ritual should be changed in society

Table 35 reveals that the overwhelming majority (81%) agreeing that changes are needed reflects a growing awareness and willingness to challenge harmful misconceptions and rituals surrounding menstruation. With such strong support for change, there's an opportunity to implement effective strategies for addressing the specific misconceptions you highlighted and creating a more informed and inclusive society regarding menstruation.

Table35: Misconception and ritual should be changed in society

Misconception and ritual should be changed in	N=21	<b>%</b>
society		
Yes	17	81
No	4	19

This research found that found the numerous types of misconception around the menstruation. This misconception can be enlisted below-

- 1. Myth: Periods are dirty or impure.
- 2. Myth: You can't get pregnant during your period.
- **3. Myth:** You shouldn't exercise or bathe during your period.
- **4. Myth:** Periods are painful for everyone.
- 5. Myth: Menstrual blood can attract animals.
- 6. Myth: You can't use tampons if you're a virgin.
- 7. Myth: Periods are contagious.
- **8. Myth:** You shouldn't eat certain foods during your period.
- **9. Myth:** Periods are a punishment for something you did wrong.

**Remarks:** The data from these various tables paints a promising picture of growing awareness and understanding about menstruation among males. Key positive trends:

 High level of awareness: The majority of respondents acknowledge the importance of menstrual awareness and education for males.

- This suggests a shift towards openness and inclusivity regarding this traditionally taboo topic.
- Limited prevalence of myths: While not completely eradicated, the low percentage of respondents holding myths about menstruation reflects progress in dispelling misinformation and promoting accurate knowledge.
- Willingness to help: Over half of respondents have offered support to women during their periods, showcasing a positive inclination towards empathy and assistance.
- Desire for change: The overwhelming majority support changing harmful misconceptions and rituals surrounding menstruation, demonstrating a commitment to dismantling harmful practices and creating a more supportive environment.

#### Considerations for moving forward

 Addressing remaining gaps: Despite positive trends, the remaining pockets of resistance (e.g., those who disagree with changing misconceptions, the 19% unaware of periods) highlight the need for

- continued education and outreach efforts.
- Tailoring educational approaches: Understanding the specific age groups, educational backgrounds, and cultural contexts of the target audience is crucial for designing effective educational programs and resources.
- Promoting open communication: Encouraging open and honest conversations about menstruation within families, communities, and peer groups can further normalize this natural biological process and break down remaining taboos.
- Addressing practical needs: While awareness is

essential, it's crucial to implement policies and initiatives that address the practical needs of those experiencing menstruation, such as access to menstrual products, adequate sanitation facilities and health care services as well.

Overall, these findings present a promising trajectory towards greater menstrual awareness, understanding, and inclusivity among males. By building on these positive trends, addressing remaining challenges, and taking targeted action, we can create a society where menstruation is openly discussed, respected, and supported for all.

#### C. Role of ASHAs and AWWs in menstrual health

The role of frontline workers is important at three levels, firstly, to identify the most vulnerable women or adolescent girls in the community that is affected due to wrong menstrual health practices and, secondly, to create awareness on the subject and thirdly to refer the adolescent at the counselling centres.

This chapter found that more than half of ASHAs and half of AWWs were trained on menstrual health. More than half of the ASHA workers reported availability of counselling facilities on menstrual health at primary health centres, while less than half (42.8%) AWWs had such facility at their Anganwadi centres.

A good percentage of frontline workers took awareness sessions on menstrual health to the best of their knowledge and understanding, however, it was analysed that both frontline workers fell short of providing consistent access to menstrual education materials to adolescents and women.

Community members provided logistical support to AWWs, such as helping to organize and facilitated menstrual health sessions, providing transportation for AWWs to reach remote areas, or donating menstrual health products.

#### **Findings**

#### A. Training on menstrual health

Both Chart 46 and 47 to be related to menstrual health and hygiene (MHH) training, but the specific focus on two important stakeholders of menstrual health at grassroot level.



Figure 46: Training received by ASHA on menstruation



Figure 47: Training received by AWW on menstruation

#### **Similarities**

- 1. Both figures show that roughly half of the respondents have received MHH training (50% in the first table and 64% in the second).
- 2. Both figures highlight the importance of MHH education for managing menstrual health effectively.

#### **Differences**

The figures show that 64% ASHA workers received training compared to 50% AWWs. While ASHAs reported receiving menstrual health training, however, they could not elaborate menstrual hygiene when questioned further. Thus, this research found the gap between knowledge and present information among the frontline workers. Hence, it raises concerns about the effectiveness and reach of the training program on menstrual hygiene/health. The ASHAs further explained few reasons for such gaps:

- **1.** *Incomplete or ineffective training:* Some workers might have received basic training but lacked sufficient depth or practical application skills, making recall difficult.
- **2. Focus on other trainings:** Frontline workers juggle various responsibilities and trainings. Menstrual health training was not be prioritized or readily recalled unless prompted specifically.
- **3.** Hesitancy due to stigma: Openly discussing menstrual health is still a taboo in some communities, leading to workers being hesitant to elaborate, even if trained.

#### B. Counselling on menstrual health

- 1. Only 62.4% ASHA workers reported that there are menstrual health counselling facilities at the health centres, while only 42.8% Anganwadi workers reported such counselling facilities at their centres. This indicates a potential gap in access to crucial information and support regarding menstrual health.
- 2. At the health centre, 35.7% ASHAS reported no access to menstrual health discussion by the adolescents or women. This might necessitate further investigation into the reasons for limited access and identify barriers faced by individuals.
- 3. At the AWC, 57.1% reported no access. This highlights a potentially significant need for improvement in addressing menstrual health discussions within AWCs.

#### C. Discussion on menstrual health with AWWs and ASHAs

- High level of discussions at AWW and with ASHAs: This research found that 85.7% for AWWs and 78.5% ASHAs
  reported witnessing girls and women discussing menstrual health with their respective frontline workers. This
  indicates a positive trend of openness and engagement around the topic in their
  communities/bastis/settlements.
- Slight difference between AWCs and ASHAs: While the percentage is high for both settings, discussions seem slightly more frequent at AWCs compared to ASHAs. This could be due to various factors, like:

Table 36: Discussion on issue of menstrual health with AWWs and ASHA s

Girl and women who discuss menstrual health issue with AWW	N=14	%
Yes	12	85.71
No	2	85.71
Girls and women who discuss menstrual health issues with ASHA	N=14	%
Yes	11	78.57
No	3	21.43

- 1. Accessibility of AWCs: They might prioritize health education and having space for dedicated open discussions.
- **2.** Accessibility of ASHAs: Individuals might not always actively seek out ASHAs for discussions because they do not have dedicated space in the community, even if the option is available.

#### • Suggested specific actions:

**For AWCs:** Enhance existing programs, provide educational materials, and train AWWs to address menstrual health concerns effectively.

**For ASHAs:** Encourage proactive engagement with girls and women, conduct awareness campaigns, and build trust within the community.

#### D. Access to menstrual health education material

- Limited access in both settings: Both AWCs and dispensaries fell short of providing consistent access to menstrual education materials. Only 71.4% of respondents reported readily available education materials in their respective AWCs and health centres, indicating a significant need for further improvement.
- **AWCs face larger accessibility gap:** While both settings (AWCs & primary health centres) show challenges with respect to access of menstrual health education material by girls and women, 92.7% ASHAs reproted to provide menstrual education materials, while 28.6% AWWs reported the availability.

### Table 37: AWCs and Dispensary having menstrual material and its accessible for girls and women

AWCs having menstrual education material and it is accessible for girls and women	N=14	%
Some times as per the need	1	7.14
No	13	92.86
Dispensary having menstrual education material and it is accessible for girls and women	N=14	%
Yes, menstrual education material is available and accessible	10	71.43
No	4	28.57

#### E. People behave differently when women or girls are in period: AWWs and ASHAs observations

This research captured the frontline workers observations with regard to family behavior towards women during their menstrual periods.

- A significant percentage (57.14%) at AWWs reported observing behavioral changes in families, compared to a much lower number (7.14%) by ASHAs. This difference warrants further investigation.
- The "sometimes" category in case of ASHAs (14.29%) suggests nuanced experiences that require further exploration to understand the specific contexts and circumstances where behavior changes occur in families when a woman had periods.

#### F. Session organized on menstruation as an AWW and ASHA

Six-months prior to this research 64.3% AWWs and 71.4% ASHAs organized sessions on menstrual health. This indicates a positive step towards raising awareness and breaking taboos surrounding menstruation.

However, there was still a significant portion of workers who did not conduct sessions (35.71% AWWs and 21.43% ASHAs). This gap needs to be addressed to ensure comprehensive menstrual health education for all.

Table 38: People behave differently when women or girls are in period: AWW and ASHA

People behave differently when women or girls are in period: AWW	N=14	%
Yes	8	57
No	6	43
People behave differently when women or girls are in period: ASHA	N=14	%
Yes	1	7
No	11	78
Sometimes	2	15

Table 39: Session organized on menstruation as an AWW and ASHA

Session organized on menstrual health by AWWs	N=14	%
Yes	9	64.3
No	5	35.7
Session organized on menstrual health by ASHAs	14	%
Yes	11	78.5
No	3	21.5

#### Specific observations

- AWWs vs. ASHAs: ASHAs seem to have a slightly higher percentage of organizing sessions compared to AWWs.
  This might be due to UDAAN menstrual hygiene programme implemented through ASHA workers for out of
  school girls aged 11-19 years. Further investigation is needed to understand other reasons behind this
  disparity.
- This research focused on the quantity of sessions organized. It would be valuable to also explore the quality of these sessions, such as the content covered, teaching methods used, and participant engagement levels.

#### G. Community support to frontline workers

• The table suggests a positive trend, with 85.7% AWWs and 85.7% ASHAs reporting support from the community, caregivers, and parents. This is crucial for the success of their work, as it fosters collaboration and creates an enabling environment for addressing sensitive topics like menstrual health. The almost identical percentages of support for both AWWs and ASHAs indicate a common understanding and appreciation for their roles within the community. This suggests that both groups face similar challenges and receive similar levels of support, regardless of their specific responsibilities.

#### Types of community support received by AWWs and ASHA

The following are the types of support received by AWWs from community:

- Education and awareness: Community members were often supportive of AWWs' efforts to educate and raise
  awareness about menstrual health. They may help to spread the word about menstrual health initiatives,
  encourage family members to participate in sessions, or even provide support for AWWs' training and
  resources.
- Logistical support: Community members provided logistical support to AWWs, such as helping to organize and facilitated menstrual health sessions, providing transportation for AWWs to reach remote areas, or donating menstrual health products.

• **Moral support:** Community members provided moral support to AWWs, especially those who faced challenges or discrimination in their work. They offered words of encouragement, provide emotional support, or even advocated for AWWs' rights and protections.

Table 40: Support from community, care giver and parent to AWW and ASHA

Support from community, care giver, and parents: AWW	N=14		%
Yes		12	85.7
No		2	14.3
Support from community, care giver, and parents: ASHA	N=14		%
Yes		12	85.7
No		2	14.3

#### D. Teachers' perspective on menstrual practices, health and its management

It is seen that students learn best in schools that provide a safe and conducive social and academic environment. Everyone at school has a vital role to play in adolescents' life which creates a long-term effect on their lives. The school teachers, principals, and the broader education system may play a positive role in adolescent's lives.

This chapter found that a good percentage of teachers received training on menstrual health education and over 90% teachers discussed menstrual health management with adolescent girls. This indicated a strong commitment to addressing this crucial topic in the classroom, which could empower girls with essential knowledge and break taboos surrounding menstruation.

This chapter highlights a potential gap in formal education, where menstrual health remains a separate topic rather than being woven into relevant subjects like biology, health, or life skills. Teachers rely on informal conversations and girls' questions to address menstrual health. There seemed to be a lack of consistency and standardized approach, potentially leading to uneven coverage across schools and students.

In this chapter it was found that the teacher feels unsure about their ability to address girls' diverse questions and experiences related to menstruation. The teacher acknowledges the importance of fostering a comfortable and open space for girls to discuss menstrual health freely. The teacher highlights the need for specific training on menstrual health topics beyond personal experience.

#### **Findings**

#### Teacher training on menstrual health education

The Table 41 suggests a positive trend, with 71.4% of teachers having received training on menstrual health education. This is promising as it indicates a proactive approach to addressing a crucial topic that was often neglected in the past.

Table 41: Teacher's training on menstrual health education

Teachers training on menstrual health	N=14	%
Yes	10	71.4
No	4	28.6

It is crucial to understand why the remaining 4 teachers (28.6%) have not received training. Are there resource constraints, logistical challenges, or specific reasons within the school or community? Identifying the barriers can help address the gap and ensure comprehensive training for all teachers.

#### Teacher discussion on health management with girls

The table presents a promising picture with 92.8% of teachers discussing menstrual health management with girls. This indicates a strong commitment to addressing this crucial topic in the classroom, which can empower

girls with essential knowledge and break taboos surrounding menstruation.

Table 42: Teacher discussion on health management with girls

Teacher discussion on health management with girls	N=14	%
Yes	13	92.8
No	1	7.2

However, the remaining 7.14% of teachers not discussing menstrual health warrants further investigation. Understanding the reasons behind this gap (e.g., lack of training, personal discomfort, cultural constraints) is crucial to ensure comprehensive coverage for all students.

#### People behaviour towards girls, during their period

In the table 43 majority of respondents (57.1%) did not report any change in the behaviour. This was encouraging, as it suggested a growing understanding and acceptance of menstruation as a normal biological process. Significant portion teacher (21.4%) reports adapting their behaviour sometimes. This could reflect sensitivity and willingness to offer support during potentially challenging times, while still maintaining normalcy at other times.

Table 43: People behave differently if girls are in period

People (family/friend/ teacher/boys) behave	N=14	%
differently if girls are in period		
Yes	3	21.5
No	8	57.1
Sometimes	3	21.4

#### Method of transacting menstrual health related education in school

The table 44 reveals a diverse range of approaches to menstrual health education in schools, with no single method dominating.

- Limited integration into curriculum: Only 7.1% of teachers report incorporating menstrual health as part of the regular curriculum. This highlights a potential gap in formal education, where menstrual health remains a separate topic rather than being woven into relevant subjects like biology, health, or life skills.
- Heavy reliance on informal discussions: 42.8% of teachers rely on informal conversations and girls' questions to address menstrual health. While this can be valuable for addressing specific concerns, it risks leaving some students uninformed or hesitant to ask questions.
- Scattered use of dedicated modules and sessions: 7.1% use a menstrual hygiene module and 35.7% conduct special sessions through educational programs. This suggests a lack of consistency and standardized approach, potentially leading to uneven coverage across schools and students.

#### Influence of training on menstrual education

The provided qualitative data give valuable insights from a teacher's perspective on the challenges of teaching menstrual health without proper training:

- Lack of confidence: Without training, the teacher feels unsure about their ability to address girls' diverse questions and experiences related to menstruation. They express self-doubt in their knowledge and expertise, fearing they might not be able to adequately answer all questions.
- Desire to create a safe environment: The teacher acknowledges the importance of fostering a comfortable

Table 44: Method of transacting menstrual health related education in school

Method of transacting menstrual health	N=14	%
related education in school		
As a part of course curriculum	1	7.1
Healthy life/Developing a module on life	1	7.1
skills		
Informal/ Girls asks some times	6	42.8
Menstrual hygiene module	1	7.1
Special session through educational	5	35.7
programme		

and open space for girls to discuss menstrual health freely. They recognize the sensitivity of the topic and understand the need for a supportive environment.

- **Limitations of personal experience:** While drawing from personal experiences can be helpful, the teacher realizes that individual journeys are unique. They worry that their own experiences might not encompass the varied experiences of their students, potentially leaving some girls feeling unheard or misunderstood.
- **Need for specialized knowledge:** The teacher highlights the need for specific training on menstrual health topics beyond personal experience. This includes covering scientific aspects, hygiene practices, managing discomfort, addressing emotional and social concerns, and dispelling myths and taboos.

#### Menstrual health problems: Narrated by teachers

The provided data offers valuable insights into the menstrual health problems that girls face in general. The data is based on the experiences of teachers and other stakeholders working with girls, and it provides a comprehensive overview of the challenges that girls face.

- **Physical problems:** The most common physical problems that girls report are heavy bleeding, back pain, stomach pain, and pelvic cramps. These problems can be debilitating and can interfere with girls' daily activities, including school, work, and social engagements.
- **Hygiene problems:** Girls also face challenges related to menstrual hygiene. Some girls may not have access to sanitary products, while others may not know how to use them properly. This can lead to infections, discomfort, and embarrassment.
- **Social and emotional problems:** Menstruation can also have a significant impact on girls' social and emotional well-being. Some girls may feel isolated or ashamed of their periods. Others may experience mood swings, anxiety, or depression.
- **Cultural and economic factors:** Cultural and economic factors can also play a role in menstrual health problems. For example, girls from marginalized communities may be more likely to experience poverty, lack of access to education, or cultural taboos surrounding menstruation.

#### **Menstruation and School Attendance**

The provided qualitative data suggests that school attendance can be affected during menstruation for a variety of reasons.

- **Physical discomfort:** The most common reason cited for absenteeism is physical discomfort, such as heavy bleeding, cramps, and fatigue. These symptoms can be debilitating and can make it difficult for girls to concentrate and participate in school activities.
- **Hygiene concerns**: Girls may also miss school due to hygiene concerns. Some girls may not have access to clean toilet, sanitary materials, while others may not know how to use them properly. This can lead to

- infections, which can be painful and embarrassing, therefore some girls prefer to stay at home during their period.
- **Social and emotional factors:** Menstruation can also have a significant impact on girls' social and emotional well-being. Some girls may feel isolated or ashamed of their periods. Others may experience mood swings, anxiety, or depression. These factors can also lead to absenteeism.

#### Principals' perspective on menstrual practices, health and its management Availability cleaning material in schools

Based on the table 45, 60% (3 out of 5) of the schools have cleaning materials (broom, disinfectant) available for menstrual hygiene management. This seems like a positive finding which suggests that 3 out of 5 schools have taken steps to address this essential need. Even if materials are available, their accessibility and storage location are crucial factors. Are they easily accessible during menstruation? Are they stored in a private space and in a dignified manner? Addressing these logical aspects is essential for ensuring effective use of cleaning materials.

Table 45: Schools with availability cleaning material

Schools with availability cleaning material	
Category	N=5
Yes	3
No	2

#### Generation of awareness sessions in schools

Lack of a standardized approach among school principal to generate awareness sessions. No single frequency dominates, indicating a lack of consistency in how often sessions are conducted. Principals of three schools recognized the importance of raising awareness and conducting sessions "as per requirement." It was found that only one school conducted monthly sessions, suggesting a potential gap in providing sustained information and addressing evolving needs. One school lacks session entirely in the collected data set. This highlights the need for a comprehensive approach ensuring all schools address menstrual health.

Table 46: Generation of awareness sessions in school

Generation of awareness sessions in school	
Category	N=5
If required	3
Monthly	1
No	1

#### Availability of dustbin in context of menstrual hygiene

The table 47 indicates that 60% (3 out of 5) of the schools have dustbins available for disposing of menstrual waste. This seems a positive finding, suggesting that a majority of schools have taken a basic step towards facilitating proper menstrual hygiene.

Table 47: Availability of dustbin

Availability of dustbin	
Category	N=5
Yes	3
No	2

#### Availability of incinerators for safe disposal of menstrual wastes

The table 48 suggests that 80% (4 out of 5) of the schools have incinerators available for menstrual waste disposal. This raises several points for consideration. Incinerators, if used properly and with the right technology, can offer a potentially efficient and hygienic way to dispose of menstrual waste. They can minimize odour, reduce waste accumulation, and contribute to a cleaner environment.

#### Table 48: Availability of Incinerator

Availability of Incinerator	
Category	N=5
Yes	4
No	1

#### **Concerns and limitations**

- **Environmental impact:** Improperly operated incinerators can release harmful pollutants into the air, contributing to air pollution and environmental health risks. It's crucial to ensure the incinerators used meet environmental regulations and are operated safely.
- Health risks: Incinerating certain types of menstrual waste, particularly those containing plastics, can release
  harmful toxins. It's important to ensure only suitable materials are disposed of in the incinerator and proper
  ventilation is maintained.
- **Cost and maintenance:** Incinerators require regular maintenance and can be expensive to operate. Schools need to factor in the cost of fuel, maintenance, and proper disposal of incinerator ash.
- **Alternatives**: While incinerators can be useful in certain settings, they should not be seen as the only solution for menstrual waste disposal. Sustainable and accessible alternatives like sanitary landfills, bio-composting toilets, or reusable menstrual products should also be considered.

#### Availability of vending machines in schools

The table 49 indicates that 40% (2 out of 5) of the schools have vending machines available for menstrual products, while 60% (3 out of 5) do not.

#### Table 49: Availability of Vending machine

Availability of Vending machine	
Category	N=5
Yes	2
No	3

#### **Positive Implications**

- **Accessibility:** Vending machines offer 24/7 access to menstrual products, even outside of school hours or when school staff are unavailable.
- **Privacy:** They provide a discreet and private way for girls to obtain products without having to ask others, potentially reducing stigma and embarrassment.
- **Emergency Preparedness:** Vending machines serve as a reliable source of products in cases of unexpected periods or emergencies, helping girls avoid missing classes or activities.
- **Diversity of Products:** They offer a range of menstrual products to accommodate different preferences and needs, including pads, tampons, and potentially reusable options.

#### Limitations and considerations

Cost: Vending machines can be expensive to purchase and maintain, potentially posing financial constraints

- for some students.
- *Reliability:* They may malfunction or run out of products, leading to inconvenience or distress for girls in need.
- **Accessibility for all:** It's crucial to ensure vending machines are placed in accessible locations, fairly priced, continuous supply of menstrual products, and considering the students with especial need as well.

#### Menstrual health activities by boys

The qualitative data provided provides a valuable glimpse into the types of activities that boys are organizing to raise awareness about menstrual health. The data suggests that boys are taking a variety of approaches, including:

- *Involving themselves in awareness sessions:* Boys are participating in awareness sessions that are organized for both boys and girls. These sessions provide information about menstruation, including the physical, emotional, and social aspects.
- **Giving presentations to their peers:** Boys are also giving presentations to their peers about menstruation. These presentations can help to break down taboos and stigma around menstruation and promote understanding.
- Working with community leaders: Boys are also working with community leaders to raise awareness about menstrual health and hygiene. This can help to reach a wider audience and promote change at the community level.

The data is encouraging because it suggests that boys are increasingly willing to talk about menstruation and take action to promote menstrual health and hygiene. This is a positive step towards creating a more equitable and just society for all.

#### Suggestion to improve menstrual practices, health and sanitation

The collected qualitative data offers valuable insights into the types of changes that stakeholders suggest to promote safe menstrual health practices. The data is based on the experiences of teachers, and principals working with girls, and it provides a comprehensive overview of the challenges and opportunities for change.

#### Key suggestions

- The need for comprehensive menstrual health education: The data suggests a need for comprehensive menstrual health education that covers the physical, social, and emotional aspects of menstruation. This education should be age-appropriate and delivered in a sensitive and inclusive way.
- The importance of involving boys: The data also suggests the importance of involving boys in menstrual health education. This can help to break down stigma and taboos and create a more supportive environment for all.
- The need for family involvement: Family involvement is also important for promoting safe menstrual health practices. Parents and caregivers can play a key role in educating their children about menstruation and providing support.
- The need for community action: Community action is also essential for promoting safe menstrual health
  practices. This includes working to ensure that all girls have access to sanitary products, clean water, and safe
  sanitation facilities.
- Ensure universal access to menstrual products: All schools should have access to menstrual products, and all girls should be able to access them free of charge. This can be achieved through a variety of means, such as government subsidies, school-based programs, or partnerships with local businesses.
- **Challenge stigma and taboo:** Schools should work to challenge the stigma and taboo associated with menstruation. This can be done through awareness campaigns, education programs, and changes to school policies and practices.
- **Provide support for teachers:** Teachers need support to deliver effective menstrual health and hygiene education. This support can include training, resources, and opportunities for professional development.



# Conclusion &

### Recommendations

### Chapter 1: Adolescent girls 11-19 years Government intervention

The participants expressed a clear need for government subsidies on sanitary pads and other menstrual materials to enhance accessibility. This recommendation aligns with the broader goal of making menstrual products affordable and available to all socioeconomic groups.

#### **Educational initiatives**

The call for educational sessions in schools, communities, and street plays (Nukkad Natak) reflected a recognition of the pivotal role of education in challenging and changing societal norms. Integrating menstrual health education into formal and informal settings can contribute significantly to breaking the silence surrounding menstruation.

#### **Product improvement**

Participants provided specific recommendations for improving sanitary pads, including a preference for specific brands and a call for larger sizes and better absorption capacity. These insights offer valuable guidance for product development and quality enhancement to meet the diverse needs of adolescent girls for in-school and out of school girls.

#### Regular distribution and availability

The recommendation for regular distribution of pads in schools and public places emphasized the importance of not only making products accessible but also ensuring a consistent supply. Integrating menstrual hygiene into broader health initiatives can contribute to normalizing the conversation around menstruation and ensuring continuous support.

#### **Inclusive facilities**

Suggestions for making sanitary pads available in public washrooms and schools align with the broader goal of creating inclusive and supportive

environments. This recommendation calls for infrastructural changes and policy initiatives to integrate menstrual health considerations into public spaces.

#### Male involvement

Encouraging male family members' involvement in conversations around menstruation is a key recommendation for fostering a supportive environment at home. Breaking the silence and encouraging open discussions contribute to dispelling myths and reducing stigma.

#### Fostering partnerships

The girls mentioned the help received from NGOs in the form of menstrual products, especially, sanitary pads. They also acknowledged government efforts and other entities. The discussion emphasized the significance of collaborations between NGOs, government bodies, and private entities to create a synergistic approach to menstrual health.

### Chapter 2: Women 19-49 years Sources of menstrual knowledge

Parents remained the leading source of menstrual knowledge highlighted the crucial role families play in educating their children about this important topic. The high percentage of parental involvement suggests a potential shift away from traditional taboos and towards open dialogue within families. Sharing information with friends was also significant, showcasing the importance of peer support and open communication among young people. Friends serve as crucial confidantes and knowledge sources, emphasizing the importance of creating safe spaces for open discussions among young people. Educators contributed meaningfully, emphasizing the value of incorporating comprehensive menstrual education into school curriculums. Lastly, Sources like siblings, other family members, television etc., revealed diverse pathways to gaining information, highlighting the need for varied and accessible resources.

#### Menstrual product choices across generations

The relationship between age and menstrual material choices is a dynamic dance, reflecting a delicate balance between convenience, cost, comfort, and environmental consciousness. As we move forward, promoting menstrual health and hygiene requires acknowledging the diverse needs and preferences across generations. By fostering open conversations and providing accessible options, we can empower women of all ages to navigate their periods with

confidence and dignity.

#### Prevalence of single-use pads

The most striking observation was the overwhelming prevalence of single-use pads, cross all age groups. This highlighted the convenience and accessibility of these products, but also raises concerns about environmental impact and potential cost burden over time. Reusable options like cloths, cotton cloths, menstrual cups, and reusable pads are used by a significantly smaller percentage. This could be due to factors like initial cost, learning curve, access to clean water for washing, or cultural stigma surrounding reusable. The research also highlighted the need for further research and advocacy to ensure everyone has access to safe, affordable, and sustainable menstrual products and information.

#### Medical advice for menstrual issues

The findings suggest that both married and single/separated/divorced/widowed individuals were open to seeking medical advice for menstrual issues. However, a significantly higher percentage of married women consulted a doctor for menstrual issues compared to unmarried women. This information could be valuable for healthcare professionals and policymakers in tailoring healthcare services and awareness campaigns to address the specific needs of different demographic groups. It also highlighted the importance of promoting open conversations about menstrual health and encouraging individuals to seek timely medical advice when needed. The data suggested that there was a strong association between being married and consulting a doctor for menstrual issues. However, more research is needed to determine the cause of this association and to understand the role of other factors.

#### Participation in social activities during menstruation

More than half respondents (58.29%) chose to abstain from some or all social activities during their periods; similarly, nearly half (46.29%) chose not to cook food; while over half (53.43%) chose not to eat; and over three-quarters (74.57%) opted for regular bathing during their period.

#### Fostering a supportive environment at workplace

There was a concerning picture of the accessibility of menstrual materials in workplaces. With a staggering 79.14% having no access on-site, it was clear that many women face unexpected challenges managing their periods at work. These workplaces deserve recognition for prioritizing the well-being of their

female employees. Even in environments with available supplies, 1.43% hesitate to ask, indicating lingering stigma and discomfort surrounding menstruation.

Normalizing open conversations about periods and fostering a supportive environment is crucial to eliminate this hesitation. Only 17.14% of offices properly displayed menstrual products. Proper display means integrating them seamlessly into restrooms, alongside other everyday hygiene products like tissues and hand soap. This sends a powerful message — menstruation is normal, natural, and deserves space in shared environments.

Tucking away supplies in locked cabinets or hidden corners sends a subtle message - that periods are something to be ashamed of, hidden, and dealt with in secrecy. While visibility is a step towards accessibility, it is only the first step on a longer journey towards menstrual equity in the workplace. Therefore, workplaces can be created more inclusive for menstrual discussion where women feel comfortable, confident, and empowered to navigate their periods with dignity and ease. We should make an attempt to break the silence, bridge the gap, and pave the way for a future where menstruation is no longer an obstacle to workplace success.

### Importance of nutrition for managing menstrual

Feelings of weakness can significantly affect physical and mental well-being, potentially impacting work, education, and daily activities. Many women may not be aware of the importance of nutrition for managing menstrual symptoms. A significantly high percentage (65.14%) of respondents do not prioritize proper nutrition during menstruation. This highlights a need for increased awareness and education about managing menstrual discomfort through dietary choices.

Proper nutrition is essential for managing menstrual symptoms, such as cramps, fatigue, and mood swings. It can also help to regulate the menstrual cycle and improve overall health.

#### Chapter 3: Transgenders

Although transgender people are recognized as a third gender in India, for them to have access to free period products and designated restrooms, the necessary infrastructure must be in place.

More support must be given to trans and non-binary people who menstruate, in addition to adequate

infrastructure. In order to normalize the discussions surrounding menstruation, this assistance can be given by educating people, healthcare professionals, school teachers and principals as well as students, including transgender and non-binary pupils who menstruate.

As highlighted previously, this report also suggests to use the term "individuals who menstruate", to give space to all individuals who menstruate, irrespective of their gender identity.

#### Chapter 4: Other stakeholders

#### Adolescent boys 11 – 19 years

Offering practical help with chores: Boys can help with household tasks like cooking, cleaning, or running errands to ease the burden on menstruating girls and women

**Showing understanding and empathy:** Boys can be supportive by simply acknowledging and understanding the physical and emotional challenges that menstruation can bring. Creating a safe space for open communication about these experiences can be very helpful.

**Providing emotional support:** Sometimes, a listening ear and words of encouragement can be the most valuable support. Boys can offer emotional support by being patient, understanding, and offering words of comfort.

Challenging negative attitudes and stigma: Boys plays a crucial role in breaking down the stigma surrounding menstruation by speaking out against negative attitudes and promoting open and honest conversations about the topic.

#### Adult male 19 - 49 years

Addressing remaining gaps: Despite positive trends, the remaining pockets of resistance (e.g., those who disagree with changing misconceptions, the 19% unaware of periods) highlight the need for continued education and outreach efforts.

**Tailoring educational approaches:** Understanding the specific age groups, educational backgrounds, and cultural contexts of the target audience is crucial for designing effective educational programs and resources.

**Promoting open communication:** Encouraging open and honest conversations about menstruation within families, communities, and peer groups can further normalize this natural biological process and break down remaining taboos.

Addressing practical needs: While awareness is

essential, it's crucial to implement policies and initiatives that address the practical needs of those experiencing menstruation, such as access to menstrual products, adequate sanitation facilities and health care services as well.

#### Frontline workers (ASHAs & AWWs)

While ASHAs reported receiving menstrual health training, however, they could not elaborate menstrual health when questioned further. Thus, this research found the gap between knowledge and present information among the frontline workers. Hence, it raises concerns about the effectiveness and reach of the training program on menstrual hygiene/health.

At the health centre, 35.7% ASHAS reported no access to menstrual health discussion by the adolescents or women. This might necessitate further investigation into the reasons for limited access and identify barriers faced by individuals.

#### • Suggested specific actions:

**For AWCs:** Enhance existing programs, provide educational materials, and train AWWs to address menstrual health concerns effectively.

**For ASHAs:** Encourage proactive engagement with girls and women, conduct awareness campaigns, and build trust within the community.

#### School teachers and principals

Comprehensive menstrual health education: The report suggests the need for comprehensive menstrual health education that covers the physical, social, and emotional aspects of menstruation. This education should be age-appropriate and delivered in a sensitive and inclusive way.

The importance of involving boys: The report suggests the importance of involving boys in menstrual health education. This can help to break down stigma and taboos and create a more supportive environment for all.

The need for family involvement: Family involvement is also important for promoting safe menstrual health practices. Parents and caregivers can play a key role in educating their children about menstruation and providing support.

The need for community action: Community action is also essential for promoting safe menstrual health practices. This includes working to ensure that all girls have access to sanitary products, clean water, and safe sanitation facilities.

Ensure universal access to menstrual products: All

schools should have access to menstrual products, and all girls should be able to access them free of charge. This can be achieved through a variety of means, such as government subsidies, school-based programs, or partnerships with local businesses.

**Challenge stigma and taboo:** Schools should work to challenge the stigma and taboo associated with menstruation. This can be done through awareness campaigns, education programs, and changes to school policies and practices.

**Provide support for teachers:** Teachers need support to deliver effective menstrual health and hygiene education. This support can include training, resources, and opportunities for professional development.

#### Limitations of the Study:

- 1. Sampling Bias: The study may suffer from sampling bias as it only includes women aged 15-49 years. This excludes younger women (below 15 years) and older women (above 49 years) who may have different perspectives and experiences relevant to the research.
- 2. Limited Generalizability: The study focuses only on specific districts within a particular region, which limits its generalizability to other districts or regions within the country. The findings may not accurately represent the entire population of women in India.
- 3. Small Sample Size: The sample size for each district is relatively small, ranging from 90 to 115 women. This small sample size may not provide a comprehensive understanding of the population's characteristics and may lead to unreliable results.
- 4. Age Range Restriction: Restricting the age range of women to 15-49 years excludes a significant portion of the female population, such as adolescents under 15 years and older women over 49 years. This limitation may overlook important insights and perspectives from these age groups.
- 5. Self-Reporting Bias: The data collected relies on self-reporting from the participants, which may introduce biases such as social desirability bias or memory recall bias. Participants may provide inaccurate information either intentionally or unintentionally, affecting the reliability of the findings.
- 6. Sample Size Discrepancy: The sample sizes for women aged 15-49 years interviewed under the National Family Health Survey (NFHS-5) vary significantly from the number of women aged 11-45 years in this particular research. This could introduce sampling bias and affect the generalizability of the

findings.

7. Regional Focus: The study is limited to specific districts within a particular region (presumably in India, given the mention of New Delhi). Therefore, the findings may not be representative of the broader population or applicable to other regions or countries.

8. Cross-Sectional Design: The study design appears to be cross-sectional, capturing data at a single point in time. This limits the ability to establish causality or identify temporal relationships between variables.

#### Challenges Faced by Researchers

Sampling Challenges: Obtaining representative samples for both the NFHS-5 data and the research sample (women aged 11-49 years) was difficult. Ensuring that the sample is diverse and inclusive of various demographic groups within the specified age range posed difficulty.

Data Collection Issues: Collecting accurate and reliable data from participants, particularly in a self-report survey format, may have been challenging. Issues such as respondent bias, incomplete responses, or misunderstanding of questions could have affected data quality.

**Resource Constraints:** Limited resources, including time, funding, and personnel, may have constrained the scope and depth of the study. Researchers might have faced difficulties in reaching out to a sufficient number of participants or conducting comprehensive analyses due to resource limitations.

**Data Harmonization:** Integrating data from different sources, such as the NFHS-5 and the research sample, might have required substantial effort in terms of data cleaning, harmonization, and compatibility checks. Ensuring consistency and validity across datasets could have been challenging.

**Ethical Considerations:** Researchers must adhere to ethical guidelines when conducting studies involving human participants. Obtaining informed consent, ensuring participant confidentiality, and addressing any potential risks or harms associated with the research could have posed ethical challenges.

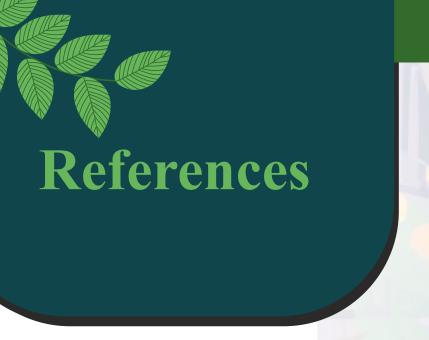
Interpretation and Generalization: Given the regional focus of the study on specific districts within a particular region, researchers have faced challenges in interpreting the findings and generalizing them to broader populations. Careful consideration of the context and potential limitations of generalizability would have been necessary.

**Analytical Complexity:** Analysing complex datasets, particularly those involving multiple variables or different data sources, could have presented analytical challenges. Researchers have employed statistical techniques and methodologies to address these complexities effectively.

**Addressing Bias:** Researchers have been vigilant in identifying and addressing potential biases that could influence study outcomes. This includes biases related to sampling, data collection, analysis, and interpretation. Mitigating biases to the extent possible would have been crucial for ensuring the validity and reliability of the study results.

**Communication and Reporting:** Effectively communicating the study findings, including the limitations and challenges encountered, is essential for transparency and accountability. Researchers may have faced challenges in conveying complex information in a clear and accessible manner to various stakeholders, including policymakers, practitioners, and the public.





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