

Menstrual Health in India | Country Landscape Analysis

Executive Summary

Women and girls constitute half of India’s population.¹ Yet, gender disparities remain a critical issue in India impacting women and girls’ education, health, and workforce participation. Data shows that girls are largely on par with boys up to adolescence, but with the onset of puberty, outcomes for girls begin to diverge and girls face increasing restrictions to their mobility and agency.^{2,3}

There are over 355 million menstruating women and girls in India,⁴ but millions of women across the country still face significant barriers to a comfortable and dignified experience with menstrual hygiene management (MHM). A study found that 71% of girls in India⁵ report having no knowledge of menstruation before their first period.⁶ At menarche, schoolgirls in Jaipur, Rajasthan report their dominant feelings to be shock (25%), fear (30%), anxiety (69%), guilt (22%), and frustration (22%).⁷ Further, 70% of women in India say their family cannot afford to buy sanitary pads.⁸ And in 2012, 40% of all government schools lacked a functioning common toilet, and another 40% lacked a separate toilet for girls.⁹

Although there is evidence in India illustrating the problem, the evidence linking the impact of poor menstrual health, an encompassing term for menarche and MHM, on critical outcomes is limited. Current studies have small sample sizes and rely on qualitative, self-reported, or anecdotal data making it difficult to generalize findings across different types of adolescent populations and diverse regions with different cultural and socio-economic contexts. Yet, in some cases menstrual health programs are designed assuming these linkages. There is need for further research to understand the impact of menstrual health interventions on life outcomes.

There has been increased momentum from donors, governments, and the private sector to address menstrual health issues. The focus to date has largely been on products and more recently on improving awareness especially among girls.

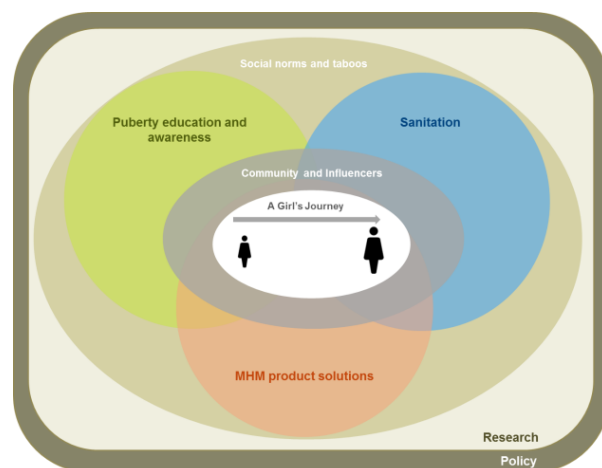
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Table 1: High-level Overview of Responses to Key Enablers to Menstrual Health in India

Enablers	Overview of current state
Education and Awareness	Girls received inadequate education on menstruation pre-menarche. Post-menarche, education programs focus on the biological aspects of puberty, with limited focus on psychosocial needs. Awareness programs are common, but are limited to product use, constrained by weak facilitators, and rarely target influencers.
MHM Products	The majority of women and girls in India use homemade products to manage their menstruation. Commercial pads are expensive for low income users, and low-cost pads vary in reach and quality.
Sanitation	Cultural practices, hygiene routines, and community attitudes related to menstruation limit girls’ use of existing toilets, particularly during menstruation. Current national level efforts to improve sanitation do not prioritize MHM or influence relevant community norms. Disposal solutions for menstrual waste are largely unexplored. Current programming does not prioritize vulnerable populations.
Policy	The recent national MHM Guidelines are a critical step towards a collaborative and integrated solution to MHM. Policy makers continue to function in silos and need greater alignment, accountability, and strategies for implementing the guidelines at the state level.

There are immediate opportunities to leverage the national momentum in India to improve menstrual health, particularly for adolescent girls. Priorities include strengthening facilitator capacity to deliver awareness training, improving the reach and quality of low-cost pads, and improving targeting of influencers. Girls’ ability to manage their menstruation is influenced by broader gender inequities across India and can be hindered by the presence of discriminatory social norms. There may be opportunity to leverage MHM as a less sensitive entry point to address sexual and reproductive health topics, such as reproductive rights and teenage pregnancy prevention, and improve a girl’s empowerment at large, but research and programming are still nascent.

Figure 1: Requirements for MHM



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Methodology

This report seeks to understand: (1) the current state of girls' experience with menarche and MHM in India, (2) donor, government, NGO, and company responses to girls' needs, and (3) opportunities for research, advocacy, and programming to better address these needs. This complements a Global Landscape Analysis and is one of three Country Landscape Analyses focused on India, Kenya, and Ethiopia.

This report is the result of a review of over 60 peer-reviewed articles and grey literature, over 30 interviews with experts and practitioners in India, and a review of relevant programming focused on menstrual health. While experts interviewed for this research highlighted that gender inequality and hence, the state of MHM was likely to be worse in the northern states like Uttar Pradesh (UP) and Bihar as compared to southern states like Tamil Nadu, they did not indicate any evidence that MHM interventions were more prevalent, better organized, or more effective or in one Indian state over the another.

The country research for India was also informed by 72 interviews with adolescent girls from rural and urban areas near Kanpur, UP, and Coimbatore, Tamil Nadu between November and December 2015 in the following categories: (1) early post-menarche 0 to 1 year post-menarche, (2) post-menarche 1 to 3 years post-menarche, and (3) late post-menarche 3+ years post-menarche up to 18 years old. Interviews were also conducted with 32 influencers including mothers, sisters, teachers, and community health care workers. This user-research is not meant to be representative of all adolescent girls in UP and Tamil Nadu. It is meant to bring the voice of adolescent girls where possible and illustrate distinct profiles of girls, whose needs may vary based on their context, requiring different intervention strategies. The regions were selected based on the following criteria (1) diversity in economic prosperity, (2) existing funding or focus for the Foundation, and (3) diversity in cultural, religious, and language background.

Context | Gender Inequities in India

The Broader Context of Women and Girls

Women and girls constitute half of India's population.¹⁰ Yet, gender disparities remain a critical issue in India impacting women and girls' education, health, and workforce participation. Literacy rates for women (55%) are significantly worse than those for men (78%);¹¹ 47% of adolescent girls in India are underweight;¹² and women in India earn 56% of what their male colleagues earn for performing the same work.¹³ In the 2015 United National Development Program's Human Development Report, India ranks 130 out of 155 countries in the Gender Inequality Index (GII), trailing behind lesser developed Asian countries such as Bangladesh and Pakistan which rank 111 and 121, respectively.¹⁴

The state of gender inequality and its impact on women and girls differs significantly across states and regions in India. The McKinsey Global Institute identified five states in India that are close to gender parity—Mizoram, Kerala, Meghalaya, Goa, and Sikkim.¹⁵ On the other hand, research and the census data indicate that the states of Uttar Pradesh and Bihar, followed by Rajasthan are significantly worse off than other states.¹⁶ Employment rate of

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married women, women's access to money and credit, and women's control over cash earnings, which are indicators of female autonomy, significantly vary across states.¹⁷ Adolescent girls are particularly vulnerable in the states of UP and Bihar, with over half of all adolescent girls married before the age of 18, up to 95% dropping out of schools and over 50% facing domestic violence.¹⁸ⁱ

The Role and Influence of Gender Disparities and Discriminatory Social Norms

Discriminatory gendered social norms—which are rooted in the collective beliefs, perceptions, and attitudes about what it means to be male and female—perpetuate the perceived inferior status of women and girls *vis-à-vis* men and boys. In India, preference for sons starts at birth with child mortality being 61% higher for girls than boys.¹⁹ These social norms become more pronounced when the adolescent girl reaches puberty and menarche.²⁰

Data shows that girls are often on par with boys up to adolescents, but with the onset of puberty, outcomes for girls begin to diverge. For example, the percentage of out-of-school boys and girls in the age group 6–10 years was 5.51% and 6.87%, respectively; however, for the adolescent age group 11–13 years, the percentage of out-of-school children was much higher among girls (10.03%) than boys (6.46%).²¹ Studies show that lack of enrollment or withdrawal from school takes place for various reasons, including economic barriers, parental concerns about safety of the girls, poor quality of teaching, and community expectations.²² In several communities, there are expectations that girls will help with domestic chores, learn to undertake household responsibilities, and get prepared for marriage. Community members often do not perceive any alternative roles for girls and prioritize these gendered expectations over sending girls to school, especially beyond the primary level.²³

Girls are also more likely than boys to be married at an early age. Almost 50% of young women aged 20–24 were married as children, i.e., before age 18 (vs. 10% of young men).²⁴ Early marriage is more common among rural adolescent girls as compared to girls in urban areas, and more common among poorer households.^{25,26} Adolescents also experience early childbearing and parenting, with one in five young women aged 20–24 having her first birth before age 18.²⁷

Menstrual Health | The Problem

There are over 355 million menstruating women and girls in India,²⁸ yet millions of women across the country still face significant barriers to comfortable and dignified experience with menstrual health.

- Girls do not consistently have access to **education on puberty and menstrual health**. In India, 71% of girls report having no knowledge of menstruation before their first period.^{29,30} Girls often turn to their mothers for information and support, but 70% of mothers consider menstruation “dirty,” further perpetuating taboos.³¹
- Girls do not have consistent **access to preferred, high-quality MHM products**. Almost 88% of women and girls in India use homemade alternatives, such as an old cloth, rags, hay, sand, or ash.³² Qualitative studies and an analysis of the product market indicate that premium commercial products are unaffordable or not consistently accessible for women and girls in low-income communities.
- Women and girls lack access to **appropriate sanitation facilities**. **There are** 63 million adolescent girls living in homes without toilets.³³ Despite national efforts to improve sanitation, women and girls lack appropriate facilities and community support to manage their menstruation privately and in a safe manner.

ⁱ The number of out-of-school children in India was estimated to be 17.7 million in 2011 (UIS data 2012).

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Once girls reach menarche in India, there is significant evidence indicating increased restrictions to their mobility and agency.^{34,35} Gendered social norms associated with menarche and menstruation are often perpetuated by community members and key influencers in girls' lives, particularly her mother, and can influence a girl's MHM behavior in the short term and may have longer-term effects on her transition to adulthood. Studies based in states including Maharashtra and Tamil Nadu have shown that during menstruation, girls are asked to stay away from religious spaces, kept in isolation, not allowed to play outside, or even go to school. Girls have reported feeling anxious, guilty, and shocked due to lack of information about menstruation prior to menarche.

Stories from the Field—A Glimpse into Girls' Experience

Pinky, 14 years old, lives with her parents and younger brothers in a katchaⁱⁱ near a village in Kanpur, Uttar Pradesh, India. Every morning, she wakes up at 4 am and helps her mother fill water from the village pump, cook, and clean before she goes to school. Like her mother, Pinky uses cloth to manage her menstruation. She disposes of her used menstrual cloth in the field, where she goes to defecate, and then, walks back home to wash and clean herself. Following her mother's advice, Pinky stays at home on the days she is menstruating, but her mother tells her brother and her father that she is unwell or has fever.

Priya, 13 years old, lives in peri-urban Kanpur. Despite having limited disposable income, Priya's mother sends Priya to coaching classes (after-school private lessons) in addition to school. Priya does not like going to school on the days she menstruates because the school toilets are dirty. More importantly Priya is frustrated at the fundamental shifts occurring in her life: "I wish it (menstruation) would not happen to me. Since I got my period, my mother told me I cannot play outside, I should come home straight from school, I should not sleep next to my brother, and I should behave like a grown up."

Kaveri, 12 years old, lives in rural Coimbatore, Tamil Nadu and is aware that menstruation is linked to a woman's ability to have children—she learned that in her school's biology class. She asks her father to buy sanitary pads from the market every month. Even if she does not have a pad, she is not worried. Her school provides her free pads provided by the State Government, and her school's toilets have an incinerator to dispose of them. Although she dislikes the free pads because of their poor quality, she knows they are useful in an emergency. She plays volleyball in school even when she has her periods. "Why shouldn't I?" she asks. That said, Kaveri does face isolation at home during menstruation; her grandmother asks her to sleep separately. She says, "Yes, sometimes I feel like I am in a jail, but other times I am happy that I have to do less house chores."

The stories above illustrate girls' diverse experiences with menstruation across states, within states, and between urban and rural areas. Girls face common problems with menstruation and MHM such as poor awareness about menstruation, limited access to MHM products, or poor sanitation. Challenges related to menstruation may also be reflective of broader issues of poverty and limited resources. However, despite variations in level of income and education, girls' experiences with menarche and MHM do signal more fundamental issues of gender inequality and discriminatory social norms at play.

The experience of menstruation is even more challenging for vulnerable menstruating girls—i.e., out-of-school girls, girls with physical or mental disabilities, adolescents who live on the street, child laborers, and institutionalized girls in the juvenile justice system. For India's disabled women and girls, limited access to disabled-friendly toilets and built-environment exacerbates the experience of menstruation.^{36,37} Census of street children in urban areas like Delhi and Mumbai have shown that almost 20–30% of street children are girls.^{38,39} Girls

ⁱⁱ Houses made from mud, thatch, or other low-quality materials are called katcha houses.

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who live on the street tend to use paid public toilets more than boys, which is an added economic burden.⁴⁰ Further, 85% of the institutions across 9 states that house children under the Juvenile Justice Act in India reported having inadequate sanitary pads.⁴¹

Menstrual Health and Links to Life Outcomes

The evidence in India showing the impact of menarche and poor MHM on critical outcomes is limited, not statistically significant, and largely inconclusive. Current studies in India have small sample sizes, and they rely on qualitative, self-reported, or anecdotal data making it difficult to generalize findings across different types of adolescent populations and diverse regions which have different cultural and socio-economic contexts. Table 2 below provides an overview of the current evidence linking menstrual health to empowerment, education, health, environment, or economic outcomes.

Table 2: Menstrual Health Links to Critical Outcomes (Refer to the Appendix for supporting data and definitions)

Domain	Poor Menstrual Health Associated with	Overview of Evidence and Strength of Evidence
Empowerment 42,43,44,45,46,47	<ul style="list-style-type: none"> Restricted mobility Lack of agency Lack of dignity / confidence 	<p>Evidence strong: Several studies measure restrictions through anecdotal reports; there is a need for more consistent use of empowerment measures</p> <ul style="list-style-type: none"> Widespread anecdotal reports of restrictions and isolation placed upon girls at menarche and during menstruation. Religious restrictions are most widespread, followed by restrictions from doing household work, sleeping on the routine bed, playing, and talking to boys. Anecdotal link between menarche and changing societal expectations for girls at puberty (e.g., symbol of fertility, sexual readiness, and marriage eligibility).
Education 48,49	<ul style="list-style-type: none"> Prioritization of girls' education Absenteeism School performance Transition to secondary school 	<p>Evidence weak: Studies show mixed results on relative contribution of MHM to school absenteeism</p> <ul style="list-style-type: none"> Several anecdotal reports of girls missing school due to menstruation, but the link between MHM and girls' school absenteeism has not been confirmed with rigorous research studies; reasons for missing school varied—physical discomfort or pain, lack of facilities at school, fear of staining clothes, etc. Early evidence linking early age of menarche and marriage; evidence of norms where marriage and education are incompatible.
Physical and Mental Health 50,51,52,53,54,55,56,57	<ul style="list-style-type: none"> Incidence of RTIs Age of sexual debut Weaker nutrition GBV Dysmenorrhea Depression 	<p>Evidence limited: Few studies try to understand the impact of poor MHM and RTIs and UTIs or depression</p> <ul style="list-style-type: none"> Few studies report girls having symptoms of RTI and UTI, particularly among cloth users. However, the link between the two is not yet established. Timing of menarche can be used as a proxy for population nutritional status and early marriage, but this indicator is not being captured to date.⁵⁸ Studies find that girls feel shock, fear, guilt, frustration, and depression at menarche and during menstruation, but the evidence is largely self-reported.
Environment ^{59,60} 61	<ul style="list-style-type: none"> Environmental hazard due to improper disposal 	<p>Evidence lacking: Few quantitative studies looking at India's environmental impact from MHM disposal</p> <ul style="list-style-type: none"> Several studies report disposal habits of women and girls in India, which include throwing sanitary pads in the open, in water bodies, or mixed with other waste. Anecdotal reports of drainage, clogging, and manual cleaning of sewage systems.
Economic 62	<ul style="list-style-type: none"> Work absenteeism for women. 	<p>Evidence lacking: Overlooked topic in research as focus has been on girls</p> <ul style="list-style-type: none"> Very few anecdotal reports of women missing work due to menstruation.

Menstrual Health in India | Landscape Analysis

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Ongoing menstrual health programming in India is often designed assuming these linkages; for example, the national MHM Guidelines is grounded around the goal of improving dignity and school attendance.⁶³ However, there have been limited rigorous studies assessing the contribution of poor MHM to school absenteeism relative to other factors.

The Current State of Menstrual Health

There is increased momentum from international donors, the national government, small and medium sized enterprises, and NGOs to address problems related to menstrual health. The focus to date has largely been on products and improving awareness about menstruation. (See Table 3 for a selection of leading players)

Table 3: Key National-level Menstrual Health Players in India *Note: National and state government players are outlined in the Policy section below

Organization*	Description of MHM-related Activities
Goonj	<ul style="list-style-type: none"> Under the Not Just a Piece of Cloth Program, Goonj produces simple, reusable cloth pads made by local women using old cloth; cloth pads are seen as a tool for women’s empowerment.
Jayashree Industries	<ul style="list-style-type: none"> Jayashree Industries is one of the early inventors of a low-cost disposable sanitary pad manufacturing machine in India. Today, these machines are sold to SHGs and NGOs across 27 states in India.⁶⁴ This social enterprise has inspired several other innovators (e.g., Aakar Innovations).
Menstrupedia	<ul style="list-style-type: none"> Menstrupedia is a for-profit enterprise that has designed and developed a comic book on menstruation adapted to the local context to provide awareness and education on MHM to adolescent girls.
UNFPA India	<ul style="list-style-type: none"> Supports the Ministry of Health and Family Welfare to develop a National Adolescent Health Strategy Rashtriya Kishor Swasthya Karyakram (RKSK), which includes clear guidelines for providing education, awareness, and support for better MHM.⁶⁵ Supports self-help groups to develop low-cost sanitary pads.⁶⁶
UNICEF India	<ul style="list-style-type: none"> Supports the development of India’s national MHM Guidelines. Provides leadership training for stakeholders, policy makers, and decision makers on MHM.⁶⁷ WASH (water, sanitation and hygiene) in Schools⁶⁸ which aims to increase the number of girls completing primary school and entering secondary school, with MHM as a key strategy. This involves partnering with the government to provide MH education, counseling in schools,⁶⁹ and installing sanitary pad vending machines.⁷⁰
WASH United India ⁷¹	<ul style="list-style-type: none"> Game-based MHM Curriculum, currently being piloted and tested in a few states with the goal of empowering girls to overcome the stigma around menstruation.^{72,73} The game also engages boys as supporters and teachers so that they can be available for sustained guidance. Menstrual Hygiene Day⁷⁴ Advocacy effort to elevate the issue of MHM within the development sector. The Great WASH Yatra,^{75,76} (Nirmal Bharat Yatra) a mobile carnival that engaged over 16,000 people in schools and communities across 5 Indian states on sanitation, including MHM.
WaterAid India ⁷⁷	<ul style="list-style-type: none"> Provides information about menstruation to women and girls and men and boys to address taboos. Adapts existing WASH services for MHM needs, i.e., ensuring space to wash menstrual cloth. Provides access to MHM products (hygienic clothes or disposable sanitary pads). Rains key stakeholders (district-level health and frontline workers).
WSSCC ⁷⁸	<ul style="list-style-type: none"> Supports the national sanitation program (Swachh Bharat Mission) with an emphasis on MHM.⁷⁹ Training of facilitators on MHM.⁸⁰ Conducts research on MHM behaviors and practices.

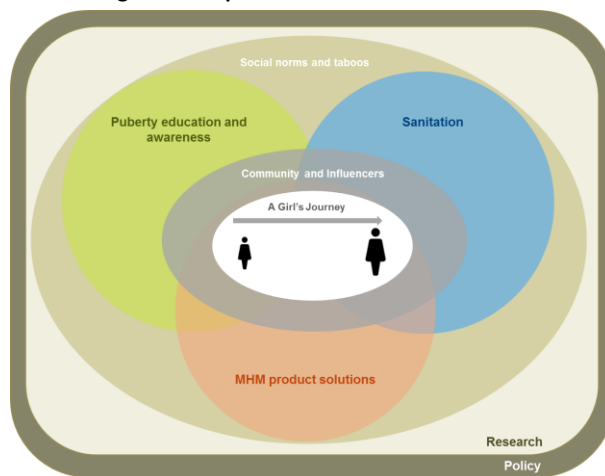
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The next four sections present a deep analysis of the challenges, current efforts, and critical gaps related to (A) Education and Awareness, (B) MHM Products, (C) Sanitation, and (D) Policy.

The relative importance and the manner in which these four interrelated enablers (see Figure 2ⁱⁱⁱ) manifest within a girl's life may vary, but there are certain trends unique to specific regions within India. The next four sections examine these enablers and the interrelated and compounding effects that limitations in access to these enablers can have on adolescent girls and young women across India. Where applicable, the below analysis elevates links to broader gendered inequities and presence of discriminatory social norms and highlights opportunities to integrate a community-based or inclusive approach into programming, research, and policy efforts. Additionally, key insights about current interventions are included below.

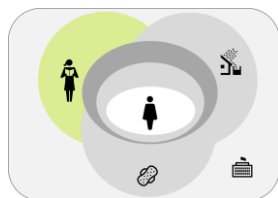
Figure 2: Requirements for Menstrual Health



A. Education and Awareness

"I was very scared. I wondered what was happening to me [when I first got my period]. I was not injured, but I was really worried. I came to home [from school] as fast as I could. But I was also scared to tell my mother about it. She would ask me how it happened." – Pinky, 13-year-old girl in rural Kanpur, Uttar Pradesh

The current state



The majority of girls in India lack of awareness about menstruation before menarche—studies have shown that 71% of girls have experiences similar to Pinky.⁸¹ Their first experience of menstruation is often associated with shame, fear, and agony. Several regional studies have also indicated that menstruating girls are not aware of the biological reasons associated with menstruation, and in fact perceived menstruation to be a “disease.”^{82,83,84,85}

Many girls and her influencers follow cultural practices and perpetuate taboos that restrict girls' mobility and activity during menstruation. While these practices vary across regions and families, common discriminatory practices include: restrictions on living and eating with and/or cooking for the family, restrictions on visiting the temple, and using flowing sources of water such as rivers and streams.⁸⁶ Mothers and grandmothers can be particularly influential in perpetuating these taboos across generations.

ⁱⁱⁱ Source: FSG informed by secondary research sources and expert interviews.

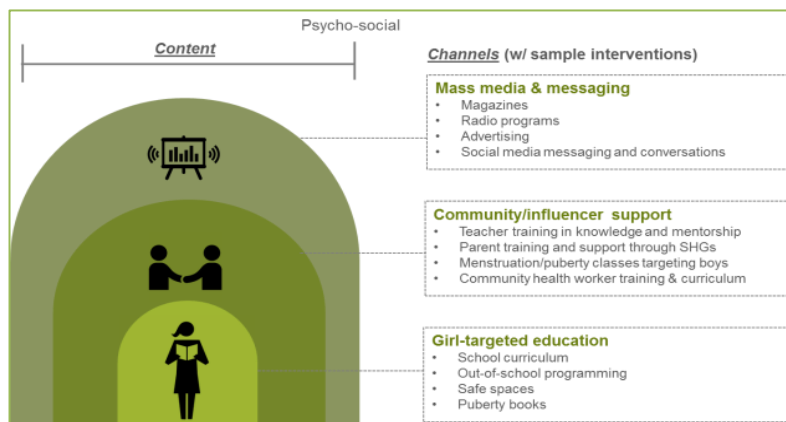
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Enablers for Improved Menstrual Health

As depicted in Figure 3, girls and boys should receive accurate, timely information on the biological and psycho-social aspects of puberty, menstruation, and MHM from all three channels—mass media, influencers, and targeted education. There are significant challenges across these three areas described in Appendix 1 with supporting evidence. However, *girl-targeted education* and *community influencers* are particularly important enablers for improving menstrual health for women and girls in India. They are described below:

Figure 3: Factors Influencing Menstrual Health Education and Awareness



Girl-targeted education:

Most girls do not consistently have access to education on puberty and menstruation in part because it is not mandated by the Government. Even when schools do have programs, teachers find the topic embarrassing to discuss in a classroom, they are rarely trained, and consequently, they rarely teach it.^{87,88,89} Schools are increasingly outsourcing MHM education to NGOs with specialized MHM programs (e.g., international NGOs like WASH United, UNICEF, and local NGOs such as Khel in Uttar Pradesh and Pasand in Karnataka).

In both in-school and out-of-school programming, the curriculum focuses more on the practical aspects of managing menstruation (e.g., product use), rarely includes biological aspects, and ignores psycho-social changes. Menstruation is closely linked to reproductive health, and therefore considered a taboo subject in India along with sex-education. This could be a driving factor for NGO workers and teachers to prioritize teaching the practical elements of MHM over other aspects of menstruation and what it signals.^{90,91,92}

Community and influencer support:

Until recently, out-of-school girls were largely left out of menstrual health programming; existing programs that do target out-of-school girls rely on government health workers who have limited capacity. NGOs target girls in school as a way to reach the maximum number of girls efficiently. Recently, the National Health Adolescent Program (Rashtriya Kishor Swasthya Karyakram (RKSK))⁹³ has explicitly called out the treatment of menstrual problems and menstrual health education as part of a larger package of health services for all adolescents. However, for out-of-school girls, menstrual health education is meant to be provided by government health workers (e.g., counselors, ASHA, or Anganwadi workers). Although such programs have significant opportunity for scale, health workers not only lack the capacity and comfort to talk about menstruation, but out-of-school girls rarely see them as a “resource” to discuss menstruation.^{94,95}

Most adolescent girls in India rely heavily on their female influencers, particularly mothers for information on menstruation. However, mothers do not know or feel comfortable discussing menstruation; their advice is often limited to period management and tends to reinforce negative beliefs.^{96,97,98}

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The Field’s Response

Menstrual health education and awareness programs are increasingly becoming one of the **most common interventions** for addressing poor menstrual health. Depending on the primary goal of the organization involved, players usually take the following three approaches that have distinct advantages:

- 1) *Programs focused primarily on improving menstruation and MHM awareness* have great potential for innovation and customization to local contexts.
- 2) *Programs where MHM is a component of a larger program targeted at girls* present great potential for scale, since these programs are often government funded; however, MHM is not always the highest priority. Additionally, the curriculums of reproductive sexual health programs that include MHM often describe menstruation as a process that allows a girl to fulfill her potential as a mother.⁹⁹
- 3) *Programs where menstrual health awareness is a means to product adoption* often partner with programs in the first category; however, besides large corporates like Procter and Gamble (P&G), Johnson & Johnson (J&J), other efforts tend to be small in scale.

Table 3: Overview of Menstrual Health Education and Awareness Interventions in India

Primary Goal	Key Players
1: Programs focused primarily on improving menstruation and MHM awareness	<p>Increasing presence by WASH (water, sanitation and hygiene) organizations (e.g., WASH United in schools across India, WaterAid in the states of Jharkhand, Orissa, Bihar, Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Andhra Pradesh, Karnataka, Tamil Nadu, and Delhi) are developing curriculum and partnering with schools to deliver awareness programs. Innovative examples include WASH United’s play-based learning curriculum.</p> <p>Many local NGOs have high-touch programs that vary in scale (e.g., Khel in UP using play-based teaching reached 12,000 people directly;¹⁰⁰ Pasand, an NGO emphasizing trainer capacity, reached 6,000 students in 55 schools).¹⁰¹</p> <p>Private sector is a new entrant—Menstrupedia has developed a comic book customized to the local context available in English, Hindi, Kannada, Marathi, and Gujarati; over 1000 books are sold; over 30 schools across India are using it; the website has 20,000 users.¹⁰²</p>
2: Programs where MHM is a component of a larger program targeted at girls	<p>All national level government programs (RKSK, SABLA, SSA—described more in the Policy section) consider MHM awareness as a component of improving other outcomes such as adolescent health, life-skill, or education. Although these programs have scale, the current emphasis on MHM is small.</p> <p>Few local NGOs working on girls’ livelihoods^{iv} include MHM as a means to engage girls in programs.¹⁰³ Sexual and reproductive health programs include MHM as a means to educate girls about family planning. In a few promising cases, NGOs see MHM education as a means for empowering girls; these programs are often localized.</p>
3: Programs where menstrual health awareness is a means to product adoption	<p>Two of the top 3 large corporations (P&G, J&J) conduct awareness programs in schools as part of their core marketing strategy to increase adoption¹⁰⁴ or as part of their philanthropic efforts.^{105, 106} Between 2012 and 2013, Whisper reached 4 million girls in schools¹⁰⁷ and Stayfree has committed to reach 100 million girls by 2018.¹⁰⁸ Large corporations also develop mass media campaigns to address taboos largely among families with access to media (e.g., Whisper’s #touchthepickle campaign) which has over 2 million views in 1.5 years.¹⁰⁹</p> <p>Smaller social enterprises (e.g., Aakar Innovation making sanitary pads in ~13 locations across India or EcoFemme making cloth pads in Tamil Nadu) conduct awareness programs with their target users because they perceive lack of awareness as a barrier for growth. However, they struggle with limited resources and are smaller in scale; e.g., EcoFemme reached 1,740 girls in 2014.^{110,111}</p>

^{iv} i.e., programs that provide or connect vocational skills to a livelihood

Menstrual Health in India | Landscape Analysis

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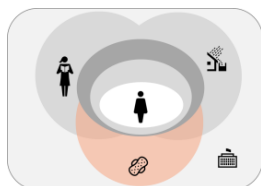
Conclusions

- **Currently, MHM curriculums focus on period management, and do not provide the time or space to discuss psycho-social changes.** They miss providing sustained mentorship for girls to cope with changes. **Facilitator quality for in-school and out-of-school programming also remains weak.**
- **Few interventions target influencers.** Although research consistently confirms that mothers are the most critical influencers for adolescent girls in India,¹¹² ongoing interventions rarely target them. Similarly, although there is evidence to show that a change in the perception of boys and men towards menstruation can help reduce embarrassment associated with menstruation,¹¹³ there are few programs for boys and men.
- **There are limited formal evaluations describing the effectiveness of intervention approaches for unique contexts.** Currently, awareness programs vary significantly from each other depending on the perspective of the stakeholder, resources available, and context of the program. For example, programs range anywhere from two hours to two days, and they vary in their approaches (e.g., video based, play-method). Effectiveness by type of player (NGOs, government, companies) also needs to be better understood.

B. Menstrual Hygiene Management Products

“Yes there are free sanitary pads distributed at my school; my PT miss (Physical education teacher) distributes them. I don’t like those pads—they don’t absorb well. In fact, I prefer cloth instead of that free pad. However, I know that even if I get my period in school, I don’t have to worry, I could use that pad for the time being.” – Kaveri, 13-year-old girl, Coimbatore, Tamil Nadu

Current State and Market Analysis



Homemade products

Approximately 88% of women in India use homemade products (e.g., old cloth or rags) to manage their menstruation (see Figure 4).¹¹⁴ The main reasons for using cloth-based product are: personal preference and familiarity, lack of access to or affordability for high-quality commercial sanitary pads, and lack of sufficient information about pads. Some girls

also use locally made cotton cloth. In a study of 164 adolescent girls in rural Gujarat, 68% said their first choice was a new soft cloth (*falalin*), while 32% said sanitary pads, and none of them preferred old cloths.¹¹⁵ In extreme cases, women also use hay, ash sand, ash, wood shavings, newspapers, dried leaves, or plastic. However, robust research on usage across India as well as impact on health outcomes has not been conducted.

Commercially available disposable pads

Premium disposable sanitary pads have the biggest market share of any commercial product, with sales in 2015 worth INR 19 billion (~US\$277M), growing at 15% per year.¹¹⁶ Currently,

standard sanitary pads without wings have the biggest market share (57%) followed by ultra-thin pads (35%), which are

growing at a faster rate given their appeal among Indian women and girls who wear western clothes.¹¹⁷ Three international brands occupy two-thirds of the market share: Procter and Gamble (P&G), Johnson & Johnson (J&J),

“I buy pads from the medical store. If there is a male shopkeeper in the medical store, I request him to call aunty in the shop so that I can buy it. I know the shopkeeper. If she cannot come right then, I will come later. I use cloth until I can buy it.” - Adolescent girl, Coimbatore, Tamil Nadu

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and Kimberly-Clark (KCC). Smaller brands like Saathi and newer entrants like Bella have leveraged the awareness created by established brands and have increased the competition by offering products at lower prices.¹¹⁸

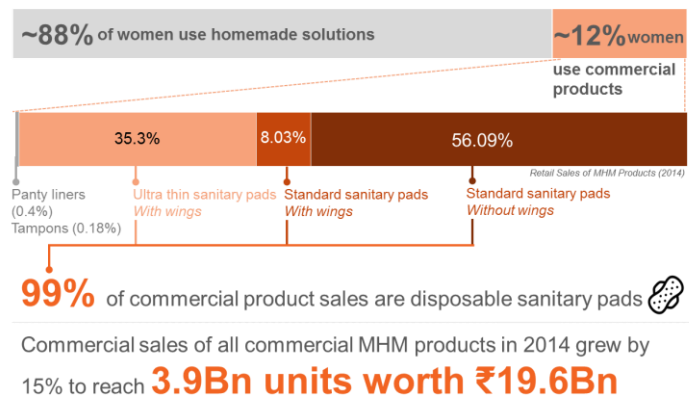
Disposable pads are considered “aspirational” by girls and tend to symbolize mobility and freedom from worry. For example, user research with 72 girls in Kanpur, UP, and Coimbatore, Tamil Nadu indicated that even in households where girls predominantly use homemade cloth, girls turned to commercial pads for important occasions like traveling or writing an exam. In fact, although the majority of sanitary pads sales occur in urban areas, rural areas still accounted for 32% share in 2014.¹¹⁹

Low-cost disposable sanitary pads, targeted at low-income urban and rural users, are slowly entering the market space.

- **Small-scale private enterprises (e.g., Jayashree Industries, Aakar Innovations) are using a decentralized model to develop low-cost pad manufacturing machines and selling them to NGOs and Self-Help Groups (SHGs) that will manufacture and sell affordable pads locally and offer livelihood opportunities for women.** Although this model has significant momentum, the quality and price of these pads varies significantly due to lack of strict standards. Furthermore, the daily capacity of the machines is still low, limiting the scale of production.
- **New private sector innovators like Saral Designs in Mumbai, Maharashtra are taking a centralized approach to manufacturing and distributing high quality, ultra-thin, low-cost pads to women and girls in low-income communities.** While they compete with the decentralized models on price, these enterprises face distribution challenges in rural and remote regions.
- **The presence of low-cost unbranded products from manufacturers in China, Ukraine, and Malaysia is rapidly increasing.**¹²⁰ National and state governments are outsourcing low-cost pads from such sources and providing it free to girls in schools and communities; however, the availability of these pads as well as the quality varies significantly.

Pads made by premium commercial manufacturers are up to 1.5 times more expensive than pads made by low-cost manufacturers. Additionally, 15% of the cheapest commercial brands (i.e., where unit price ranges from INR

Figure 4: Snapshot of MHM Product Landscape in India



3 international players occupy 75% market share (2014):

- P&G's **Whisper** had 48% market share with Whisper Choice and Whisper Ultra targeting mid-range and premium consumers
- J&J's **Stayfree** had 25% market share
- Kimberly Clark's **Kotex** had 2.5% market share

Source: Euromonitor International Report on Sanitary Protection in India, June 2015

Figure 5: Average Prices of MHM Products in India

	Commercial Large Manufacturers Price in INR/Unit*	Low-Cost Small Manufacturers Price in INR/Unit**	Price Difference
Ultra thin pads	8.67	3.43	1.5 times
Standard pads with wings	5.95	3.50	0.7 times
Standard pads without wings	5.32	1.00 to 2.75	1-5 times

* Average unit price = Price per pack / number of units per pack; Based on an analysis of over 169 products available in the Euromonitor Report 2014

** Price based on secondary research and interviews with low-cost small manufacturing organizations (For ultra-thin pads, the manufacturer was Saral Designs; for Standard pads with wings, the manufacturer was the pad developed by Aakar Innovations; for Standard price without wings, Jayashree Industries' recommended pricing and a few other state-run low-cost sanitary pads were considered)

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2.50 to 3.44) are sold in bulk—often in packs of 20 and are available at hypermarkets—inhibiting low-income customers from purchasing these premium commercial pads.¹²¹ See Figure 5 to see how the prices of commercial manufacturers making premium disposable pads vary from the prices of low-cost smaller manufacturers.

Reusable pads and insertable products

The demand and market share for reusable cloth-pads is low due to the upfront cost, lack of awareness about the product and product use, and limited aspirational value.¹²² Organizations such as EcoFemme in Auroville, Tamil Nadu are manufacturing these pads, providing livelihoods to local women, educating in-school girls on product use, and providing the pads free of cost.¹²³ However, the scale of such organizations remains small (e.g., largely in Tamil Nadu) and there are very few players in the Indian market.

Insertable products (i.e., tampons and menstrual cups) are considered a high barrier product in India given apprehension among women with inserting products, as well as the community's perception that usage of tampons affects a woman's virginity.¹²⁴ Leading stakeholders in MHM space including the national government do not advocate insertable products as an option for women and girls.

Enablers to Product Access and Uptake

Figure 6 depicts critical factors that contribute to regular and consistent use of preferred MHM product(s). Although there are significant barriers associated with each one of these factors, **high price**, **poor access**, and **inappropriate use** of preferred and appropriate MHM products are the most significant challenges facing women and girls in India.

Price of product:

Commercially available premium sanitary

pads are aspirational and yet, unaffordable for most girls from low-income households. Small-scale qualitative studies and surveys with adolescent girls and women in urban and rural India have indicated high cost as the primary reason for not using a sanitary pad.^{125,126,127} Consumers in India, particular in rural slums and peri-urban areas are price sensitive and look for cheaper products, discounts, and special offers such as buy-1-get-1-free.¹²⁸ As illustrated in Figure 5 above, commercial products made by premium manufacturers are significantly more expensive than low-cost pads.

The quality of low-cost commercially available disposable sanitary pads varies significantly due to inconsistent enforcement of standards.^{129,130} NGOs and social enterprises manufacturing low-cost pads largely follow guidelines suggested by the Bureau of Indian Standards¹³¹ (e.g., purchasing the appropriate raw material), however, the quality of the final product varies significantly due to modifications made onsite (e.g., amount of absorbent material varies).

Figure 6: Factors Influencing Access to MHM Product



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The Field's Response

Last-mile distribution of sanitary pads, including both premium and low-cost, remains a challenge across India. Decentralized models of productions have expanded in recent years, but daily production levels remain low, limiting the scale and reach of these low-cost products.^{132,133,134,135}

- *Premium commercial disposable pads* are largely sold through pharmacies (46%), modern grocery retail stores (29%), and traditional kirana stores (20%).¹³⁶ However, the distribution of these pads in remote rural areas is still a challenge.
- *Manufacturers of low-cost machines* like Jayashree Industries and Aakar Innovations have partnered with self-help groups and NGOs to decentralize the manufacturing of low-cost pads and distribution to overcome the last-mile challenge and create livelihoods for women. The Government of India encouraged decentralized models across multiple industries to build local economies in rural communities.¹³⁷ To date, **these efforts have been largely unsuccessful for the following reasons:**
 - Quality of pads varies a lot as each SHG makes its own independent decision about the amount of absorbent material to manage costs and because the staff may not be trained to ensure quality control.
 - SHG manufacturing units have struggled to achieve financial sustainability because small scale productions limit opportunities for economies of scale in buying raw material or manufacturing.
 - SHGs struggle to effectively create awareness and market the sanitary pads impacting the financial sustainability of the operation.^{138,139} New low-cost manufacturing start-ups like Saral Designs that produce high quality ultra-thin pads are small in scale, and but with further investment could explore alternate financial models that would allow them to take advantage of economies of scale.¹⁴⁰

Finally, women and girls may not feel comfortable purchasing MHM products from male salesmen.^{141,142,143,144}

Even when pads are purchased, shopkeepers wrap the packet in a newspaper or a black plastic bags, perpetuating the silence around menstruation.¹⁴⁵

Conclusions

There is debate in the field about the appropriate MHM solution for women and girls in India given the environmental concerns about the increasing share of disposable sanitary pads. Large corporations have an incentive to shift consumers from using cloth to disposable sanitary pads and use intensive marketing and awareness campaigns to shift users' preferences.¹⁴⁶ Although the national guidelines support the use of clean cloth, the Government of India is encouraging states to manufacture and increase access to disposable pads. The growing demand and supply of disposable sanitary pads present environmental concerns. In response, there have been some early efforts to develop innovative MHM products such as bio-degradable pads made out of locally grown materials such as bamboo, banana stem fiber, and sugarcane waste,¹⁴⁷ as well as re-usable cloth pads; however, these products have a high up-front cost and are not available at scale.

Despite innovative methods to address the issue of last mile distribution through self-help-groups that decentralize production and distribution of pads, the need remains significant. There is a need to further explore the reasons for the limited success of SHGs and explore other holistic interventions to provide access to preferred products at scale.

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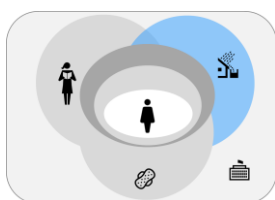
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C. Sanitation

“There is no place to dispose the pad at school. Some girls dispose it anywhere. If I need to change at school, I will go to my Principal's office and ask for a leave. When I am at home, I bury it [the pad] in a field because if cattle are grazing there, they would dig the ground. I walk back home, clean myself in the changing area.”

- 13-year-old girl, rural Kanpur, UP

The current state



There are 636 million Indians who lack toilets, and more than 72% of rural people relieve themselves behind bushes, in fields, or by roadsides;¹⁴⁸ lack of adequate sanitation disproportionately affects women. Without toilets in their home or public spaces, many women are forced to use public spaces to openly defecate and manage their menstrual needs. In addition to the impact on their health and dignity, women in communities face an increased threat of sexual harassment, rape, and other forms of

violence.¹⁴⁹ Over the past decade, the Indian government, leading WASH donors, and NGOs have made significant efforts to build sanitation infrastructure. They also recognize the need to drive behavior change to encourage people to use toilets.¹⁵⁰ More recently, leaders in the WASH space have begun to promote menstrual hygiene as fundamental to basic hygiene and sanitation services.

Table 4: Overview of Sanitation Interventions in India

Primary Goal	Key Players and Intervention Trends
Programs that prioritize improving sanitation and disposal infrastructure	<p><i>Trend: Increasing national efforts to improve sanitation infrastructure and sanitation-related behavior change. However, these efforts do not target changing community perceptions about disposal of menstrual waste or sanitation as it relates to menstruation (e.g., using toilets during menstruation)</i></p> <ul style="list-style-type: none"> • The Indian government has a new focus on improving MHM infrastructure as part of the national sanitation program. MHM education and gender separate toilets are embedded in the 2015 Menstrual Hygiene Guidelines (See Policy Section for details). • Leading WASH organizations (e.g., WASH United, UNICEF’s Sanitation Program) are working with governments, schools, and communities to provide gender-separate latrines, water, and in some cases, incinerators for disposal of menstrual waste. These organizations are also complementing their own efforts by creating awareness (See Awareness and Education Section); however, awareness programming is often limited to product use and basic know-how about menstruation.
Programs that change community norms about sanitation during menstruation	<p><i>Trend: Select programs are focusing on improving community norms related to sanitation and disposal during menstruation</i></p> <ul style="list-style-type: none"> • WASH organizations and local NGOs (e.g., Water Aid India and Vatsalya’s Breaking the Silence Program in Uttar Pradesh) are starting to work with communities, including boys, men, and infrastructure service providers to change perceptions about menstruation so that it results in an increased use of sanitation infrastructure. • Few environmental NGOs (e.g., Kachra project based in Mumbai, Maharashtra) have advocacy programs to improve awareness among policy makers and users about the environmental concerns related to inappropriate disposal.

Enablers to Improved Menstrual Health

Challenges related to the state of sanitation and menstrual health include:

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Limited access to functioning toilets remains a barrier and disproportionately impacts menstruating girls and women.^{151,152,153}

- *Access in schools:* In 2012, 40% of all government schools lacked a functioning common toilet, and another 40% lacked a separate toilet for girls.¹⁵⁴ Several studies report that girls do not change pads in school^{155,156} or that girls would go to school if proper toilet facilities existed.¹⁵⁷
- *Access in home:* Despite national-level efforts, ~53% of all households in India lack a toilet, requiring women and girls to use communal or public toilets, which may be far away, or defecate in the open, increasing women's vulnerability to violence.¹⁵⁸ Although sexual assault often goes unreported, women living in slums in Delhi reported that it is common to be physically assaulted on their way to use a public toilet. They also reported incidences of men hiding in the latrines at night, waiting to rape those who entered.¹⁵⁹
- *Access in communities:* There are gendered differences between sanitation infrastructure available for men and women. For example, the municipal government in Mumbai provides men with 5,993 public toilets and 2,455 urinals; whereas women are provided with only 3,536 public toilets.¹⁶⁰ Similarly, in Mumbai, women have to pay to use public toilets whereas men can use urinals for free.¹⁶¹

Even when toilets are available, cultural practices and hygiene routines as well as community attitudes related to menstruation limit the use of existing toilets, particularly during menstruation. Girls may avoid using toilets for fear of leaving blood spots in the latrine, if there is not an adequate water supply for washing.¹⁶² Social norms and community attitudes associated with menstruation also inhibit women and girls from using toilets and disposal mechanisms appropriately. For example, 91% of girls in communities in Gujarat report staying away from flowing water during menstruation.¹⁶³

Community attitudes and perceptions about menstruation and the availability of disposal infrastructure influences how women and girls dispose their menstruate waste. Common practices for collecting and disposal of sanitary pads can vary from throwing unwrapped or wrapped pads into fields and on rooftops, burying them in the ground, or burning them one at a time or collectively after a menstrual cycle. These methods are particularly common in areas where there are no toilets or disposal mechanisms within toilets and/or where silencing menstruation is the norm. Even when disposal mechanisms are available, women and girls are also hesitant to dispose of MHM products in dustbins due to the fear of being identified as having menstruation.¹⁶⁴

Current system level efforts to address disposal of menstrual waste, particularly the incinerator technology, does not adequately consider the user and may have a negative impact on both the user and the environment.

Incinerators are currently being encouraged by the Government as a solution to dispose of menstrual waste, particularly in schools. NGO and school-based practitioners highlight that often times girls themselves have to handle the incinerator exposing them to health hazards. There are instances where incinerators do not reach the appropriate 900 degrees and thus do not process menstrual waste properly, or incinerators are too large and it is not efficient to burn the pads until the incinerator is full.¹⁶⁵ The longitudinal effects of using incinerators on the environment and human beings are not yet studied.¹⁶⁶

The current system does not consider the dignity and health of waste management workers. Menstrual waste is mixed with household waste, putting sanitation workers who have to segregate it at risk.¹⁶⁷ In 2008, it was estimated that there are 1.5 million people, typically from lower social economic classes, whose job it is to manually empty pits and septic tanks, exposing them to a tremendous amount of health hazards.¹⁶⁸

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Conclusions

- WASH programming is focused on technical solutions to improve sanitation infrastructure and increasingly behavioral interventions to improve sanitation routines. Yet, **interventions to improve community attitudes and practices around access to sanitation as it relates to menstruation** needs to be addressed in a more targeted way.
- **The MHM sector in India has put few resources towards disposal of menstrual waste**, which is a growing problem with the increase in use of disposable sanitary pads. Currently, incinerators are proposed as a solution, but the environmental impact is unknown. Even at low penetration rates of sanitary pad usage (12%), India generates an estimated 9,000 tons of menstrual waste every year, enough to fill a landfill of 24 hectares.¹⁶⁹ A long-term sustainable solution is yet to be explored.

D. Policy

Current State of the Government’s Response

Policies to improve MHM are led by multiple Ministries in India, with each Ministry bringing their own unique approach to address this cross-cutting topic. Although MHM is not the top priority for any of these Ministries, it is often a sub-set of other goals, such as improving health or education outcomes for women or adolescent girls. Existing policies and programs are outlined below and described in greater detail in Appendix.

Table 5: Overview of MHM Policies

Ministry	MHM-related Policy or Program
Ministry of Health and Family Welfare (MoHFW)	<i>The Rashtriya Kishor Swasthya Karyakram (RKSK)</i> , India’s national adolescent health strategy, launched in January 2014 to prioritize access to MHM information, support, and MHM products through Adolescent Friendly Health Clinics and counselors. ^{170,171}
Ministry of Drinking Water and Sanitation (MoDWS)	<i>The Swachh Bharat Mission (SBM)</i> , India’s national cleanliness program launched in October 2014, is run in rural areas by MoDSW and in urban areas by MoUD. It prioritizes sanitation infrastructure (e.g., individual and community toilets, solid waste management) and awareness programs for behavioral change. ^{172,173} Recently, the MoDWS also took the leadership in drafting the National MHM Guidelines.
Ministry of Urban Development (MoUD)	
Ministry of Human Resource Development (MoHRD)	<i>The Sarva Siksha Abhiyan (SSA, 2000-01) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA, 2009)</i> , which aim to provide elementary education for all and enhance access to secondary education, respectively prioritize sanitation infrastructure in schools as a way to improve school retention. Additionally, <i>Swachh Bharat: Swachh Vidyalaya (SB:SV)</i> , ¹⁷⁴ India’s national guidelines for sanitation in schools, emphasizes MHM facilities in schools (e.g., incinerators).
Ministry of Women and Child Development (MoWCD)	<i>The SABLA program (2011)</i> , which is an integrated service to improve health, nutrition, and empowerment for girls, suggests providing awareness about MHM to adolescent girls through Anganwadi Centers. ^{175,176}

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In December 2015, the Ministry of Drinking Water and Sanitation released the National Guidelines for Menstrual Hygiene Management with support from UNICEF India, elevating the urgency for an integrated approach to improved MHM for adolescent girls and women in India.¹⁷⁷ These guidelines are integrated into the national sanitation program (Swachh Bharat Mission). Yet, the guidelines emphasize the role of various Ministries in improving MHM and recommend greater convergence—i.e., consensus on the roles and responsibilities, and greater coordination. It outlines the role of state governments, district administrators, front line and community health workers, engineers, schools, and communities. In addition to targeting girls, the guidelines emphasize inclusion of boys and men. Finally, it also provides recommendations standards for MHM education, MHM product, and sanitation infrastructure support required in schools and communities.

Barriers and Gaps

Only a few national programs targeting MHM recommend holistic solutions, and in practice, solutions often remain siloed. RKSK is one of the only programs that prioritize the provision of sanitary pads and the provision of sustained support and information on menstruation through counsellors. However, as indicated in the Product Section above, information is often limited to instructions on product use. Similarly, the recent MHM Guidelines recommend the role of the Ministry of Drinking Water and Sanitation to include building sanitary infrastructure and conducting awareness programs to change community attitudes about accessing sanitation during menstruation. However, in practice, the emphasis of the Ministry to date has largely been on building toilets.¹⁷⁸

Ministries are encouraged to converge and work together according to the MHM Guidelines, however, ministries are still in the process of operationalizing the guidelines. MHM Guidelines mention the need for convergence across departments to improve MHM. However, the guidelines lack clarity on what convergence might look like in action, i.e., who specifically will coordinate or oversee the coordination across departments and levels. This is particularly important because various policies and programs across Ministries overlap in their goals. For example, RKSK and SABLA both prioritize creating awareness about MHM among adolescent girls; however, there is limited clarity on how a counselor under RKSK's Adolescent Friendly Health Clinics and an Anganwadi worker supported by SABLA may complement each other's efforts.

Implementation of existing policies remains a challenge due to limited capacity on the ground.

- *Limited human resource capacity:* Although MHM programs leverage health workers (e.g., ASHAs, counselors) and teachers to provide MHM education, their comfort in discussing sensitive topics, particularly when talking to boys, varies and the quality of their training programs is inconsistent.¹⁷⁹ Additionally, as noted in the [Education and Awareness section](#), few adolescents and youth see health workers as a resource for such information.¹⁸⁰
- *Market barriers:* The MHM Guidelines recommend increasing access to MHM products by outsourcing production and distribution of pads to self-help-groups. However, as noted in the [Product section](#) above, despite efforts to leverage SHGs, they have struggled to create awareness of sanitary pads and serve as a high volume platform for manufacturing pads.

Measurement of impact of these programs is often limited to outputs. Although the MHM Guidelines suggest that effective MHM will ultimately result in an improved ability for adolescent girls to stay in school, there is little to no data collected to build this evidence. Currently, the Swachh Bharat Mission (SBM) reports only on progress of physical infrastructure, i.e., toilets constructed.¹⁸¹ Similarly, KPIs within the MHM Guidelines are limited to outputs

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such as “the percentage of state level orientations organized on MHM” or :the percentage of schools with a separate functional toilet block for girls.”

Conclusions

- Although the national MHM Guidelines identify responsibilities of various ministries, there is **lack of clear direction on how to operationalize convergence**, i.e., coordination on the ground.
- Government programs present significant opportunity for scale, but **lack human resources** capacity.
- There is **limited private sector encouragement** to improve access to products, sanitation, or awareness.

Conclusions and Recommendations

Conclusions

The momentum menstrual health has gained in India over the past decade has been led in part by the growth in the MHM product market—initially led by commercial manufacturers, followed by a series of innovative low-cost small scale entrepreneurs who target low-income users. In parallel, NGOs and donors from the WASH sector have taken the lead to improve awareness around menstruation. More recently, recognizing the need for collaboration, the national MHM Guidelines have put the onus of improving MHM on various Ministries.

However, current efforts to improve MHM are missing opportunities to address menstrual health more holistically. High-quality commercial products do not target girls from low-income communities. On the supply side, low-cost pads lack reach and vary in quality. On the demand-side, users have limited awareness about the product. Programs generating awareness about products and improved menstrual health behaviors are on the rise, but they have yet to show progress in shifting taboos related to menstruation. Lack of psycho-social support and limited facilitator capabilities miss the opportunity to build girls’ confidence and shift inherent discriminatory social norms that define a girl’s role in the Indian society. Policy makers continue to function in silos and do not always hold themselves accountable for outcomes. Current menstrual health programming does not prioritize vulnerable populations such as girls living on the street or in institutions.

Finally, given India’s vast diversity in culture and socio-economic contexts, there is an overarching need to better understand the user and determine which intervention approach to use for girls with distinct contexts and needs. For example, below are illustrative approaches to addressing the needs of the users introduced in the Context sections above:

Table 6: Overview of Different Approaches for Different Contexts

Context	Approach
For Kaveri from Tamil Nadu... <i>Education was extremely important for Kaveri and her family. The regular availability of sanitary pads in her school had helped normalize menstruation.</i>	... Continue to improve her monthly MHM experience <i>An MHM intervention for such a user should prioritize providing better access to low-cost, yet high-quality MHM products which she lacks. Although she faces isolation at home, it is less of an issue for her—she has the agency to prioritize her interests.</i>
For Priya from urban Kanpur...	...Improve MHM as a gateway to shift gendered social norms

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Priya is frustrated with the fundamental changes in her expected behavior since menarche. Her mother, who is otherwise ambitious for her future education, begins to restrict her mobility.

Programming in such contexts should improve MHM directly, but also treat it as a gateway to empowering Priya to have a voice and confidence. Such interventions should also prioritize educating her influencers who perpetuate discriminatory social norms.

For Pinky from rural Kanpur...

Pinky's poverty-struck family lacks access to toilets and MHM products. Further, deeply embedded discriminatory gendered social norms prevent her from having any agency and voice, and from prioritizing her education.

...Prioritize shifting gendered social norms first

For such extreme contexts, simply addressing MHM alone would not necessarily be sufficient or effective. Given finite resources and prevailing issues of gender inequity, there is a need to understand and shift social norms to improve health, development, and empowerment outcomes.

Recommendations

Given the current national momentum on menstrual health coupled with significant need, there is **an immediate opportunity for the field to improve the effectiveness of existing efforts** and better support for girls' experience of menarche, menstruation, and MHM in India. *These immediate priorities are outlined below:*

Table 7: Overview of Immediate Menstrual Health Priorities

<p>Education and Awareness: Strengthen the capacity of influencers—teachers, community health workers (CHW), mothers—to improve programming effectiveness</p>	<ul style="list-style-type: none"> Targeting teachers and CHWs presents an opportunity for sustainably scaling access to education and awareness on menstrual health, particularly through national programs (e.g., RKSK). MHM curricula already exist. What is needed is to build facilitator capabilities to provide education and psycho-social support at scale. Programming that educates mothers is rare. There is a need for evidence-based programming on enabling mothers to provide accurate information on MHM and appropriate ongoing support at scale.
<p>MHM Products Support market-based solutions to innovate and distribute low-cost, yet high-quality sanitary pads at scale</p>	<ul style="list-style-type: none"> Low-cost pads that are manufactured through low-cost machines using a decentralized model have limited production capacity and vary in quality. Market-based interventions including technological innovations to increase capacity of low-cost machines are needed to increase scale, capacity, and quality of pads produced as part of the decentralized model. Centralized manufacturing systems (e.g., corporations) make pads at scale, but have limited reach in remote rural areas. Additional research is needed to understand the underlying distribution challenges in specific regions, the price point that women and girls are willing to pay for the product, and user product preference. Support innovation of products which are environmentally friendly, culturally appropriate, and affordable given the environmental concern with disposable pads.
<p>Sanitation Address the burgeoning problem of disposing menstrual waste in an environmentally safe and affordable manner</p>	<ul style="list-style-type: none"> Given the lack of discourse on disposal issues in the Indian MHM sector, three parallel approaches are essential: <ul style="list-style-type: none"> Convene multisector stakeholders (i.e., government, corporate, NGOs, social enterprises, researchers, innovators) to align on a common vision for disposal. Conduct longitudinal research to understand the long-term impact of incinerators on health and environment so that the field can make an informed decision about how to manage the disposal of menstrual waste. Explore innovative solutions to dispose sanitary pads in an environmentally

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	friendly, safe, culturally appropriate and scalable manner.
	<ul style="list-style-type: none">• It is also crucial to continue improving access to sanitation by embedding girl-friendly design and features as part of the national sanitation campaign, Swachh Bharat Mission, and explore market-based as well as community-based sustainable solutions to sanitation infrastructure maintenance.
Policy Increase the on-the-ground capability to implement the national MHM Guidelines effectively	<ul style="list-style-type: none">• <i>Assign MHM specific performance indicators</i> to various Ministries and identify an MHM Champion across Ministries.• <i>Strengthen the implementation</i> by building the capacity of front-line workers and CHWs (to improve awareness and education); <i>connect state and district governments to the MHM producers</i> who provide low-cost, high quality products• <i>Study effective implementation in select state(s)</i> and replicate lessons learned.

Additionally, there is a need for **targeted research** to better understand the current state and pressing needs of girls and women and to improve the effectiveness of programming. These opportunities are listed below:

- 1) **Conduct consumer research to better understand various types of users and customize programming appropriately to serve distinct needs.** Research should aim to understand: *Define segments of adolescents to inform MHM programming (e.g., girls living in rural areas with access to media, young mothers living in urban slums). Identify their key influencers and to what extent they influence the girl. Define the level of menstrual health awareness, product, or sanitation that the girl has access to.*
- 2) **Conduct research to better understand effectiveness of ongoing interventions.** There is a need to study outcomes of interventions; e.g., *to what extent did this intervention shift community norms about menstruation? To what extent did this intervention influence the girl's education and health outcomes?* Evidence on what works will help align budgetary and human resources to the activities with the greatest impact.

Finally, there is opportunity to **explore menstrual health as a window of opportunity for accessing young adolescents.** This requires additional programming, impact measurement, and research.

- 3) **Given the significant changes in a girl's life associated with menarche, there is an opportunity to invest in MHM and menarche as a gateway to influence young girls, shift discriminatory norms, and play a catalytic role in her life.** A few NGOs, such as Vatsalya in UP and Center for Catalyzing Change in Delhi, are beginning to approach menstruation as a tool to empower the girl with agency and the voice to negotiate.¹⁸² Such an approach would answer questions such as: *To what extent has this MHM intervention been successful in influencing empowerment outcomes? How can this intervention be scaled?* There is a need for more research on the impact of existing programming efforts where MHM is a gateway for empowerment so that lessons can be adapted and scaled to improve empowerment outcomes for adolescent girls and women in India.

Menstrual Health in India | Landscape Analysis

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Menstrual Health in India | Landscape Analysis

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