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Challenges in menstrual health service delivery to girls and young women in Mumbai slums: provider perspectives

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ABSTRACT

Although India recognises its importance, good menstrual health management continues to elude women and girls in disadvantaged areas including urban slums, and the role of health care providers is poorly understood. Our objective in this study was to explore the perspectives of healthcare providers regarding the challenges faced in delivering menstrual health services to girls and young women. A total of 16 key informant interviews were conducted with frontline workers, pharmacists and medical practitioners serving urban slums in Mumbai. Provider perceptions suggest that girls' and young women's limited awareness about menstruation, adherence to traditional taboos, lack of health promoting practices, and discomfort about seeking information or care were key barriers to delivering menstrual health services. However, narratives also identified systemic barriers, notably poor waste disposal facilities, limited access to healthcare, erratic supply of government-issued menstrual products, and provider-level challenges such as personal inhibitions, the relatively low priority providers gave to menstrual matters, and their lack of sensitivity and skills to communicate effectively with girls and young women. Findings call for multisectoral programmes, including school-based education, improvements in water, sanitation and hygiene conditions, regular access to affordable menstrual products, and capacity building of providers to ensure more effective menstrual health service delivery.

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Introduction

Menstrual health remains under-prioritised in sexual and reproductive health discourse, receiving no explicit mention in the Sustainable Development Goals and limited attention from the international scientific community. Menstruating girls and women in low-and-middle-income countries (LMICs) face multiple challenges in managing their menstrual health (Kashiwase 2024; Wilbur et al. 2021). Evidence from such settings shows that girls often receive menstruation-related information that is neither timely nor adequate (Chandra-Mouli and Patel 2020). Moreover, misconceptions about menstruation are abundant and menarche is often associated with fear (Betsu et al. 2023; Chandra-Mouli and Patel 2020). Even those with knowledge about menstruation may shy away from approaching frontline health workers out of embarrassment (Agampodi and Agampodi 2018). Schools often lack adequate water, sanitation, and hygiene (WASH) services crucial to manage menstruation, forcing girls to miss classes or even drop out (Mucherah and Thomas 2017; Tamiru et al. 2015). Although the health sector bears a considerable responsibility for alleviating these challenges, its contribution to promoting menstrual health management (MHM) in many LMICs, including India, has thus far remained limited.

Health care providers are well positioned to deliver information and services and to challenge menstrual stigma and taboos (Agampodi and Agampodi 2018; McCammon et al. 2020). However, menstruation-related services remain largely clinical and treatment-focused, with the promotion of good menstrual health management often falling outside the remit of clinicians and frontline workers (Singhania and Muralidharan 2022). Although healthcare providers play a key role in promoting MHM, limited

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attention has been paid to raising their awareness or sensitising them to this role (Singhania and Muralidharan 2021), or to their responsibility in informing and serving adolescents and young people (Stotz and Brand 2025). There is a widely articulated need for improved training of frontline health workers on all aspects of menstrual health, including addressing misinformation and taboos, menstrual disorders, and gender-responsive approaches for reaching diverse sub-populations (see, for example, Chandra-Mouli and Patel 2020; Babbar, Martin, et al. 2022; Garg et al. 2021).

Research on menstruation-related care for girls and young women from providers' perspectives remains sparse globally. Limited evidence from high-income countries suggests that few providers routinely ask about menstruation, and fewer than half of patients discuss such issues with them (Miller et al. 2024). Evidence from LMICs is even more limited; for instance, one review identified only eight menstrual health initiatives, largely focused on awareness or product supply, with none addressing provider capacity (Hennegan and Montgomery 2016).

The situation in India is no different. Like other countries, India has recognised the importance of good MHM for women and girls. A recent Supreme Court judgement has reiterated this commitment as a fundamental right (Dr. Jaya Thakur vs. Government of India 2026). Various government programmes have been implemented that aim to improve MHM. The National Adolescent Health Programme (Rashtriya Kishor Swasthya Karyakram, RKSK), for example, seeks to raise awareness, challenge taboos, promote open communication on menstruation, and ensure access to affordable products, safe disposal facilities, and health services (Ministry of Health and Family Welfare 2020). The Adolescent Education Programme delivered in school settings, also includes menstruation-related components (Ministry of Human Resource Development 2019). The Menstrual Hygiene Management Scheme aims to raise awareness about good MHM, provide subsidised sanitary napkins through frontline health workers and schools, and ensure safe disposal (National Health Mission 2016). These, along with schemes to improve infrastructure and amenities, have been proposed (Sharma et al. 2020). However, implementation has been challenging, and provider capacity-building needs are rarely addressed. The distribution of sanitary pads through frontline workers has also been erratic (Achuthan, Khobragade, and Kolil 2025; Babbar, Rustagi, et al. 2022). Moreover, government schemes are primarily implemented in rural areas, while urban settings remain relatively underserved (Muralidharan 2019).

As in other settings, research from India on menstruation-related interactions between providers and girls primarily reflects girls' perspectives and underscores their reluctance to seek care from health providers, including frontline workers (McCammon et al. 2020). In one study, only one in ten adolescent girls considered frontline health workers and teachers reliable sources of information for their menstrual health queries (Garg et al. 2022). However, another study noted that girls who received counselling from a health care provider were significantly more likely to have correct knowledge about menstruation and to use hygienic menstrual products (Prasad, Dwivedi, and Shetye 2024). Hardly any research has been fully devoted to understanding healthcare providers' own perspectives, and what is available suggests that providers may be more preoccupied with distributing pads and medicines to girls than addressing menstruation-related needs or building awareness about it (Dalai et al. 2024).

The objective of this study therefore is to shed light, through the narratives of healthcare providers rather than girls, on the challenges they face in delivering menstrual health services to girls and young women residing in resource-poor slums in Mumbai. We focus on those providers most likely to come into contact with this group, namely, frontline and community-based workers, doctors and pharmacists, collectively referred to in this paper as 'providers' for convenience, and probe not only their knowledge and inhibitions about addressing menstruation-related matters but also the challenges they faced and perceived in delivering menstrual health services in the communities served.

To analyse provider narratives, we drew on the MHM in Emergencies Toolkit framework (Sommer et al. 2018), which operates from the premise that a complete MHM response requires three components: (1) menstrual materials and supplies, (2) MHM-supportive facilities, and (3) MHM information. From the providers' perspectives, our study illustrates the situation across all three domains – supplies, facilities, and information. In addition, we include a fourth component, namely, providers' own knowledge and sensitivity in respect of menstruation. We hypothesised that these four components would likely shape the effectiveness of MHM service delivery (see Figure 1). The toolkit was originally designed to guide

Figure 1. Major challenges in menstrual health service delivery to girls and young women.

comprehensive menstrual health responses in humanitarian crises but we employed its three domains to systematically categorise healthcare providers' insights in a slum population. While our study did not directly assess the quality or nature of MHM programmes, aligning provider perspectives with this framework allows for a meaningful comparison with existing programme priorities and highlights gaps at both the community and provider levels.

Context

Mumbai, India's financial capital, is one of the most urbanised and densely populated cities in the world. The city proper contained a population of around 12 million in 2011, with more than 40% residing in slums (Office of the Registrar General and Census Commissioner and India 2011) largely located on public land belonging to various government bodies (Bapat and Agarwal 2003). Slum residents comprise in general a mix of long-time and recent migrants, with varying awareness and attitudes about health promoting practices. As in other slum settings in the country, most residents belong to lower income groups, accommodation is cramped, and amenities are generally of poor quality (Bag, Seth, and Gupta 2016). Homes typically comprise one or two small multipurpose rooms, with many households lacking water and sanitation facilities and facing erratic water supply, poor garbage collection, and drainage.

Mumbai's public health system is three-tiered, comprising government-run primary health posts and dispensaries, secondary infrastructure which consists of maternity clinics and peripheral hospitals, and at tertiary level, hospitals and medical colleges. In resource-poor areas, care is supplemented by community-based frontline workers from the public sector and NGOs, and private providers. Key among public interventions is the Integrated Child Development Services (ICDS) programme, through which frontline (*anganwadi*) workers provide basic health services, nutritional supplementation to mothers and young children, referrals, and early childhood education, serving as a vital link between government services and disadvantaged communities. Despite these facilities, health care needs remain unmet in impoverished areas (Observer Research Foundation 2012). While there is a preference for low-cost public healthcare in general, barriers such as long waiting times, low quality of care, and poor accessibility persist, forcing slum dwellers

to opt for private healthcare options (Patwardhan et al. 2023; Sinha and Shekhar 2017). While several MHM initiatives have been implemented (National Health Mission 2016), the supply of government-provided pads remains irregular. In contrast, pads are widely available in medical stores.[1]

Mumbai's slums are heterogeneous, differing in access to basic services, the presence of community-based organisations, their proximity to public health facilities, and settlement history. Health care options range from private clinics and informal providers, to NGOs, as no government hospitals are located within slums. The slums included in this study reflect this diversity and are therefore likely to capture a wide range of provider experiences across different types of slums within the city.

Methods

This study was part of a larger research project aimed at studying the dynamics of menstrual health management among girls and young women in the slums of Mumbai.

As part of this work, the 24 municipal wards of Mumbai were stratified into three zones (based on Census 2011 slum population lists) each having one-third of the total slum population to ensure proportional representation across areas with differing slum density. Thereafter, two non-adjacent wards were purposively selected from each zone to ensure representative coverage, making for a total of six wards. Using the 2015 slum list, cross-validated through Google Maps, three slum areas were then randomly selected from each ward, yielding 18 slum areas.

The research project comprised three components: a survey of girls and young women aged 12–24 years, a parallel survey of boys and young men aged 15–24 years, and a qualitative phase consisting of key informant interviews with 16 health care providers, and in-depth interviews with mothers and fathers of girls. Fieldwork for the entire project was conducted between June-September, 2024. This paper provides findings solely from the key informant interviews with healthcare providers.

Given the paucity of previous research on provider perspectives on menstruation and the exploratory nature of this study, key informant interviews were adopted. We opted for this method because it enabled researchers to obtain in-depth insights from individuals with extensive knowledge or experience in a specific area. The key informants were identified through snowball sampling. The interviews comprised open-ended questions that explored providers' attitudes and awareness regarding menstruation, their experiences and comfort in communicating menstruation-related information and services to girls and young women, and their observations of community hygiene, sanitation, and disposal practices.

Interviews were conducted by male and female interviewers, who underwent rigorous training, conducted by principal investigators (AC, SJ) that included mock interviews and practice field interviews. Interviews were conducted in Hindi, audio-recorded, transcribed by the interviewers and translated into English, lasted about one hour, and took place at participants' workplaces.

Textual data were analysed to generate codes, and two broad themes were identified that constrained girls' ability to manage their menstrual health effectively. The first theme related to challenges in menstrual health service delivery as observed by healthcare providers, including perceptions of the challenges that girls faces in the three domains of menstrual materials and supplies, supportive facilities and services for MHM and information on menstrual health. The second theme addressed providers' own limited knowledge, skills and sensitivity with regards to menstruation related matters.

Ethics

Ethical review and approval for this study (IRB number: IIPS/PSC-54/IRB/532/2024) was received from the International Institute for Population Sciences, Mumbai, India.

Results

Healthcare provider characteristics

We interviewed 16 health care providers serving the selected slums: anganwadi workers (5), NGO health workers (3), doctors (5), and pharmacists (3). Anganwadi and NGO workers conducted outreach for health

and nutrition, pharmacists ran or worked in private medical shops, and doctors provided primary care in the absence of local public facilities. Providers had long experience working in the slums (mean ≈16 years); most were female (10), their mean age was 47 years, and all but three had completed at least ten years of schooling (Table 1). All 16 providers reported interacting with girls in slums and the wider community, though menstruation-related services varied by provider type. Anganwadi and NGO workers mainly disseminated information through group sessions with girls and parents to raise awareness, while doctors provided information incidentally during consultations, and pharmacists reported being rarely consulted. Anganwadi workers and pharmacists handled the distribution or sale of menstrual products, with most girls relying on private shops. Doctors primarily treated menstrual problems, while Anganwadi and NGO workers and pharmacists who encountered such cases only offered referrals.

Table 1. Key informant characteristics

Occupation of KI	n	Age	Sex	Educational qualification: last class/highest degree successfully completed	Duration served in the community
Anganwadi workers	5	38	F	12	15 years
		44	F	12	16 years
		37	F	12	4 years
		57	F	BA	20 years
		39	F	5	18 years
Doctors*	5	46	F	MBBS	12 years
		52	M	LCEH*	20 years
		36	M	BHMS*	10 years
		69	M	BAMS*	30 years
		60	M	BUMS*	31 years
NGO health workers	3	34	F	7	7 years
		61	F	10	15 years
		42	F	0	15 years
Pharmacists	3	35	F	D. Pharm	7 years
		48	M	BA	20 years
		48	M	12	12 years
Total (N) = 16 ($F=10$, $M=6$)		Mean age = 47 years			Mean duration of service = 16 years

*Includes: MBBS (Bachelor of Medicine/Surgery); LCEH, BHMS (homeopathic practitioners), BAMS (Ayurveda practitioners), BUMS (Unani medicine practitioners)

Challenges in menstrual health service delivery as observed by providers

Providers perceived that girls face three challenges in ensuring good MHM – difficulties in acquiring menstrual products, challenges in accessing supportive facilities and services, and limited awareness of good MHM practices.

Challenges in accessing menstrual materials and supplies

Providers highlighted challenges in access to affordable and good-quality menstrual products. They suggested that in these slums, affordability and limited distribution mechanisms are critical barriers, leading some girls to rely on unsafe or unhygienic alternatives.

Irregular supplies of menstrual products. Although government schemes for the distribution of sanitary pads to girls exist, the supply of free products is erratic and frontline workers entrusted with supplying free pads, do not visit the areas regularly. As a result, menstrual products in these slums are typically purchased or sought from NGO workers.

> Yes, I'm aware of the government scheme that distributes pads through ASHA workers but they don't provide them in this slum. No ASHA Worker comes here. One doesn't even try to look for them (ASHA workers). So, people here buy their own pads and use them (Female NGO health worker, age 42 years).

> The cost of the sanitary napkins is too expensive for families. Sometimes even that is not available because we do not receive them on a regular basis. … So, if any girl is in need, she asks the NGO workers for sanitary pads (Female Anganwadi worker, age 39).

Shift to unhygienic period products. Since the supply of free or subsidised pads is so erratic, and pads procured from the private sector are costly, providers reported that a few girls have had to switch back to cloth use or use poor quality pads:

> The main issue is to get a cheaper sanitary pad. Many girls will say, 'Why pay this much? It is better to wear only cloth.' Because a cloth would save them a lot of money. So out of compulsion, many would prefer to use cloth because it's free of cost (Female Anganwadi worker, age 39).

> They also use those cheap pads which they get on the footpaths. Mostly these women use that because they get it for cheap (Male doctor, age 60).

> We teach them to use pads if they have the budget for it. If not….we instruct them to use clean cotton cloth pieces, wash them with Dettol, and we explain how to fold the cloth pieces properly (Female Anganwadi worker, age 44 years).

Challenges in accessing support facilities and services for MHM

Inadequate WASH infrastructure in slum settings was perceived as a major constraint. Lack of private and clean toilets, limited availability of water, and restricted access to health care meant that even when healthcare providers attempted to offer support, these barriers limited the effectiveness of their efforts.

WASH conditions and related challenges

Providers highlighted irregular municipal water supply and reliance on public toilets as major challenges in slums, with water being often unavailable for days or of poor quality, making basic hygiene activities difficult. Providers reported:

> Currently, the water supply situation is challenging. Water is supplied for just one hour a day, and sometimes for just half an hour, but the timing is uncertain. It might come in the morning, and sometimes the timing changes from day to day (Female Anganwadi worker, age 44).

Providers reported that although many slum residents had household toilets, water shortages compelled them to rely on public toilets during menstruation. Given high user density and poor disposal practices, maintaining the cleanliness of these public facilities was a major concern.

> Many people throw their pads in the trash in open areas. Because of which cats, dogs or rats come along here…. Sometimes girls leave pads on the bathroom floor or they leave them on the window ledge…. But if you keep it like that for a while it will stink. Even though we have placed a plastic container for these items, they don't dump them there…. when we see this outdoors it feels bad. Even if it's mine or yours, we would still feel bad to see it (Female Anganwadi worker, age 39).

> Here there are a lot of public toilets. You can see three here itself. They are common toilets. They [authorities] try to maintain hygiene. But if 100 people go to the same toilet, is it possible to maintain hygiene? Not possible. So, people can get infections. If they are not properly cleaned, it's not good to use those bathrooms (Male octor, age 36).

Even the local anganwadi and schools lack toilet facilities.

> Currently, we take small children outside or make them wear diapers. There is a public toilet, but it is far away and it's not convenient for taking the children there. We must have toilets and a proper water supply inside the anganwadi (Female Anganwadi Worker, age 38).

Healthcare providers noted that although garbage disposal facilities were present in some slums, waste was not cleared daily, and drains often became clogged with garbage and used menstrual products.

> Yes, it (clogging) happens… When there's heavy rain, it overflows. Trash gets stuck and doesn't flow away. Government workers don't come to clean the drain. They are seen maybe once every two months (Female Anganwadi worker, age 37).

> Next to the bathroom there is a new garbage bin… but mostly people feel ashamed to carry their used menstrual products to that bin. They dump them near their homes. So, during the rainy season, the situation becomes very bad (Female Anganwadi worker, age 39).

Limited access to required health care

Doctors and pharmacists noted limited access to advanced diagnostics, referral services, and specialised care in slums, including a shortage of female doctors, which often made parents reluctant to seek care for their daughters.

> There is no specialised doctor or gynaecologist in this area. Two or four lady BAMS (traditional medicine – ayurveda) doctors exist (Male pharmacist, age 48).

> When it comes to male doctors, parents think, 'Oh, she will go to a male doctor, what will she even tell him!' So, there is a bit of hesitation for that (Female NGO health worker, age 42).

Challenges in accessing information on menstrual health

Healthcare providers described widespread misperceptions, stigma, and adherence to restrictive cultural norms around menstruation. Limited awareness and inadequate health education were seen as reinforcing poor practices and preventing help-seeking for menstrual problems.

Limited awareness and adherence to traditional norms

Providers observed that despite increasing awareness about the mechanics of menstruation, girls remained unaware about its significance, and many obtained information from unreliable sources, for example:

> There is a lack of proper education and awareness on menstruation, leading to misconception and stigma associated with religious practices and old backward thoughts… Yes, girls do know about menstruation. But the information which they carry along with them at an early age is not accurate. Many girls get to know about menstruation from informal sources, like peers or media, by use of phones these days, which is quite limited information and can lead to misunderstanding. They often don't understand the full scope of it. They think menstruation is dirty or something and most of them do not know how to manage it well… (Male doctor, age 60).

Several healthcare providers reported that girls and young women continued to hold misperceptions and followed traditional cultural constraints. Menstruation continued to be perceived as a taboo, and was often associated with the notion of impurity, making it difficult for women to talk openly about their problems.

> About half of the people still follow traditional beliefs, they avoid cooking, avoid sitting outside the house or engaging in any activities (attending marriages/functions), and don't worship during these 4 days (during periods) (Male pharmacist, age 48).

> Here (in this particular slum), they believe one should not touch pickles for these 4–5 days (during periods), or the pickles will spoil. They also say not to fry papads because they turn red (Female Anganwadi worker, age 39).

> In this area, the [–] caste people have a tradition of keeping their daughters at home for 9 to 12 days when they get their periods for the first time. After 9 to 12 days, then girls are allowed to go outside. It is a part of their caste practices (Female NGO health worker, age 42).

Embarrassment among girls and women to seek menstrual care

Providers believed that menstruation was accompanied by a sense of embarrassment among girls, thwarting providers' efforts to reach out to them. They suggested that girls tended to remain silent during discussions about these issues and some remarked that girls were even too shy to open up to their parents, particularly around the time of menarche:

> Some girls feel shy, they don't come, no matter how much effort you make. It's not that there are restrictions from their family, but some girls can't speak up (Female Anganwadi worker, age 57).

> In the slum, support for the menstrual needs of women is quite limited. Many people still view menstruation as something shameful, which makes it difficult for women and girls to openly discuss and manage their menstrual health (Male doctor, age 60).

> Adolescent girls feel shy and won't talk about menstrual problems. They keep quiet. They don't have knowledge. Especially if it's the first time, they don't know about it, and thinks they have some disease, and keep quiet and don't tell anyone (Female doctor, age 46).

Lack of menstrual health-promoting practices among girls and young women

Providers noted the absence of hygienic menstrual health practices in these slums, including infrequent bathing during menstruation, the reuse of cloths or disposable pads, and reluctance to consult health care providers about menstrual problems in a timely way. They believed that serious consequences, including prolonged loss of blood and anaemia, arose from these unhealthy practices.

> I've seen that girls don't even change the cloth and they don't even shower or bathe, which will ultimately lead to poor menstrual hygiene (Male doctor, age 60).

> They (girls) keep using the same cloth for many days. This definitely leads to itching, rashes (Female doctor, age 46).

> Here, women and girls don't dry their undergarments in the sun…I tried explaining the problems to them. I keep telling them to wash them using hot water. I think hygiene is poor here (Male pharmacist, age 35).

> Some may experience gynaecological disorders, become anaemic, and have heavier bleeding. But they don't tell anyone; they only keep changing pads. Usually, bleeding should stop within 5 days. If there is continuous bleeding for 10 days, haemoglobin levels drop. Girls don't discuss these issues promptly (Male doctor, age 69).

Provider-level challenges: limited knowledge, skills and sensitivity

Healthcare providers' narratives reveal limited preparedness, with gaps in knowledge, skills and sensitivity, alongside persistent misconceptions and negative attitudes. Menstrual health was often not prioritised as part of their education and training, nor was communication with young people to address inhibitions, or to engage with boys and other stakeholders. Moreover, several Anganwadi and NGO health workers appeared to lack a basic understanding of menstruation, for example:

> It's just the blood that has accumulated being expelled. That's what I heard (Female NGO health worker, age 42).

Moreover, some adhered to traditional beliefs about menstruation being a 'women's issue' and expressed reluctance to communicate messages about menstruation to boys and young men.

> We don't discuss it with boys. As this (menstruation) is a female related issue, boys have nothing to do with this… (Female Anganwadi worker, age 39).

Overall, providers showed very limited sensitivity to their role in promoting good menstrual health practices and appeared ill-prepared to help girls and young women overcome discomfort in discussing menstrual health concerns. For example, a doctor suggested that menstruation is a natural phenomenon, and the government had no need to invest in programmes to address menstrual health:

> You see, madam (addressing the interviewer), menstruation is not a very big issue, and there is no need for the government to have to focus on it (Male doctor, age 69).

Providers acknowledged girls' inhibitions in discussing menstruation with them, but made limited efforts to take the initiative. Anganwadi workers often cited girls' shyness, embarrassment and difficulty in comprehending the messages conveyed to them, which led workers to avoid detailed discussion and attribute their own inaction to the girls' discomfort and lack of understanding:

> Some people feel ashamed to talk about menstruation openly. So, now we don't provide complete information about pads like earlier (Female Anganwadi worker, age 37).

> We provide detailed information…Those who are smart and educated understand well. But those who aren't educated just listen and don't really grasp it…These people don't prioritise education. The girls struggle to

even complete 10th grade…. Some girls feel shy, they don't come, no matter how much effort you make (Female Anganwadi worker, age 57).

Discussion

Research on adolescent sexual and reproductive health to date has largely relied on adolescents' reports or facility assessments, focused mainly on contraception, abortion, or pregnancy rather than menstruation. In these studies, data suggest that beyond technical competence, healthcare providers often lack skills for non-judgemental engagement, trust-building, and open communication (Chilinda et al. 2014; Hoopes et al. 2017; Werdhani et al. 2025). Evidence from adolescents and young people in India suggests that satisfaction with services received is limited, with key factors being provider-related including the absence of confidential, non-judgemental and supportive interaction (Mehra et al. 2013).

Few studies about adolescent sexual and reproductive health moreover, have focused on the situation among the urban poor. Slum populations face unique challenges in ensuring good MHM that more well to do girls may not face – including more limited exposure to information in schools, more rigid adherence to traditional norms and taboos, and poorer access to WASH facilities on the one hand and to well-trained healthcare providers on the other. Despite their disadvantaged status, few studies have explicitly focused on the MHM needs of girls and young women in urban slums. Few, likewise, have elicited insights into menstruation-related matters from the perspective of healthcare providers serving impoverished populations. The objective of our study was to fill these gaps. We explored the perspectives and narratives of a range of providers themselves – physicians, pharmacists and frontline health care workers with regard to the barriers that confront their ability to deliver menstrual health services to girls and young women.

Barriers to delivering effective menstrual health services to girls and young women articulated by providers in Mumbai's slums corroborate and supplement the findings of other studies undertaken from the perspective of girls (see, for example, Balla and Nallapu 2018; Chandra-Mouli and Patel 2020; Dambhare, Wagh, and Dudhe 2012; Garg and Anand 2015; Hennegan and Montgomery 2016; Mudey et al. 2010). Findings from these studies have also identified inadequate menstruation-related knowledge, the persistence of misconceptions and a preference for information seeking from inadequately informed family and peers rather than healthcare providers.

Provider interviews pointed to several systemic challenges. These included inadequate WASH infrastructure and irregular government supplies of menstrual products, forcing women and girls to rely on the private sector (see also, Garg and Anand 2015; Dalai et al. 2024). Programme limitations also constrain access. For example, the absence of Accredited Social Health Activists (ASHAs) in urban slum communities suggests poorer outreach to the urban poor than in rural areas (Muralidharan 2019). Providers cited the absence of toilets, erratic water supply, poor maintenance, and unsafe disposal practices as barriers to safe menstrual health management, corroborating findings from earlier community-based studies in slums (Chakravarthy, Rajagopal, and Joshi 2019).

Past studies have highlighted healthcare providers' incomplete knowledge and embarrassment in communicating openly with adolescent clients. For example, a study of frontline health workers and teachers in Delhi concluded that providers' knowledge was far from comprehensive (Garg et al. 2022). Other studies have highlighted providers' perceptions about feelings of shame and embarrassment girls face in openly discussing SRH-related problems with healthcare providers (Sahay 2020; Swe et al. 2022). Our findings add to this evidence, showing that providers often lacked a comprehensive understanding of menstruation, adhered to traditional norms, had limited communication skills, and lacked the sensitivity needed to build rapport and deliver menstruation-related services.

Based on the findings of this study, it would appear that capacity-building for healthcare providers to date has been inadequate in ensuring sound awareness, addressing entrenched taboos and skill gaps, and enabling providers to offer empathetic counselling to girls and boys. Given clear evidence that healthcare providers' attitudes and capacities are key to the success of menstruation-related interventions (Babbar et al. 2022; Joshi et al. 2025; Nawaz, Romail Manan, and Rahman 2022), targeted work is needed to dispel misperceptions and equip frontline workers and medical practitioners with sensitive, non-judgemental communication and counselling skills to engage young people.

Limitations

We acknowledge certain limitations to this study. With respect to internal validity, it is important to note that we did not probe healthcare practices, training exposure, or differences across provider categories. Despite our best efforts when conducting interviews, privacy could not always be ensured, the interviews were sometimes interrupted, and some responses may have been influenced by personal and procedural reactivity and social desirability effects. In relation to external validity and generalisability, the research was conducted in slum areas in a single city and relied on narratives from only 16 providers, limiting generalisability. However, many of the challenges observed are likely not unique to Mumbai, and documenting experiences in this setting may offer insights relevant to other cities with extensive informal settlements. By detailing the socio-demographic context of the slums, we enable readers to judge the applicability of findings to other urban, resource-constrained settings in India and beyond.

Looking forward

Study findings underscore the need for further enquiry as well as multisectoral action to strengthen MHM initiatives in urban slum settings (Hennegan and Montgomery 2016; Werdhani et al. 2025). The Supreme Court ruling stressing MHM as a fundamental right and calling for multilevel action reinforces this need (Dr. Jaya Thakur vs. Government of India 2026). Importantly, the findings call for a stronger evidence base in MHM in order to advance menstruation-related human rights, including research that quantifies challenges and identifies evidence-based best practices (Hennegan and Montgomery 2016; McCammon et al. 2020). Our findings also underscore the need for research that directly examines healthcare providers' own perspectives, capacities, and challenges in delivering menstrual health services, and identifies evidence-based actions to inform programming for healthcare providers.

In addition, our findings suggest the need for multisectoral programme activities. With regard to capacity building for providers, particularly frontline workers, education and training must be reviewed and efforts made to orient providers towards the importance of menstrual health and its management, enable them to overcome adherence to traditional taboos and discomfort, and build the communication skills for engaging adolescents and young people on culturally sensitive issues including menstruation (Chilinda et al. 2014). On the education front, the findings call for integrating comprehensive menstrual health education into school-based health education programmes to build awareness, dispel myths, and breakdown communication barriers.

Improvements in WASH conditions, especially water and waste disposal are essential, and menstrual product distribution needs to be expanded to ensure the regular distribution of subsidised products in ways that guarantee accessibility to the poorest girls in resource-poor settings. Overall, such activities can combine to enable more holistic support to girls (and women), foster girl-friendly, open, and empathetic engagement, and respect the need for private and confidential, culturally sensitive counselling.

Note

1. Other menstrual products are rarely used in India; in 2019-21, just two percent of those aged 15-24 used tampons or any other method (IIPS and ICF 2021) and products such as reusable sanitary pads, may not be suitable of feasible in the absence of improved WASH facilities (see also Hennegan and Montgomery 2016).

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Use of AI

The authors used ChatGPT (GPT-5.2, OpenAI) as a generative artificial intelligence tool to assist with language refinement. The AI was not used for data analysis, data interpretation, or generation of results. All substantive intellectual

contributions, interpretation of findings, and final editorial decisions were made by the authors, who take full responsibility for the content of the manuscript.

Author contributions

Credit: **Paramita Majumdar**: Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing; **Shireen J. Jejeebhoy**: Conceptualization, Supervision, Writing – original draft, Writing – review & editing; **Aparajita Chattopadhyay**: Conceptualization, Project administration, Resources, Writing – review & editing.

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The authors state they have no competing interests to declare.

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Data availability statement

The dataset, transcripts and interview guides for the current study may be made available by the corresponding author upon reasonable request. A project factsheet is available on the website of International Institute for Population Sciences (https://www.iipsindia.ac.in/sites/default/files/MHM_Fact_sheet.pdf).

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