

Short Communication

High prevalence of gynaecological symptoms among Indian women: implications for integrated menstrual and reproductive health

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ABSTRACT

This short communication reports on the unexpectedly high prevalence of symptoms consistent with reproductive tract infections and sexually transmitted infections among urban, mid-to-high-income Indian women participating in a study on menstrual cup acceptability. As part of the screening process, data on gynaecological symptoms were collected via Google Forms, adhering to the World Health Organization (WHO) Syndromic Case Management Protocol. The exclusion criteria were based on this protocol, supplemented by expert recommendations and ethical review considerations. Given the online recruitment process, comprehensive exclusion data was available, allowing for a detailed assessment of symptom prevalence prior to exclusion. Analysis revealed that of the 41.5% of the 164 respondents who registered for participation report at least one symptom consistent with the WHO protocol. This high prevalence, observed in a demographic often assumed to have better access to healthcare, highlights significant gaps in awareness, screening, and care-seeking behaviors. The findings underscore the need for more integrated approaches to menstrual health (MH) and sexual and reproductive health (SRH), leveraging MH interventions as entry points for proactive screening, improved health education and enhanced access to SRH services.

Key words: gynaecological symptoms, India, menstrual cups, menstrual health, reproductive tract infections, sexual and reproductive health

HIGHLIGHTS

- Integrating menstrual health and sexual and reproductive health is crucial for holistic well-being.
- Approximately 40% of women in the study exhibited gynaecological symptoms, revealing a widespread but under-addressed health issue.
- Many women didn't recognize their symptoms as problematic, highlighting the need for increased awareness and care-seeking.
- Education, access to healthcare, and destigmatization are key to improving women's health.

INTRODUCTION

The integration of menstrual health (MH) and sexual and reproductive health (SRH) is crucial for improving women's overall well-being (Hoppes *et al.* 2022). In the diverse socio-economic and geographical landscape of India, despite progress in SRH, significant challenges remain, particularly regarding gynaecological morbidity (Bhasin *et al.* 2020). Regional variation in treatment utilization, ranging from 64% in Punjab to 8% in Nagaland, highlights the persistent challenge of gynaecological morbidity across India. However, siloed funding and programming led to a lack of integrated data, hindering a comprehensive understanding and the development of effective intervention strategies.

While menstrual hygiene management (MHM) is gaining attention, with the increasing use of disposable sanitary pads (NFHS-5 reports 77.3% of young Indian women use a hygienic method, primarily sanitary pads) (IIPS & MacroInternational 2022), the broader aspects of MH, including their connection to reproductive tract infections (RTIs) and sexually transmitted infections (STIs), are often overlooked. The rise in disposable pad use also presents environmental challenges, as the waste is primarily non-biodegradable plastic, and India's waste management system is not equipped to handle it effectively. Menstrual cups are a reusable, potentially more sustainable alternative, but data on their acceptability and safety in the Indian context

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are limited (Babbar & Garikipati 2023; van Eijk *et al.* 2019). This short communication reports on an unexpected finding from a larger study on menstrual cup acceptability in India (Garikipati & Mahajan 2021): a high prevalence of RTI/STI symptoms among participants among urban, mid-to-high-income women who registered for the study. This finding highlights the critical need for a more integrated approach to MH and SRH in India (Babbar & Sivakami 2023), even among populations assumed to have better access to care.

METHODS

The study included the urban mid-to-high-income group (recruitment via online networks) for which detailed data on exclusion criteria were available due to the online recruitment process. Data collection occurred between April 2020 and December 2021. Recruitment was conducted via online networks, and potential participants registered their interest through Google Forms. Eligibility criteria included being 18–45 years old, menstruating, and not having any exclusion criteria, as described below.

Exclusion criteria: Stringent exclusion criteria were implemented based on the WHO Syndromic Case Management Protocol for RTIs/STIs (World Health Organization 2021), consultation with a gynaecologist, and ethical considerations. These criteria were designed to exclude women with preexisting RTIs/STIs from the menstrual cup acceptability study. Exclusion criteria included: reporting more than one RTI/STI symptom (except for abnormal vaginal discharge alone), having a sexual partner with urethral discharge or genital sores, painful intercourse combined with other symptoms, irregular periods combined with other symptoms, recent miscarriage or abortion without resumption of regular periods, planning pregnancy, and lack of access to piped or collected water at home. IUD users were also to be excluded.

Data collection: Data collected via Google Forms included demographic information, menstrual history, gynaecological symptoms (using a checklist based on the WHO Protocol: vaginal itching/burning, lower abdominal pain, abnormal vaginal discharge, and painful urination), and health-seeking behavior. This short communication focuses specifically on the prevalence of reported symptoms among those who registered for the study and participated in the screening and the reasons for their exclusion.

Data analysis: Descriptive statistics were used to analyze the prevalence of reported gynaecological symptoms across the entire sample ($N = 164$).

Ethical considerations: The study received ethical approval from the Center for Operations Research and Training Ethics Review Board, India (EC-CORT/2032) and the University of Liverpool Ethics Committee, UK (Ref: 7720). Informed consent was obtained electronically from all 164 participants.

RESULTS

Data on gynaecological symptoms were collected from 164 urban, mid-to-high-income women who registered an interest in participating in the menstrual cup acceptability study. Table 1 presents the number and percentage of women reporting different numbers of gynaecological symptoms. A significant proportion of these women, 41.5% ($n = 68$), reported experiencing between one (25.61%, $n = 42$) to four (1.22%, $n = 2$) symptoms consistent with a RTI or STI, based on the WHO Syndromic Case Management Protocol. Figure 1 illustrates the types of symptoms reported. The most commonly reported symptoms were vaginal itching or burning (21.2%, $n = 35$), lower abdominal pain (20.6%, $n = 34$), abnormal vaginal discharge

Table 1 | Prevalence and number of gynaecological symptoms reported by registrants during screening

Number of symptoms	Number	Percentage
No symptoms	96	58.53%
1 symptom	42	25.61%
2 symptoms	18	10.98%
3 symptoms	6	3.66%
4 symptoms	2	1.22%
Total	164	100%

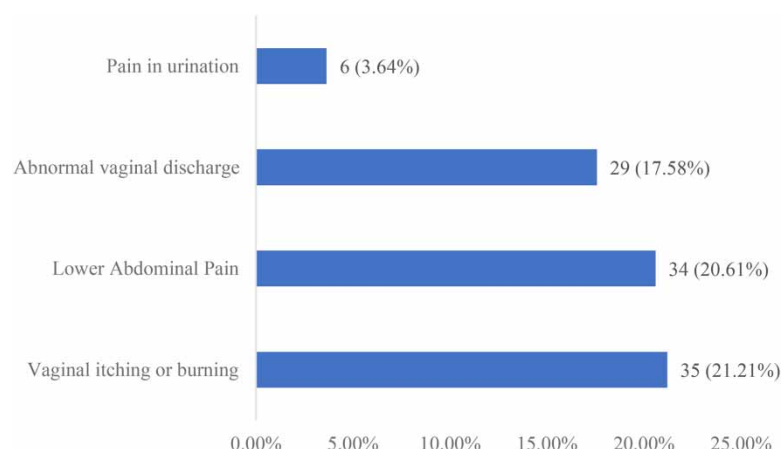


Figure 1 | Types of symptoms reported by 68 of the 164 registrants during screening. The number of women reporting symptoms exceeds 68 since a respondent could report more than one symptom.

(17.6%, $n = 29$), and painful urination (3.6%, $n = 6$). The 68 women who reported RTI/STI symptoms were excluded from the cup acceptability study.

DISCUSSION

The finding that 41.5% of urban, mid-to-high-income women who registered for a study on menstrual cup acceptability reported experiencing at least one gynaecological symptom suggestive of an RTI or STI is significant and unexpected. This high prevalence of self-reported symptoms highlights a potentially widespread and under-addressed public health issue within a demographic often assumed to have better access to healthcare and information. This finding challenges the assumption that higher socio-economic status automatically translates to better gynaecological health outcomes.

The context of this finding – emerging from a study initially focused on MH – addresses the critical need to integrate MH and SRH services (Babbar & Sivakami 2023). MH programs offer a valuable and potentially less stigmatizing opportunity to reach women. Because women may be more comfortable discussing menstrual issues, MHM interventions can serve as a crucial entry point for SRH education, symptom screening, and referral. These findings have significant implications for policy and program design. Government initiatives promoting menstrual hygiene should incorporate a broader SRH perspective (The Economic Times 2023). Simply providing menstrual products without addressing underlying gynaecological health issues is insufficient.

A multi-pronged approach is needed, including (a) building capacities of front line workers to provide information and referrals based on symptoms of RTIs/STIs with the lens of destigmatisation of menstruation and body literacy; (b) training healthcare providers (including ASHAs and ANMs) to proactively inquire about gynaecological symptoms; (c) developing culturally appropriate educational materials addressing both MH and RTI/STI prevention and management, emphasizing timely care, destigmatizing gynaecological problems, and improving body literacy; (d) ensuring adequate access to water, sanitation, and hygiene facilities; and (e) ensuring access to affordable and quality diagnostic and treatment services for RTIs/STIs (addressing financial barriers, guaranteeing provider availability, and providing access to medications and follow-up).

This study has a few limitations. First, it relies on self-reported symptoms, which may be subject to recall bias and may not reflect clinical diagnoses. Second, the sample, while purposively selected, is not statistically representative of the entire urban, mid-to-high-income Indian population. Lastly, the cross-sectional nature of the data does not allow us to establish causality.

In conclusion, this study reveals a concerning high prevalence of self-reported gynaecological symptoms among urban, mid-to-high-income Indian women seeking to participate in a menstrual product acceptability study. The widespread experience of symptoms highlights a significant public health challenge. It underscores the urgent need to move beyond a narrow

focus on menstrual hygiene and embrace a comprehensive approach that integrates MH and SRH. There is specifically a critical need to build capacities among frontline SRH services to provide information and referrals based on symptoms of RTIs/STIs with the lens of destigmatisation of menstruation and body literacy. By building MH capacities into SRH programming in terms of training providers, launching awareness campaigns, and ensuring access to quality care and WASH facilities, India can significantly improve women's gynaecological health. The time to act is now, to break the silence and ensure all women have access to the information, support, and services they need.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study received ethical approval from the Center of Operations Research and Training Ethics Review Board, India (Ref: EC-CORT/2032) and the University of Liverpool Ethics Committee, UK (Ref: 7720).

CONSENT FOR PUBLICATION

All the authors provide their consent for publication

FUNDING

The study was funded by Overseas Development Assistance in year 2018–2019.

AUTHORS' CONTRIBUTIONS

SG and KB wrote the original draft. KB prepared the tables. SG, KB, and TM edited the manuscript.

DATA AVAILABILITY STATEMENT

Data cannot be made publicly available; readers should contact the corresponding author for details.

CONFLICT OF INTEREST

The authors declare there is no conflict.

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First received 10 September 2024; accepted in revised form 17 March 2025. Available online 21 May 2025