

Review

Menstruation in Adolescent Girls: Myths & Taboos

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Abstract

Menstruation is a natural process experienced by women. It signifies the natural commencement of puberty. Yet, it is shrouded with taboos and myths across various cultures. Menstruation related taboos not only ostracize women from socio-cultural activities but also affect their emotional well-being, mental condition, lifestyle and overall health. Tackling these deeply entrenched beliefs presents considerable challenges, particularly due to the lack of knowledge among girls about puberty, menstruation, and reproductive health. Therefore, there's a crucial need for a strategic approach to tackle the issues. This paper aims at delving into prevalent menstruation-related myths and taboos in India, their detrimental impact on women's lives, the importance of addressing them in primary care, and an overview of various strategies to combat these taboos. Furthermore, the article proposes strategies to improve menstrual health and hygiene among adolescent girls. The study finds that cultural and social attitudes toward menstruation are influenced by factors such as girls' education, attitudes, family environment, cultural background and beliefs.

Keywords

Adolescent, menarche, menstruation, myth, social & cultural practices, taboos.

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Menstruacija pri mladostnicah: miti in tabuji

Izvleček

Menstruacija je naraven proces, ki ga doživljajo ženske, vendar je v različnih kulturah zavita v tabuje, povezane z menstruacijo, ne le da odvrtačo ženske od družbeno-kulturnih dejavnosti, temveč vpliva tudi na njihovo duševno stanje, življenjski slog in splošno zdravje. Reševanje teh globoko zakoreninjenih prepričanj predstavlja velik izziv, zlasti zaradi pomanjkanja znanja med dekleti o puberteti, menstruaciji in reproduktivnem zdravju. Namen tega prispevka je poglobiti se v prevladujoče mite in tabuje v zvezi z menstruacijo v Indiji, njihov negativen vpliv na življenja žensk, pomen obravnave le-teh v primarni oskrbi in pregled različnih strategij za boj proti tem tabujem. Poleg tega članek predlaga strategije za izboljšanje menstrualnega zdravja in higiene med mladostnicami. Študija ugotavlja, da na kulturni in družbeni odnos do menstruacije vplivajo dejavniki, kot so izobrazba deklet, družinsko okolje, kulturno ozadje in prepričanja.

Ključne besede

Adolescenca, menstruacija, miti, socialni in kulturni običaji, tabuji

Introduction

Menstruation is a natural physiological phenomenon of normal healthy females who experience shedding of blood from the uterine endometrium in every month from the age of menarche until menopause. It typically commences in girls aged 11-14 years and serves as a key indicator that puberty is underway. During the puberty phase, there occur notable changes in one's physical, psychological and cognitive abilities. For women, the onset of menstruation, known as menarche, is one of the most significant and memorable events of adolescence (Alharbi et al., 2018). Menarche marks the beginning of a normal biological process during which a girl gradually matures. Despite being a natural process exclusive to adolescent girls and women, menstruation has long been obscured by myths and taboos across various cultures in the third world countries, especially in India (Kaur et al., 2018). These societal attitudes have marginalized women from participating fully in various aspects of socio-cultural life. The pervasive taboos surrounding menstruation have far-reaching consequences, impacting the emotional well-being, mindset, lifestyle and, most importantly, the health of girls and women. Ganguly and Midya (2023) reported various cultural and religious restrictions that are imposed upon the school-going early adolescent girls in Bankura, West Bengal. Limited awareness and understanding of puberty, menstruation and reproductive health among girls further

perpetuate these socio-cultural taboos and myths. Consequently, addressing these deeply ingrained issues necessitates a deliberate and comprehensive strategy. This paper aims at shedding light on the prevalent beliefs surrounding menstruation in India, their detrimental effect on women's lives, and the imperative need to address these concerns within primary care settings.

Myths and taboos related to menstruation

In Nepal, during the menstruation, women are considered filthy, impure and untouchable (Amatya et al., 2018). These social misconceptions prevent girls from participating in their daily activities, such as touching kitchen items, livestock, men, and water resources; consuming certain foods like milk and other dairy products; and visiting specific public places, including temples, prayer rooms, and cultural ceremonies (House et al., 2013). Additionally, girls are often forced to sleep alone in cattle sheds, known as Chhaupadi, where personal hygiene is severely lacking (Thakuri et al., 2021). Nonetheless, Chhaupadi custom is not only common during menstruation but also during postpartum period. When living in the Chhaupadi huts during menstrual cycle, women/girls experience physical as well as psychological anguishes. In the western hills of Nepal, several incidents have been documented during

the practice of living in Chhaupadi huts, including rape, sexual assault, illness, and bites from snakes or scorpions (Thakuri et al., 2021). These incidents were connected to inadequate security and unhygienic surroundings (Thapa & Aro, 2021). Poor hygiene and sanitation standards in Chhaupadi are also a result of a lack of sanitary napkins, an unclean environment, and limited access to water and sanitation services (Sharma et al., 2022). Poor menstrual hygienic practices adversely affect one's health, increasing the risk of the genitourinary and reproductive tract infections, depression, anxiety and cervical cancer (Thakuri et al., 2021). According to a study conducted on Tanzanian adolescent girls (aged 16–19 years), the most prevalent menstrual "taboo" is the possibility of infertility as a form of punishment and improper disposal of menstrual waste (Sommer, 2013). Taboos include beliefs such as "If one flushes her pad down the toilet, she can never become pregnant," and "If her brother finds out that she has menstrual blood, she can never become a parent in her entire life" (Sommer, 2013). Conversely, a significant portion of Cambodian girls were advised by their mothers to retain their initial used menstrual sanitary material, as it was believed to provide protection against malicious intentions, to act as an antidote for snakebites, and to enhance skin smoothness (Sommer et al., 2015). Menstruating women and girls in Western Uganda are often restricted from drinking milk due to a belief that it could impact milk production from cows (Mohammed and Larsen-Reindorf, 2020). Similar prohibitions exist in Eastern Uganda, where it is thought that seeding groundnuts during menstruation would reduce crop productivity (Mohammed and Larsen-Reindorf, 2020).

In India, discussing menstruation has long been considered taboo, and even today, cultural and social influences continue to pose hurdles to the advancement of knowledge on the subject. A significant majority of the 355 million menstruating women and girls in India encounter uncomfortable and undignified experiences with menstrual hygiene management (Sharma et al. 2020). In many parts of India, menstruation is still culturally viewed as unclean and impure. It is often accompanied with ancient myths. The origin of these myths can be traced back to the Vedic era, often associated with the stories like Indra's slaying of Vritra. The Veda declares that the guilt of killing a Brāhmana, akin to murder, manifests monthly as the menstrual flow in women (Janet, 1994). According to Samvarta, it is said that "Father, mother, and brother, all

these three go to hell if they see a maiden in puberty." In the Hindu faith, women are traditionally forbidden from engaging themselves in regular activities during menstruation. They have to undergo a process of purification before rejoining their families and resuming their daily tasks. A class of neuropeptides known as kisspeptin is essential for controlling ovulation and bringing on puberty in sexually mature females (Xie et al., 2022). There is no rational basis for considering menstruating women as 'impure'. Many women and girls in India face several restrictions in their daily lives due to menstruation (Table 1). For urban females, the main limitation during menstruation is to stay out of the prayer room and ritual places. Rural girls face restrictions in entering kitchen and store rooms or applying Kohl (Joshi and Fawcett, 2001). There is a misconception that menstruating women are unhygienic and unclean, leading to concerns about food contamination when they prepare or handle it (Bhalgat, 2023). There is a myth that during menstruation, the body emits a specific odour or radiation that spoils preserved food (Kumar and Srivastava, 2011). Consequently, they have to avoid handling sour foods like pickles during this time with the belief that such food may be spoiled.

Dysmenorrhea, a frequently encountered gynecological condition, is characterized by excruciating menstrual cramps that originate in the uterus (Itani et al., 2022). Swain and Nayak (2018) identified dysmenorrhea as the most common issue among menstruating girls in Balda village in Koraput district, Odisha. Girls are often prohibited from touching holy books and men during menstruation. A pubertal ceremony is a ritual that is celebrated when a girl attains Puberty. In the Paraja and Rana communities, menstruating girl is referred to as Bartaman Jhia, and her pubertal ceremony is called Uthani. Her family members then consult Dishari; a traditional healer, who follows religious calendar (Pāñji) and guide the devotees about the rituals and customs to follow. Dishari advises them to sacrifice animals, typically a black hen or a male goat in order to ward off the evil spirit associated with it. Girls are instructed to spend 7-9 days at indoor during the period of menstruation which is considered as pollutant period. After that, the family members take her to bathe at the holy river in order to purify her. Simultaneously, the Dishari performs some defined rites and sacrifices animal at the river bank. Once the ceremonies are completed, the family invites relatives and villagers for a feast. The girl uses pieces of clothing instead of sanitary napkins as going out to buy sanitary

napkins is considered as a sin (Swain & Nayak, 2018). In the Paraja community, when a girl attains menarche, her family either arranges a party or offers a coconut to God at home. Menstruating girls in the Rana community are bound by a number of socio-cultural restrictions. During their menstruation, they are not allowed to go into the kitchen or do any cooking. They are also prohibited from going inside the temples and other places of worship. They must also avoid touching the men in the society and taking food from kitchen during menstruation. They are not allowed to consume sour, spicy, or Prasāda (Vegetarian foods especially for devotees). They are only allowed to consume rice, jaggery, and green vegetables at this time because they believe that eating sweets will cause profuse bleeding (Saga). Additionally, they are not allowed to cross Dhinki (the traditional wooden rice meal) as they consider it to be extremely bleeding (Swain and Nayak, 2018). The Rana community observes these limitations as a part of their cultural views and customs surrounding menstruation.

Cultural norms and religious taboos surrounding menstruation are often aggravated by traditional belief about evil spirits, as well as feelings of shame and embarrassment related to sexual reproduction (Garg and Anand, 2015). In some societies, women bury their cloths used during menstruation as a means of protecting them from perceived influences of evil spirits (Sivakami et al., 2019). In Suriname, there is a belief that menstrual blood holds a dangerous power, and individuals with malicious intent can harm a menstruating woman or girl by using black magic ("wisi"). Additionally, it is believed that a woman can exert control over a man by using her menstrual blood to impose her will (Garg and Anand, 2015). It's interesting to note that such beliefs are still observed in Asia, including India (Khatuja et al., 2019). However, there is no logical or scientific explanation for these beliefs.

In some parts of India, strict dietary restrictions are also observed during menstruation, with menstruating girls typically avoiding sour foods like curd, tamarind and pickles (Puri and Kapoor, 2006). It is believed that consuming such foods may disturb or even stop the menstrual flow (Sadiq and Salih, 2013). A common misconception among teenage girls is that physical activity during menstruation aggravates dysmenorrhea (John et al. 2021). However, in reality, exercise can actually help to alleviate premenstrual syndrome and dysmenorrhea (Agarwal & Agarwal, 2010). Additionally, exercise triggers the release of serotonin, which can enhance mood and overall well-being (Sadiq

and Salih, 2013; Garg and Anand, 2015). In Brazil, a study found that menstruating women were prohibited from touching, harvesting, or preparing medicinal plants due to beliefs that it could harm the plants or reduce their medicinal properties (Siqueira et al. 2021).

In almost all parts of India, perception of Hinduism revolves around the concept of purity and pollution. Bodily excretions are considered polluting as are the bodies when they produce them. All caste groups experience ritual impurity due to menstruation and childbirth. Water is frequently employed as the primary means of purification. Preserving water sources from such contamination, as they are considered the physical embodiment of Hindu deities, becomes a prime concern. This sheds light on prohibiting menstruating girls and women from performing many daily works. There is a belief that if a girl or woman in her menstrual period touches a cow, it may render the cow infertile (Garg and Anand, 2015). This association often leads girls to perceive their own bodies as carriers of curse and impurity. Muslim girls reportedly avoid touching religious books, performing prayer, and visiting mosques (Fischer, 1978). Similarly, girls from the Sarna tribe also avoid visiting their places of worship during menstruation. Christian girls, on the contrary, actively participate in worship and attend church services even during their menstrual period (Maharaj and Winkler, 2020).

There is a long-standing custom among the Lohra tribe that mothers do not discuss menstruation with their daughters (Kumar and Srivastava, 2011). Kayastha is a prominent and influential caste in India and Nepal, traditionally associated with administrative and religious duties, and considered the direct offspring of a Vedic deity (Kumar and Srivastava, 2011). It's a common superstition among Kayastha families that handling handmade ghee or vinegar while a woman is menstruating will ruin it.

A menstruating female is not allowed to greet guests, sit on the couch, enter kitchen or serve meals in Marwari households because she is considered impure (Chawla, 1992). The Oraon tribe holds a belief that when a girl attains menarche and if her mother shreds a piece of cloth into three equal parts in one breath and offers it to her daughter, it will alleviate abdominal pain (Kumari et al., 2021). Among the Bhargav Brahmins, it is a tradition for menstruating girls to refrain from touching iron objects like locks and keys (Eram & Tamanna, 2016).

Impact of taboos related to menstruation on women's life

Taboos surrounding menstruation in Indian societies (Fig. 1) profoundly affect the emotional wellbeing, mental health, lifestyle and, most crucially, the physical health of girls and women (Garg and Anand, 2015). The early onset of menstruation (before age 12) reduces school enrolment by 13% (Khanna, 2019). Despite being in the 21st century, millions of women across India still encounter substantial obstacles to achieve comfortable and dignified experiences with menstrual health (Yadav and Pandey, 2023). Moreover, the monthly menstruation period also presents obstacles for female students. Gender-unfriendly school culture, a lack of female toilet facilities, and insufficient menstrual

protection further exacerbate the situation. In India, more than 77% of women and girls who are menstruating use old cloths (Garg and Anand, 2015). A study on a Muslim community in India reported that more than 80 percent women and girls use old cloths (Adak and Midya, 2020). Insufficient protection and inadequate washing facilities can increase susceptibility to infection, while the odour of menstrual blood may subject girls to stigmatization, which affects their mental health (Parker et al., 2014). The task of confronting socio-cultural taboos and beliefs surrounding menstruation becomes even more complex due to limited knowledge and understanding of puberty, menstruation, and reproductive health (Puri and Kapoor, 2006, Ahuja et al., 2018). There are different perceptions among girls regarding the cause of menstruation (Table 2).

Table 1. Restriction of daily activities during menstruation.

Tabela 1. Omejitve vsakodnevnih opravil med menstruacijo.

Researchers	Setting	Number of participants	Percentage of responded facing restrictions from different activities												
			Religious occasion	Physical activity/playing	Schooling	Attending family functions	Household work	Food restriction	Talk to boys	Visit to others home	Sleep on routine bed	Touch stored food	Enter kitchen	Separated	No restrictions at all
Mudey et al., 2010		300	87	18.6	12.6	14.3	7	2.6		23.6					17
Thakre et al., 2011	Rural	146	73.2	28.7	7.5		28.7				30.8	41.5		43.1	23.2
	Urban	241	67.6	19.5	3.7		24.9				23.6	26.9		26.9	28.2
Seenivasan et al., 2016		500	92.4		9.2		55.7				51.8	44.0			
Maji, 2016		100	100									57			
Hakim et al., 2017	Government	250	97.2					15.6			3.2				0
	Non-Govt.	250	100					12			2.8				0
Mathiyalagen et al., 2017		242	44.6	21.9	34.7	7.9	33.1				58.7				
Sultan and Sahu, 2017		350	76	12	5		8	22			15				
Chauhan et al., 2019		165	88.4		1.8			6							11.5
Das and Tasa, 2019		107	82.2	47.6	45.7	62.6	52.3				53.2	59.8	42.9		
Parle and Khatoon, 2019		600	88.9				35.1								
Shoor, 2017		352	53.9	11	0.8	7.9		37.7	2.27	5.39			7.1	0.2	11
Patel et al., 2019		273	62.6	10.6	1.8	20.9			4.4		23.1		12.1	8.4	28.6

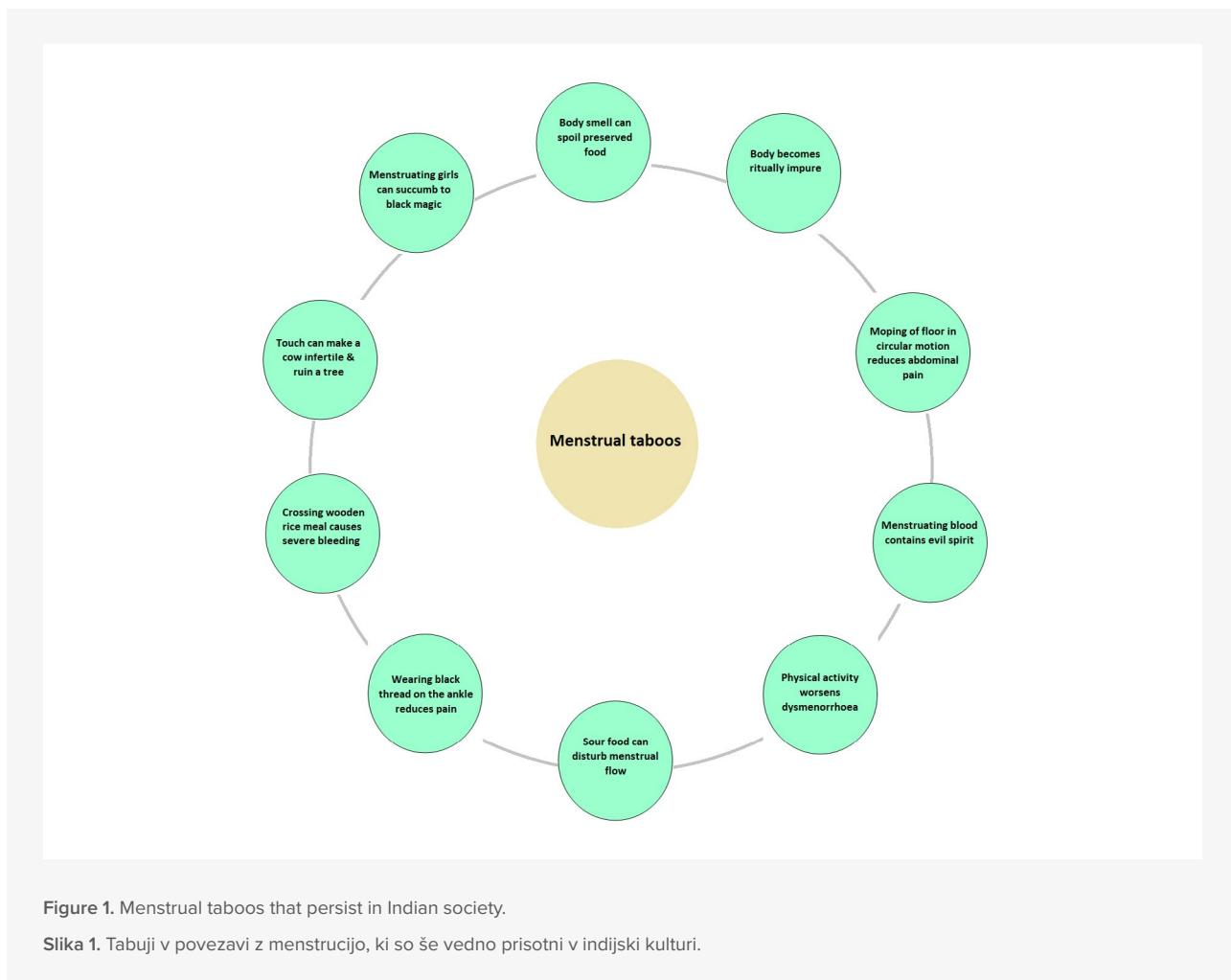


Figure 1. Menstrual taboos that persist in Indian society.

Slika 1. Tabuji v povezavi z menstruacijo, ki so še vedno prisotni v indijski kulturi.

Table 2. Overview of socio-cultural perceptions about the cause of menstruation in India.

Tabela 2. Pregled socialno-kulturnega dojemanja menstruacije v Indiji.

No of participants	Menstruation perceived as				References
	Physiological/ natural process (%)	Curse of God (%)	Disease (%)	Don't Know (%)	
387	18.4	1.0		80.6	Thakre et al., 2011
506	74.2	17			Shanbhag et al., 2012
798	41.1				Bhattacharjee et al., 2013
50	84	2	2	12	Dixit et al., 2016
100	38	16		46	Maji, 2016
242	71.5	6.6	2.9	18.6	Mathiyalagen et al., 2017
350	37	22			Sultan and Sahu, 2017
165	18.6		4	55.8	Chauhan et al., 2019
110	38.2	15.5		46.4	Das and Tasa, 2019
600	68.1	3.8	1.2	26.8	Parle and Khatoon, 2019
273	35.9	27.1	1.5	35.5	Patel et al., 2019
1963	74.6	15.2	1.3	7.5	Tamphasana et al., 2020

Strategies to combat menstruation related myths

The beginning of menstruation marks a significant milestone in female puberty, triggering substantial psychological and behavioural changes in adolescent girls. Indian society, that is most religiously and ethnically diverse, generates a lot of traditions, myths, misconceptions and superstition regarding menstruation. Adolescent girls often get succumb with reproductive tract infections due to poor hygiene and health. Based on the available evidences, it is crucial to adopt a strategy to combat the myths and social taboos associated with menstruation. It is essential to enhance the reproductive health of adolescent girls and women. The primary strategy in this regard should be to raise awareness among adolescent girls regarding menstrual health and hygiene (Garg and Anand, 2015). A comprehensive education involving schools, parents, and health personnel is essential to improve knowledge and practices related to menstrual hygiene (Rastogi et al. 2019). Additionally, promoting open discussions and creating supportive environments in schools and communities can further enhance their confidence and knowledge, leading to better health outcomes and overall well-being.

Often, young girls grow up with limited and/or mis-information about menstruation as their mothers and other women feel embarrassed to discuss these issues with them. The mothers and other women may also be unaware of biological facts and good hygienic practices, and they rather pass on cultural taboos and restriction to be observed. Empowering women through education and increasing their participation in decision-making processes is crucial for tackling a range of societal issues like taboos associated with menstruation. Women and girls often find themselves excluded from decision-making positions as a result of lower literacy rates. Raising women's educational attainment is, therefore, crucial for eradicating persistent cultural barriers as well as for promoting improved community health. Access to sanitary napkins and appropriate sanitation facilities, along with washing amenities, should be guaranteed with a gender-sensitive approach. Schools, governments, and non-governmental organizations should collaborate to provide these essential resources. Schools can ensure that these facilities are available on their premises, while governments can create policies and allocate funds to support menstrual health initiatives. NGOs can play a crucial role in advocacy, education, and

distribution of sanitary products, especially in underserved communities. On the other hand, initiatives should be taken to debunk misconceptions surrounding menstruation.

In rural and slum areas, where access to sanitary products is challenging, distribution of locally produced and distributed low-cost sanitary napkins can be an effective solution (Kumar and Srivastava, 2011). The initiative was initially launched in 2011 across 107 selected districts in 17 states in India, offering a pack of six sanitary napkins named "Free days" to rural adolescent girls just at \$ 0.072. Since 2014, funds have been allocated to States and Union Territories under the National Health Mission for decentralized procurement of sanitary napkin packs, which are then provided to rural adolescent girls at a subsidized rate. Accredited Social Health Activists (ASHAs) play a crucial role in India's rural healthcare system, serving as frontline workers linking communities to health services. They play a key role in distribution, with an incentive of receiving \$0.012 per sold pack, along with a free pack of napkins every month for their personal use (<https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1021&lid=391>). Expanding the involvement of male partners and addressing their belief system is crucial in challenging entrenched social norms and cultural taboos. Despite typically having less knowledge about menstruation (Cultural taboos and stigma, lack of education, Socioeconomic factors, Gender Inequality, Misinformation, Personal discomfort etc) it's essential for men and boys to comprehend it to effectively support their wives, daughters, mothers, students, employees and peers (Kirk and Sommer, 2006).

Menstruating girls must be advised to consume small indigenous fish or probiotic-enriched local fermented foods on regular basis to fulfil their nutritional requirements, improvement of gut health, proper nutrient absorption, development of immune function, maintaining hormonal balance, reduced inflammation and improvement of mental health (Ganguly et al., 2018a; Ganguly et al., 2024). Probiotics are beneficial microorganisms which when consumed in adequate amount confer health benefit to the host (Ganguly et al., 2024; Ganguly et al., 2018b; Ganguly et al., 2019). They improve the quality of intestinal microflora which helps to combat various bacterial and viral infections (Chattaraj et al., 2022; Ganguly et al., 2018c). Countries where a large section is battling with protein deficiency and malnutrition (Stephenson et al. 2000), it may hold potential in uplifting the general health status of the populace (Ganguly et al., 2018d). Multisectoral approaches involve

collaboration among various stakeholders and sectors to achieve shared health outcomes, optimizing resource use and improving program effectiveness (Salunke & Lal, 2017). A study conducted in Nigeria demonstrated that integrating menstrual health education into school curricula enhanced students' understanding and attitudes toward menstruation (Uzoечи et al., 2023). In India, an educational program targeting both girls and boys effectively reduced menstrual stigma. A study in Uttar Pradesh engaged men and boys in menstrual hygiene management, sensitizing them and training male teachers to provide MHM services in schools (Sahin et al., 2015). Another intervention involving classroom discussions on gender equality for adolescents over two years resulted in more supportive attitudes towards gender equality, with effects persisting two years after the program ended (Dhar et al., 2018). A comprehensive review focusing on low- and middle-income countries revealed that initiatives such as healthcare provider training and community outreach significantly improved menstrual health outcomes (Hennegan et al., 2019). Similarly, in Tanzania, a program providing menstrual health services and education to adolescent girls led to notable improvements in their sexual and reproductive health (Njee et al., 2024). A Ghanaian study found that females' education raises their overall academic achievement and school attendance (Montgomery et al. 2012). Meanwhile, a community-based program in Kenya addressed menstrual stigma and provided menstrual products, resulting in improved school attendance and self-esteem among girls (Wood et al., 22). In Bangladesh, engaging religious leaders and community members in menstrual health education successfully reduced stigma and promoted better menstrual hygiene practices (Warrington et al., 2021). In the United States, exposure to menstrual-themed media was

found to reduce stigma and foster positive attitudes toward menstruation (Ramaiyer et al., 2023).

Connecting physical infrastructure such as water and sanitation projects with health education and reproductive health programme is essential. It's important to address the issue in a more integrated and holistic manner. Menstruation is nothing but a very normal biological phenomenon, and adolescent girls and women should understand that they have the power of procreation only because of this virtue.

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Ethical approval (for researches involving animals or humans)

Ethical approval was granted by the Institutional Ethics Committee of Vidyasagar University vide Approval Number VU/IHEC-4/9-23.

Conflict of interest

The authors declare that there is 'no conflict of interest' to publication and authorship of this article.

Authors' Contributions

Conceptualization – M. G., D. K. M.; Investigation – M. G; Resources – M. G, S. J.; Supervision – D. K. M.; Validation - D. K. M.; Writing (original draft) – M. G, S. J., A. G.; Writing (review & editing) – A. G.

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