

Menstrual Health in Rural Adolescent Girls

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ABSTRACT

Menstruation is a natural physiological process, yet for millions of adolescent girls living in India's rural areas it remains a source of stigma, health risk, and educational disadvantage. This essay examines the multifaceted challenges that rural girls face, reviews existing data and interventions, and proposes a comprehensive, rights based strategy that links menstrual health to broader human rights commitments of the international community. By weaving together epidemiological evidence, sociocultural analysis, and policy evaluation, the discussion underscores why menstrual equity is not merely a hygiene issue but a fundamental human rights concern that demands coordinated action at local, national, and international levels. Menstruation, despite being a fundamental biological process, remains a profound barrier to health, education, and social equity for millions of adolescent girls in rural India, transforming a natural function into a significant source of stigma, health risk, and educational disadvantage. This essay intends to move beyond a simplistic view of menstrual hygiene by critically examining the complex, multifaceted challenges faced by rural Indian girls. It will meticulously review existing epidemiological data and current intervention models, seeking to understand the true prevalence of unhygienic practices, the associated health consequences such as increased risk of reproductive tract infections, and the pervasive impact of menstrual exclusion on school attendance and overall well-being. By integrating this evidence with a deep sociocultural analysis, the discussion will articulate how deeply ingrained taboos, inadequate sanitation infrastructure, and patriarchal norms combine to restrict girls' mobility, educational access, and bodily autonomy. Ultimately, this paper will argue that achieving menstrual equity is not merely a hygiene issue, but a fundamental human-rights concern that demands a comprehensive, rights-based strategy, linking local-level policy interventions with broader international human-rights commitments to ensure coordinated and effective action that secures health, dignity, and full participation for all girls.

Keywords: Mental health, Adolescent girls, Rural areas, Human rights

INTRODUCTION

The Universal Declaration of Human Rights (UDHR, 1948) affirms that "all human beings are born free and equal in dignity and rights." The right to health, education, and non discrimination are enshrined in Articles 12, 26, and 2 of the UDHR, respectively. Yet, in many parts of the world, biological events such as menstruation expose deep structural inequalities that prevent girls from fully enjoying these rights. In India, where roughly 70 % of the population resides in rural settings, adolescent girls (aged 10-19) confront a constellation of barriers that transform a normal bodily function into a chronic source of marginalisation.

This essay will provide a comprehensive, four-part analysis of the menstrual health challenges facing adolescent girls in rural India, beginning with (a) a clear delineation of the multifaceted impacts of inadequate menstrual management. This initial section will detail the resulting health consequences, such as increased susceptibility to reproductive tract infections; the educational consequences, including chronic school absenteeism and dropout rates; and the severe psychosocial impacts, encompassing emotional distress, shame, and reduced self-esteem. Following this, the essay will (b) critically assess the adequacy of current national programmes and international assistance, evaluating the reach, effectiveness, and sustainability of existing

schemes (like the centrally sponsored *Kishori Shakti Yojana* or locally supported NGO initiatives) in truly addressing the pervasive issues of stigma, infrastructure deficits, and affordability of menstrual products in remote areas. The discussion will then shift to (c) analyzing the robust human-rights framework—drawing upon rights to health, education, non-discrimination, and water and sanitation—that legally obliges the Indian state and the international community to take effective, non-retrogressive action to ensure menstrual equity. Finally, the paper will (d) recommend specific, evidence-based policy and programmatic measures that are meticulously aligned with the Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 5 (Gender Equality), thereby formulating a strategic roadmap that integrates menstrual dignity into the broader global human-rights and development agenda.

The Burden of Menstrual Morbidity in Rural Adolescence:

Prevalence of Menstrual Disorders:

National Family Health Survey-5 (NFHS-5, 2020-21) data reveal that among rural girls aged 15-19, 55 % report irregular cycles, 38 % experience dysmenorrhea severe enough to limit daily activities, and 22 % suffer from heavy menstrual bleeding (≥ 80 ml per cycle)[1]. These figures are markedly higher than urban counterparts, where irregular cycles are reported by 38% and severe dysmenorrhea by 27%[2].

Nutritional Interplay:

Iron deficiency anemia (IDA) is a significant public health concern globally, but it is particularly prevalent and impactful among adolescents due to their unique physiological, nutritional, and social circumstances. This age group (10-19 years) experiences a period of rapid growth spurt, which drastically increases the body's demand for iron to support expanding blood volume and developing muscle mass. For adolescent girls, the onset of menarche introduces a regular, chronic iron loss through menstruation, making them overwhelmingly more susceptible to anemia than their male counterparts. This vulnerability is compounded by widespread inadequate dietary intake common in many Indian settings, characterized by diets high in iron-inhibiting phytates and low in easily absorbed iron sources and Vitamin C. Furthermore, the prevalence of intestinal parasitic

infections like hookworm, especially in areas with poor sanitation, leads to chronic blood loss and impaired nutrient absorption, severely exacerbating the deficiency.

The long-term consequences of IDA during adolescence are severe, extending beyond mere physical symptoms like fatigue, weakness, and pallor. Iron is crucial for optimal neurological development, meaning deficiency detrimentally affects cognitive function, leading to reduced attention, poor concentration, and lower overall scholastic performance. Critically, IDA in an adolescent girl establishes an intergenerational cycle of malnutrition: an anemic girl is highly likely to become an anemic mother, facing increased risks of maternal and neonatal complications, premature birth, and delivering a low birth weight baby. This child is then born with compromised iron stores, highly probable to enter adolescence already deficient, thus perpetuating the entire negative health cycle.

To effectively combat this pervasive issue, a comprehensive public health strategy is essential, primarily centered on breaking this cycle. Weekly Iron and Folic Acid Supplementation (WIFS) programs are vital, providing prophylactic support, though their success relies heavily on improving adherence and compliance. Simultaneously, efforts must focus on dietary diversification and targeted nutrition education within school settings to promote the intake of iron-rich foods and absorption enhancers. Finally, public health interventions like periodic deworming are necessary to manage parasitic burdens, while medical guidance is required for managing excessive menstrual blood loss. Addressing IDA in adolescents is recognized as a strategic “window of opportunity” to safeguard the cognitive potential of the youth and ensure the future health of both mothers and children.

Anemia, defined as haemoglobin < 12 g/dL, afflicts 53 % of rural adolescent girls, compared with 31 % of urban peers[3]. Iron deficiency anemia exacerbates menstrual blood loss, creating a vicious cycle of fatigue, reduced concentration, and school absenteeism. Food diversification, which means incorporating a wider variety of foods into the diet, is considered the best and most sustainable way to prevent malnutrition caused by a lack of micronutrients[4,5]. While iron from animal sources (heme iron) is absorbed more easily by the body than iron from plants (non-heme iron), staple foods in the Indian diet—like whole grains, whole pulses (lentils/beans), and especially green leafy vegetables (GLVs)—still provide

a significant amount of the iron consumed[6].

Hygiene Related Infections:

A 2022 cross sectional study in Bihar and Uttar Pradesh found that 68 % of girls used cloth that had been washed with soap less than once per cycle, and 42 % reported at least one episode of reproductive tract infection (RTI) in the preceding year[7]. The lack of private, gender segregated latrines in schools—only 31 % of rural schools meet the basic sanitation standards set by the Ministry of Education—contributes directly to these infections[8].

Educational Consequences:

Research by the Indian Institute of Population Sciences (IIPS) estimates that menstrual related absenteeism leads to an average loss of 0.8 years of schooling per girl[9]. In states such as Bihar, where 30 % of girls miss school during menstruation, the dropout rate for secondary education is 23 % higher than the national average[10].

Sociocultural Dimensions of Menstrual Stigma:

Mythology and Taboo:

Across many rural communities, menstruation is framed as “impure” (ashuddha) and “shameful” (sharam). Qualitative interviews conducted in 2021 across six states (Maharashtra, Kerala, Rajasthan, Assam, Tamil Nadu, and Punjab) revealed that 71 % of mothers believed that girls should avoid cooking or religious activities while menstruating[11]. Such beliefs are reinforced by community elders and religious leaders, limiting girls’ mobility and participation.

Lack of Accurate Information:

Menstruation and sex education are fundamentally intertwined components of Comprehensive Sexuality Education (CSE), as menstruation serves as the most critical and early biological marker of pubertal maturation and the onset of reproductive capacity. Integrating these topics is essential because it provides adolescents with the necessary biological context to understand puberty, fertility, conception, contraception, and overall sexual health, simultaneously creating a structured educational environment to counteract deeply ingrained social taboos and shame that traditionally surround women’s bodies in cultures like India. Presenting the menstrual cycle as a normal, natural physiological process directly challenges

prevailing myths and reduces the fear often associated with menarche, shifting the focus from mere Menstrual Hygiene Management (MHM) to a broader understanding of bodily autonomy, health rights, and gender equity. Furthermore, teaching both genders about menstruation fosters empathy and respect among peers, transforming boys into informed allies rather than sources of stigma, which is crucial for establishing inclusive school and community environments that support girls’ continued education and psychological well-being. Despite this necessity, the integration faces barriers in India due to societal discomfort with discussing sexual health, leading to curricula that are often either non-standardized, delivered too late, or narrowly focused only on hygiene product distribution, failing to provide the comprehensive, rights-based knowledge young people require for informed decision-making.

A 2023 evaluation of school based sex education programmes showed that only 38 % of teachers felt competent to discuss menstruation, and 62 % omitted the topic entirely due to personal discomfort or lack of training[12]. Consequently, misinformation proliferates: many studies in India and elsewhere have revealed that many adolescent girls believe that doing exercise/physical activity during menses aggravate the dysmenorrhea while in real exercise can help relieve the menstruating women with symptoms of premenstrual syndrome and dysmenorrhea and relieve bloating. Exercise also causes a release of serotonin, making one feel much happier [13,14].

Gender Norms and Power Dynamics:

Patriarchal structures dictate that women’s bodies are subject to communal regulation. The “silence” surrounding menstruation reinforces gender hierarchies, making it difficult for girls to negotiate for resources (e.g., pads, clean water) or to challenge discriminatory practices. This silence also hampers collective action, as girls may fear ostracism if they speak out.

Human Rights Framework and International Obligations:

Right to Health:

The International Covenant on Economic, Social and Cultural Rights (ICESCR, Article 12) obliges states to “recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health”. The Committee on Economic, Social and Cultural Rights

(CESCR) has interpreted this to include the right to menstrual health, emphasizing that states must ensure access to affordable, safe, and culturally appropriate menstrual products[15].

Right to Education:

Article 13 of the ICESCR and Article 28 of the Convention on the Rights of the Child (CRC) guarantee the right to education. The UN Special Rapporteur on the Right to Education (2020) highlighted that “systemic denial of menstrual hygiene facilities constitutes a violation of the right to education, particularly for girls”[16].

Non Discrimination:

Both the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, Article 10) and the CRC (Article 2) require states to eliminate discrimination based on sex and to ensure equal opportunities in education. Menstrual stigma, by restricting girls’ attendance, directly contravenes these provisions.

International Community’s Role:

The Sustainable Development Goals (SDGs) embed menstrual health within Goal 3 (Good Health and Well Being) and Goal 5 (Gender Equality). Target 3.7 calls for universal access to sexual and reproductive health services, while Target 5.6 urges the elimination of discrimination and harmful practices. Moreover, the UN Human Rights Council’s 2022 resolution on “Menstrual Hygiene and Human Rights” urges member states to adopt comprehensive policies, allocate adequate resources, and involve civil society in programme design[17].

Thus, the international community—through multilateral agencies (UNICEF, WHO, UN Women), development partners, and NGOs—has a legal and moral duty to support national efforts, monitor compliance, and provide technical assistance.

Existing National Programmes and their Gaps:

Menstrual Hygiene Scheme (MHS):

Launched in 2011, the MHS provides free sanitary napkins to girls in government schools. While coverage has expanded to 1.2 million schools, supply chain irregularities persist: a 2022 audit found that 27 % of districts experienced stock outs for more than three months per year[18].

National Adolescent Health Programme (NAHP):

NAHP integrates menstrual health education into the Adolescent Health Toolkit. However, implementation relies on frontline health workers (ASHAs) who often lack refresher training. A 2023 evaluation reported that only 52 % of ASHAs could correctly answer basic questions about menstrual physiology[19].

Swachh Bharat Mission – Rural (SBM R):

SBM R has constructed 2.1 million household toilets, yet 38 % lack hand washing facilities, and 22 % have broken doors, compromising privacy—a critical factor for menstrual management[20].

Non Governmental Initiatives:

Organizations such as “Pad Bank” (Kashmir), “Sahayog” (Bihar), and “Menstrual Health Alliance India” (MHIA) have introduced reusable cloth pads, community awareness drives, and mobile based supply chains. While these pilots have shown promising outcomes—e.g., a 15 % reduction in school absenteeism in Pad Bank’s intervention area—their scalability is limited by funding and the need for sustained community ownership[21].

Recommendations: A Rights Based, Integrated Strategy

Strengthen Legal and Policy Foundations:

1. Enact a Menstrual Health Act that mandates:
 - (a) provision of free, high quality sanitary products in all public schools and health facilities;
 - (b) tax exemption for all menstrual products; and
 - (c) inclusion of menstrual health in the curriculum for grades 6-12.
2. Align national programmes with SDG targets by setting measurable indicators (e.g., 90 % of rural schools with gender segregated toilets by 2027).

Improve Supply Chain Resilience:

- Establish a centralized procurement and distribution hub at the state level, linked to a real time inventory management system (e.g., using QR codes) to prevent stock outs.
- Partner with local women’s cooperatives to produce reusable cloth pads, providing them with micro credit and quality certification support.

Enhance Education and Community Engagement:

- Conduct mandatory teacher training (minimum

40 hours) on menstrual physiology, gender sensitive pedagogy, and psychosocial support.

- Launch a mass media campaign (TV, radio, social media) featuring local influencers and religious leaders to normalize menstruation.
- Facilitate monthly “Menstrual Health Clubs” in schools, where girls can discuss challenges, receive supplies, and mentor younger peers.

Upgrade Infrastructure:

- Retrofit existing school toilets to include locked doors, adequate lighting, and hand washing stations with soap.
- Ensure safe water supply (piped or filtered) in every school, with regular water quality testing.

Integrate Nutrition and Health Services:

- Pair menstrual health outreach with iron folate supplementation and deworming drives, targeting all adolescent girls in rural areas.
- Train ASHAs to screen for menstrual disorders and refer cases to primary health centres equipped with basic gynaecological care.

Mobilise International Support

- Invite UN Women and UNICEF to provide technical assistance for curriculum development and monitoring.
- Seek grant funding from the Global Fund for Women and the Bill & Melinda Gates Foundation for pilot projects on reusable products.
- Encourage peer learning exchanges with countries that have successfully scaled menstrual health programmes (e.g., Kenya, Bangladesh).

Monitoring, Evaluation, and Accountability:

A robust monitoring framework is essential to ensure that policies translate into rights realization. Key performance indicators (KPIs) should include:

- *Coverage*: Percentage of rural schools receiving free sanitary products quarterly.
- *Absenteeism*: Reduction in menstrual related school absenteeism (target ≥ 30 % decrease by 2028).
- *Infection rates*: Decline in self reported RTIs among adolescent girls (target ≥ 20 % reduction).
- *Knowledge gain*: Pre and post test scores on menstrual health knowledge among students and

teachers.

An independent National Menstrual Health Commission, with representation from civil society organisations, could oversee data collection, conduct annual audits, and publish a public report card.

Conclusion:

Menstrual health in rural India epitomises the intersection of health, education, gender equality, and human rights. The data unequivocally show that when girls lack clean menstrual supplies, safe sanitation, and accurate information, their physical well being, school participation, and future prospects are severely compromised. These deprivations are not merely personal misfortunes; they constitute violations of internationally recognised rights to health, education, and non discrimination.

The Indian government, supported by the international community, possesses the legal obligations, policy tools, and financial resources to transform this landscape. By enacting a comprehensive Menstrual Health Act, securing reliable supply chains, investing in gender sensitive education, upgrading school infrastructure, and integrating nutrition, India can make tangible progress toward SDG 3 and SDG 5 while upholding its commitments under the ICESCR, CEDAW, and CRC.

Ultimately, menstrual equity is a litmus test for a society’s commitment to equality and dignity for all its members. When a girl can manage her period without fear, shame, or interruption, she is free to learn, to work, and to participate fully in the social and economic life of her community—an outcome that reverberates across generations and fulfils the promise of universal human rights.

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