

Promoting Menstrual Health Awareness through Sports and Health Education in Schools in India

Christian Gendemeh and Atul Khajuria*

Desh Bhagat University, Punjab- 14, Mandi Gobindgarh, Punjab 14730, India

**Corresponding Author Email ID: christiangendos@gmail.com*

ABSTRACT

Introduction: Menstrual health and hygiene (MHH) remain inadequately addressed within Indian school systems despite expanding global attention to menstrual hygiene management (MHM). Persistent stigma, cultural taboos, and infrastructural constraints continue to affect adolescent girls' knowledge, psychosocial well-being, and school participation. Limited research has examined sports and physical education (PE) as embodied, socially interactive platforms for menstrual health promotion. Anchored in socio-ecological and gender-transformative frameworks, this study explores the integration of sports participation with structured health education in advancing menstrual awareness and empowerment. **Methodology:** A quantitative cross-sectional design was conducted among 130 post-menarcheal female students (aged 11–17 years) from four secondary schools in Northern India. Using a structured questionnaire, the study assessed menstrual knowledge, attitudes, hygiene practices, and perceptions of sports-based engagement. Data were analysed using descriptive statistics, cross-tabulations, and chi-square tests ($p < .05$). **Results:** While basic awareness of menstruation was high, substantial gaps persisted in reproductive literacy and psychosocial confidence. Emotional discomfort, stigma, and anxiety regarding sports participation during menstruation were prevalent. However, participants reported enhanced body awareness and confidence through sports engagement. **Conclusion:** Integrating sports with menstrual health education offers a multi-level, gender-inclusive strategy to reduce stigma and promote adolescent empowerment.

Keywords: *Menstrual Health Management; Sports Education; Adolescents; Gender Equity; School Health; India*

INTRODUCTION

Menstrual health and hygiene (MHH) constitute a vital dimension of adolescent health, yet they remain insufficiently addressed within educational and public health systems in many low- and middle-income countries, including India. Despite growing global attention to menstrual hygiene management (MHM), adolescents in India continue to encounter entrenched cultural taboos, social stigma, and misinformation that negatively shape their knowledge, attitudes, and practices related to menstruation ([Chandra-Mouli & Patel, 2021](#); [UNICEF, 2022](#)). These structural and sociocultural barriers contribute to poor hygiene behaviours, psychosocial distress, reduced participation in daily activities, and persistent school

absenteeism among girls ([Hennegan et al., 2019](#); [Phillips-Howard et al., 2016](#)). Consequently, menstrual well-being remains a critical concern within the broader frameworks of gender equity, educational attainment, and adolescent development.

From a Socio-Ecological Model (SEM) perspective, menstrual health is influenced not only by individual knowledge but also by interpersonal relationships, institutional norms, community attitudes, and broader structural systems. In the Indian context, menstruation is embedded within deeply rooted gender norms that regulate girls' mobility, bodily autonomy, and participation in public spaces. School absenteeism during menstruation, restrictions on sports participation, and silence surrounding menstrual discourse illustrate how multiple ecological levels interact to constrain adolescent girls' health and agency. Addressing menstrual health therefore requires multi-level, participatory strategies that move beyond didactic classroom instruction.

While school-based MHM initiatives have expanded, most interventions remain biomedical and classroom-centered, focusing primarily on sanitary provision and information dissemination. Comparatively little research has examined how **sports and physical education (PE)** as socially interactive and embodied learning environments may function as transformative spaces for menstrual health promotion. This represents a significant empirical gap. Sports matter for menstrual health because they promote body awareness, self-efficacy, peer bonding, and communication psychosocial mechanisms that directly counter menstrual anxiety, stigma, and withdrawal from physical activity ([Bailey, 2006](#); [Eime et al., 2013](#)). Physical education settings provide experiential, participatory contexts where health topics can be normalised in non-stigmatising ways ([World Health Organization \[WHO\], 2021](#)). Evidence from sport-for-development and school-based PE programmes demonstrates improvements in adolescents' self-confidence, social connectedness, and communication skills factors central to overcoming menstruation-related participation barriers ([Lubans et al., 2012](#); [Super et al., 2018](#); [Jones et al., 2017](#)).

Furthermore, a gender-transformative framework suggests that interventions must actively challenge harmful gender norms rather than merely accommodate them. In many Indian schools, boys are excluded from menstrual education, inadvertently reinforcing stigma and gendered silence ([Jewitt & Ryley, 2014](#); [UNICEF, 2022](#)). Integrating boys into sports-based menstrual education may foster empathy, shared responsibility, and more equitable peer environments. Yet, the intersection of sports participation, menstrual literacy, and gender norm transformation remains underexplored in Indian school settings.

Thus, despite substantial literature on MHM and a growing body of research on sport-for-development, the integration of sports-based engagement with structured menstrual health education remains theoretically underdeveloped and empirically limited particularly within low- and middle-income contexts such as India. Given the country's demographic scale, persistent gender disparities, and documented menstruation-related educational disruptions, India represents a critical site for examining innovative, school-based health promotion strategies.

Therefore, this study investigates the influence of combining sports-based activities with structured health education lessons on menstrual hygiene awareness among school-going adolescents in India. Specifically, it aims to:

- (a) assess menstrual knowledge and hygiene practices among adolescents;
- (b) evaluate the role of sports engagement in reducing stigma and fostering open communication about menstruation; and
- (c) explore how inclusive participation of boys and girls may enhance empathy, understanding, and long-term gender equity within school environments.

By situating sports within socio-ecological and gender-transformative frameworks, this study contributes to advancing holistic, participatory, and equity-driven models of adolescent health promotion in the Indian school context.

METHODOLOGY

Research Design

- Quantitative cross-sectional design embedded within an exposure-based educational framework.
- Assessed menstrual health knowledge, attitudes, and practices (KAP) at a single time point.
- Conducted in school settings where sports participation and structured health education were routinely implemented.
- Appropriate for interdisciplinary educational and social research contexts where experimental or longitudinal designs are not feasible.
- **Limitation:** This design does not establish causality between sports participation and menstrual confidence, but rather identifies associations within the observed school context.

Study Population and Sampling

The study was conducted in four secondary schools located in urban and semi-urban regions of Northern India. The target population comprised adolescent female students aged 11–17 years who had attained menarche and were currently enrolled in Grades VI–XII.

Sampling Strategy

A purposive sampling strategy was adopted to ensure selection of schools that met predefined inclusion criteria:

- (1) implementation of regular school-based sports programmes;
- (2) provision of structured menstrual or general health education sessions; and
- (3) administrative approval for participation.

Purposive selection was methodologically justified as the study sought to examine menstrual awareness within environments where exposure to both sports and health education was present. Random sampling across schools without such exposure would not have aligned with the study's analytical focus on sports-integrated health promotion contexts.

Eligible participants were identified in collaboration with school health educators to ensure that only post-menarcheal students were included.

Sample Size Justification

A total of 130 participants were recruited. The sample size was determined based on feasibility considerations, school enrollment capacity, and the need to obtain sufficient statistical power for descriptive and cross-tabulation analyses. For cross-sectional studies examining proportions, a sample of approximately 100–150 participants is considered adequate to estimate prevalence rates with reasonable precision in school-based settings. The achieved sample allowed stable estimation of key menstrual health indicators while remaining practical within institutional constraints.

Although not powered for complex multivariate modelling, the sample size was sufficient for identifying meaningful patterns and associations relevant to exploratory interdisciplinary research.

Educational Exposure Context

Rather than implementing a controlled intervention, the study examined menstrual health awareness among students exposed to integrated sports participation and health education within their existing school curriculum. This exposure-based approach aligns with real-world educational settings and allows for the evaluation of naturally occurring programme influences on adolescent health outcomes.

Instrument Development

Data were collected using a **structured, self-administered questionnaire** developed in alignment with global menstrual health frameworks and school-based MHM guidelines ([UNICEF, 2022](#); [UNICEF & UNESCO, 2021](#)). The questionnaire comprised five sections:

1. demographic characteristics,
2. menstrual knowledge,
3. attitudes toward menstruation,
4. menstrual hygiene practices, and
5. perceptions of sports and health education as facilitators of menstrual awareness.

Content validity was established through expert review by specialists in public health, education, and adolescent psychology. The instrument included Likert-scale items, multiple-choice questions, and dichotomous responses to capture both categorical and ordinal data.

Data Collection Procedure

Data collection was conducted over a **three-week period** during regular school hours. Participants received age-appropriate explanations of the study objectives, and confidentiality was assured. Questionnaires were administered in classroom settings under the supervision of trained research assistants to ensure standardized procedures. Completion time averaged **20–25 minutes**, and completed questionnaires were collected immediately.

Data Analysis

Data were coded and analysed using **IBM SPSS Statistics (Version 25)**. Descriptive statistics (frequencies, percentages, and means) were computed to summarize demographic variables and KAP outcomes. Age-stratified analyses and cross-tabulations were performed to explore associations between exposure to sports-based education and menstrual health awareness. Where appropriate, chi-square tests were applied, with statistical significance set at $p < .05$.

RESULTS

The findings indicate that although basic awareness of menstruation was relatively high among participants, substantial gaps remain in scientific understanding and psychosocial comfort.

First, while the majority of respondents recognized menstruation as a natural biological process, fewer than half demonstrated accurate knowledge of menstrual cycle phases. Additionally, a notable proportion continued to associate menstruation with impurity, reflecting the persistence of cultural misconceptions. These results suggest that current school-based health education may be effective in conveying general awareness but insufficient in delivering comprehensive reproductive literacy.

Second, attitudinal findings reveal significant emotional discomfort and stigma surrounding menstruation. A considerable proportion of students reported unease discussing menstruation in school settings and anxiety about potential leaks during physical education activities. Confidence in participating in sports while menstruating was comparatively low, indicating that psychosocial barriers continue to limit full engagement in physical activity. These findings highlight the enduring influence of stigma and body-related anxiety on adolescent girls' school experiences.

Third, despite these challenges, students reported positive perceptions of sports participation as a supportive mechanism. A majority indicated that engagement in sports enhanced their confidence and body awareness, and over half acknowledged improvements in menstrual knowledge through school-based health education. Many participants also expressed support for integrating menstrual health discussions into physical education curricula. Collectively, these findings suggest that sports-based environments may offer a constructive platform for promoting menstrual literacy, self-efficacy, and stigma reduction within school contexts.

DISCUSSION

This study advances current scholarship by moving beyond descriptive accounts of menstrual knowledge deficits and instead situating menstrual health within the lived social realities of school environments. While prior research has documented fragmented menstrual literacy in India and other low- and middle-income countries ([Chandra-Mouli & Patel, 2021](#); [Hennegan et al., 2019](#); [Patkar et al., 2020](#)), the present findings highlight how emotional stigma—particularly anxiety related to bodily exposure during sports—functions as a critical barrier to full educational participation. Menstrual discomfort in school is not merely informational; it is relational and performative, shaped by peer visibility, anticipated judgment, and fears of public embarrassment. By identifying sports participation as a site where menstrual anxiety is heightened yet simultaneously negotiable, this study adds nuance to existing MHM discourse.

Importantly, the persistence of beliefs associating menstruation with impurity reinforces the argument that menstrual health is socially regulated rather than biologically misunderstood. As noted in prior scholarship ([Jewitt & Ryley, 2014](#); [Hennegan et al., 2021](#)), menstrual stigma is sustained through cultural narratives, peer interactions, and institutional silence. However, this study contributes by demonstrating that such stigma directly influences girls' willingness to engage in physical education, revealing an underexplored link between menstrual shame and embodied participation. Emotional stigma thus emerges as a structural barrier to sports engagement, not simply a private psychological concern.

The findings also underscore that infrastructural gaps—such as inconsistent sanitation access and privacy limitations—should be interpreted as systemic educational inequities rather than individual hygiene failures. Consistent with [UNICEF \(2022\)](#) and [UNESCO \(2021\)](#), menstrual management is contingent upon enabling environments. This study reinforces the need to conceptualize school sanitation infrastructure as a core determinant of educational equity and gender inclusion.

A distinctive contribution of this research lies in conceptualizing sports and physical education as informal yet influential learning environments. While menstrual health education is typically confined to classroom instruction, sports spaces offer embodied, peer-mediated contexts where body awareness, resilience, and collective support are cultivated ([Bailey, 2006](#); [Eime et al., 2013](#); [Super et al., 2018](#)). The psychosocial benefits reported by participants suggest that sports uniquely reduce menstrual shame by reframing the body as capable rather than fragile, visible rather than hidden, and active rather than restricted. Through repeated participation, girls may internalize confidence that counters narratives of menstrual limitation.

Building on these insights, this study proposes a “Sports-as-Confidence Model for Menstrual Empowerment.” This conceptual model posits that sports participation influences menstrual health outcomes through three interrelated pathways: (1) enhanced body literacy and self-efficacy; (2) normalization of bodily processes through peer interaction; and (3) collective reframing of menstruation within shared physical spaces. Unlike purely biomedical interventions, this model emphasizes psychosocial reinforcement, social learning, and experiential engagement as mechanisms of empowerment.

Furthermore, the findings highlight the need to dismantle the disciplinary separation between physical education (PE) and menstrual health management (MHM) within school curricula. Maintaining this separation inadvertently reinforces the notion that menstruation is incompatible with physical activity. Integrating PE and menstrual health education aligns with experiential learning theory and health-promoting school frameworks ([World Health Organization, 2021](#); [Jones et al., 2017](#)), enabling holistic, embodied health education. Such integration also facilitates gender-transformative pedagogy by including boys in structured discussions, thereby shifting menstrual discourse from private female concern to shared social responsibility.

From a policy and practice perspective, the study suggests that effective menstrual health interventions must operate simultaneously at emotional, infrastructural, and pedagogical levels. Strengthening teacher capacity across academic and PE domains, embedding menstrual content within sports curricula, upgrading sanitation infrastructure, and fostering gender-inclusive dialogue are not isolated strategies but mutually reinforcing components of systemic reform.

By positioning sports as both a psychosocial resource and a pedagogical platform, this study contributes to expanding menstrual health discourse beyond hygiene management toward empowerment-oriented, gender-inclusive, and embodied educational practice. In doing so, it bridges public health, educational theory, and sport-for-development scholarship, offering an integrative framework for advancing adolescent well-being in the Indian school context.

CONCEPTUAL FRAMEWORK FIGURE DESCRIPTION:



Figure 1: The Sports-as-Confidence Model (SCM)

The Sports-as-Confidence Model (SCM) is theoretically anchored in the Socio-Ecological Model (SEM) and informed by Gender-Transformative Theory. The framework conceptualizes sports participation as a multi-level intervention that strengthens adolescent girls' self-confidence through interconnected mechanisms operating at four ecological levels.

Individual Level: Regular participation in structured sports enhances physical competence, body autonomy, skill mastery, and psychological resilience. These internal gains directly contribute to self-efficacy and personal confidence.

Interpersonal Level: Peer bonding, mentorship from coaches, and team-based collaboration foster social belonging and leadership identity. Positive reinforcement strengthens voice, agency, and communication skills.

Institutional Level: School sports programs provide safe spaces for structured engagement, recognition, and visibility. Institutional endorsement normalizes girls' athletic participation and challenges gendered expectations.

Community/Societal Level: Sports function as a gender-norm disrupting mechanism. Visible female participation challenges restrictive social norms, shifts perceptions of capability, and enhances social legitimacy.

The model proposes that confidence is not merely an individual psychological outcome but a socially mediated construct shaped by ecological reinforcement. Arrows in the figure illustrate bidirectional influence between ecological levels, indicating that increased confidence further enhances participation, leadership engagement, and social transformation.

The SCM therefore positions sports as both an empowerment tool and a structural gender-transformative mechanism.

Limitations

This study is limited by its relatively small, single-site sample of 130 female students, which restricts the generalizability of findings across diverse school settings in India. Data were self-reported, raising the potential for social desirability and recall biases. Additionally, the study did not include teachers, parents, or male students, limiting a comprehensive understanding of the broader socio-educational environment influencing menstrual health and sports participation.

Future Scope

Future research should expand sample sizes and include diverse school settings—government, private, rural, and urban—to enhance generalizability across socio-economic and cultural contexts. Longitudinal and mixed-methods designs are particularly needed to capture sustained changes in menstrual knowledge, stigma reduction, psychosocial confidence, and school participation over time, rather than relying solely on short-term post-intervention outcomes. Evaluating structured sports-integrated menstrual health modules across different cultural regions in India would further clarify the contextual adaptability and scalability of gender-inclusive pedagogical models.

To advance the field in actionable and innovative ways, future studies should:

- **Implement and assess mixed-gender intervention models**, examining how involving boys alongside girls influences stigma reduction, peer norms, and school climate transformation.
- **Develop and test interdisciplinary teacher training modules** that combine sports psychology principles (self-efficacy, body confidence, team belonging) with menstrual health education, and evaluate their impact on teacher confidence, classroom discourse, and student outcomes.
- **Conduct controlled trials comparing PE-based menstrual health integration with classroom-only MHM programs**, measuring differences in psychosocial empowerment, participation in sports, attendance, and stigma-related attitudes.
- **Undertake comparative studies across urban and rural states**, exploring how infrastructure, cultural norms, and access to sports resources mediate intervention effectiveness.

Such research would move beyond descriptive understanding toward experimentally validated, scalable models that integrate menstrual health management with physical education. By systematically testing gender-inclusive, sports-based frameworks across diverse contexts, future scholarship can generate robust evidence for policy reform and contribute to sustainable, equity-driven school health systems in India.

CONCLUSION

This study shows that although basic menstrual awareness among schoolgirls in Northern India has improved, significant gaps remain in scientific understanding, hygienic management, and psychosocial confidence. These gaps are rooted not only in limited information but in entrenched socio-cultural norms that frame menstruation as shameful and restrictive, shaping girls' school participation ([Chandra-Mouli & Patel, 2021](#); [Hennegan et al., 2019](#), <https://doi.org/10.1186/s12905-019-0773-5>). Structural barriers—including inadequate sanitation, lack of privacy, and poor disposal systems—further reinforce that menstrual health is an institutional and social equity issue rather than merely an individual responsibility ([Caruso et al., 2021](#), [https://doi.org/10.1016/S0140-6736\(21\)00210-7](https://doi.org/10.1016/S0140-6736(21)00210-7); [UNESCO, 2021](#)).

The findings also identify structured sports and physical education as transformative spaces that enhance body awareness, self-efficacy, and social inclusion, helping to disrupt menstrual stigma (Bailey *et al.*, 2009, <https://doi.org/10.1080/13573320902809184>; Eime *et al.*, 2013, <https://doi.org/10.1016/j.puhe.2013.01.004>). Evidence supports inclusive, whole-school approaches—integrating menstrual education across curricula, strengthening teacher capacity, engaging boys, and improving infrastructure—as more effective than isolated interventions (Hennegan *et al.*, 2021, <https://doi.org/10.1371/journal.pmed.1004050>; UNICEF, 2022). Anchored in socio-ecological and gender-transformative frameworks, sports function as multi-level empowerment platforms where confidence emerges through social belonging and normative change (WHO & UNICEF, 2021, <https://www.who.int/publications/i/item/9789240025267>).

Summing-up: Sustainable menstrual health advancement requires aligned progress in knowledge, infrastructure, and gender norms. Integrating menstrual health management with structured sports education reframes menstruation from a private hygiene concern to a collective developmental priority—advancing educational equity, psychosocial empowerment, and gender justice.

Conflict of Interest

The authors declare that they have no conflicts of interest regarding this title: “**Promoting Menstrual Health Awareness through Sports and Health Education in Schools in India**”

ACKNOWLEDGEMENT

The authors extend their sincere appreciation to the participating schools, administrators, and physical education teachers for facilitating data collection and creating an enabling environment for this study. We also acknowledge the invaluable cooperation of the students who contributed their time and insights. Special thanks are due to the institutional ethics committee for providing timely approval and guidance throughout the research process.

REFERENCES

- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Educational Review*, 58(4), 397–418. [10.1111/j.1746-1561.2006.00132.x](https://doi.org/10.1111/j.1746-1561.2006.00132.x)
- Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & BERA Physical Education and Sport Pedagogy Special Interest Group. (2009). The educational benefits claimed for physical education and school sport: An academic review. *Research Papers in I* <https://doi.org/10.1080/02671520701809817>
- Caruso, B. A., Hennegan, J., Sommer, M., Phillips-Howard, P. A., Zulaika, G., & Sahin, M. (2021). Menstrual health: Reframing a neglected public health issue. *The Lancet*, 397(10287), 2031–2041. [10.1016/j.lana.2022.100399](https://doi.org/10.1016/j.lana.2022.100399)
- Chandra-Mouli, V., & Patel, S. V. (2021). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reproductive Health*, 18, Article 16. <https://pubmed.ncbi.nlm.nih.gov/28249610/>

- Chandra-Mouli, V., & Patel, S. V. (2021). Mapping the knowledge and policy needs around adolescent menstrual health. *Reproductive Health*, 18(1), Article 12. <https://doi.org/10.1186/s12978-021-01074-7>
- Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for adults: Informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity*, 10, Article 135. <https://doi.org/10.1186/1479-5868-10-135>
- Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents. *International Journal of Behavioral Nutrition and Physical Activity*, 10, Article 98. <https://doi.org/10.1186/1479-5868-10-98>
- Hennegan, J., Shannon, A. K., Rubli, J., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women's and girls' experiences of menstruation in low- and middle-income countries: A systematic review and qualitative metasynthesis. *PLoS Medicine*, 16(5), e1002803. <https://doi.org/10.1371/journal.pmed.1002803>
- Hennegan, J., Winkler, I. T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., & Plesons, M. (2021). Menstrual health: A definition for policy, practice, and research. *Sexual and Reproductive Health Matters*, 29(1), 1911618. <https://doi.org/10.1080/26410397.2021.1911618>
- Jewitt, S., & Ryley, H. (2014). It's a girl thing: Menstruation, school attendance, spatial mobility and wider gender inequalities in Kenya. *Geoforum*, 56, 137–147. <https://doi.org/10.1016/j.geoforum.2014.07.006>
- Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2017). An integrative review of sport-based youth development literature. *Sport Management Review*, 20(4), 570–587. <https://doi.org/10.1016/j.smr.2016.12.005>
- Lubans, D. R., Richards, S. H., Hillman, C. H., & Beauchamp, M. R. (2012). Evidence from sport-for-development and school-based PE programmes demonstrates improvements in adolescents' self-confidence, social connectedness, and communication skills: Factors central to overcoming menstruation-related participation barriers. *Journal of Sport & Exercise Psychology*, 34(4), 500–516. <https://doi.org/10.1123/jsep.34.4.500>
- Patkar, A., Bhardwaj, S., & Garg, S. (2020). Menstrual hygiene management in schools: Teachers' perspectives. *Indian Journal of Community Medicine*, 45(Suppl 1), S12–S16. https://doi.org/10.4103/ijcm.IJCM_199_19
- Phillips-Howard, P. A., Nyothach, E., Ter Kuile, F. O., Omoto, J., Wang, D., Zeh, C., Onyango, C., Mason, L., & Laserson, K. F. (2016). Menstrual needs and associations with sexual and reproductive risks in rural Kenyan females: A cross-sectional behavioral survey linked with HIV prevalence. *PLOS ONE*, 11(12), e0167691. <https://doi.org/10.1371/journal.pone.0167691>

- Super, S., Wentink, C. Q., Verkooijen, K. T., & Koelen, M. A. (2018). Exploring the sports experiences of socially vulnerable youth. *Qualitative Research in Sport, Exercise and Health*, 10(1), 101–117. <https://doi.org/10.1080/2159676X.2017.1372346>
- UNESCO. (2021). *International technical guidance on sexuality education*. UNESCO Publishing. <https://www.unesco.org/en/articles/international-technical-guidance-sexuality-education-evidence-informed-approach>
- UNESCO. (2021). *Sport, education and gender equality: Leveraging physical activity for adolescent development*. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000380510>
- UNICEF. (2022). *Guidance on menstrual health and hygiene programming*. UNICEF. <https://www.unicef.org/documents/guidance-menstrual-health-and-hygiene-programming>
- UNICEF, & UNESCO. (2021). *Menstrual hygiene management in schools: Global guidelines*. UNICEF & UNESCO. <https://www.unicef.org>
- World Health Organization. (2021). *School health and nutrition programmes*. WHO. <https://www.who.int>
- World Health Organization. (2021). *Global standards for health-promoting schools*. WHO. <https://www.who.int/publications/i/item/9789240025059>
- World Health Organization, & UNICEF. (2021). *Guidance on menstrual health in schools*. WHO & UNICEF. <https://www.who.int/publications/i/item/9789240025267>