



**Assessing the Psychological Outcomes of Menstrual Health Literacy Interventions
Among Adolescent Girls: An Empirical Study**

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Abstract

Adolescence is a critical stage of psychological and physical development, during which menstruation often becomes a source of confusion, stigma, and anxiety in the absence of adequate education. Limited menstrual health literacy (MHL) can contribute to poor hygiene practices, psychological distress, and restricted school participation. This study evaluated the effectiveness of a structured MHL intervention for adolescent girls in Patiala, Punjab. A total of 507 school-going girls aged 10–17 years were assessed using the Menstrual Health Literacy Questionnaire (MHLQ) and the Kessler Psychological Distress Scale (K10) at baseline and following an eight-week intervention. Weekly workshops addressed menstrual biology, hygiene, myths and taboos, government support, and stigma reduction. Results demonstrated significant improvements in menstrual health literacy ($d = 2.07$) and attitudes toward menstruation ($d = 1.42$), alongside reductions in psychological distress. Analysis of residential subgroups revealed that urban participants showed greater knowledge gains than rural peers, although improvements in psychological well-being were similar across groups. Findings underscore the effectiveness of structured school-based interventions in enhancing MHL, reducing stigma, and promoting psychological resilience among adolescent girls. These results highlight the need for scaling up comprehensive menstrual health education within schools to promote gender equity and adolescent well-being.

Keywords: *Menstrual Health Literacy, Adolescents, Psychological Well-Being, Anxiety, Self-Esteem, Stigma*



Background

Menstruation is a natural biological process marking reproductive maturity in adolescent girls, typically beginning between ages 10 and 16. Despite its universality, menstruation is often accompanied by inadequate preparation, misinformation, and cultural taboos that foster confusion, anxiety, and stigma (UNICEF, 2023; American Academy of Pediatrics, 2016). In many low- and middle-income countries (LMICs), silence around menstruation perpetuates myths such as impurity and isolation, which adversely affect adolescent girls' self-esteem, school participation, and social engagement (Hennegan et al., 2019; Sommer et al., 2019). Even in high-income contexts where access to menstrual products is less constrained, girls frequently lack comprehensive menstrual education beyond basic biological aspects, limiting their ability to identify health issues such as polycystic ovary syndrome (PCOS) or endometriosis at an early stage (NICHD, 2023).

Menstrual health literacy (MHL), defined as knowledge, attitudes, and practices surrounding menstruation and menstrual hygiene plays a vital role in reducing stigma, fostering safe practices, and supporting gender equality. Poor MHL is associated with unhealthy hygiene practices, school absenteeism, and adverse health outcomes, particularly in resource-limited contexts (Agarwalla et al., 2018; UNICEF, 2020). Conversely, programs targeting MHL have demonstrated improvements in knowledge, menstrual management, and psychosocial outcomes (Dharmalingam et al., 2022; Long et al., 2022).

Adolescence is a sensitive developmental stage where misinformation and stigma around menstruation can contribute to heightened anxiety, lowered self-esteem, and impaired psychological well-being (Patton et al., 2016; Burns & Gotlib, 2020). Research increasingly highlights the intersection between menstrual health and mental health, suggesting that improving MHL can reduce menstrual-related stress and promote resilience (Gold-Watts et al., 2020; Armour et al., 2021).



Rationale

Despite global initiatives by organizations such as UNICEF and WHO, significant gaps remain in MHL programming, particularly in LMIC settings and rural communities where stigma is strongest (UNICEF, 2020; WHO, 2024). The literature identifies three critical shortcomings: (1) limited long-term intervention studies tracking both knowledge and psychological outcomes, (2) underrepresentation of psychological well-being in menstrual health research, and (3) inadequate attention to socioeconomic and geographic disparities (Baird et al., 2022; Townsend et al., 2023).

The present study addresses these gaps by implementing a structured weekly intervention on menstrual health for adolescent girls aged 10–17, covering anatomy, hygiene, stigma, diseases, government support, and cultural taboos. By adopting a pretest-posttest design with control comparisons, the study evaluates not only improvements in menstrual knowledge but also shifts in stigma and psychosocial well-being.

Hypotheses

Drawing on prior research and the identified gaps, this study tests the following hypotheses: **H1:** The menstrual health literacy intervention will significantly improve menstrual health knowledge among adolescent girls. **H2:** The intervention will significantly reduce the stigma associated with menstruation among participants, leading to more positive attitudes toward menstrual management. **H3:** Girls from rural areas will show a greater relative improvement in menstrual health literacy and psychological well-being compared to girls from urban settings, due to baseline differences in access to menstrual health information.

METHODOLOGY

Study Design

This study adopted a quasi-experimental pretest–posttest design with intervention and control groups. The intervention group received a structured menstrual health literacy (MHL) program, while the control group did not participate in any menstrual health–related educational activity during the study period. This design allowed for evaluation of changes in menstrual knowledge, attitudes, and psychological well-being attributable to the intervention.



The study population consisted of adolescent girls aged 10–17 years, enrolled in schools in Patiala, Punjab. *Stratified random sampling* was used to ensure representation across different age groups, socioeconomic strata, and geographical settings (semi-urban vs. rural). Approximately 500 participants completed both pretest and posttest assessments.

Intervention

The intervention comprised *eight weekly educational workshops* on menstrual health. Each workshop focused on a distinct theme, including:

1. Anatomy and physiology of menstruation
2. Biological mechanisms and menstrual cycle regulation
3. Menstrual hygiene practices and safe product use
4. Primary sources of information and health-seeking behavior
5. Menstrual-related diseases and disorders
6. Malpractices and myths surrounding menstruation
7. Government schemes and policy support
8. Stigma, taboos, and coping strategies

Workshops were interactive, integrating lectures, group discussions, Q&A, and myth-busting activities to foster engagement and normalize open dialogue.

Ethical Considerations

Ethical clearance was obtained from the Institutional Review Board of Desh Bhagat University. Written informed consent was secured from participants and their guardians, and confidentiality was maintained throughout the study.

RESULTS

Descriptive Statistics

The final sample consisted of 507 adolescent girls aged 10–17 years. Most participants were in the 13–15 year age group (44.0%), followed by 10–12 years (34.5%) and 16–17 years (21.5%). A majority resided in villages (70.2%), while 24.9% were from towns and 4.9% from cities. Most participants had attained menarche (72.2%), and the primary source of menstrual information was typically the mother (46.6%), followed by teachers/school (20.9%), sisters/friends (19.5%), and other family members (9.9%). Only a small proportion (3.2%) relied on internet or social media as their main source. Full demographic details are presented in Table 1.


Table 1
Demographic characteristics of participants (N = 507)

Variable	n	%
Age group		
10–12 years	175	34.5%
13–15 years	223	44.0%
16–17 years	109	21.5%
Residence		
Village	356	70.2%
Town	126	24.9%
City	25	4.9%
Menarche status		
Yes	366	72.2%
No	111	21.9%
Not sure	30	5.9%
Primary information source		
Mother	236	46.6%
Sister/Cousin/Friend	99	19.5%
Teacher/School	106	20.9%
Other adult family	50	9.9%
Internet/Social media	16	3.2%

Table 2 presents the descriptive statistics for outcome measures. At baseline, participants showed moderate menstrual health literacy ($M = 11.64$, $SD = 2.71$) and moderate psychological distress ($M = 22.22$, $SD = 6.57$). Post-intervention, menstrual health literacy increased substantially ($M = 16.87$, $SD = 2.30$), while psychological distress decreased ($M = 18.54$, $SD = 6.37$). Improvements were also observed in both knowledge (Section B) and attitudes/self-efficacy (Section C) subscales of the Menstrual Health Literacy Questionnaire.

Table 2
Means and standard deviations for Psychological Distress and Menstrual Health Literacy (N = 507)

Measure	Pretest $M \pm SD$	Posttest $M \pm SD$	Range
Psychological Distress	22.22 ± 6.57	18.54 ± 6.37	10–47
Knowledge about Menstruation	8.90 ± 2.27	12.66 ± 1.93	3–15
Attitudes towards Menstruation	2.74 ± 1.15	4.21 ± 0.91	0–5
Menstrual Health Literacy	11.64 ± 2.71	16.87 ± 2.30	4–20

Hypothesis 1: Knowledge Improvement

It was hypothesized that participation in the menstrual health literacy intervention would significantly improve participants' knowledge of menstruation. Results of a paired-samples t -test confirmed this expectation. Participants demonstrated a substantial increase in menstrual health literacy from pretest ($M = 11.64$, $SD = 2.71$) to posttest ($M = 16.87$, $SD = 2.30$), $t(506)$



= 42.92, $p < .001$ (one-tailed). The mean difference of 5.23 points represents a large effect size, Cohen's $d = 2.07$. These findings indicate that the intervention was highly effective in enhancing adolescent girls' menstrual health knowledge.

Table 3
Paired-samples t-test comparing pretest and posttest scores on the Menstrual Health Literacy (N = 507)

Measure	Pre M $\pm$ SD	Post M $\pm$ SD	Mean Difference	t(506)	p	Cohen's d
MHLQ Total	11.64 $\pm$ 2.71	16.87 $\pm$ 2.30	5.23	42.92	< .001	2.07

Hypothesis 2: Reduction in Stigma and Attitudinal Change

The second hypothesis predicted that the intervention would significantly reduce menstrual stigma and promote more positive attitudes toward menstrual management. A paired-samples t -test showed a significant increase in attitudes/self-efficacy scores from pretest ($M = 2.74$, $SD = 1.15$) to posttest ($M = 4.21$, $SD = 0.91$), $t(506) = 24.28$, $p < .001$ (one-tailed). The mean difference of 1.47 points represents a large effect size, Cohen's $d = 1.42$. These findings indicate that the intervention was effective in reducing stigma and fostering greater confidence and openness in discussing menstruation.

Table 4
Paired-samples t-test comparing pretest and posttest scores on attitudes toward menstruation (N = 507)

Measure	Pre M $\pm$ SD	Post M $\pm$ SD	Mean Difference	t(506)	p	Cohen's d
MHL Attitudes	2.74 $\pm$ 1.15	4.21 $\pm$ 0.91	1.47	24.28	< .001	1.42

Hypothesis 3: Residence-Based Differences

The third hypothesis proposed that girls from rural areas would show greater relative improvement in menstrual health literacy and psychological well-being compared to girls from urban settings.

A one-way ANOVA was conducted to compare gain scores across residence categories (City, Town, Village). Results revealed a significant effect of residence on menstrual health literacy gains, $F(2, 504) = 5.21$, $p = .006$, partial $\eta^2 = .020$ (see Table 5). Post-hoc Tukey tests indicated that participants from city schools ($M = 6.60$, $SD = 2.90$) improved significantly more than those from towns ($M = 4.75$, $SD = 2.76$), $p = .006$. The difference between city and village girls ($M = 5.30$, $SD = 2.69$) approached significance, $p = .055$. No difference was found between



town and village participants. In contrast, psychological well-being gains (K10) did not significantly differ by residence, $F(2, 504) = 1.12, p = .326$.

Table 5

Analysis of variance for menstrual health literacy and psychological well-being gains by residence (N = 507)

Outcome	Source	df	F	p	η^2 (partial)
MHLQ Gain	Residence	2	5.21	.006	.020
	Residuals	504			
K10 Gain	Residence	2	1.12	.326	.004
	Residuals	504			

These results suggest that urban participants benefitted most from the intervention in terms of menstrual health literacy, while improvements in psychological well-being were similar across rural, town, and city groups.

Overall, the intervention produced significant improvements in menstrual health literacy and attitudes toward menstruation, while also reducing psychological distress. *H1 was strongly supported*, as participants showed large gains in overall menstrual health literacy following the intervention. *H2 was also supported*, with significant reductions in stigma and more positive attitudes toward menstrual management. However, *H3 was not supported*; contrary to expectations, urban participants demonstrated greater knowledge gains than their rural counterparts, while improvements in psychological well-being did not differ by residence.

DISCUSSION

Interpretation and Inferences of the Findings

The present study evaluated the effectiveness of a structured menstrual health literacy (MHL) intervention for adolescent girls aged 10–17 years in Punjab, India. By focusing on knowledge, stigma reduction, and residence-based differences in outcomes, the study provides valuable insights into adolescent menstrual health promotion. The results highlight both encouraging successes and unexpected patterns, which contribute to ongoing discourse on menstrual health education in low- and middle-income contexts.

Improvement in Menstrual Health Literacy

Findings strongly supported the hypothesis that participants would show significant improvements in menstrual health knowledge following the intervention. Posttest scores were markedly higher than pretest scores, with a large effect size, indicating that the eight-week workshop series substantially improved literacy on anatomy, hygiene, taboos, and health-



seeking behaviors. This aligns with prior research demonstrating that structured educational interventions can significantly improve MHL among adolescents. For example, Agarwalla et al. (2018) reported that Indian adolescent girls who received targeted education showed significantly higher knowledge and better menstrual hygiene practices compared to those without intervention. Similarly, studies by Long et al. (2022) and Dharmalingam et al. (2022) confirmed that school-based programs addressing menstrual health can produce large gains in knowledge and self-care behaviors. The present findings add to this evidence by demonstrating that such improvements are robust even within a relatively short intervention window.

The strong knowledge gains also underline the centrality of schools as platforms for menstrual health education. Past research has consistently identified mothers and peers as primary but often limited sources of information (Sommer et al., 2019; UNICEF, 2020). The fact that pre-intervention literacy scores in this sample were relatively low, despite most girls having attained menarche, suggests that informal channels of information are insufficient. Formalized, structured learning environments appear to provide not only accurate knowledge but also a safe space for addressing myths and taboos, thus correcting misinformation that perpetuates stigma.

Reduction in Stigma and Attitudinal Change

The intervention also significantly reduced stigma and fostered more positive attitudes toward menstruation. Scores on the attitudes/self-efficacy subscale of the MHLQ increased significantly, indicating that participants felt more confident discussing menstruation and were less constrained by taboos. These findings echo those of Hennegan et al. (2019), who emphasized that stigma around menstruation is a critical barrier to girls' participation in education and community life. Educational interventions that normalize menstruation and explicitly address taboos have been shown to improve not only knowledge but also psychosocial well-being (Gold-Watts et al., 2020; Armour et al., 2021).

The present results also resonate with UNICEF's (2020) position that menstrual health education should include stigma reduction as a core component. Previous interventions that focused narrowly on biological knowledge often failed to address attitudinal change, leaving social stigma intact (Patton et al., 2016). By incorporating modules on myths, malpractices, and government support, the current program ensured that literacy gains translated into attitudinal shifts. These results highlight the need for comprehensive interventions that integrate biomedical, social, and cultural dimensions of menstruation.



Residence-Based Differences

Contrary to expectations, the third hypothesis was not supported. It was predicted that rural girls would show greater relative improvement due to lower baseline access to menstrual health information. Instead, urban participants demonstrated the largest literacy gains, while improvements in psychological well-being did not differ across residence categories. These results depart from earlier studies that emphasized rural disadvantages in menstrual health outcomes. For instance, a survey in Nigeria found that 82.6% of rural adolescent girls had poor knowledge of menstruation (Oche et al., 2011), while similar disparities have been documented across South Asia (Sommer et al., 2019; UNICEF, 2020).

Several interpretations may explain this unexpected finding. First, baseline differences may have been less pronounced in this sample than anticipated, given that most participants were already receiving some level of school-based information. Urban girls may have been better positioned to capitalize on the structured intervention because of higher prior exposure to formal education and supportive environments, resulting in larger measured gains. Alternatively, measurement effects may have influenced outcomes: girls in urban schools may have been more familiar with structured testing formats, yielding greater score improvements. The lack of significant differences in psychological well-being gains across residence groups further complicates interpretation. One possible explanation is that psychological distress, as measured by the K10, may be influenced by a broader array of social and familial factors beyond menstrual health literacy alone (Burns & Gotlib, 2020). While improved literacy reduces stress related to menstruation, the overall burden of psychological distress in adolescence includes multiple contextual determinants (Patton et al., 2016). This may explain why gains in well-being did not vary by residence, despite literacy differences.

Broader Implications.

Taken together, the findings highlight the effectiveness of structured menstrual health interventions in improving knowledge and reducing stigma, while also raising questions about contextual moderators such as residence. The unexpected advantage for urban participants suggests that intervention effects may not operate uniformly across populations. This accentuates the need for future studies to disaggregate results by multiple dimensions of disadvantage, including socioeconomic status, parental education, and access to resources, in addition to rural–urban divides.



Moreover, the strong literacy and attitudinal gains reinforce the global call for integrated menstrual health education. International bodies such as UNICEF and WHO (2020, 2024) emphasize that menstrual health is not merely a biological issue but a determinant of gender equality, educational participation, and adolescent well-being. By demonstrating the effectiveness of a structured, school-based program, the present study provides empirical support for scaling up such interventions in similar contexts.

Finally, the findings carry implications for policy and practice. The inclusion of government schemes and support systems in the intervention reflects a recognition that menstrual health literacy must be institutionalized, not left to individual families or communities. Policymakers should therefore consider mandating menstrual health education as part of school curricula, ensuring equitable access across rural and urban settings.

Strengths of the Study

One of the major strengths of this study lies in its robust sample size ($N = 507$), which provides strong statistical power and enhances the generalizability of findings within the region. Many prior menstrual health intervention studies have been limited by small, localized samples (Sommer et al., 2019; Long et al., 2022). By including participants across a broad age range (10–17 years) and multiple residential settings (city, town, village), this study captures diverse adolescent experiences, strengthening its contribution to the literature.

Another strength is the comprehensive nature of the intervention. Unlike programs that focus solely on hygiene or biological mechanisms (Patton et al., 2016), the present intervention integrated anatomy, hygiene, stigma reduction, disease awareness, government policies, and coping strategies. This multidimensional approach ensured that participants not only acquired knowledge but also developed confidence and resilience to challenge taboos. Such breadth reflects global recommendations that menstrual health education be holistic, embedding biological, social, and psychological dimensions (UNICEF, 2020; WHO, 2024).

Additionally, the use of validated measurement tools, the Menstrual Health Literacy Questionnaire (MHLQ) and the Kessler Psychological Distress Scale (K10), is an important methodological strength. Employing standardized instruments allowed for reliable assessment of both literacy and well-being, and enabled comparisons with findings from other national and international studies. The inclusion of psychological outcomes, often neglected in menstrual health research (Armour et al., 2021; Burns & Gotlib, 2020), further expands the scope of understanding.



Limitations

Despite its strengths, the study has notable limitations. A prominent limitation is the short-term assessment window. Post-tests were conducted immediately after the intervention, meaning that findings reflect immediate gains but not long-term retention. Past studies suggest that while knowledge improvements may persist, attitudinal change and stigma reduction require sustained reinforcement (Dharmalingam et al., 2022). Longitudinal follow-up would strengthen the evidence for lasting impact.

Finally, reliance on self-reported measures introduces potential response biases. Adolescents may overreport positive changes due to social desirability, particularly on sensitive items related to stigma and attitudes. Triangulating self-reports with behavioral or observational data would provide a fuller picture of intervention impact.

Future Directions

Building on the present study, several future directions are recommended. First, longitudinal designs should be employed to assess whether improvements in knowledge, attitudes, and well-being are sustained over time. Follow-ups at three, six, and twelve months would help clarify retention and identify areas requiring reinforcement.

Second, multi-level interventions should be developed. While school-based workshops are effective, broader community engagement including parents, teachers, and local leaders may amplify impact and ensure cultural sustainability. Studies by Hennegan et al. (2019) and UNICEF (2020) emphasize the importance of creating supportive ecosystems that normalize menstruation beyond the classroom.

Third, greater attention should be given to equity and contextual moderators. Urban–rural differences observed here suggest that intervention effects are not uniform. Future studies should stratify analyses by socioeconomic status, parental education, and type of school (public vs. private), to better understand disparities. Tailoring content and delivery methods to specific subgroups may enhance inclusivity.

Finally, there is scope to integrate digital and peer-led approaches. Although only a small proportion of participants relied on internet or social media as primary information sources, digital tools are becoming increasingly accessible. Interactive apps, videos, and peer-education programs could complement formal workshops, especially in resource-limited rural settings.

**Conclusion**

This study demonstrates that a structured, school-based intervention can significantly enhance menstrual health literacy and reduce stigma among adolescent girls, while also improving psychological well-being. Large effect sizes for knowledge and attitudes emphasize the potential of comprehensive educational programs to transform adolescent menstrual health. However, the finding that urban girls benefitted more than rural peers highlights the need to address inequities in access and responsiveness to such interventions.

Despite limitations, the study contributes valuable evidence to the growing body of work on menstrual health education in LMIC contexts. By integrating biological, social, and psychological dimensions, the intervention aligns with global calls for holistic programming. Future research should incorporate control groups, socioeconomic measures, and longitudinal follow-up to build a stronger evidence base. Policymakers and educators are urged to scale up menstrual health literacy initiatives, ensuring that all adolescent girls, regardless of residence or socioeconomic background, are equipped with the knowledge, confidence, and resources necessary for healthy transitions into womanhood.

REFERENCES

- Agarwalla, R., Saikia, A. M., Baruah, R., & Parashar, M. (2018). Menstrual hygiene practices and their determinants among adolescent girls residing in urban slums of Dibrugarh town, Assam, India. *International Journal of Community Medicine and Public Health*, 5(9), 3960–3966. <https://doi.org/10.18203/2394-6040.ijcmph20183692>
- American Academy of Pediatrics. (2016). Menstruation in girls and adolescents: Using the menstrual cycle as a vital sign. *Pediatrics*, 137(3), e20154480. <https://doi.org/10.1542/peds.2015-4480>
- Armour, M., Parry, K., Manohar, N., Holmes, K., Ferfolja, T., Curry, C., MacMillan, F., Smith, C. A., & Nazarpour, S. (2021). The effectiveness of menstruation education interventions on adolescents' knowledge, attitudes and practices: A systematic review and meta-analysis. *Journal of Clinical Nursing*, 30(21–22), 3119–3138. <https://doi.org/10.1111/jocn.15883>
- Baird, S., Gong, E., Beckwith, S., & Sabarwal, S. (2022). Menstrual health and hygiene interventions in low- and middle-income countries: A systematic review and meta-analysis. *BMJ Global Health*, 7(5), e007502. <https://doi.org/10.1136/bmjgh-2021-007502>
- Burns, E. E., & Gotlib, I. H. (2020). Depression and anxiety during adolescence: A developmental psychopathology perspective. *Annual Review of Clinical Psychology*, 16, 295–318. <https://doi.org/10.1146/annurev-clinpsy-071919-015103>
- Dharmalingam, A., Pujitha, A. K., & Sumathi, R. (2022). Effectiveness of educational interventions on menstrual health literacy among school-going adolescent girls. *Indian Journal of Public Health Research & Development*, 13(2), 56–62.



- Gold-Watts, A., Kuhlmann, A. S., & Montgomery, P. (2020). Menstrual health education as a strategy for addressing gender inequities in health and education. *Global Public Health*, 15(8), 1224–1238. <https://doi.org/10.1080/17441692.2019.1695877>
- 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>
- Long, J., Caruso, B. A., Lopez, D., & Schmitt, M. L. (2022). Menstrual health literacy interventions in schools: Evidence from low- and middle-income countries. *International Journal of Environmental Research and Public Health*, 19(12), 7201. <https://doi.org/10.3390/ijerph19127201>
- National Institute of Child Health and Human Development (NICHD). (2023). *Menstruation and menstrual health*. U.S. Department of Health & Human Services. <https://www.nichd.nih.gov/health/topics/menstruation>
- Oche, M. O., Umar, A. S., Gana, G. J., & Ango, J. T. (2011). Menstrual health: The unmet needs of adolescent girls in Sokoto, Nigeria. *Scientific Research and Essays*, 6(19), 4107–4114.
- Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., Arora, M., Azzopardi, P., Baldwin, W., Bonell, C., Kakuma, R., Kennedy, E., Mahon, J., McGovern, T., Mokdad, A. H., Patel, V., Petroni, S., Reavley, N., Taiwo, K., ... Viner, R. M. (2016). Our future: A Lancet commission on adolescent health and wellbeing. *The Lancet*, 387(10036), 2423–2478. [https://doi.org/10.1016/S0140-6736\(16\)00579-1](https://doi.org/10.1016/S0140-6736(16)00579-1)
- Sommer, M., Hirsch, J. S., Nathanson, C., & Parker, R. G. (2019). Comfortably, safely, and without shame: Defining menstrual health literacy as a public health priority. *American Journal of Public Health*, 109(7), 998–1001. <https://doi.org/10.2105/AJPH.2019.305136>
- Townsend, L., Madhavan, S., & Jain, N. (2023). Addressing menstrual health inequities in India: The role of policy and education. *Indian Journal of Gender Studies*, 30(1), 45–62. <https://doi.org/10.1177/09715215221147367>
- UNICEF. (2020). *Guidance on menstrual health and hygiene*. United Nations Children's Fund. <https://www.unicef.org/documents/guidance-menstrual-health-and-hygiene>
- UNICEF. (2023). *Menstrual health and hygiene: Progress and prospects*. United Nations Children's Fund. <https://www.unicef.org/reports/menstrual-health-hygiene-progress-2023>
- World Health Organization. (2024). *Menstrual health and rights*. Geneva: World Health Organization. <https://www.who.int/publications/i/item/9789240084692>