

Improving Menstrual Hygiene Management in Asia & Africa

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Background



Globally

1.9 Billion women
are of reproductive age

(UN, 2022)

500 Million
lack access to menstrual products & adequate facilities

(The World Bank, 2022)



Africa

Zambia

Cameroon

Asia

Japan

Indonesia

Bangladesh

Rationale: (i) Barriers: Limited Water, Sanitation, & Hygiene (WASH), stigma, lack of affordable products, (ii) Period poverty
Objectives: 1. Investigate regional MHH issues across **Urban: U, Peri-urban: PU, Rural: R, & Indigenous: I** settings;
2. Explore **local cultural knowledge and practices**; 3. Co-create **community-driven solutions**

Methods and Participants

Research Site (Region)	Participants (Questionnaires & Surveys)	Main Tools
Sapporo (U) Japan	154 university students (81 female + 74 male; Age 20 ± 1.4)	Questionnaires (Socio-demographic, Global MHH Indicators 2022, KAP); Focus Group Discussions (male & female)
Rajshahi (R) Bangladesh	384 female nursing students (Age 22 ± 1.5)	Questionnaires (Socio-demographic, KAP, Global MHH Indicators 2022); Educational intervention; Art-based workshop; FGDs (male & female)
Sidoarjo & Surabaya (PU) Indonesia	354 female junior high school students (Age 14 ± 1.9)	Questionnaires (Socio-demographic, KAP, Physical Activity, Food Recall, MEDI-Q); FGDs (male & female)
Kafue & Lusaka (PU) Zambia	337 female primary school pupils (Age 14 ± 1.8)	Questionnaires (Socio-demographic, KAP); FGDs (boys only, n = 21); Picture book co-creation workshop (boys & girls, n = 30; men & women, n = 16)
Yaoundé (U, PU) & Gribé Village (I) Cameroon	98 female university students (Age 22.3 ± 0.3) 118 female secondary (Age 16.1 ± 0.3) 13 male Baka hunter-gatherers (HGs) (Age 10–70s)	Questionnaires (Socio-demographic, KAP); Semi-structured interviews (male Baka participants)
Data Collection Tool Citations <ul style="list-style-type: none">KAP Knowledge (Alam et al., 2022)KAP Attitudes = MAQ: Menstrual Attitude Questionnaire (Brooks-Gunn J & Ruble DN 1980)KAP Practices = MPQ: Menstrual Practices Questionnaire (Hennegan et al., 2022)FGDs: Focus Group Discussions (Boyers et al 2022, Chidya et al 2024)		<ul style="list-style-type: none">Physical Activity Questionnaire (Kowalski KC, Crocker PRE & Donen RM 2004)Food Recall (Gibson RS 2005)MEDI-Q: Menstrual Diet Quality Questionnaire (Mekary RA et al 2009)Global MHH Indicators 2022 (Global MHH Monitoring Group 2022)In-depth interviews (Boyers et al 2022)

Results Summary

Key Findings: Knowledge and Menstrual Attitudes (MAQ)

	Japan	Cameroon	Bangladesh	Indonesia	Zambia
Knowledge	63%	In progress	45%	63.6%	48%
Average MAQ Score (out of 7)	4.14	In progress	4.49	4.39	4.49

Japan (U, University students)



Hokkaido Uni, Sapporo

- Female students:** menstruation is a “proof of women’s health.”
- Confidence managing menstruation. Hid materials at home (**embarrassment**).
- Male & female students expressed need for **joint MHH education**.
- Male participants:** learnt about MHH from girlfriends, social media. Showing **gradual openness**.

Emerging Themes

Theme	Cross-Country Observation
Knowledge & Awareness	University students (Japan, Indonesia) scored higher than peri-urban school children and indigenous groups respectively (Zambia, Cameroon)
Product Use & Management (Practice)	Disposable pads dominated in Asia; Zambia, Cameroon showed mixed or reusable use due to cost and availability. Hygiene practices such as handwashing and drying methods varied widely.
School WASH Facilities	Inadequate privacy and cleanliness in Bangladesh and Zambia hinder comfort and safety during menstruation.
Cultural Beliefs & Stigma	Secrecy persists across settings; involving boys and men helps reduce stigma.
Art-Based Learning	Visual and participatory methods (Bangladesh, Zambia) enhanced discussion and empathy around MHH.

Bangladesh (R, University students)

- Recalled **fear and confusion at menarche**: “I didn’t know what was happening.”
- Pads sold in black plastic bags (**ongoing stigma**).
- Intervention:** Art-based education, mixed-gender sessions significantly improved KAP outcomes.
- Females:** **Greater confidence** after interactive workshops and health education sessions.



Menstrual knowledge, information & awareness session + art-based activity

Indonesia (PU, Junior high school students)

- Students emphasized **pain, discomfort (66%)** and link between menstruation & school absenteeism.
- Access to **clean water essential**, but **not always available** at school.
- Teachers provided most menstrual information.** Unsupportive peer environment
- Males:** **embarrassed** to discuss menstruation publicly.



Menstrual knowledge, information & awareness session + art-based activity

Cameroon (U, High school & University students; I, Baka HGs)



Research sites: U, PU, I

Urban Communities (Yaoundé):

- Inadequate WASH facilities.
- Mothers’ education:** shaped knowledge, practices.
- Economic status:** influenced product choice, disposal.

Indigenous Communities (Gribé Village, Baka HGs):

- Menstrual knowledge transfer: **wives to husbands, fathers to sons**.
- Secrecy, taboos restricted open dialogue. **No strong menstrual prohibitions** reported.
- Men showed curiosity** but little direct education on menstruation.

Zambia (PU, Primary & Junior High school students, Adults)



Picture book co-creation workshop (children, adults)

- Common challenges:** Poor WASH access; fear of staining; teasing by boys; lack of disposal facilities.
- Myths:** “menstruation is a disease”, “boys shouldn’t know about menstruation” (**silence, stigma**).
- Suggested solutions:** reusable pads, hygiene (soap + bathing), open family discussions.

- Desired changes:** Incinerators; menstrual training before menarche; education for males.
- Book concepts:** “Breaking the Silence,” “My Period, My Pride” express **normalization, inclusion**.

Conclusions

Objective 1, Investigate regional MHH issues: Persistent gaps in WASH access, stigma, and product affordability affect female participation and comfort across all sites.

Objective 2, Explore local cultural knowledge and practices: Norms and myths shape behavior differently by context; **engaging males helps reduce secrecy and stigma**.

Objective 3, Co-create community-driven solutions: Participatory methods strengthened dialogue & ownership, **producing locally relevant, practical actions**.

Overall conclusion: Integrating education, gender inclusion & WASH improvements in **culturally grounded, community-led approaches** can transform MHH sustainably.

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