

**Title:**

Bangladeshi schoolgirls' self-efficacy in managing menstrual hygiene: A protocol for the development of a novel measurement tool

**Presenter:**

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**Category of content:**

Research

**Relevant MHM in Ten Priority:**

Build a strong cross-sectoral evidence base for MHM in schools for prioritization of policies, resource allocation and programming at scale.

**BACKGROUND**

Hennegan and Montgomery's systematic review appraising the current evidence for the effectiveness of school-based MHM interventions in improving girls' education and psychosocial outcomes in low and middle-income countries noted that while trials of MHM interventions report positive impacts on menstrual knowledge and practices, few have quantified relevant psychosocial constructs.<sup>1</sup> Stakeholders have called on researchers to measure MHM trials' effectiveness in increasing girls' self-efficacy in managing their menstrual hygiene.<sup>2,3</sup> However, to date there exists no definition or conceptual framework for the construct of "MHM self-efficacy" in the peer-reviewed literature and no validated tools to measure it. **Our study aims to conceptualize, construct, and pilot a robust psychometric tool specifically for measuring MHM self-efficacy in order to fill this identified gap.**

Self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3).<sup>4</sup> Self-efficacy beliefs influence how one feels, thinks, motivates oneself, and behaves. Girls with high MHM self-efficacy should theoretically approach difficult MHM-related tasks as "challenges to be mastered rather than threats that should be avoided" (p.2).<sup>4</sup> Ultimately, obtaining high levels of MHM self-efficacy could reduce anxiety arousal, thus enabling girls to feel more comfortable attending school during their periods.

A validated MHM self-efficacy scale will enable randomized control trials to determine whether school-based MHM interventions are effective in improving schoolgirls' self-efficacy in managing their menstruation comfortably, safely and with dignity, and thus likely to contribute to a reduction of MHM-related anxiety arousal in the school environment. Being able to quantify the effect of MHM interventions on such an important outcome, researchers will be in a better position to provide evidence useful for effective policy making in regards to school-based MHM programs.

**METHODOLOGY**

The scale development process (See Table) is being conducted in urban and rural secondary schools in Dhaka Division, Bangladesh. A systematic literature review identified the need to

develop a novel psychometric tool, and an initial pool of items has been created based on existing literature, an analysis of in-depth interview and focus group data with schoolgirls, and key informant interviews with stakeholders. A content expert validation exercise will be conducted to further refine the pool of items before pretesting and formal testing of the scale. The final scale's reliability and evidence for its validity will be shared upon completion of the formal testing process.

**Table: Scale development process**

<b>Step in the process</b>	<b>Associated methods</b>
1. Define the construct and develop conceptual framework	<ul style="list-style-type: none"> <li>• Systematic literature review</li> <li>• In-depth interviews</li> </ul>
2. Create initial item pool and decide on formatting & response options	<ul style="list-style-type: none"> <li>• Key informant interviews</li> <li>• Focus group discussions</li> <li>• Content expert validation exercise</li> </ul>
3. Pretest	<ul style="list-style-type: none"> <li>• Cognitive interviews</li> </ul>
4. Analyze pretest data and refine tool	<ul style="list-style-type: none"> <li>• Analysis of response distributions</li> <li>• Qualitative analysis of cognitive interview data</li> </ul>
5. Formally test in target population	<ul style="list-style-type: none"> <li>• Inclusion of scale on large-scale survey</li> </ul>
6. Evaluate scale's psychometric properties	<ul style="list-style-type: none"> <li>• Factor analysis</li> <li>• Reliability analyses</li> </ul>
7. Interpret scale's factor structure	<ul style="list-style-type: none"> <li>• Key informant interviews</li> </ul>

**References:**

1. Hennegan J, Montgomery P. Do menstrual hygiene management interventions improve education and psychosocial outcomes for women and girls in low and middle income countries? A systematic review. *PLoS One*. 2016;11(2):1–21.
2. Sommer M, Caruso BA, Sahin M, Calderon T, Cavill S, Mahon T, et al. A Time for Global Action: Addressing Girls' Menstrual Hygiene Management Needs in Schools. *PLoS Med*. 2016;13(2):1–9.
3. Phillips-Howard PA, Caruso B, Torondel B, Zulaika G, Sahin M, Sommer M. Menstrual hygiene management among adolescent schoolgirls in low-and middle-income countries: research priorities. 2016;1:1–7.
4. Bandura A. *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman and Company; 1997.