

SUPPLEMENTAL TABLE 1

## Integrated Behavioral Model for Water, Sanitation and Hygiene: model adapted for school WASH interventions

Levels	Contextual	Psychosocial dimension "Software"	Technology dimension "Hardware"
School system/structural	School policies, regulations	Leadership from school system	Financing, supply and maintenance systems, school policies for latrines/toilets, water, water treatment, and soap
	Public, private, faith-based School funding	Support of schools by school system School system commitment to WASH and maintenance facilities	
School/School principal/ Management committee	School health programs Physical condition, school equipment, facilities, classroom size, and crowding	Leadership by principal, financial and organizational commitment to WASH and maintenance of facilities	Location, condition, cleanliness, privacy of WASH facilities
	Allocation of responsibility among staff for maintenance of facilities and promotion of WASH	Shared goals vs. factionalism within the school	Male and female access to toilets, water, water treatment, soap, hand sanitizer Number of users per facility
Interpersonal/Classmates and teachers	Classroom size and crowding	Injunctive norms, descriptive norms for students and teachers	Modeling/demonstration of use of facilities/products by other users Ability for facilities/products to be accessed by multiple users simultaneously
	Arrangement of the classroom	Aspirations for health, cleanliness	
Individual	Teacher skills, experience, and workload	Shame related to dirtiness	Perceived cost, value, convenience, and other strengths and weaknesses of WASH facilities and products
	Age, gender, and socioeconomic status of students	Self-efficacy, knowledge, disgust, perceived threats for students and teachers	
Behavioral/Habitual	Organization of the school day	Existing water and sanitation habits, outcome expectations for WASH behaviors	Ease/Effectiveness of routine use of facilities and products
	Recess and bathroom breaks Meals, dining facilities		

SUPPLEMENTAL TABLE 2

Conceptual framework: contextual and psychosocial dimension of the Integrated Behavioral Model for Water, Sanitation and Hygiene based on the baseline, pilot, and 14-month follow-up assessment study findings in urban Dhaka and rural Mymensingh, Bangladesh, 2011–2013

Levels	Contextual dimension	Psychosocial dimension
School system/Structural	Elementary schools have school management committee and parent–teacher associations, and promote personal hygiene and cleanliness. However, schools lack respiratory hygiene policies and regulations.	School system supported the formation of hygiene committee of teachers, management committee members, students and janitors, and the promotion of respiratory hygiene and inclusion of teachers to lead the behavior change communication sessions.
School/School principal/Management committee	Head teacher and school management committee members own the authority to allocate responsibilities among teachers, students and janitors, such as maintenance of water and sanitation facilities in schools.	Head teachers, school management committee, and parent–teacher association members took responsibility, supported the intervention, and committed to promote the intervention’s activities.
Interpersonal/Classmates and teachers	Schools have regular hygiene classes to promote personal hygiene, and teachers were trained by the Education Ministry to deliver hygiene sessions.	Teachers conveyed messages about the benefits of respiratory hygiene to students during schools’ regular hygiene classes, acted as role models, and provided reminders to adopt behaviors.
	Each classroom consisted of an average of 50 students.	The “doer” students acted as role models, provided reminders to adopt behaviors to “non-doers,” and shared the idea of coughing and sneezing into upper sleeves with their family, friends, and community.
Individual	Elementary schools included both male and female students of 6–13 years old, who usually represents low socioeconomic backgrounds.	Students had the self-efficacy to cough and sneeze into upper sleeves and understood the threats of being affected by respiratory diseases. Individual students were aware of and acted upon subjective and personal norms with regard to feelings of disgust when coughing or sneezing in open air or covering them with hands, but not washing with soap and water afterward.
Behavioral/Habitual	First shift of classes start with grade I–II in the morning (8 AM for urban and 9 AM for rural schools) for two and half hours. Afterward, second shift of classes start with grade III–V for 4 hours (11 AM for urban and 12 AM for rural schools). School breaks for half an hour (10.30–11 AM for urban and 11.30–12 PM for rural schools) for daily assembly to be participated by all teachers and students (grade I–V).	Usual/existing practice of coughing and sneezing into open air or in front of others faces or covering them with hands.  School community expected outcome for both health and nonhealth benefits from the use of upper sleeves.