

Findings from quasi-experimental study:

WASH in Schools – MHM and Learning Impact



Key points

The impact evaluation data shows that the chances of managing menstrual hygiene properly are 1.3-fold higher among school girls that received inclusive WASH intervention than schoolgirls who did not.

Absentee girls missed an average of 1.5 days in the intervention schools and 2.5 days in the control schools in each menstrual cycle.



WASH in Schools initiative to empower girls



Menstrual hygiene management was an integral part of the inclusive school WASH model. The WinS project developed the capacity of 300 female teachers as lead facilitators for menstrual hygiene management who have been instrumental in creating interactive and ICT-based classroom modules as part of their regular lesson plans. Interactive Q&A and audio-visual educational approaches have been used to increase the awareness, attitudes and practices of adolescent girls on various behavioral aspects. This module includes a story (Keyar Golpo) about a young girl who had menstruation for the first time and how she managed it. The lessons of the story include a range of information on menstruation, misconceptions and menstrual hygiene management.

Background

The provision of WASH facilities in schools influences the health and learning outcomes of students. National Hygiene Baseline Survey 2014 reveals that 57% of the secondary schools in Bangladesh lack separate sanitation facilities for students. Those with separate toilets face practical issues such as non-functional toilets or unusable toilet conditions due to lack of operation and maintenance of the facilities. Several studies have shown that the lack of MHM-friendly facilities and support for school-girls and female teachers is an obstacle to their full participation in school and therefore to quality education.

Bangladesh National Hygiene survey revealed that 40% of girls miss about three school days during menstruation and one third feel that menstrual problems interfere with their school performance. (BNBS 2014).With this in perspective, WaterAid Bangladesh has developed a WASH in Schools (WinS) program to demonstrate a comprehensive and inclusive model that incorporates water, sanitation and hygiene into the physical facilities as part of education system. This initiative aimed to establish a systematic mechanism to promote a WASH inclusive learning atmosphere for secondary school students with a special focus on girls. Inclusive WASH model includes-running water facilities inside the toilet, handwashing device, necessary minimum arrangements for MHM like wash and drying facilities for used cloths, and proper disposal facilities, Menstrual Hygiene Management (MHM) corners with available materials inside the girl's bathroom as well as disable friendly amenities.In addition, the project collaborated with educational departments,the Teachers Training Institute (TTI),



the School Management Committees (SMC), the Parent Teachers Association (PTA) and local governments to take up the model and implement widely in educational set up.

In addition to the implementation of water, sanitation, hand washing and MHM services, WaterAid has introduced to its school model the promotion of menstrual hygiene. Menstrual hygiene has been promoted through the participation of female teachers to educate female students about menstruation and hygiene management.

The WASH in School intervention has been implemented in more than 300 schools since 2017. until 2020, the cumulative student reach in number are 107,096 for water, 91,598 for sanitation and 34,221 female students with menstrual hygiene messages.

An impact evaluation study was conducted between January and March 2020 to understand the effects of the WASH in school initiative on students, particularly girls. This brief is intended to highlight the results of the evaluation with regard to menstrual hygiene practices in schools.



Over 107,000
students supported
with water facilities



Over 91,000
with access to toilets



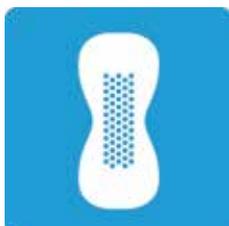
Over 34,000
girls with messages
on periods

Research questions

The impact assessment study was designed to answer the following questions that illustrate the impact of menstrual hygiene interventions in schools.

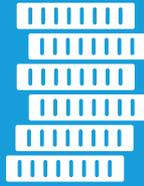


- If the improvement of WASH facilities and menstrual hygiene behavior change programmes at school has influenced the knowledge, attitudes and practices of menstrual hygiene among female students.

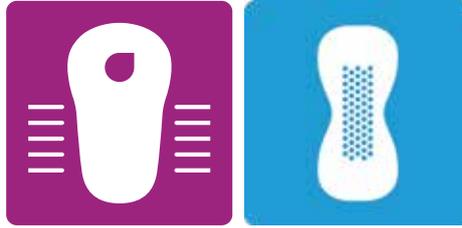


- If improvements in WASH facilities and menstrual hygiene behavior change school programmes have had an effect on reducing absenteeism, physical mobility, and social interactions during their menstruation.

Methodology



In the absence of a baseline for WinS, a sampling frame was followed covering schools where WinS provided intervention (the 'treatment' group). It also covered schools with similar characteristics (student size, type of school,) and did not receive WinS intervention since last three years to serve as 'control' group. We planned to include an equal number of intervention schools and control schools reasonable to detect an increase of 10% for all targeted outcomes with a 5% margin error, 80% statistical power and α of 0.05. A total of 1,560 students were selected from 52 schools (26 from each category - treatment and control). We compared treatment and control responses cross-sectionally. Propensity score matching was applied to measure the average treatment effect on treated (ATT).



Sanitation facilities

In Bangladesh, generally schools do have separate sanitation facilities for boys and girls, but the functionality and maintenance remain a challenge. WASH in school programme addressed systemic barriers by engaging school management committees in WASH management, also supported installation and renovation of separate toilets for boys and girls. Besides, the WASH in school model includes Menstrual Hygiene Management (MHM) facilities in female toilet

Key findings

Findings from the study indicates a positive shift in menstrual hygiene practices due to WinS initiatives.



85%

Separate sanitation facility for boys and girls

100%

Control Schools
Intervention Schools

4%

MHM facilities in girl toilets

81%

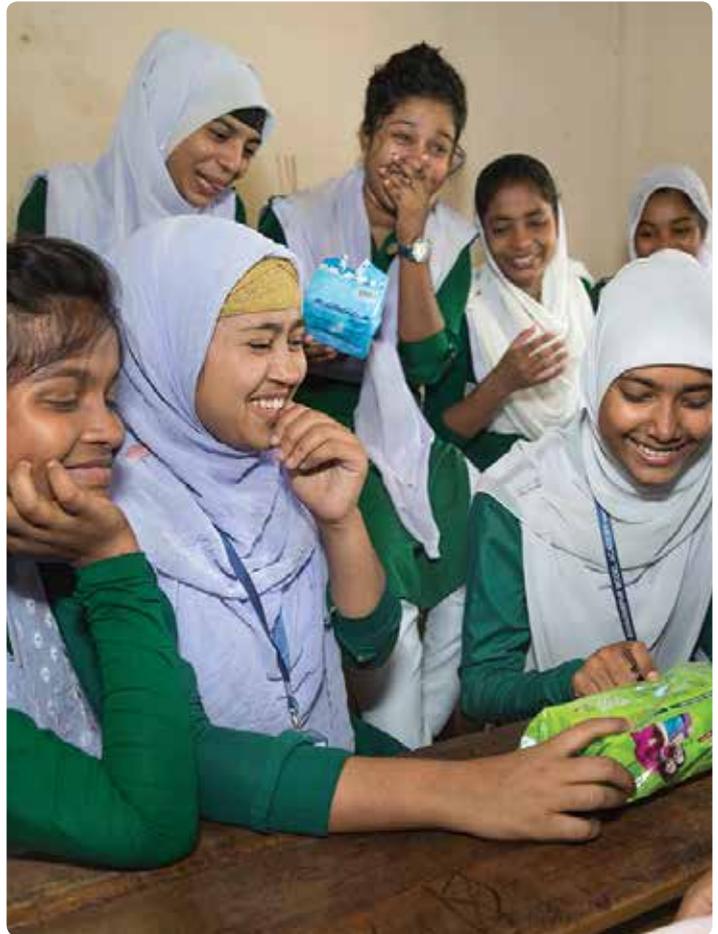
Control Schools
Intervention Schools

Knowledge on menstrual hygiene

The chances of improved knowledge on menstruation and menstrual hygiene were 52% higher among girls in the intervention schools compared to the control schools .



Menstrual hygiene awareness and knowledge on menstruation through educational sessions was promoted as part of WinS initiative. The average knowledge score on menstruation was significantly higher among girls in the intervention schools.



4.6

Knowledge score on menstruation and menstrual hygiene

- Control Schools
- Intervention Schools

5.5

Management of menstrual hygiene

The likelihood of a girl student maintaining menstrual hygiene properly are 32% higher in the intervention schools compared to the control schools.

51%

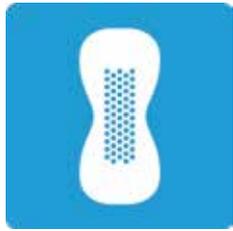
Percentage of girls properly manage menstrual hygiene

- Control Schools
- Intervention Schools

65%

The proportion of girls properly managed menstrual hygiene was significantly higher in the intervention schools than students in the control schools





Absenteeism during menstruation

There is 57 % lower chance of missing a school-day during menstruation among girls in the intervention schools compared to the control schools.

In addition, the average days of absence due to menstruation have decreased as a result of the intervention.

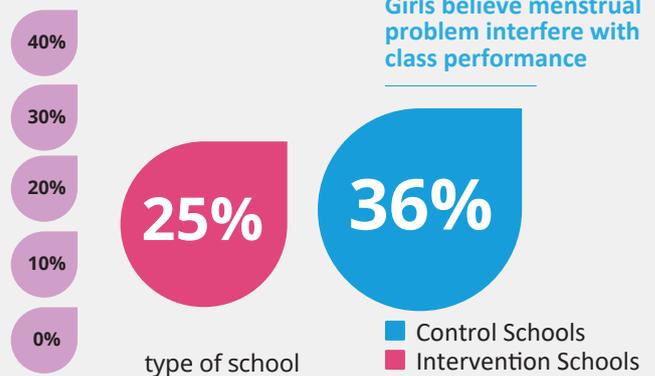
Average reported absent days due to period: -
Intervention schools: 1.5 days, control schools: 2.5 days

Self-confidence

The perception that menstruation and associated problems interfere with class performance is significantly decreased by 36 percent as a result of intervention .

The attributes that improve the self-confidence of a girl child during her period was scored to determine effect of intervention on these attributes. The average score of these factors was 12 percent higher for the intervention student than for the control group student. There is also an 20% increased likelihood of consulting with someone regarding menstrual issues, but the findings are not statistically significant.

Girls believe menstrual problem interfere with class performance



Missed school during last menstruation

23%

38%

■ Control Schools
■ Intervention Schools



Mean score on self-confidence
Intervention schools: 7.62
Control schools: 6.01

Following restrictions

The data indicate a 23 percent decline in the following social taboos and prohibitions during menstruation as a result of intervention. Nevertheless, the results are not statistically significant.

Conclusions and recommendations

The WASH in School impact assessment study shows that improvement in WASH facilities at schools and menstrual hygiene education resulted in enhanced hygienic practices during menstruation, increased knowledge on menstruation, decreased school absence during menstruation as well as decreased in following social prohibition during period.

Recommendations

The study was able to provide evidence that the menstrual hygiene model was shown to be successful in improving menstrual practices and behaviours. The model is therefore tested and can be replicated on a national scale.



Due to funding issues and donor driven project, few schools had only water and hygiene interventions.

Menstrual Hygiene Knowledge= Knowledge on what is menstruation, cause of menstruation, reason of bleeding during menstruation, menstruation blood come from, age for menstruation, duration of menstruation, menstruation per month, interval between two menstruation cycle, odor in blood, whether menstrual blood is unhygienic, and menstrual complication.

Properly managed menstrual hygiene: Use disposable sanitary pads and dispose in waste bin/ burn/incinerate/ bury; OR, use new cloths/rag/reusable manufactured sanitary pads and clean/wash with soap and water, in proper place and dry in sunlight

Self-confidence: comfortable to play sports, can sit in the front of the classroom, follow lectures attentively, can do class-work, comfortable to ask question in the class, can raise hands when teacher ask, comfortable to stand up in the class to answer questions, comfortable to write in the board, comfortable to stay whole day in the class. the positive response received a score.

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Annex

Table 1: Comparison of menstrual hygiene knowledge, practice and attitude among students between intervention and control schools (N=930)

Indicators	Intervention n/N (%) or mean (SD)	Control n/N (%) or mean (SD)	OR [†]	95% confidence interval	P-value	Adjusted OR ^{β†}	95% confidence interval	P-value
a. Mean of menstrual hygiene knowledge score	5.5 (1.8)	4.6 (1.4)	1.46	1.04, 2.03	0.027	1.52	1.06, 2.16	0.021
b. Proportion of girl students properly managed menstrual hygiene	295/456 (65)	241/474 (51)	1.77	1.14, 2.76	0.011	1.32	1.02, 1.70	0.034
Missed schools during last menstruation	107/456 (23)	180/474 (38)	0.50	0.38, 0.65	0.000	0.43	0.28, 0.65	0.000
§ school in last 3 months during menstruation	1.53 (3.17)	2.50 (4.07)	0.93	(0.89, 0.96)	0.000	0.92	(0.87, 0.98)	0.005
Proportion of girls believe menstrual problems interfere with school performance ^β	112/456 (25)	172/474 (36)	0.57	0.49, 0.66	0.000	0.64	0.56, 0.73	0.000
† Consulted with someone for menstruation-related complications	422/456 (93)	434/474 (92)	1.14	0.38, 3.48	0.813	1.20	0.40, 3.58	0.745
† Mean score of self-confidence during menstruation ^d	7.62/12 (3.78)	6.01/12 (4.12)	1.11	1.04, 1.18	0.002	1.12	1.04, 1.17	0.001
Followed restrictions during menstruation ^c	198/456 (43)	245/474 (52)	0.72	0.35, 1.46	0.405	0.72	0.35, 1.45	0.357

^aMenstrual Hygiene Knowledge= Knowledge on what is menstruation, cause of menstruation, reason of bleeding during mens, menstruation blood come from, age for menstruation, duration of menstruation, menstruation per month, interval between two menstruation cycle, odor in blood, whether menstrual blood is unhygienic, and menstrual complication.

^{β†}Adjusted for grade, age, mother Education and Father education

^bProperly managed menstrual hygiene: Use disposable sanitary pads and dispose in waste bin/ burn/incinerate/ bury; OR, use new cloths/rag/reusable manufactured sanitary pads and clean/wash with soap and water, in proper place and dry in sunlight

^βadjusted by School has separate toilet for girls with MHM facilities, Hand cleaning agent (soap and water) available in or near latrine (after defecation) ;grade, age, Mother education and Father education

^dSelf-confidence: comfortable to play sports, can sit in the front of the classroom, follow lectures attentively, can do class-work, comfortable to ask question in the class, can raise hands when teacher ask, comfortable to stand up in the class to answer questions, comfortable to write in the board, comfortable to stay whole day in the class

^βadjusted by Mother's education, father's education, MHM knowledge

[†]adjusted by Mother's education, father's education, Grade and age

^{β†}Adjusted by Age, Grade, Mother & Father education, School has separate toilet for girls with MHM facilities, Hand cleaning agent (soap and water) available in or near latrine (after defecation)

[§]Adjusted by Age, Grade, Mother & Father education, Hand cleaning agent (soap and water) available in or near latrine (after defecation)

^crestrictions: Restriction of food or restriction on activities

^βadjusted by Mother's education, father's education, grade, and age

References

Alam, M., Halder, A., and Horng, L. (2017b). Bangladesh National Hygiene Baseline Survey Preliminary Report. Dhaka, Bangladesh 2014.



Photograph
WaterAid/H&M/ Jannatul Mawa

Design
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