

# Measuring outcomes for Menstrual Health & Hygiene

May 15, 2020



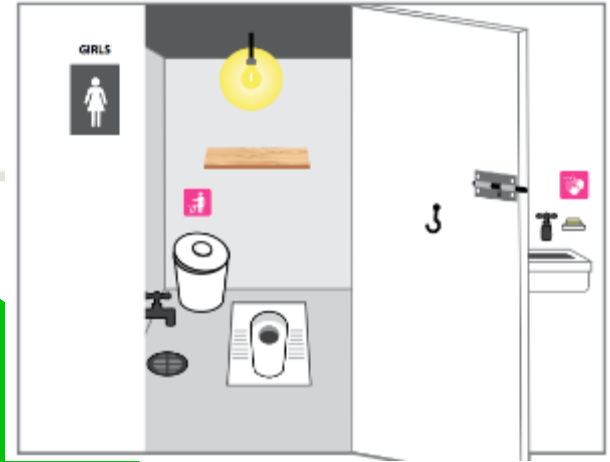
# AGENDA

1. MHH programming within SHN
2. Research on MHH and Girl's Education
3. Menstruation-related ENgagement, Self-Efficacy and Stress (MENSES) Assessment
  - Evolution
  - Results
  - Next steps
4. MHH Monitoring tools

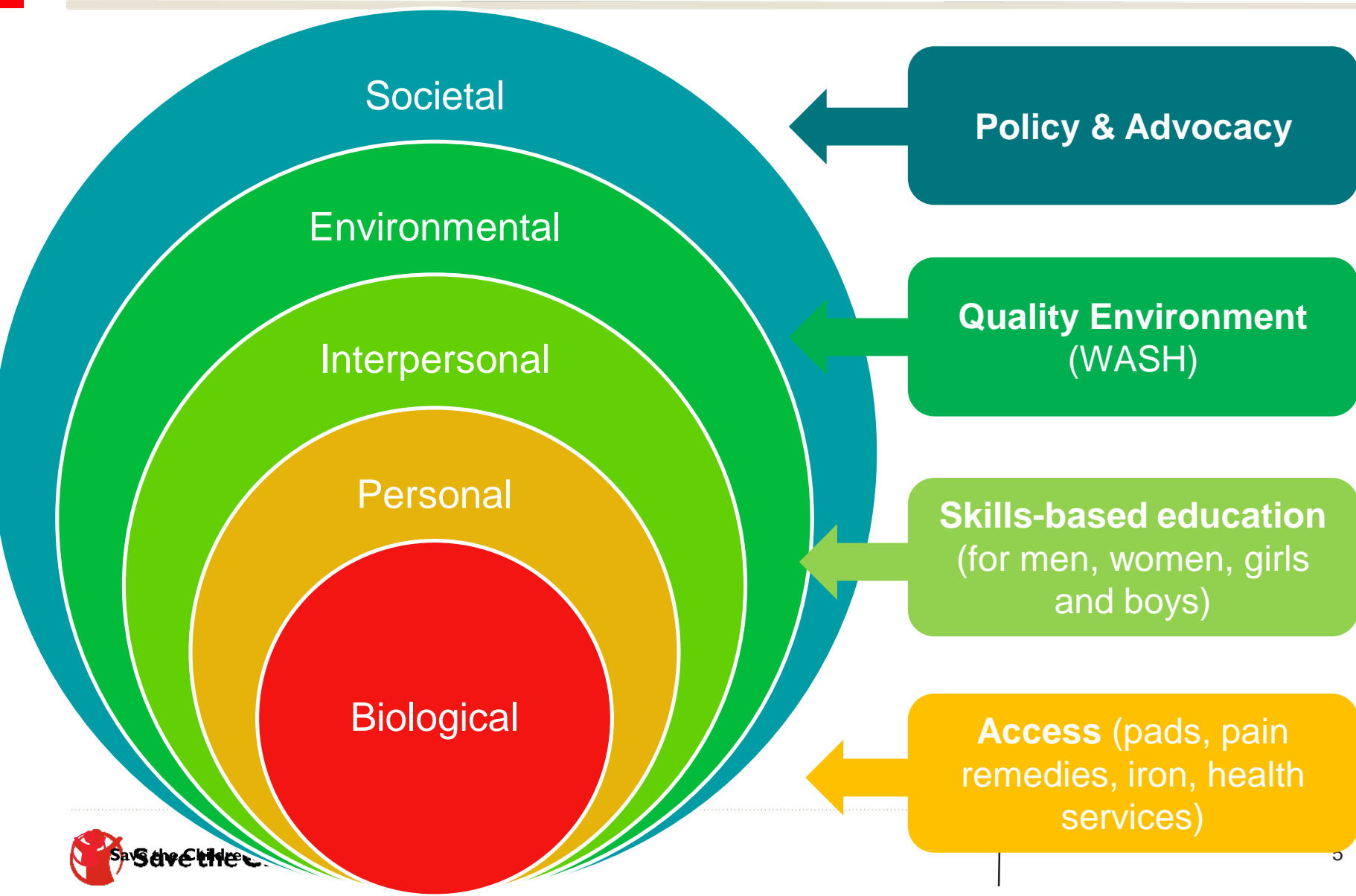
# Global MHH Activities



# MHH programming



# MHH IS MORE THAN SANITARY PAD DISTRIBUTION



# Menstrual Health and Hygiene Definition (DRAFT)

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Menstrual health is a state of complete physical, emotional, mental and social well-being in relation to the menstrual cycle... Menstrual health implies that all people:

- receive **accurate and timely information** about the menstrual cycle and other vaginal bleeding **across the life-course**;
- experience a **positive and respectful environment** in which they can **confidently care for their bodies... seek support, free from stigma or psychological distress**;
- receive accurate information and timely support for the diagnosis and care of menstrual disorders and discomforts... **access to appropriate health care services**;
- decide how to **participate in social, cultural, economic and political life** during all phases of the menstrual cycle **free from discrimination, coercion, exploitation and/or violence**
- can comfortably **care for their bodies during menstruation** and make informed decisions about care practices....

# Menstrual Health as a barrier to education



**'Orphan' children in sub-Saharan Africa  
missed school during their  
period**





# Menstrual Health and Education

## What does research say?

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- **Bangladesh:** girls were more likely to miss school during menstruation if they believed that menstruation impacted their performance in school, had locked bathrooms, or faced restrictions during menstruation (Alam et al., 2017).
- **Malawi:** 1/3 of girls interviewed missed at least one day of school during their last menstrual period (Grant et al., 2013).
- **Uganda:** high school girls and boys missed class equally, but girls were more likely to miss school during their period (Miiró et al., 2018); another study found that 64.7% of girls avoided standing in class to answer questions (Hennegan et al. 2016)
- **Studies evaluating the impact of pads and MHM education on school attendance yield mixed results** (Oster et al., 2011; Montgomery et al., 2012; Montgomery et al., 2016; Philipps-Howard et al., 2016; Austrian et al,

# Menstrual Health and Education

## What do girls say?

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*“They do not participate – they feel tired – and their academic performance goes down. The teachers do not help the girls – if a girl has an accident or bad cramps, she will go home – the teachers will not know she has left.”*

*~rural schoolgirl (Sommer 2010)*

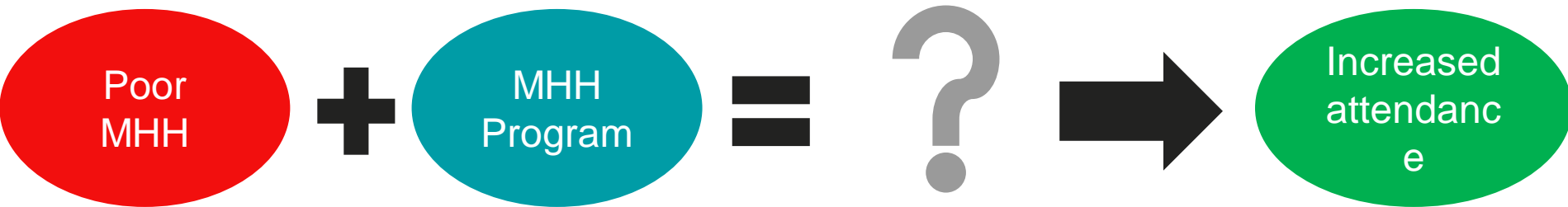
# MH IMPACTS MORE THAN SCHOOL ATTENDANCE

- Northern **Tanzania**: the onset of menses restricts girls' ability to **participate** in social and academic activities...They often experience **shame, confusion, and fear**, as a result (Sommer, 2009).
- Bolivia, Philippines & Sierra Leone: Poor MHM negatively impacts **girls' concentration and participation** at school (UNICEF, Emory University, Save the Children, 2013)
- Kenya: girls described **difficulties engaging** in class, due to **fear** of smelling and leakage, and subsequent teasing (Mason et al, 2013)
- Reaching menarche in complete ignorance and in fear may weaken girls' sense of **self-confidence and competence** (Williams & Currie, 2000; Short & Rosenthal (2008); Ruble & Brooks-Gunn (1982)

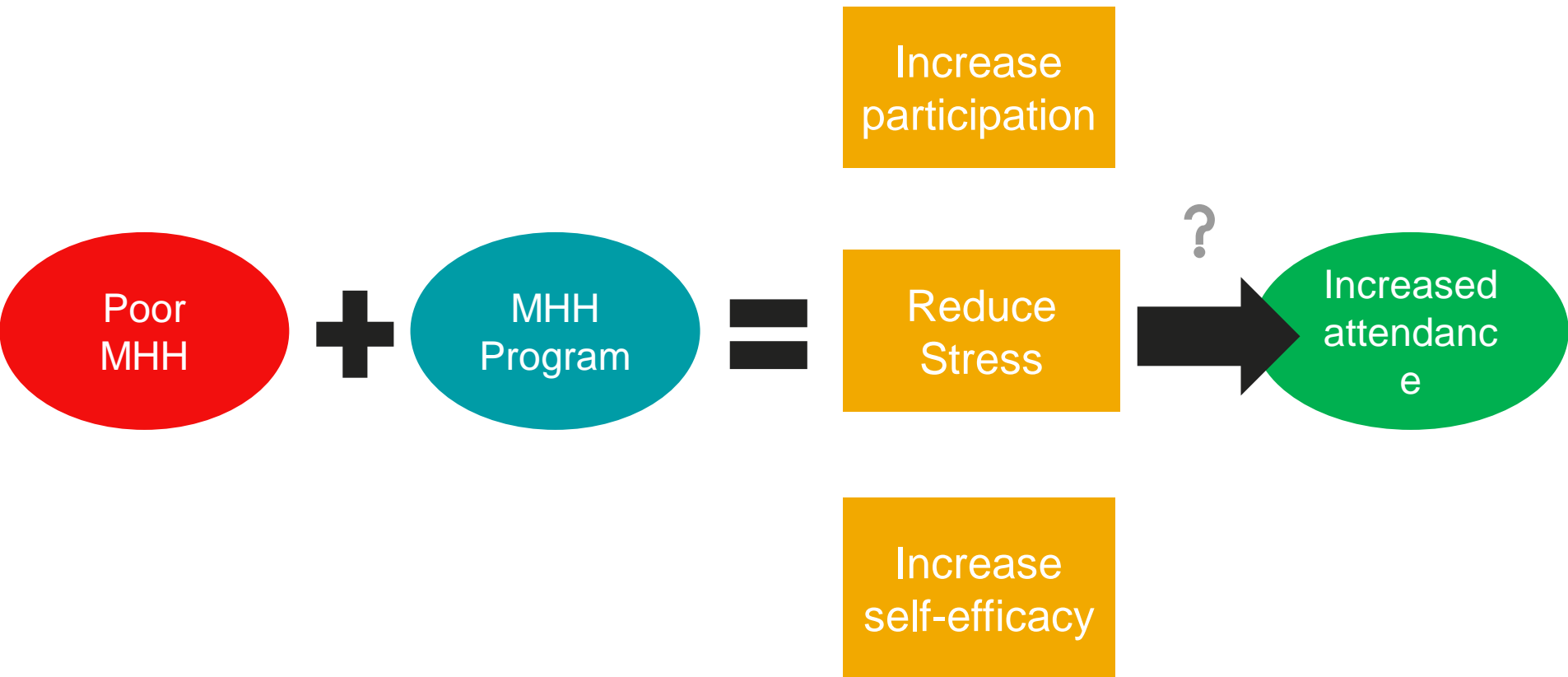


# Menstrual Health and Education

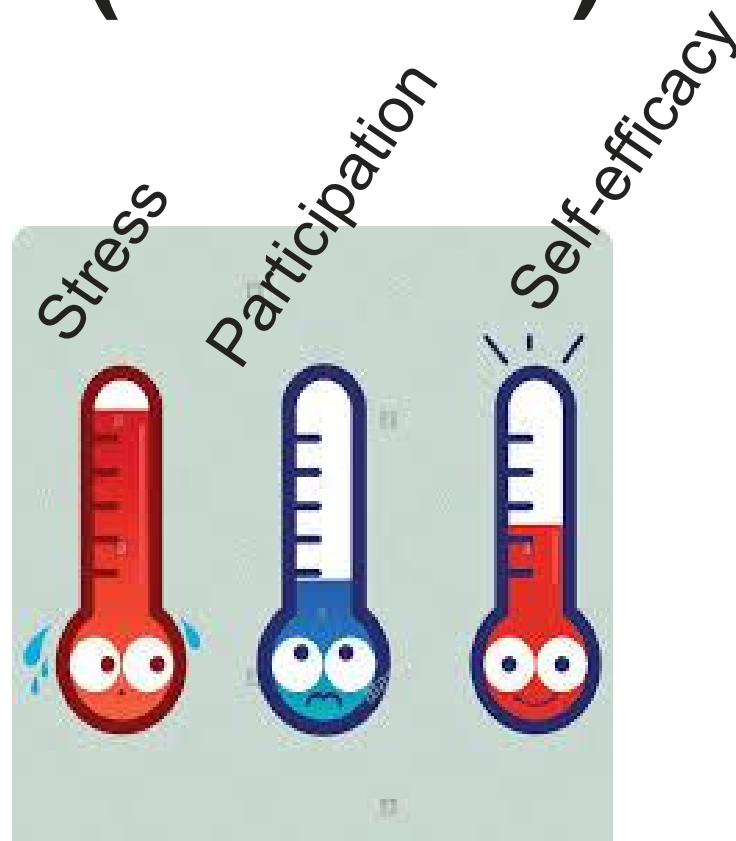
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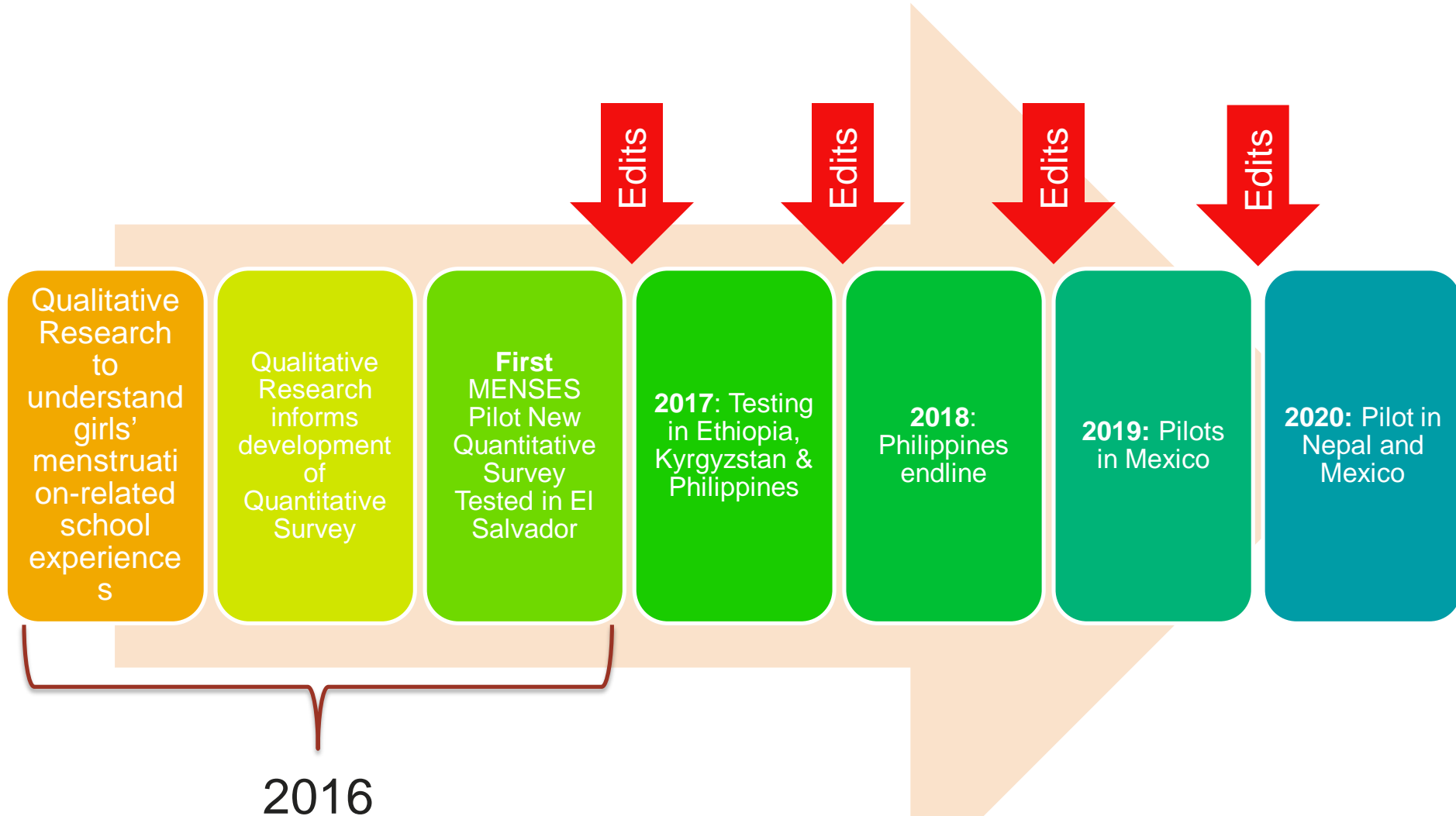
# Menstrual Health and Education



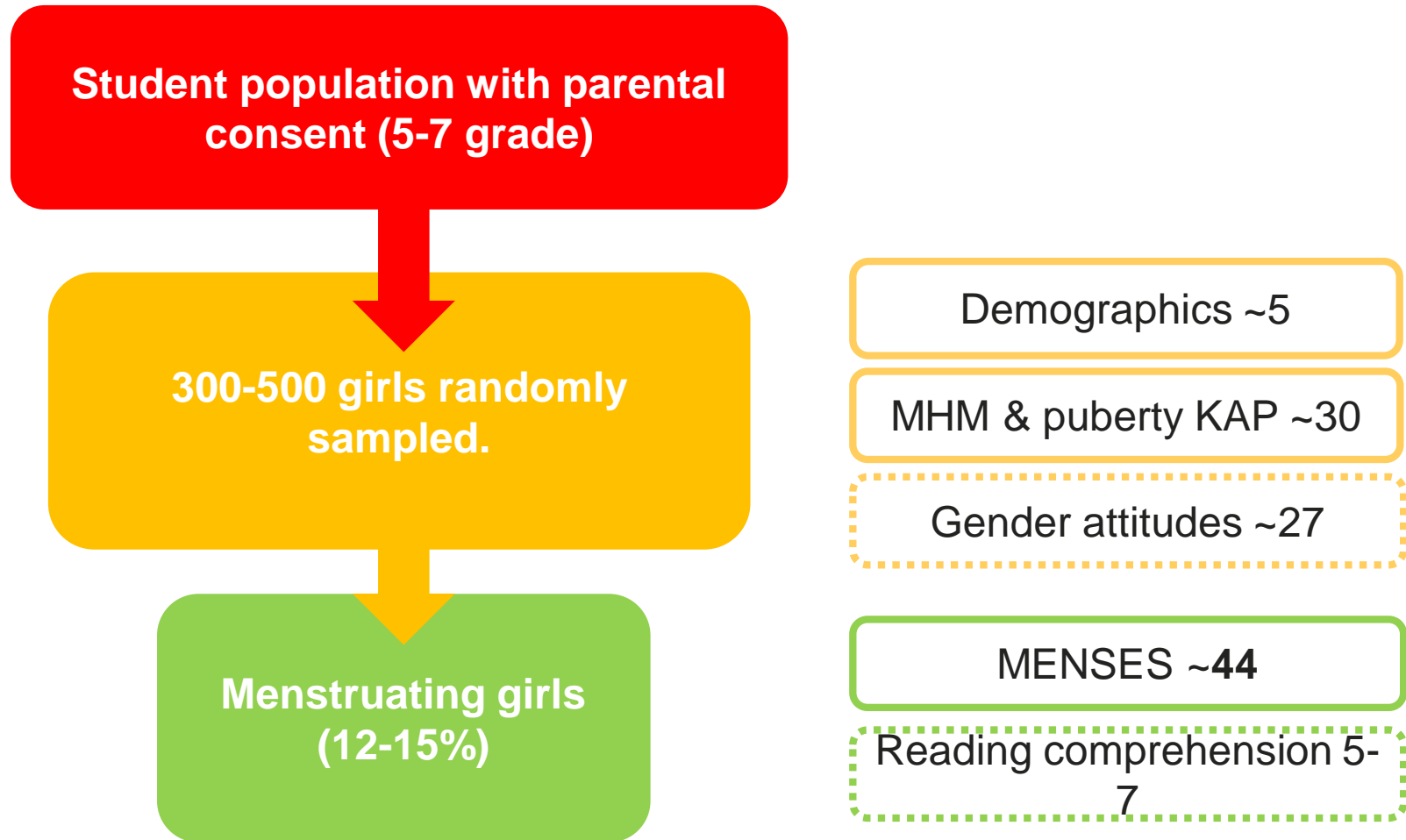
# Menstruation-related ENgagement, **Self-Efficacy** and **Stress** Assessment **(MENSES)**



# MENSES Assessment Development



# MENSES Sampling and survey questions





# Sample MENSES Items

## Participation

- The last time you had your period at school when the teacher asked you to go to the board for an activity, you asked to be excused from it...

Always

Sometimes

Never

## Stress

- The last time you had your period at school you worried about using the school bathroom

A lot

Somewhat

Not at all

## Self-efficacy

- When you have your period in school, you are confident that you could report students who bully you about menstruation to the teacher

Strongly agree

Agree

Disagree

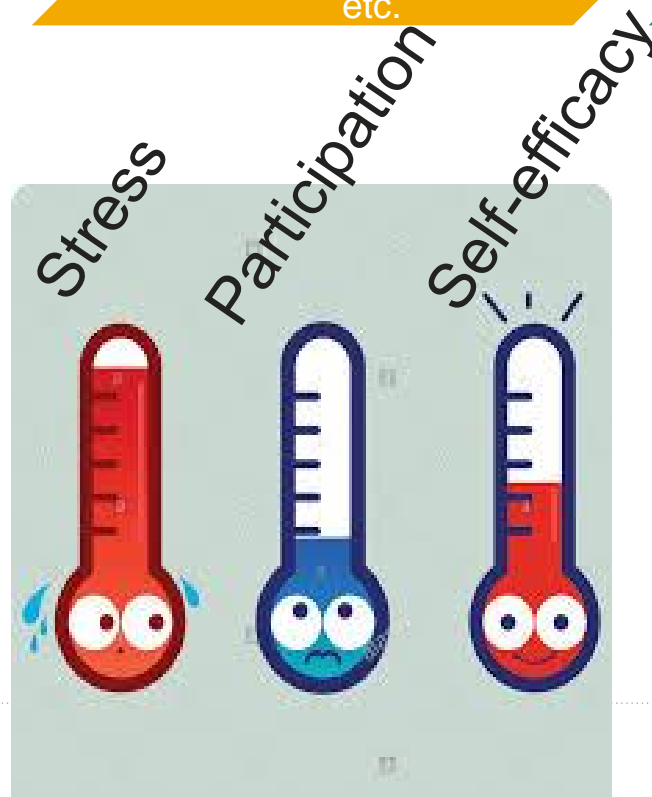
Strongly disagree

# How MENSES Assessment is analyzed

MENSES is comprised of 3 sections of questions – each pertaining to one construct of interest

Each section is analyzed separately to see how the questions interact with each other to test if they measure 'stress,' 'self-efficacy,' etc.

Items that hang together (form the construct) are used to assess change between baseline and endline.



# Sample

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## Philippines

- 645 girls in grades 5 and 6
- Baseline 2017
- Endline 2018

## Mexico

- 331 girls in grades 5 and 6 and first grade of Secondary
- Baseline Q4 2020

# What do we know about MENSES

## How is it working?

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### Analysis:

- **How well the observed variables represent the participation, stress, and self-efficacy constructs that the tool is trying to measure?**
  - Exploratory Factor Analysis using Philippines baseline sample
  - After observing eigenvalues and fit statistics for the different EFA models, we chose the best goodness of fit
- Can this findings be confirmed using a different sample?
  - Confirmatory Factor Analysis using Philippines endline sample
  - Use sub-sample of questions to in each domain with the confirmatory sample (~33 questions).
- CFI and TLI statistics were above 0.90, suggesting that the models fit the data very well.
- Internal Reliability - Raykov's reliability coefficients (RRC) – above .7, minimum level of reliability.
- Inter-rater reliability – GOOD!
- **Philippines model was validated using Mexico data → These models provided a good fit to the data.**
- Composite scores are created for each domain to measure change over time.



# Philippines baseline v. endline comparison

- The three domains range between 0 and 3. We want participation and self-efficacy to go up, stress to go down
- Participation remained the same after the intervention
  - FEWER girls missed a day of school
  - More girls had a difficult time concentrating in class
  - More girls did not feel like doing their homework
- Stress slightly decreased
  - Decreased feelings of loneliness
  - Decreased anxiety of being “peeked” on in the bathroom
  - Increased worry of having enough water to use in the bathroom
- Self-efficacy increased
  - More confident to access sanitary pads at school
  - Increased confidence they can use the bathroom any time.
  - More confident they can ask a teacher for help if they stain themselves

Table 9. Philippines scores at baseline and endline

Domain	Baseline	Endline	Sig
Participation	2.3	2.3	
Stress	1.94	1.93	
Self-efficacy	2.3	2.5**	p<0.000 1



# Philippines baseline v. endline comparison cont...

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## Philippines

- Having a female teacher was significantly related to lower stress, higher participation and self-efficacy
- At endline, girls that live with both their mother and older sister presented a higher score on self-efficacy. Girls who lived with either their mother or a sister exhibited lower stress compared to girls without this family support
- **Girls from Grade 5 and 6 with higher self-efficacy answered more reading comprehension correctly**

## Both Countries:

- Girls with higher SES had better MENSES outcomes overall.

# Conclusions & Next Steps

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## Conclusions

- There is evidence to support the content validity of the MENSES Assessment
- Scores within each domain are internally consistent
- Data collectors can apply the tool consistently

## Next Steps

- Collect MENSES data in Nepal and compare with Philippines and Mexico data, especially reading comprehension findings.
- Collect endline data in Mexico and compare trends with Philippines
- Add teacher sex, SES items and reading comprehension items to future MENSES assessments.
- What is a meaningful change over time?
- Investigate WHY our program in the Philippines is not impacting school participation or stress scores – in-depth review of tool with intervention.

# Collaboration – moving MENSES forward

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Since we are still studying how the measurement tool works we would like to share the tool under the following circumstances:

- There's an ongoing comprehensive MHH program that is committed to collecting baseline and endline data in a reasonable timeframe (~12 months)
  - Girls 10-14
  - Opportunities to embed MENSES within other relevant assessments
- Program team undergoes a technical training on the use of the tool and a final review of changes/adaptation made to MENSES
- Access to all the raw data – so we can analyze and compare with PH, MX and Nepal.



# Credits

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## Principal Investigators

- Jeanne Long, SHN Director
- Jacquelyn Haver, SHN Senior Specialist

## Analysis

- Pamela Mendoza, Research Senior Specialist

## Academic Partners:

- Dr. Bethany Caruso, Emory University
- Dr. Robert Dreibelbis, London School of Tropical Hygiene and Medicine

## Research Fellows:

- Chiara Bercu, Columbia University
- Nelly Maina, Columbia University

## El Salvador

- Margarita Franco, PDQ
- Mario Alvarado, MEAL Specialist
- Beatriz Huezo, SHN Coordinator

## The Philippines

- Jon Valdez, WASH Advisor
- Anjelia SanBuenaventura, SHN Program Officer

## Mexico

- Fernanda Acosta, Sponsorship Manager
- Jorge Sanchez, SHN Coordinator

# Questions?

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# Exploratory factor analysis

Are the relationships between items consistent with a single or multiple underlying constructs?

## Stress

	Model 1 1 factor	Model 2 3 factors	Model 3 3 factors + cov	Model 4 1 factor + cov
$\chi^2$	165	138	87	61
RMSEA	0.09	0.07	0.04	0.05
upper bound	0.07	0.05	0.02	0.02
lower bound	0.10	0.08	0.06	0.07
CFI	0.80	0.88	0.96	0.95
Tucker	0.76	0.85	0.94	0.93

# Confirmatory factor analysis

Can these findings be confirmed in a separate sample?

## Philippines

	Participation	Stress	Self-efficacy
$\chi^2$	39.02	75.66	112.59
RMSEA	0.05	0.05	0.04
upper bound	0.03	0.03	0.02
lower bound	0.08	0.06	0.05
CFI	0.95	0.94	0.93
TLI	0.93	0.92	0.91
SRMR	0.04	0.04	0.04

## Mexico

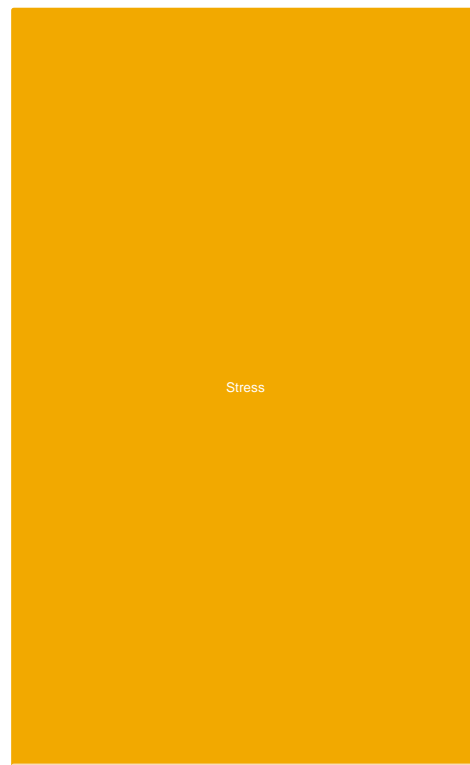
	Participation	Stress	Self-efficacy
$\chi^2$	13.15	23.39	67.10
RMSEA	0.00	0.06	0.02
upper bound	0.00	0.00	0.00
lower bound	0.10	0.12	0.07
CFI	1.00	0.96	0.97
TLI	1.00	0.94	0.96
SRMR	0.062	0.06	0.79

# Composite scores

**Assumption:** Given that our tools are often used by teams in low-resource contexts, we created three scores that assume equal weights for all the items considered in each domain.

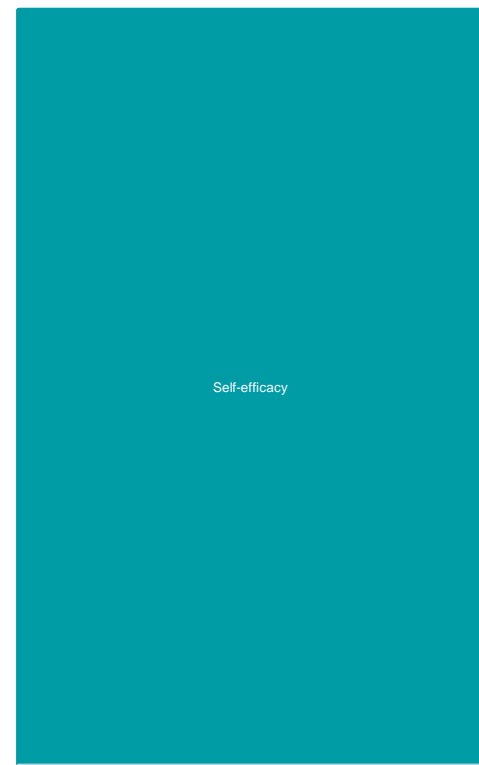


• P4



• S2

• S9



• Se3

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# MHH Program Monitoring Guidance and Tools



**Menstrual Health & Hygiene**

**Program Monitoring**

**Instructions**

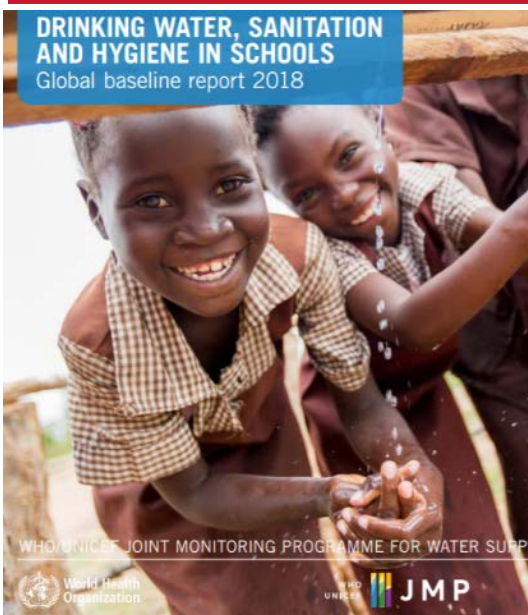
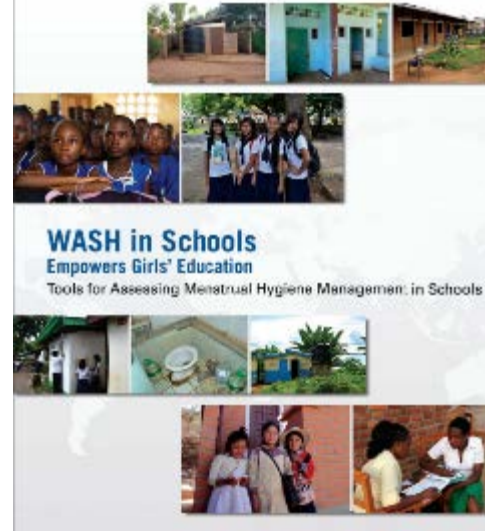
# Background

## Rational for the MHH Ladder



# Background

## Resources informing the MHH Monitoring Instructions



Procter & Gamble and Save the Children in Mexico #WeSeeEqual – Transforming Gender Norms among Schoolchildren





# MHH Ladder

## Overview

		Service Levels			
		No service	Limited service	Basic service	Advanced service
Sub Outcomes	Access to Health Services	The school does not provide the expected service.	The school only partially meets the expected service.	The school meets the basic requirement for the expected service.	The school goes beyond the basic requirement & makes links with the community to extend service to children & their families.
	Quality Learning environment				
	Skills-based Health Education				
	Community Support & Advocacy				



## Questions?

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