MHM for Schoolgirls in India

Presented by Penelope A Phillips-Howard (PI)

On behalf of:

Tata Institute of Social Sciences, Mumbai
UNICEF WASH in Schools Programme, India
Liverpool School of Tropical Medicine and partners

4th Annual Virtual Menstrual Hygiene Management in Schools Conference, October 22nd 2015
Researchers and collaborative team

**TISS** – M Sivakami, Nikita Surani, Chetan Patil, Sharayu Shinde, Narendra Kakade, Harshad Thakur

**UNICEF India** - Mamita Bora Thakkar, Arun Dobhal, Yusuf Kabir, Pratibha Singh, Aruna Rathnam, Bharathy Tahaliani, Ram Chandra Singh, Sandeep Tendolkar, Suzanne Coates

**LSTM and partners** - Annemieke van Eijk, Kayla Laserson, Kelly Alexander, Ashley Bauman, Linda Mason, Gibby Koshy, Penelope Phillips-Howard

**Other stakeholders and partners** - National, state and local ministry officials, international and local aid agencies, NGOs, other agencies
MHM for Schoolgirls in India

- **Background**
  - Range of MHM problems affect girls comfort, safety, dignity
  - Studies report restrictions, absence, use unhygienic cloths
  - Past research — large array, limitation on methods
  - Govt (4 ministries) — toilets in school, knowledge and healthy practices, access to ‘absorbents’, disposal systems

- **Objectives of research project**
  - Understand the barriers and challenges of MHM and WASH faced by schoolgirls in India, and
  - Use the generated to develop a holistic package for MHM in schools for scale-up across India
MHM for Schoolgirls in India

Systematic review and meta-analysis

Stakeholders interviews
- national, state, local

National Programme review, data sources

FGD
teachers, girls, boys and parents

Girls surveys

WASH in Schools observation surveys and KII interviews

Teachers survey

Development of holistic package for MHM in schools in India
# Timelines for research to support MHM for Indian schoolgirls: Nov 2014 to Oct 2015

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</table>
Random sampling for field surveys, 3 Indian states

India

Chhattisgarh

Tamil Nadu

Maharashtra

Purposive sampling to represent India: geographically, demographically

Stratified random sample - exclude cities

Simple random sample

Stratified random sample, best practice y/n

Simple random sample co-eds, plus all girls

Purposive sampling Y8,9,10

All in class (filter non-menstruating in analysis)
Field data generated to date from 3 Indian states

<table>
<thead>
<tr>
<th>Category</th>
<th>3 States</th>
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<td>3601</td>
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<td>50</td>
<td>10</td>
<td>60</td>
<td>27</td>
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<td>KII WinS/MHM</td>
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<td>10</td>
<td>60</td>
<td>27</td>
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<td>FGD girls</td>
<td>10</td>
<td>6</td>
<td>16</td>
<td>19</td>
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<td>FGD teachers</td>
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<td>FGD boys</td>
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<td>10</td>
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<td>FGD parents</td>
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<td>3</td>
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<td>Stakeholders</td>
<td>34</td>
<td>8</td>
<td>42+12</td>
<td>50</td>
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# Systematic Review and Meta-analysis: Literature search methods

<table>
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<tr>
<th>Framework</th>
<th>Search terms</th>
<th>Number of articles</th>
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<tr>
<td><strong>P</strong></td>
<td>Population (adolescent OR adolescence OR puberty OR peer OR school)</td>
<td>P: 3,922,974</td>
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<tr>
<td><strong>I</strong></td>
<td>Intervention or condition AND (Menstruation OR menstrual OR menses)</td>
<td>I: 20,899 P+I: 16382</td>
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<tr>
<td><strong>C</strong></td>
<td>Control -</td>
<td></td>
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<tr>
<td><strong>O</strong></td>
<td>Outcome AND (hygiene OR hygienically OR sanitation OR sanitary)</td>
<td>O: 112,907 P+I+O: 397</td>
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<td><strong>T</strong></td>
<td>Timing AND (&quot;2000/01/01&quot;[PDat] : &quot;2015/01/31&quot;[PDat])</td>
<td>P+I+O+T: 32</td>
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<tr>
<td><strong>S</strong></td>
<td>Setting AND India</td>
<td>S: 252,289 P+I+O+T+S: 24</td>
</tr>
</tbody>
</table>

- Records identified through database search (n=145)
- Additional records identified through other sources (n=80)
  - Records after duplicates removed (n=205)
  - Records screened (n=205)
  - Records excluded (n=53)
    - Full text articles removed
      - no full text available (n=9)
      - other publication, already included study (n=5)
  - Full text articles assessed for eligibility (n=152)
  - Studies included in database for analysis (n=138)
Girls menstrual awareness and knowledge in India

Number of studies contributing to the pooled estimate are above bars

Pooled Prevalence and 95% CI
Girls’ sources of information on menarche in India

- **Mother**: 15% (rural) and 18% (urban)
- **Friend**: 12% (rural) and 15% (urban)
- **Relative**: 10% (rural) and 14% (urban)
- **Teacher**: 8% (rural) and 12% (urban)
- **Media**: 6% (rural) and 9% (urban)
- **Health worker**: 1% (rural) and 2% (urban)

Number of studies contributing to pooled estimate above bars.

Pooled Prevalence

- **Percentage**
  - Mother: 15% (rural) and 18% (urban)
  - Friend: 12% (rural) and 15% (urban)
  - Relative: 10% (rural) and 14% (urban)
  - Teacher: 8% (rural) and 12% (urban)
  - Media: 6% (rural) and 9% (urban)
  - Health worker: 1% (rural) and 2% (urban)
Meta-regression: Proportion of girls reporting religious menstrual restrictions over time in India

Pooled prevalence: 77%, 95% CI 71-83%

Meta-regression: p=0.902

Source: Van Eijk AM, Sivakami M, Thakkar MB et al

67 studies
Type of absorbents used by Indian adolescent girls

<table>
<thead>
<tr>
<th>Type of Absorbents</th>
<th>Overall</th>
<th>Rural</th>
<th>Urban</th>
<th>Slum</th>
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</thead>
<tbody>
<tr>
<td>Commercial pads</td>
<td>105</td>
<td>56</td>
<td>38</td>
<td>9</td>
</tr>
<tr>
<td>Cloths</td>
<td>102</td>
<td>35</td>
<td>55</td>
<td>8</td>
</tr>
<tr>
<td>Pads and cloths</td>
<td>43</td>
<td>23</td>
<td>14</td>
<td>4</td>
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</table>

Number of studies contributing to pooled estimate above bar; *significance urban v rural area
Meta-regression: use of sanitary napkins by adolescent girls in India over time

Pooled prevalence: 45% 95% CI 38-52%

Meta-regression p<0.0001

Source: Van Eijk AM, Sivakami M, Thakkar MB et al

104 studies
Disposal of menstrual absorbents by girls in India

Number of studies contributing to pooled estimate above bar; *significance urban v rural area
Girls reported school absence by region in India

Pooled prevalence: 24%, 95% CI 19-30%

Source: Van Eijk AM, Sivakami M, Thakkar MB et al

64 studies
Meta-regression: Percent girls’ school absence and menstrual pad/napkin use in India

Source: Van Eijk AM, Sivakami M, Thakkar MB et al
Importance of WinS - Proportion of girls who change menstrual items in school

<table>
<thead>
<tr>
<th></th>
<th>Number of studies</th>
<th>Proportion of girls</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>TOTAL</td>
<td>17</td>
<td>37%</td>
<td>29%-46%</td>
</tr>
<tr>
<td>RURAL</td>
<td>12</td>
<td>39%</td>
<td>30%-48%</td>
</tr>
<tr>
<td>URBAN</td>
<td>5</td>
<td>34%</td>
<td>15%-57%</td>
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</tbody>
</table>

Relevance: (three international, one Indian study)
Two studies found direct association between absence and very dirty toilets - one showed separate girls toilets reduced absence, another showed better WASH in school reduced girls absence
Systematic review conclusions

- Half of girls **unaware** of menarche; **restrictions** still debilitating
- **Mothers** main source of **information**, rarely health workers
- One third of girls change in school- need to strengthen WinS
- Absence – pads association; likely other **cofactors** (WinS, SES)
- Need for hygienic **absorbents** - hygienic cloth not precluded
- Girls not aware of **other options** (i.e. tampons, menstrual cups)
- Disposal options for pads/ lacking but increasingly important
- Current programmes are very promising but studies show there is **room for improvement**, lack of convergence, gaps
- Field data required to fill gaps, inform holistic package
Opportunities and challenges to date

- Three partners – contribute knowledge and skillsets, each develop further expertise
- Differing commitments, priorities and expectations between collaborators need early clarity to minimise delays, inputs
- Unrealistic timeframe adds pressure – best not under-estimate requirement of different languages, ethical approval, clearance procedures, school timetables have on timelines
- True random selection results in representative samples but add to logistics – remote areas have safety and travel issues
- Adequate sampling affected by age of menarche – needed to double sample to ensure representation of menstruating girls