Effectiveness of mass media campaigns in changing Water, Sanitation and Hygiene related health behavior in rural Bangladesh

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2014 Water and Health conference
Chapel Hill, North Carolina
15th October, 2014
Handwashing with soap
structured observation, 11 country review

- after toilet use: 17%
- after cleaning a child: 13%
- after cleaning up child stool: 19%
- before feeding a child: 5%

SHEWA-B
The Sanitation Hygiene Education and Water Supply in Bangladesh Program

- 7 year program (2007 – 2013)
- Implemented by the Government of Bangladesh and UNICEF
- Included 68 sub districts
- Targeted 31 million people
- Included urban and rural areas
- Conducted by local community hygiene promoters (CHPs)

- In midline (2009) evaluation, only few outcome indicators showed positive change
Handwashing with Soap/Ash observed
Baseline (2007) and midline (2009)

Before preparing food
Control baseline: 0.6%
Control midline: 1.0%
Intervention baseline: 1.0%
Intervention midline: 0.9%

Before eating
Control baseline: 0.4%
Control midline: 1.0%
Intervention baseline: 1.0%
Intervention midline: 0.4%

Before feeding a child
Control baseline: 0.7%
Control midline: 2.0%
Intervention baseline: 2.0%
Intervention midline: 3.0%

Handwashing with Soap/Ash observed
Baseline (2007) and midline (2009)

- Before preparing food: 0.4% (Control baseline), 0.9% (Control midline), 0.6% (Intervention baseline), 1.0% (Intervention midline)
- Before eating: 0.4% (Control baseline), 1.0% (Control midline), 0.4% (Intervention baseline), 1.0% (Intervention midline)
- Before feeding a child: 0.7% (Control baseline), 2.0% (Control midline), 1.0% (Intervention baseline), 3.0% (Intervention midline)

- After cleaning a child's anus: 0% (Control baseline), 18% (Control midline), 17% (Intervention baseline), 23% (Intervention midline)
- After defecation: 0% (Control baseline), 10% (Control midline), 17% (Intervention baseline), 23% (Intervention midline)

* P <0.05

Mass Media Campaign

- UNICEF revised their intervention package in 2011 focusing on
  - Few key messages delivery
  - Two target groups (pregnant women and mothers of children and primary school students)

- **A nation wide mass media campaign**
  - Radio spots across six regional channels and video spots on five TV stations
  - Messages delivered in drama form with ‘nurture and disgusts’ method
  - Three rounds of campaign
  - First round on hand washing and sanitation (both radio and TV)

- Aired on November 2011 to April 2012
### Mass Media Campaign

<table>
<thead>
<tr>
<th>AUDIO/Radio coverage</th>
<th>VIDEO/Television coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wash hands with soap</strong>&lt;br&gt;After defecation&lt;br&gt;After cleaning a child who defecated&lt;br&gt;Before feeding a child&lt;br&gt;Before food preparation</td>
<td><strong>Wash hands with soap</strong>&lt;br&gt;After defecation&lt;br&gt;After cleaning a child who defecated&lt;br&gt;Before feeding a child&lt;br&gt;Before food preparation&lt;br&gt;Before touching and caring of babies</td>
</tr>
<tr>
<td><strong>Sanitation</strong>&lt;br&gt;Use sanitary latrine for defecation&lt;br&gt;Discard child feces into latrine&lt;br&gt;Clean latrine slab, pan and floor to reduce flies and bad smell</td>
<td></td>
</tr>
</tbody>
</table>
Rationale

- Many WASH-related interventions are delivered in low income countries through interpersonal communication.
- These interventions are too costly to scale with limited resources\(^1\).
- Mass media can be a powerful and cost effective method\(^2\).
- Very few WASH mass media interventions have been evaluated.

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1 Parkinson J 2009. 2 Wakefield et al. 2010
Objective

To determine whether the SHEWA-B mass media campaign improved beneficiary health behavior knowledge and health behavior

Figure courtesy: UNICEF
Sample Size

- Mass media evaluation was a component of the 58 Sub districts study
- Designed to measure the variability in programme implementation across the sub districts
- Several key outcomes of interest were determined to measure the variance
- A sample of 20 clusters per sub districts was chosen in order to detect differences in outcomes ranging from 1.99% to 6.8% between sub districts
Household selection

A house with at least one child under 5 yr of age
Study Participants

- Mother or caregiver of child under 5 yr of age

Data collection

- Pre tested questionnaire included:
  • Face-to-face interviews
  • Spot checks
  • Hand washing demonstrations
## Socio-demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>2011 (N= 8,947)</th>
<th>2012 (N= 8,400)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Household head</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td><strong>0 yr education (youngest child’s parent)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Father</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td><strong>Avg. household size</strong></td>
<td>5.6</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Owned</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>95</td>
<td>94</td>
</tr>
<tr>
<td>Mean farm land*</td>
<td>69.6</td>
<td>72.8</td>
</tr>
<tr>
<td>Electricity</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>TV</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Radio</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>73</td>
<td>81</td>
</tr>
<tr>
<td>Improved toilet</td>
<td>36</td>
<td>41</td>
</tr>
</tbody>
</table>

* Decimal
Respondents contact with a CHP

Courtyard sessions

- Ever attended
  - 2011: 12%
  - 2012: 16%

- Ever heard
  - 2011: 17%
  - 2012: 19%

Heard about in 2 months

- Ever attended
  - 2011: 8%
  - 2012: 6%

CHP Contact in last 2 Months

- Home visit
  - 2011: 18%
  - 2012: 19%

- Any contact
  - 2011: 18%
  - 2012: 19%
Respondent Recalled SHEWA-B Messages

- **Hand washing messages**
  - 2011: 30%
  - 2012: 45%

- **Safe water messages**
  - 2011: 26%
  - 2012: 40%

- **Sanitation messages**
  - 2011: 31%
  - 2012: 46%
Respondent’s Sources of SHEWA-B Messages

- **Any means**: 2011 - 66%, 2012 - 82%
- **SHEWA-B CHP**: 2011 - 28%, 2012 - 45%
- **Media campaign**: 2011 - 38%, 2012 - 47%
- **Other NGO**: 2011 - 8%, 2012 - 7%
- **Other than SHEWA-B**: 2011 - 24%, 2012 - 29%
### Health Behavior: Handwashing Outcomes

<table>
<thead>
<tr>
<th>Category</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demonstrated HW behavior after defecation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregivers</td>
<td>56</td>
<td>70</td>
</tr>
<tr>
<td>*Child</td>
<td>48</td>
<td>66</td>
</tr>
<tr>
<td><strong>Hand cleanliness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caregiver</td>
<td>41</td>
<td>47</td>
</tr>
<tr>
<td>*Child</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td><strong>Convenient HW location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Child</td>
<td>52</td>
<td>63</td>
</tr>
</tbody>
</table>

*3 to 5 yr
Health Behavior: Latrine use and Safe water

- **Environmental sanitation**
  - 2011: 34%
  - 2012: 39%

- **Cleanliness of latrines**
  - 2011: 52%
  - 2012: 51%

- **Covered container**
  - 2011: 27%
  - 2012: 20%

- **Latrine access**
  - **No access**
    - 2011: 4%
    - 2012: 6%
  - **Improved latrine**
    - 2011: 36%
    - 2012: 41%

- **Safe water**
  - **Covered container**
    - 2011: 27%
    - 2012: 20%

- **Health Behavior: Latrine use and Safe water**

  - Bar chart showing the percentage of households using improved latrines and having access to safe water in 2011 and 2012.
Summary

Over the 1 yr period when the mass media campaign was aired

- No change in CHP contact
- Increased health message recall
- Increased observed health behaviors

Conclusion:

A mass media campaign on top of a low key interpersonal communication intervention resulted in improved health knowledge and behaviors.
Limitations

- Before and after analysis
- Limitation of survey questions to accurately determine whether the messages recalled were from SHEWA-B media campaign
Recommendations

- Future WASH interventions should incorporate use of mass media campaigns along with interpersonal communication
- Evaluation of mass media should be included in the study design
- To increase the validity of the mass media evaluation:
  - Questions should be developed to determine message sources more accurately to attribute changes to mass media campaigns
  - Both qualitative and quantitative studies should be incorporated in the evaluation to determine factors underlying the translation of knowledge to practice in response to a mass media campaigns
Donor: UK AID

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icddr,b thanks its Core Donors

- Australian Aid
- Canada
- Sweden
- UKaid from the British people