

# Behavior Change in Emergency Contexts: Handwashing Promotion in Post-Earthquake Haiti and Drought Response in Borena Zone, Ethiopia\*

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## Background

- Personal hygiene, i.e. handwashing with soap (HWWS), is especially relevant in a disaster context where risks for diarrheal diseases are elevated.
- Hygiene promotions are rarely studied in an emergency context.
- Evaluation results from two emergency responses are reported:
  - Oxfam's hygiene promotions in post-earthquake Haiti (2010 to 2011)<sup>1</sup>
  - Oxfam's drought response in Borena zone, Ethiopia (2011 to 2012)
- According to the RANAS model (Mosler, 2012)<sup>2</sup>, it is assumed that promotion activities, to be effective, have to influence a set of behavioral factors (i.e. health related beliefs and perceptions) which in turn change handwashing behavior.



Figure 1. Hygiene promotion in Haiti.

## Research Questions

- Which behavioral factors are most important in determining HWWS?
- Which promotion activities influence which behavioral factors and have an impact through these on HWWS?

## Methods

### Data Collection

- Displacement camps and neighborhoods in Haiti
- Rural villages in southern Ethiopia
- Cross-sectional design
- Face-to-face interviews with the primary caregiver
- $N = 811$  in Haiti and  $N = 463$  in Ethiopia

### Dependent Variable

Frequency of handwashing with soap at key times

### Data Analysis

Regression and mediation analyses

## Behavioral Factors explaining Food Related HWWS in Haiti<sup>3</sup>

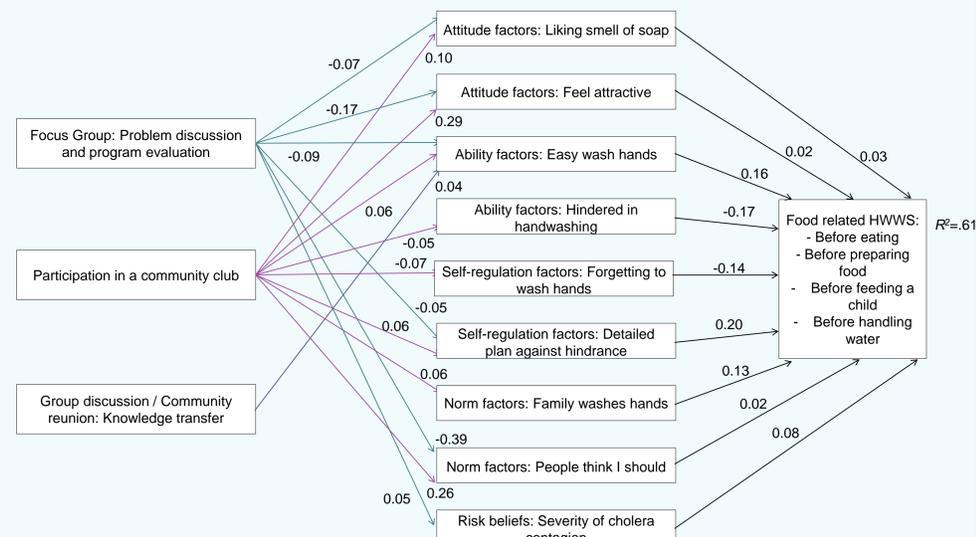


Figure 2. Association between selected promotion activities, behavioral factors and food related HWWS. Unstandardized regression coefficients are displayed. Only significant coefficients with  $p < .05$  are presented.

- Attitude, norm and ability factors are most important in determining handwashing with soap.
- Health risk factors and health knowledge are of only minor importance.
- The behavioral factors mediate the association between promotion activities and handwashing with soap.

## Total Promotion Effects on Food Related HWWS in Haiti and Ethiopia<sup>4</sup>

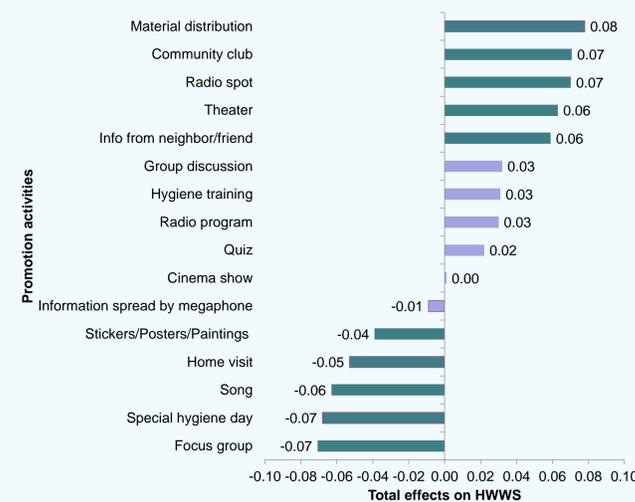


Figure 3. Total unstandardized effects of promotion activities on food related HWWS. Turquoise bars represent significant unstandardized regression coefficients with  $p < .05$ . Bars with purple outline represent promotions implemented in both countries.

- 6 promotion activities are associated with increased handwashing with soap: radio spots, radio programs with Q&A, material distributions with instructions for use, information from friends or neighbors, hygiene theaters and community clubs.
- 5 of the promotion activities are associated with *decreased* handwashing with soap: focus group, stickers, posters and paintings, hygiene songs, special hygiene days and home visits.

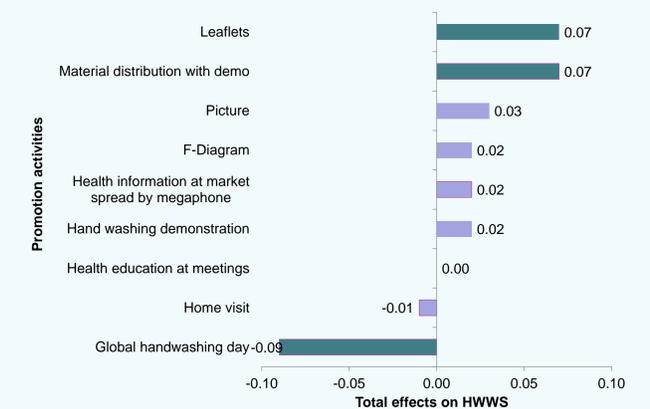


Figure 4. Total unstandardized effects of promotion activities on food related HWWS. Turquoise bars represent significant unstandardized regression coefficients with  $p < .05$ . Bars with purple outline represent promotions implemented in both countries.

- 2 promotion activities are associated with increased handwashing with soap: leaflets and material distribution.
- 1 of the promotion activities is associated with *decreased* handwashing with soap: global handwashing day.

## Conclusions

- Attitudes, norms, and ability beliefs were most important in explaining handwashing behavior in both countries.
- Future promotion activities should target these factors in particular.
- Some promotion activities had positive, some had negative and some had no significant association with handwashing behavior.
- Of the four promotion activities implemented in both countries, material distributions revealed to be promising in changing handwashing behavior in both samples. Global handwashing day activities, home visits, and information spread by megaphone were negatively, inconsistently or insignificantly associated with handwashing behavior.
- Carefully redesigning the activities, conducting pre-tests and subsequently protocoling the behavior change effects is inevitable for having reliably effective promotion activities.

<sup>1</sup> <http://www.oxfamamerica.org/files/factors-determining-the-effectiveness-of-oxfams-public-health-promotion-approach-in-haiti>

<sup>2</sup> Mosler, H.-J. (2012). A systematic approach to behavior change interventions for the water and sanitation sector in developing countries: a conceptual model, a review, and a guideline. *International Journal of Environmental Health Research*, 1-19. doi: 10.1080/09603123.2011.650156.

<sup>3</sup> Similar results found in Ethiopia and for feces related handwashing with soap.

<sup>4</sup> Similar results found for feces related handwashing with soap.

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