Model handwashing station vs. self-made handwashing station: Effect on desired handwashing behavior

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Introduction

- Diarrhea incidences, an important cause of child death, increase from around the time that complementary foods are introduced, and the peak age range children present with diarrhea is 6 to 23 months (1)
- Consumption of contaminated complementary food may contribute to diarrhea and growth faltering (2)
- Caregiver hand hygiene during food preparation and child feeding is particularly important in preventing diarrhea

- Washing hands with soap is more common when water and soap are together at a convenient location (3)
- In Bangladesh, water sources and handwashing places are often distant from food preparation and child feeding areas (4)

Objectives

- To assess the effectiveness of handwashing stations in facilitating handwashing with soap before food preparation and before feeding a child
- To assess the effectiveness of encouraging caregivers to create their own handwashing station on improving handwashing with soap

Methods

Study population

- Two rural districts of Bangladesh: Manikgonj and Dinajpur
- Mothers and caregivers of children aged 6-23 months were the primary target group
- Father, grandfather, grandmother and community leaders were the secondary target groups

Intervention

- September to mid-December 2011
- 40 households received study-provided handwashing station and bottle for soapy water (a mixture of detergent powder and water)(5)
- 40 households received behavior change communication messages only

Community health workers promoted intervention recommendations through home visits, group meetings with mothers, and community meetings with a video show.

- Community health workers:
  - assisted study participants to install the study-provided handwashing station at the recommended place
  - encouraged mothers who didn’t receive any hardware to develop their own handwashing station from available household resources
  - demonstrated how to make soapy water

Data collection

- Informal interviews: each mother was interviewed during each visit
- Group discussions: 4 with household members and 4 with community leaders during each visit
- Unstructured observations: 20 randomly selected households during each visit

Handwashing with soap

- Caregivers’ self-reported handwashing practices at recommended times increased in both study groups from the first assessment to the final assessment (Figure 3)
- Handwashing with soap was observed among 80% (8/10) in the study-provided handwashing station group and 50% (5/10) among the self-made handwashing station group at the final assessment
- Study participants explained that the main motivator for regular use of a handwashing station was having water and soap in one place near the food preparation and child feeding area

Results

- By the end of the trial among the self-made handwashing station group, 63% (26/41) of caregivers reported that they regularly used the handwashing station (Figure 4) and 40% (4/10) were observed using a handwashing station
- The self-made handwashing station developed by community members most often comprised an existing household bucket for water storage, a jug or mug to pour water over hands, and a plastic bottle for making and storing soapy water
- Community members in both intervention groups reported preference for soapy water over bar soap

Conclusion

- A handwashing station with soap and water placed at a convenient location is effective in increasing handwashing with soap before preparing food and feeding a child
- Although providing hardware resulted in a higher percentage of caregivers who washed hands compared to caregivers who did not receive any hardware, encouraging caregivers to create and use their own handwashing station was feasible and effective in increasing handwashing behavior at these two key times

Recommendation

In the absence of large-scale provision of handwashing stations, caregivers can be encouraged to create and use their own handwashing station.

References


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Figure 2: Handwashing Stations

Figure 3: Frequency of caregivers’ self-reported handwashing practice with soap before food preparation and before feeding a child

Figure 4: Percentage of households reporting regular use and maintenance of handwashing stations

Figure 5: Introduction of handwashing station to caregivers