



Issue 120 October 11, 2013 | Focus on Hand Washing

This issue contains 2013 hand washing studies, reports, and links to hand washing/hygiene websites created to serve as a resource for Global Handwashing Day, held annually on October 15. This worldwide celebration of hand washing with soap aims to: foster and support a global and local culture of hand washing with soap; shine a spotlight on the state of hand washing in each country; and raise awareness about the benefits of hand washing with soap.

Resources in this issue include an annotated bibliography of 20 hand washing journal articles published in 2013 and the Global Public-Private Partnership for Handwashing website and its Global Handwashing Day Social Media Toolkit.

ANNOTATED BIBLIOGRAPHIES

An Annotated Bibliography of 2013 Peer-Reviewed Handwashing Studies, 2013.
WASHplus. ([Full text](#))

This bibliography contains citations, abstracts, and links to 20 journal articles published in 2013. Links to the abstract or full text are included for the articles.

SELECTED 2013 JOURNAL ARTICLES, BY PUBLICATION DATE

Handwashing before Food Preparation and Child Feeding: A Missed Opportunity for Hygiene Promotion. *Am J Trop Med Hyg, Sep 2013.* F Nizame. ([Abstract](#))

From 50 randomly selected villages in Bangladesh, this study collected quantitative and qualitative data on hand washing linked to child feeding to integrate hand washing promotion into a young child complementary feeding program. Most participants cited the unavailability of soap and water near the cooking place as a barrier to hand washing before food preparation. Most caregivers ranked nurturing messages as the best motivator to encourage hand washing with soap.

Designing a Handwashing Station for Infrastructure-Restricted Communities in Bangladesh Using the Integrated Behavioural Model for Water, Sanitation and Hygiene Interventions (IBM-WASH). *BMC Public Health, Sep 2013.* K Hulland. ([Full text](#))

The aim of this study was to identify a locally feasible and acceptable hand washing station that enabled frequent hand washing. Factors that influenced selection of candidate designs were market availability of low-cost, durable materials that were easy to replace or replenish in an infrastructure-restricted and shared environment. Water storage capacity, ease of use

and maintenance, and quality of materials determined the acceptability and feasibility of specific hand washing station designs. The contextual, psychosocial, and technological factors that influence their use were also explored.

A Qualitative Evaluation of Hand Drying Practices among Kenyans. *PLoS One*, Sept 2013. B Person. ([Full text](#))

The authors conducted a qualitative inquiry to better understand current hand drying behaviors associated with activities of daily living and mouth and nose covering practices among Kenyans. Hand drying, specifically on a clean towel, was not a common practice among the participants. Most women dried their hands on their waist cloth, called a *leso*, or their clothes whether they were cooking, eating, or cleaning the nose of a young child. If men dried their hands, they used their trousers or a handkerchief. Children rarely dried their hands; they usually just wiped them on their clothes, shook them, or left them wet as they continued with their activities. Many people sneezed into their hands and wiped them on their clothes. Drying hands on dirty clothes, rags, and lesos can compromise the benefits of hand washing. Understanding these practices can inform health promotion activities and campaigns for the prevention and control of diarrheal disease and influenza.

The Context and Practice of Handwashing Among New Mothers in Serang, Indonesia: A Formative Research Study. *BMC Public Health*, Sep 2013. K Greenland. ([Full text](#))

This article reports on formative research into the context and practice of hand washing with soap by new mothers, which can substantially impact child morbidity and mortality. New mothers are an important target group for hand washing interventions: they are considered particularly susceptible to behavior change and their actions can directly affect a child's health. As the child's grandmother is an authoritative source of information about parenting, interventions focused on improving newborn care should target grandmothers as well as midwives.

Cluster-Randomised Controlled Trials of Individual and Combined Water, Sanitation, Hygiene and Nutritional Interventions in Rural Bangladesh and Kenya: The WASH Benefits Study Design and Rationale. *BMJ Open*, Aug 2013. B Arnold. ([Full text](#))

The WASH Benefits study includes two cluster-randomized trials to assess improvements in water quality, sanitation, hand washing, and child nutrition—alone and in combination - in rural households with pregnant women in Kenya and Bangladesh.

Implementation of an Educational Intervention to Improve Hand Washing in Primary Schools: Process Evaluation within a Randomised Controlled Trial. *BMC Public Health*, Aug 2013. C Chittleborough. ([Full text](#))

The purpose of this study was to examine the reach, dose, fidelity, acceptability, and sustainability of the implementation of an educational hand washing intervention in primary schools, and to explore views regarding acceptability and sustainability of the intervention. The hand washing intervention was acceptable to schools, but its reach outside of a randomized trial, evidenced in the low proportion of schools in the control arm that received it after the trial had ended, suggests that the model of delivery may not be sustainable.

Impact of Duration of Structured Observations on Measurement of Handwashing Behavior at Critical Times. *BMC Public Health*, Aug 2013. A Halder. ([Full text](#))

Structured observation is frequently used to measure hand washing at critical events, such as

after fecal contact and before eating, but it is time-consuming. The authors aimed to assess the impact of reducing the duration of structured observation on the number and type of critical events observed. Decreasing the duration of hand washing significantly reduced the observation of critical events of interest to evaluators of hand washing programs. Researchers seeking to measure observed hand washing behavior should continue with the prolonged duration of structured observation. Future research should develop and evaluate novel models to reduce reactivity to observation and improve the measurement of hand washing behavior.

Interventions to Improve Water Quality and Supply, Sanitation and Hygiene Practices, and Their Effects on the Nutritional Status of Children. *Cochrane Database Syst Rev*, Aug 2013. A Dangour. ([Abstract](#))

The available evidence from meta-analysis of data from cluster-randomized controlled trials with an intervention period of 9-12 months is suggestive of a small benefit of WASH interventions (specifically solar disinfection of water, provision of soap, and improvement of water quality) on length growth in children under 5 years of age. The duration of the intervention studies was relatively short and none of the included studies is of high methodological quality. Very few studies provided information on intervention adherence, attrition, and costs. Several ongoing trials in low-income country settings may provide robust evidence to inform these findings.

Household Environmental Conditions are Associated with Enteropathy and Impaired Growth in Rural Bangladesh. *Am J Trop Med Hyg*, Jul 2013. L Lin. ([Full text](#))

This study assessed the relationship of fecal environmental contamination and environmental enteropathy. The results are consistent with the hypothesis that environmental contamination causes growth faltering mediated through environmental enteropathy.

Teaching Handwashing with Soap for Schoolchildren in a Multi-Ethnic Population in Northern Rural Vietnam. *Global Health Action*, Apr 2013. T Xuan. ([Full text](#))

This study demonstrated that it is feasible to engage teachers and implement active teaching methods for behavior change of hand washing with soap in a group of multi-ethnic primary schoolchildren without the need for major investments in water and hygiene infrastructures. However, researchers observed limited transfer of those practices from school to home. Continuous access to soap at schools also needs to be promoted.

Editorial: Can We Afford to Overlook Hand Hygiene Again? *Trop Med Int Health*, Mar 2013. K Greenland. ([Full text](#))

Hand washing with soap (HWWS) is one of the most cost-effective of all public health interventions. Alongside sanitation, HWWS after defecation acts as a primary barrier to fecal-oral spread of diarrhea by preventing fecal matter from entering the environment, while HWWS before eating reduces transmission of fecal pathogens.

Exploring the Gap Between Hand Washing Knowledge and Practices in Bangladesh: A Cross-Sectional Comparative Study. *BMC Public Health*, Jan 2013. S Rabbi. ([Full text](#))

Hand washing is considered one of the most effective hygiene promotion activities for public health in developing countries. This study compared hand washing knowledge and practices in BRAC's water, sanitation, and hygiene program areas over time. A gap between perception and practice of proper hand washing practices with soap was identified. Hand washing practice with soap before eating was much lower than after defecation. Hand washing knowledge and practices before cooking food, before serving food, and while handling babies is considerably limited compared to other critical times. A multivariate analysis shows that socio-economic

factors including education of household head and respondent, water availability, and access to media have strong positive associations with hand washing with soap.

BOOKS/REPORTS

Are Your Hands Clean Enough? Study Findings on Handwashing with Soap Behaviour in Kenya, 2013. Water and Sanitation Program. ([Link](#))

Past initiatives in Kenya have focused on raising awareness of hand washing with soap, but they have not fully translated into behavior change. An in-depth understanding of motivators and barriers to hand washing at a national level is critical for a behavioral change campaign. This study has been designed to provide baseline information on hand washing behavior in detail and explore the factors that influence hand washing behavior in schools and in the community's context. The study also provides information on preferred and trusted channels of communication.

Don't Look, Don't Touch, Don't Eat: The Science Behind Revulsion, 2013. Valerie Curtis. ([Link](#))

In *Don't Look, Don't Touch, Don't Eat*, Valerie Curtis builds a strong case for disgust as a "shadow emotion"—less familiar than love or sadness, it nevertheless affects our day-to-day lives. In disgust, biological and sociocultural factors meet in dynamic ways to shape human and animal behavior.

Making Hand Washing Devices from Alloy Cans, 2013. Peter Morgan. ([Link](#))

Alloy cans that contain cokes, beers, and all manner of soft drinks are discarded by the millions daily. Most are 330 ml in capacity, some smaller at 200 ml. These cans make excellent hand washing devices in combination with a vessel that can store water, like a bucket. By making three holes in the can with a nail and hammer and attaching a wire handle the can is turned into an almost zero cost hand washer. The bucket may cost a dollar or two.

WEBSITES

Global Public-Private Partnership for Handwashing (PPPHW) – ([Website Link](#)) | [Social Media Toolkit for Global Handwashing Day](#)

PPPHW is a partnership of 10 public and private organizations championing hand washing with soap globally.

WASHplus Weeklies will highlight topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org.



About WASHplus - WASHplus, a five-year project funded through USAID's Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit www.washplus.org or email: contact@washplus.org.

