



Research Summary: Handwashing research in 2014

In 2014, 26 peer reviewed handwashing studies that focused on developing countries were published.

What we have learned about handwashing in 2014: A summary

Measurement of handwashing behavior: Based on a review of numerous studies using structured observation to measure behavior, hands are washed with soap after approximately 19% of events that involved using the toilet or coming into contact with a child's excreta¹.

Behavior change communication: The much-awaited results from the Super-Amma campaign, a handwashing behavior change intervention based on emotional drivers such as nurture and disgust, have started to come in. These results show that this approach to handwashing promotion has lasting impact and is achieving the diffusion of handwashing as a social norm.^{2,3} We received further confirmation that the knowledge of handwashing benefits is linked to its practice^{4,5} and that women's participatory groups⁶ and handwashing education in schools⁷, including students' involvement in hygiene and sanitation clubs⁹, are good settings in which to build that knowledge into action. Furthermore, even just the act of checking whether households have soap seems to increase their handwashing.¹⁰

Handwashing 'hardware': We found further evidence that the availability of appropriate handwashing stations and soap in schools⁷, healthcare centers⁸, and in the home^{12,13} increases handwashing prevalence, as does having piped water and functioning sewage mechanisms.¹⁴ We also saw further evidence that soap and ash are equally effective at cleaning hands¹⁵, and learned that 4g of moringa oleifera leaf powder shows promise as an effective alternative to soap or ash for effective handwashing.¹⁶

Benefits of handwashing: A review estimated that handwashing with soap reduces the risk of diarrhea by 40%.¹ Excluding the studies which could theoretically have been biased by the researchers knowing which people were exposed to handwashing interventions and which were not (unblinded), handwashing with soap was estimated to reduce the risk of developing diarrhea by 23%.¹ Further evidence showed that having soap in the home reduces children's episodes of diarrhea, acute respiratory infections, eye infections, helminth infections, and school absences.^{18,19,20,21} It was found that good handwashing interventions in school also reduces school absences (but only for girls in one study),⁷ and that school-based interventions reduces episodes of diarrhea in pre-school aged siblings.¹⁷

Contamination: Various studies demonstrated hands to be contaminated with rhinovirus,²² E coli,^{5,25} and helminth eggs.²³ One study inversely correlated prevalence of handwashing with the amount of influenza virus found on household surfaces.²⁴ A final study showed that in the rural areas studied, hands revert to baseline levels of contamination within one hour after handwashing with soap.²⁶

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