Policy Brief

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Social and Behaviour Change Interventions for Promoting Handwashing

Statement of Issue

Diarrhoea accounts for 1.8 million deaths in children in low- and middle-income countries (LMICs). In 2010, a majority of childhood deaths in India were attributed to infections, particularly pneumonia (3.7 million, 24% of total under-5 death) and diarrhoea (2.4 million, 13% of total under-5 death) (Lie et al., 2012; Black et al., 2010). The RSOC (2013-14) data shows that 6.5 per cent of children aged 0-59 months had diarrhea 15 days prior to survey. Of these 77.9 per cent sought advice or treatment and 54.4 per cent of those were given ORS, but only 12.6 per cent were given both ORS and Zinc.

One of the identified strategies to prevent diarrhoea is hand washing (Ejemot RI et al., 2008).Effective preventive interventions to address these diseases include promotion of handwashing with soap, safe drinking water and sanitation along with exclusive breastfeeding for six months, adequate nutrition, and prevention of low birth weight as well as promotion of clean environment (Bhutta et al., 2013).

Over 165 million pre-school-age children live in India, where there is continual need for community-based interventions to promote healthy behaviors such as healthy eating and handwashing among young children (Batada, A., 2013). A metaanalysis of the intervention studies also concluded that handwashing along with water quality treatment, sanitation and hygiene can reduce the risk of diarrhoea by 30 per cent (Bhutta et al., 2008). A systematic study by Cairncross et al. (2010) concluded that handwashing with soap alone can reduce care-seeking for diarrhoea in children below 5 years by 48 per cent.

Methodology

Under Call to Action, Population Council in partnership with UNICEF and USAID conducted an evidence review to identify key social and behaviour change (SBC) strategies and health outcomes supporting child survival in the South Asia region, especially in India. More than 7605 articles on Maternal and Child Health published during the last 13 years (2002-2015) were scanned after database searching, and of these, 156 intervention studies were selected for analysis. On Handwashing behaviour, a total of 332 articles were identified and screened, 80 abstracts were read, 43 articles were downloaded and reviewed and 20 were selected for final review. The outcome of the review was a Report, "*Evidence Review on Population Level Social and Behaviour Change in South Asia for Enhancing Child Survival and Development*" on which this policy brief is based. In addition, a technical group in UNICEF India has enhanced the findings and recommendations with new literature and relevant evidence.

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Different interventions to increase handwashing have been successfully trailed (Ejemot-Nwadiaro et al., 2008). Various intervention programmes have been conducted using different social and behaviour change (SBC) interventions to influence handwashing behaviour as an individual practice as well as a social norm (Biran et al. 2009, Langford et al., 2011; Levinson.et al., 2007; Sheth&Obrah, 2004). However, handwashing with soap at critical times remains a challenge in South Asia (Ray et al., 2010; Huda et al., 2012; Langford et al., 2011). The Government of India (GoI) endorsed the National Sanitation and Hygiene Advocacy and Communication Strategy developed with UNICEF's support in 2012. The strategy aims to move towards an open defecation free India by 2022 and promote handwashing with soap using different behaviour change approaches (MDWS-GoI, 2013).

While the literature is replete with a variety of handwashing studies in community, school and health care settings, none have been able to definitively document long-term behaviour change, thereby challenging the sustainability of various interventions. Additionally, there is a need to better understand which research approach is most effective in promoting long-term behaviour compliance in global low- and middle-income settings. In one study, the unavailability of water inside the household, and lack of a definite convenient place for handwashing in the household were responsible for poor adherence to handwashing (Luby&Halder, 2008). In another, it was found that people in South Asia do not wash their hands at crucial handwashing times. For example, the percentage of handwashing before cooking is far less than the percentage of handwashing after defecation (Huda et al., 2012; Langford et al., 2011; Ray et al., 2010). One of the reasons for such behaviour is that unless the dirt is visible or some act is socially considered to be polluted, people usually do not wash their hands. As a result, people become more prone to enteric infections through touching the food before eating or preparing food using hands with 'invisible' dirt or infection causing microbes (Affleck &Pelto, 2012; Sheth&Obrah, 2004). The other reason for failure to bring a long term change in behaviour could be the short duration of most of the programmes.

Literature Review: Key Findings

The results of the evidence review indicated that the following interventions led to increased adherence to handwashing behaviour.

1. **Engaging community members to plan and execute the interventions.** Most of the successful interventions adopted community engagement approaches wherein the community members themselves designed the action plans with the help of programme staff and local NGOs. The community engagement approach is generally believed to be more effective at a local scale, as it is formulated for overcoming the barriers within a particular community. However, all the interventions that showed positive impact using community engagement for handwashing were large-scale programmes. These programmes targeted a cluster of localised interventions in a large geographic region favouring behaviour change at a large scale, and therefore, resolving problems like poor sanitation, and inadequate water supply along with the promotion of handwashing and better hygiene practices. The SHEWA-B programme of Bangladesh resulted in an increase of 14 per cent in handwashing with soap after cleaning children's bottom and 13 per cent increase in handwashing after defecation. However, it did not result in significant increase in the use of soap while handwashing before preparation and serving of food, eating, feeding a child, and after eating.

Another study in Nepal using the same model experienced similar increase (14 per cent points) in handwashing after cleaning baby's bottom.The study also resulted in a significant increase in handwashing before cooking (58 per cent), before feeding (29 per cent), and before eating (37 per cent). Another study in India used the 'social franchising' model to conduct a five year long intervention in Maharashtra (Aga Khan Foundation, 2008). The study resulted in increase in handwashing before cooking (37 per cent), feeding children by mother (43 per cent), after defecation (11 per cent), and after cleaning children after defecation (14 per cent). The study findings also reported improvement in child's health in terms of less incidence of diarrhoea.

[SHEWA-B programme in Bangladesh (Huda et al., 2011), the intervention by Langford et al. (2011), and the 'social franchising' model by Aga Khan Foundation study (2008); (Storey, et al. 2011)]

2. **Use of peer educators for interventions.** Use of peer educators in a behaviour change strategy is based on the social cognition learning theory using the peer educators approach which includes practice, problem solving, and peer support. The intervention using this strategy was delivered through demonstration by peer educators with children so that they could coach the target mothers as they practiced the handwashing with their own child. In a small-scale intervention, the peer educators approach is particularly helpful to build confidence among the target group, and which in turn facilitates the behaviour change. In another intervention trial 'SuperAmma'(character in an animation film -a forward-thinking, rural woman who had a loving relationship with her son, taught him good manners, and ensured handwashing with soap (HWWS) amongst family memberswas used to promote the behavior in rural India. The 'SuperAmma' intervention achieved wide reach across men and women of varied social and economic status. There was a high recall of most intervention activities, subjects could cite reasons for HWWS that were in line with intervention messaging and there was substantial increase in HWWS.

[The interventions conducted by Aboud et al. (2009), Aboud and Akhtar (2011), Seth and Obrah (2004), Rajaraman, D. et al (2014)]

3. **Community mobilisation using school children.** Programmes like School Sanitation and Hygiene Education (SSHE) by UNICEF expected that children would be an agent of spreading hygiene education and behavioural norms throughout the society if this behavior is inculcated in school. 4 years after the commencement of the programme, an impact assessment of the programme was conducted in Kerala to measure its sustainability. The results of the study showed a sustained increase in knowledge and behaviour related to handwashing. SSHE also included provision of toilet infrastructure and handwashing facilities in schools and hygiene education to promote behavioural change among children so that the adults in their home are also encouraged to increase their adherence to handwashing behaviour. Other initiatives to follow a similar approach were the intervention study by Biran et al. (2009), and Meena Radio by UNICEF (2010).

In another intervention, hand washing promotion (education activities, sometimes with provision of soap) at child day-care facilities or schools was used to prevent around one-third of diarrhoea episodes among communities living in LMICs. There was increased hand washing at major prompts (before eating/cooking, after visiting the toilet or cleaning the baby's bottom), and increased compliance to hand hygiene procedure (behavioural outcome). When an intervention combined hand washing promotion aimed at 5- year-olds with provision of free soap, children had fewer episodes of diarrhea, respiratory and eye infections.

Further, there were fewer episodes of diarrhoea and ARIs in the intervention group for 'whole families' and children in the intervention group had significantly fewer days of school absence due to their own or family illnesses.
[SSHE program by UNICEF- Mathew et al. (2009), intervention conducted by Biran et al. (2009), Ejemot RI et al., 2008), Nicholson, J.A. (2014)]

4. **Social and behaviour change strategy using multiple channels.** Interventions involving multiple channels are useful to reach a wider audience in terms of exposure to the programme. During a 5-year long community-based diarrhoea management programme titled SathiBachpanKe, ICICI Foundation (2012) advertised in public and private electronic media. Apart from advertisements played during commercial breaks, messaging was also embedded in the serial storyline. Further, to reach the media dark areas, a direct contact programme was also conducted using interpersonal communication by making door-to-door visits, explaining the campaign messages, giving leaflets about diarrhoea prevention and management, and arranging Nukkad Natak (street theatre) especially for the illiterate section of the target population. The programme resulted in an increase of 11 per cent in self-reporting of handwashing with soap before feeding the child.

   Another innovative intervention, Mobile Community Viewing (MCV) demonstrated the potential of low-cost interventions to engage communities and promote healthy behaviors by leveraging a popular children's television show to promote healthy behaviors in children's communities. A re-purposed vegetable cart rolled through narrow streets and screened Galli Galli Sim Sim(Sesame Street in Hindi) episodes, followed by activities and distribution of print materials. Since 2007, MCV activities have reached over 850,000 children and 300,000 caregivers. Compared to neighborhoods unexposed to the MCV, children in neighborhoods with the MCV showed greater gains in knowledge of healthy foods (e.g. a 24 per cent point improvement in their knowledge of milk and its good effects on the body), healthier food choices, and handwashing with soap.
   [Intervention conducted in SathiBachpanKe by ICICI Foundation (2012), Batada, A. (2013)]

Policy Recommendations

1. **Water and sanitation programmes need to have an integrated handwashing component.** Increasing evidence suggests that water, sanitation and hygiene (WASH) practices affect linear growth in early childhood.Compared with open defecation, household access to toilet facility is associated with a 16–39 per cent reduced odd of stunting among children aged 0–23 months. The full public health benefit from handwashing interventions will not be realised unless done in parallel with improved sanitation and supply of safe water within the households. Programmes that showed significant increase in handwashing behaviour or health status in terms of reduction of morbidity, such as SHEWA-B from Bangladesh integrated the sanitation and clean water supply components with the handwashing campaign. Hence, holistic and integrated programmes across WASH and in support of larger public health communication interventions, including training of frontline workers, must be designed.

2. **Engage the community to plan and execute their own programme.** The community members themselves, especially the positive deviants, understand the barriers of the intervention better than anybody else.

Therefore, after making the community members aware of the health benefits of handwashing, engaging them to plan and execute their own programme is the most effective and sustainable intervention. Self-regulatory (SelfR; perceived self-efficacy and planning) interventions can help individuals to exhibit more handwashing. Sequencing may be important as a motivation module (Mot) first helps to set the goal and a self-regulatory module (SelfR) then helps to translate this goal into actual behavior. A scalable village-level intervention based on emotional drivers of behaviour, rather than knowledge, was tested in rural India. The intervention including community and school-based events incorporating an animated film, skits, and public pledging ceremonies showed substantial increase in handwashing with soap.

3. **Use of school children and peer educators to increase knowledge and awareness for better adherence to handwashing.** Using school children as change agents and use of peer educators can play a significant role to promote handwashing as a norm in the society. The intervention explaining the importance of handwashing for infectious disease prevention is important to raise awareness on perceived vulnerability from the enteric infections among the people and how handwashing can prevent those diseases (Biran et al., 2009). Direct-contact hand washing interventions aimed at younger school-aged children can affect the health of the whole family. These may be scalable through public–private partnerships and classroom-based campaigns.

4. **Long-term SBC intervention programmes.** One of the barriers to sustainability of the behaviour change for increased handwashing is short duration of the intervention programmes. Long term interventions (beyond 2 years) may help to establish handwashing as a norm in the society. A study was conducted in Karachi (Pakistan) to evaluate handwashing behaviour 5 years after a handwashing intervention. Five years after receiving handwashing promotion, intervention households were found to have soap at the household handwashing station, knew key times to wash hands and reported purchasing more soap than controls, suggesting maintenance of improved handwashing practices in this population after long term intervention.

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The United Nations Children's Fund
73, Lodi Estate
New Delhi – 110003, India

Email.: newdelhi@unicef.org
Website: www.unicef.in