Starting Life Strong in Lao PDR

Designing child-focused hygiene and nutrition interventions
The interconnections of
WATER SUPPLY, SANITATION, HYGIENE, & NUTRITION

Childhood stunting (defined as being too short for one’s age) has long-lasting impacts on children’s physical and cognitive development. These impacts, in turn, reduce productivity and compromise health well into adulthood. Stunting is a direct and largely irreversible result of inadequate nutritional intake on the part of both the mother and child, coupled with frequent infections and illnesses during the first 1,000 days of a child’s life. The underlying causes include dietary deficiencies, lack of exclusive breastfeeding, as well as inadequate access to water and sanitation services, poor hygiene, and caregiver neglect. Stunting can be reduced only through concerted multisectoral action, an approach that the Government of the Lao People’s Democratic Republic (Lao PDR) has adopted.

Key messages

Poor water supply, sanitation, and hygiene (WASH) contribute to the childhood disease burden related to undernutrition.

To improve children’s nutritional intake and mitigate childhood stunting requires coordinated efforts focused on WASH services, infant-focussed education, and nutrition.

Policy makers would do well to consider the indepth research connecting WASH services, hygiene practices, and nutritional outcomes.

Asymptomatic gut infections, known as environmental enteropathies, are considered a key cause of childhood stunting (Prendergast and Kelly 2012). These infections are caused in part by unhygienic environmental conditions. Therefore, greater access to quality water supply, sanitation, and hygiene (WASH) during the early stages of life has been proposed as an important pathway to reduced stunting (Humphrey 2009).

Yet large randomized trials conducted in low-income rural settings of Bangladesh, Kenya, and Zimbabwe show no effect of traditional WASH interventions on height-for-age z-scores in young children (Luby et al. 2018; Null et al. 2018; Humphrey et al. 2019). While these interventions—namely, improved water quality, improved on-site sanitation, and promotion of handwashing—can effectively eliminate many of the important fecal-oral transmission pathways in rural settings, complementary hygiene interventions are still needed. For example, a World Bank-funded study in Bangladesh found that despite access to on-site sanitation, household compounds’ contamination by human and animal feces remained widespread (Ercumen et al. 2017), likely due to poor waste disposal and hygiene practices.

Complementary hygiene interventions, especially those that focus on interrupting fecal-oral pathways of disease transmission among infants and young children, are needed (Cumming et al. 2019). These interventions are referred to as “Baby WASH” (Ngure et al. 2014).
The Scaling-Up Water Supply, Sanitation and Hygiene Project (SWSSHP) is a US$25 million investment to improve WASH services in four northern provinces of Lao PDR. To inform the design of Baby WASH interventions to be delivered alongside general project interventions, a two-stage formative study was commissioned by the World Bank, with support from the Japan Scaling up Nutrition (SUN) Trust Fund. Research was carried out in collaboration with RANASMoosler (www.ranasmosler.com) and Lao Social Research (www.laosocialresearch.com) in 2019–20.

**Formative RESEARCH METHODOLOGY**

**The Scaling-Up Water Supply.** Sanitation and Hygiene Project (SWSSHP) is a US$25 million investment to improve WASH services in four northern provinces of Lao PDR. To inform the design of Baby WASH interventions to be delivered alongside general project interventions, a two-stage formative study was commissioned by the World Bank, with support from the Japan Scaling up Nutrition (SUN) Trust Fund. Research was carried out in collaboration with RANASMoosler (www.ranasmosler.com) and Lao Social Research (www.laosocialresearch.com) in 2019–20.

**During** the first stage of the study, qualitative research was conducted to identify the primary fecal-oral transmission pathways in households with young children, and to understand aspects of health-related knowledge, norms, and beliefs that inform hygiene practices. The methodology involved focus group discussions with health workers, village leaders, and families; transect walks to observe village settings; photovoice recordings; and individual interviews. The research identified three practices likely to reduce early childhood exposure to harmful pathogens and support healthy growth. These were: (1) handwashing with soap before feeding a baby, (2) controlling babies’ mouthing behaviors, and (3) exclusively breastfeeding babies in their first six months.

**During the second phase of the research,** a quantitative survey was conducted in 616 households to collect information on the practices of these three behaviors and the factors driving them. (These factors include health risk perceptions, personal attitudes and beliefs, norms and attitudes, perceptions regarding the feelings and behaviors of others, and self-regulatory habits relating to perceived ability and confidence.)

The research looked at factors driving the choices of those who practiced each behavior regularly and those who did not. Based on these findings, a set of interventions was designed for a primary audience of mothers and infants, as well as the larger family unit.

**Handwashing with soap before feeding a baby**

**Controlling babies’ mouthing behaviors**

**Exclusive breastfeeding**
Research findings and
THE DESIGN OF INFANT-FOCUSED
WASH INTERVENTIONS

Handwashing with soap before feeding children

**Findings**
Survey respondents who reported themselves as relatively unlikely to practice handwashing before feeding a baby felt that their behavior was consistent with that of their peers. They were personally unconcerned by the feelings associated with not washing with soap—for example, they did not feel disgust at unclean hands and they felt that washing hands took a lot of effort. Similarly, they were not confident they would be able to wash their hands at critical times and were unsure they would even remember to do so. Importantly, they did not view handwashing as critical to the prevention of diarrhea in young children. Finally, societal norms did not carry much weight—they believed that important people in the village were not concerned if they washed their hands or not.

**Planned interventions**
A series of caregiver meetings, household visits, and phone messages were recommended, focusing on building and using a handwashing station with soap, and delivering social behavior change communication (SBCC) on the benefits of handwashing. In follow-up community meetings, each village would receive a certificate featuring a written commitment to secure handwashing facilities for all households in the village.

Controlling babies’ mouthing behaviors

**Findings**
Survey respondents who were relatively unlikely to control the mouthing behaviors of their babies did not link this behavior with the prevention of diarrhea, and felt little personal responsibility for or confidence in their ability to control such behaviors, or to even remember to do so. Also, in their view, important people in the village were not concerned with whether they controlled their babies’ mouthing behaviors or not.

**Planned interventions**
A series of caregiver meetings, household visits, and phone messages were recommended, focused on demonstrating the presence of dirt on objects and the floor, along with encouraging the building of playpens. These were also to deliver SBCC on the health benefits of controlling mouthing behaviors to caregivers, and to secure commitments to encourage this hygiene practice from other family members.

Exclusive breastfeeding

**Findings**
Among many survey respondents, the link between exclusive breastfeeding and undernourishment, and its subsequent link to child health, was not understood and there was relatively little commitment and feeling of responsibility to breastfeed in the first six months after birth. Further, mothers’ confidence in their ability to breastfeed at all times was low, especially among those with agricultural work responsibilities. Respondents who were relatively unlikely to practice exclusive breastfeeding did not view it as a societal norm.

**Planned interventions**
One-on-one household visits were recommended that would focus on encouraging mothers to overcome obstacles to breastfeeding, deliver SBCC on the health benefits of exclusive breastfeeding, and secure commitments from other family members to encourage the practice.
The Baby WASH interventions developed through this research will be delivered alongside the SWSSHP and integrated into the World Bank-supported multisectoral convergence for nutrition projects in Lao PDR. These projects—spanning WASH, social protection, health, and agriculture—will deliver a package of nutrition-specific and nutrition-sensitive interventions to the same households concurrently.


Following the delivery of the interventions, the research team will evaluate the adoption of Baby WASH behaviors among the target audience. Impacts on child nutrition will be measured jointly for the multisectoral convergence projects to capture the effects of the various projects’ inputs. The results of the evaluation will be shared with the Government of Lao PDR, to inform choices on whether and how to use the approach in other settings with high rates of stunting.
The first 1,000 days of a child’s life—spanning the period in utero to the age of two—is an important window of opportunity to start children on a path toward full physical and cognitive well-being. During this period, it is important that children grow up in households with safe drinking water supply and good sanitation infrastructure.

Beyond expanding access to WASH services, the research outlined in this brief identified three behaviors likely to reduce early childhood exposure to harmful pathogens and support healthy growth in rural areas of northern Lao PDR. A representative survey was used to identify the factors driving these behaviors, and to design Baby WASH behavioral interventions accordingly. The practice of these important hygiene behaviors, especially among caregivers of young children, could help interrupt fecal-oral pathways of disease transmission and support healthy growth in the first 1,000 days.
References


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