

Better Handwashing Habits and Quality Interactions for Healthier Children

ideas ⁴²

Using behavioral innovation to foster children's physical well-being and cognitive development

Supporting children's health includes fostering both physical well-being and cognitive development. We worked with the Grupo Breca social impact lab in Peru to encourage consistent handwashing to prevent diarrhea, which can be life-threatening, and to support quality interactions between caregivers and children to help them develop important skills later in life.

Summary

Supporting children's physical health and cognitive development is important for their overall health and well-being—often for years to come. [Aporta](#), the social impact lab within Grupo Breca in Peru, leads a project called Volar to strengthen early childhood development. Aporta and ideas42 partnered to develop solutions focused on two behaviors key to good early childhood development and health: handwashing at critical moments and quality interactions (QI) between caregivers and children.

These two behaviors are critical in Peru, where more than 60% of children suffer from diarrhea before the age of five, leading to **1,600 deaths each year**. Of these, **90%** could easily be prevented by handwashing with soap.

However, healthy childhoods depend not only on physical health, but also cognitive development. Children with higher levels of cognitive development **do better in school, have lower rates of unemployment, and earn higher wages**. Unfortunately, low-income children in Peru lag behind their higher income peers in terms of cognitive development, perpetuating intergenerational cycles of poverty. **Poor health** and **lacking stimulation** in early childhood can both have serious detrimental impacts on intellectual development that is a key factor for success later in life. Quality interactions like singing and playing during a child's early years can help to prevent these negative impacts.

Due to the high impact of handwashing and quality interaction with young children on their future health and well-being, we designed a set of behavioral interventions to address challenges in both areas in two regions of Peru—Ica and Puno. Our prototypes drew from insights gathered among almost 200 caregivers, children, and other community members. We created design packages specifically tailored to serve our focus communities, and these designs are currently being piloted by Aporta.

Highlights

- ▶ In Peru, over 90% of deaths in children under 5 from diarrhea could be prevented by handwashing
- ▶ In Peru, low-income children receive less quality interaction, a critical behavior for childhood development
- ▶ Leveraging communal norms to strengthen behavior is an effective behavioral design tool to increase handwashing and quality interaction

The importance of handwashing

Inadequate water, sanitation, and hygiene are responsible for **over half of global diarrheal diseases** and contribute to undernutrition, growth stunting, anemia, impaired development, and death. Fortunately there's a simple solution—washing hands with soap at **critical moments**, such as before preparing food and after using the bathroom. Merely taking these actions has been shown to **reduce diarrhea incidence by half**, but many people still fail to.

In Peru, there are opportunities to increase the frequency of handwashing at critical moments. Researchers observing handwashing found that only **1 out every 5** people washes their hands after using the bathroom. Before eating or feeding a child, the rates were even lower, with **only 10% and 6% washing their hands**, respectively.

In order to identify behavioral barriers to handwashing in Peru, we analyzed interview and observational data collected by our partners in Ica and Puno, a coastal and mountainous community.¹ What we found is that while the vast majority of parents know they should wash their hands and can identify the critical moments, many rely on faulty heuristics for when and how to wash their hands. For example, some people believe they only need to wash their hands with soap when their hands are visibly dirty. Others will “clean” their hands by wiping them on their clothes or rinsing them with water, removing visible dirt but leaving invisible germs. These behaviors may be driven in part by a mental model in which illnesses are primarily attributed to non-microbial causes such as cold weather and folk theories.

Handwashing is further hampered by the hassles involved with accessing and using water, as well as the inherent hassles of taking the time and cognitive energy to wash hands. Many households in our focus communities have inconsistent access to piped water and store it in a large bucket outside the home, making it inconvenient to use at critical moments. What's more, the benefits of handwashing are not immediately salient because of the time lag between eating with dirty hands and getting sick, for example. As a result, caregivers who are not in the habit of washing their hands do not have a salient trigger reminding them to reconsider their hand hygiene.

Handwashing at the Feria—and at home

Together with our partner Aporta, we developed a package of designs that aims to address the underlying behavioral barriers to handwashing at critical moments. Our design is based around a Feria Familiar—or family fair—held in town plazas for families with children under five that includes skits, interactive activities, and games centered around hand hygiene. The event promotes the importance of handwashing, establishes a new norm that not washing hands is socially unacceptable, highlights the consequences of not washing hands, and makes handwashing a more pleasant and fun experience. Many of the activities are intentionally designed to trigger disgust at the idea of not washing hands, which is a **powerful tool for establishing social rules**.

¹ Qualitative fieldwork was led by Dr. Matthew Bird of la Universidad del Pacifico in Peru and included 40 interviews with mothers, 5 focus groups with mothers, and 19 home visit observations.

The Feria also includes a soap-making workshop where families make their own bar of soap using essential oils to add a pleasing scent and including a small toy of their choice in the center of the bar. The scent is a mini reward that helps to establish the handwashing habit in the same way that [adding mint to toothpaste](#) helped Americans build the habit of brushing their teeth. The toy—which children will find once they’ve used the whole bar—motivates children to wash their hands frequently, and has been shown to [increase caregiver handwashing](#) as well. The day ends with a handwashing demonstration on the proper way to wash hands and an opportunity to feel the satisfaction of having clean hands. Participants that complete all activities are entered into a raffle for a small gift basket with soap and hand lotion to frame handwashing as a small luxury.

Another part of the solution package is handwashing reminder stickers for the household which are distributed through facilitated home visits. The stickers are in-the-moment reminders to wash hands at critical points and posted in the part of the house where that activity is likely to happen—the kitchen, outside the latrine, and where food is served, for example.

Name tags and informational posters in restaurants, health centers, and other establishments noting their employees’ commitment to wash their hands are the final component of the design package. These salient, signed commitments to hand washing send the message to both clients and employees that handwashing is important. [Public commitments](#) such as these use social pressure to draw others’ attention to the promised behavior and have been shown to sustain behavior change. These promises have the added benefit of solidifying the norm that everyone washes their hands while keeping handwashing top of mind at key moments, such as before eating.

Lasting impacts of quality interactions between parents and their babies …

In Peru, [gaps in cognitive development](#) between low- and high-income children contribute to economic inequality and cycles of intergenerational poverty. Quality interactions (QI), such as singing, playing, and face-to-face conversations, create [long-term benefits](#) by helping babies develop important cognitive, socio-emotional, and communication skills. These simple, regular interactions when babies are young can have lasting impacts on educational attainment and even income, suggesting that QI is a promising [strategy for poverty alleviation](#).

However, many families do not engage regularly in these interactions with their young children for a variety of reasons. In order to identify behavioral barriers to QI in Peru, we analyzed interview and observational data collected by our partners in Ica and Puno. We found that many busy caregivers don’t have rules of thumb for how and how much to stimulate their babies’ brains and, as a result, believe that QI is a time-consuming and challenging task. In addition, the concept of QI was unfamiliar, especially in regards to babies who don’t yet walk or talk. Play and activities that stimulate babies’ brains are seen as important for older children, but not young children, and therefore are easy to put off for later.

Furthermore, many caregivers do not have a strong mental model of the benefits of QI as it relates to cognitive development because cognitive development is not prioritized for young children. Educational

achievements of older children are often conflated with cognitive development, and in younger children, visible physical milestones are what parents focus on and what friends, family, and health workers tend to ask about. As a result, cognitive development is perceived as less important to a young child's well-being than physical development. Since caregivers do not recognize the importance of cognitive development in young children, they do not consider engaging in more QI.

Making cognitive development part of daily life

To reach caregivers, we are organizing an event called Infant Learning Day. At the event, caregivers rotate through a series of stations where they practice simple quality interactions, like singing or telling stories to their babies. Caregivers are prompted to plan how they will incorporate these activities into their daily routine at every station.

To encourage completion, every participant is given a passport with a page explaining each activity. After the participant completes the activity, they get a stamp in their booklet. Once all the pages in the passport have stamps, participants are entered into a lottery to win games or puzzles to stimulate their baby. Lotteries can be a powerful motivational tool because people tend to [overweight the likelihood of small probability events](#), such as winning the lottery. This makes lotteries a cost-effective means to impact behavior. But participants didn't have to win to get a prize: the passport book itself is a resource of QI activities that parents can refer back to later.

As part of a larger ongoing home visitation program, community health workers will visit families' homes to support caregivers in building a feasible routine of QI that is integrated into their daily life. To help develop the habit and make QI feel doable to caregivers, we developed a calendar toy that has a different image and texture each day for caregivers to describe to their children (e.g., two tomatoes, a sheep made of cotton balls, people dancing). This toy breaks down the daunting task of QI into a simple goal that is realistically achievable every day, [linking QI with a sense of accomplishment that helps to sustain the habit over time](#).

Finally, in both of our regions of focus in Peru radios are very prevalent in homes, with [about 80% of families owning a radio](#). We created 1-minute PSA-style radio spots that offer quick QI activities caregivers can do while doing other chores. These radio spots will serve as a daily reminder to caregivers to interact with their baby and facilitate the integration of QI into daily routines through the promotion and demonstration of concrete, easily achievable QI activities. Radio ads are also an opportunity to address the mental model that children who cannot talk or walk do not need cognitive stimulation, for example, by showing that other parents are interacting in quality ways with their babies.

Takeaways and next steps

Improving consistent handwashing and quality interactions between caregivers and young children in Peru, while problems very different in nature, can both benefit from similar designs that establish communal norms to strengthen behavior. To increase handwashing and QI, both require a strong intention and regular, repeated behaviors. As a result, the mechanism of the intervention of each is similar—help people create an intention and form a new habit.

Multiple rounds of user-testing that we did shed light on the implementation context and response to the prototypes that helped us tailor the designs to better serve the community. A key finding was that community events in town plazas were a popular channel for reaching caregivers who are often running errands around the square, but additional incentives for participation are necessary to keep participants engaged all the way through. The passports were developed to fulfill that need and strongly resonated with caregivers who are used to getting medical records stamped.

Additionally, there is a strong culture of improvement and growth in our focus communities. Framing QI as an investment in babies' futures resonated, and designs that could potentially facilitate entrepreneurship were particularly well-received. For example, restaurant owners appreciated the name tags and signs advertising handwashing because it would improve clients' perceptions of the business.

A pilot test to evaluate the feasibility of these designs in Puno is underway. We look forward to sharing those results and developing new insights about how to encourage handwashing and cognitive development among children and families in order to set them up for healthy lives in the long-term.