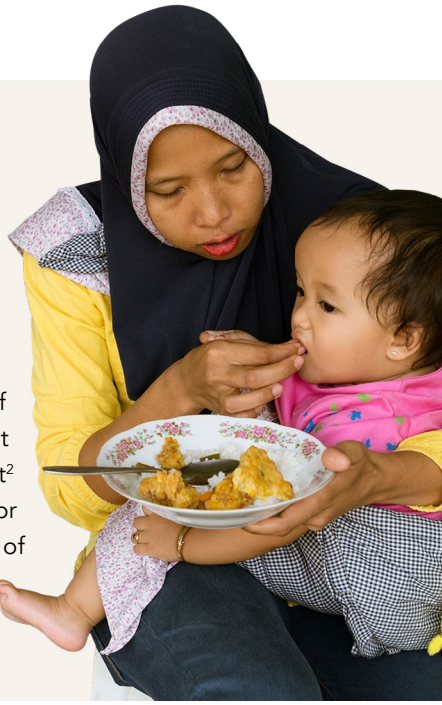
Impact Story 6:

IMPROVING CHILDREN'S DIETS IN INDONESIA: THE BADUTA PROJECT



THE OPPORTUNITY

Despite doubling its GDP per capita between 2007 and 2017[1], the quality of the diet of infants and young children in Indonesia has stagnated over the same period. A recent study found that the percentage of Indonesian children who consumed a diversified diet[2] was **53·1 %** in 2007, **51·7 %** in 2012 and **53·7 %** in 2017. A diversified diet is an indicator of a nutritious diet, which is so essential to promote healthy growth and development of infants and children. The question was "how?" The Indonesian government had been running behaviour change programmes prior to 2017: why were they not moving the needle on diet quality?

THE SOLUTION

In 2013 Indonesia's Ministry of Health requested that GAIN support the district governments of Malang and Sidoarjo in East Java Province to reduce stunting by improving maternal and infant nutrition. Subsequently GAIN with funding from the Ministry of Foreign Affairs of the Netherlands and the Bill and Melinda Gates Foundation and in collaboration with Save the Children (Netherlands), Paramitra Foundation (an Indonesian NGO) and PT Holland for Water (Nazava water filters) implemented the first phase of the Baduta[3] project partnership with East Java provincial and district health authorities. The project had 4 components (see below).

1

Iron intake for pregnant women

- Emo-Demos
- TV & tablet commercials
- SMS Bunda
- Iron tablet intake monitoring

2

Infant and young child feeding

- Emo-Demos
- TV & tablet commercials
- SMS Bunda
- Infant and young child feeding counselling

3

Exclusive breastfeeding

- Emo-Demos
- TV & tablet commercials
- SMS Bunda
- Breastfeeding counselling
- Baby-Friendly Hospital Initiative

4

Hygiene and improved drinking water

- Emo-Demos
- Tablet commercials
- Safe drinking water and water filter promotion by Nazava sales agents

Figure 1: The 4 project components of Baduta

5 Key theory & design elements of Behavior Centred Design

1. **Evolutionary psychology** — Tap into unconcious motives
2. **Social context focus** — Establish new social norms
3. **Multiple touchpoints** — Repetition = Recognition
4. **Commercial marketing** — Make it compelling & aspirational
5. **Neuroscience** — Use visual demonstrations and behaviour rather than speech

Figure 2: Key elements of behaviour centred design of interventions in Baduta

1 World Bank data at https://www.macrotrends.net/countries/IDN/indonesia/gdp-per-capita

2 As measured by the Minimum Diversified Diet indicator

3 Baduta is an Indonesian word which means child under the age of 2 years

4 Aunger, R.; Curtis, V. The Evo-Eco approach to behaviour change. In Applied Evolutionary Anthropology; Gibson, M.A., Lawson, D.W., Eds.; Springer International Publishing: New York, NY, USA, 2014.

What was new about Baduta? It was the application of Behaviour Centred Design (see Figure 2) to all 4 components of the project. This approach relied on surprise, fun, reinforcement, and emotional responses (together labelled "emo-demos"). The interventions build on the work of the London School of Hygiene and Tropical Medicine in how behaviour change occurs: responsive to environment and less calculating and more responsive to emotions[4]. The pilot Baduta Project ran from 2013 – 2017 in two Districts of East Java Province and was independently evaluated by a team from the University of Sydney between February 2015 and December 2016.[5]

The Baduta Behavior Change Interventions

- "Emo-Demos" intervention package: developed using Behaviour Centred Design (BCD), emotional demonstrations (or emo demos) are participatory and game-like activities aiming to create good habits by encouraging caregivers to associate emotions or interests with key behaviours. Village midwives and facilitators delivered emo-demos during monthly child growth monitoring events to promote complementary feeding. Topics included nutrition during pregnancy, breastfeeding, care during pregnancy, complementary feeding issues, and handwashing.
- National television (TV) campaign: included four high-quality spots with messages on nutrition during pregnancy, breastfeeding, and complementary feeding issues. Aired on five national TV channels. Village facilitators also showed TV spots using tablets during village meetings to pregnant mothers and "street visits".

Adapted from Fahmida et al. 2020[6]

THE IMPACT

The University of Sydney team published its results in December 2020. They show that the percent of children between 6 and 11 months of age achieving minimum diet diversity in the Baduta areas was **52%** compared to **23%** in the comparison areas. For children between 16-18 months of age the corresponding figures were **76%** and **53%**. While there was no impact on exclusive breastfeeding rates or on stunting rates, the impacts on diet quality are large, and we know that while diet diversity increases alone cannot raise child nutrition, it is one of many vital factors that has to rise for nutrition to improve.

The second phase of Baduta (2018-2021) scaled up the emo-demo component of the project to ten times the pilot reach to a target of 250,000 caregivers of children under 5. In the second phase the five most populous districts of East Java, reaching 521 villages, including 4,494 community health centres with population of around five million led efforts to scale up with GAIN supporting this effort.

Both Baduta's early successes and its behaviour change methodologies have been shared widely in Indonesia, with government and other interested stakeholders. This includes 15 universities that are integrating emo demos into their nutrition curricula. The interest from other stakeholders in other provinces has also been strong.

There is real potential for Baduta's emo demos to be integrated into national health programming. In a country where the under 5 population exceeds 24 million where social norms favour suboptimal child feeding practices, and where much progress remains to be made in improving the nutritious status of children and mothers this is a very encouraging prospect. Emo demos for nutrition are also now being adapted and tested in Mozambique and Bangladesh. Integrated, innovative and behaviour centred projects like Baduta have potential to contribute to improving diets of infants and young children.

5 https://www.gainhealth.org/sites/default/files/publications/documents/gain-working-paper-series-1-the-baduta-programme-in-indonesia.pdf

6 Fahmida, Umi, Min Kyaw Htet, Elaine Ferguson, Tran Thanh Do, Annas Buanasita, Christiana Titaley, Ashraful Alam et al. "Effect of an integrated package of nutrition behavior change interventions on infant and young child feeding practices and child growth from birth to 18 months: cohort evaluation of the Baduta cluster randomized controlled trial in East Java, Indonesia." Nutrients 12, no. 12 (2020): 3851.

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