

# Digital health interventions for childhood development depend on **interactive learning** and **community networks** for success

## *Lessons from Indonesia*

### Beyond behaviour change in mHealth: evaluating systems effects of a digital health intervention to promote socioemotional and cognitive development in early childhood in Indonesia

Victoria Loblay, Mahalakshmi Ekambareshwar, Ian Hickie, Aila Naderbagi, Iqthyer Zahed, Haley LaMonica  
Brain and Mind Centre, Faculty of Medicine and Health, The University of Sydney, NSW, Australia

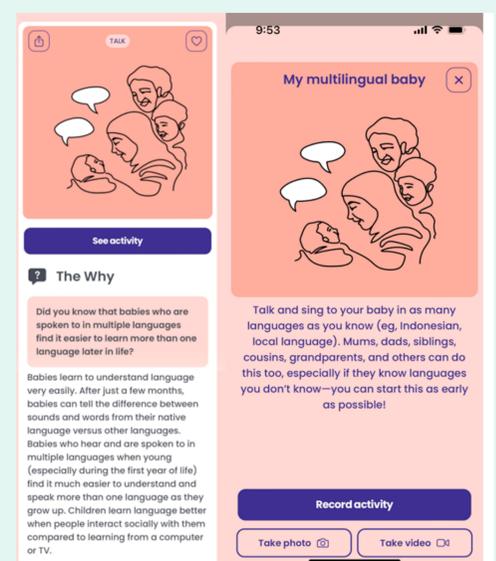
#### Introduction

Parenting apps, like other mHealth interventions, often rely on individual users adopting a new technology via mobile phones or similar devices. Evaluation approaches typically focus on individual user experiences with impact measures designed to capture individual behaviour change. Based on an evaluation of a caregiving app, *Thrive by Five* (Tb5) to promote socioemotional and cognitive development in early childhood in Indonesia, we used a **complexity lens** that alerted us to **dynamic interactions between app users and the broader context** of the mHealth intervention.

#### Methods

- 1. Qualitative interviews and workshops** with parents and caregivers (n=47), local experts on early childhood development & local partner organisations (n=6) and funders (n=4).
- 2. Citizen ethnography** - 2 highly engaged users recorded audio-diaries over 4 weeks to capture reflections and conversations on Tb5 use

A "Collective Action" in the Thrive by Five app



***"The app tells you to learn things by yourself. In Indonesia, we have a strong interest in early childhood education, but they do it together so it is more enjoyable for them to do so. It is different with this app, you have to do it yourself"***

#### Key lessons from Indonesia

- We identified patterns of self-organisation and adaptation by Tb5 users to make the intervention work locally:
- 1) Negotiating app use in relation to gender roles, household division of labour and intergenerational caregiving
  - 2) Blending new knowledge with traditional cultural values and attitudes to child-rearing
  - 3) Embedding Tb5 within networks of community interaction (social media, local kindergartens, rural village communities)

Structures and networks that enabled interactive learning (e.g. community networks in rural villages) facilitated app engagement. This worked by allowing people to make sense of, communicate and embed app use within existing relationships, interconnections and evolving understandings of childhood development.

