ASSESSING THE IMPACT OF A COMMUNITY-BASED PACKAGE OF INTERVENTIONS ON CHILD DEVELOPMENT AND NUTRITION IN ZAMBIA

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The Challenge

Globally, children struggle to reach their developmental potential due to chronic undernutrition, infectious disease and lack of stimulation in the home during early life. In Zambia, 37% of children under age five are stunted—contributing to delayed or under-development.[1] Studies show that early childhood development (ECD) interventions can lessen the negative impact of these exposures. Community-based platforms are currently the primary strategy to deliver ECD to rural populations in developing countries. While these platforms show promise, how to best package and deliver ECD programmes in resource-limited settings like Zambia remains unclear, limiting their implementation and large-scale uptake.

The Intervention

The Zambian Centre for Applied Heath Research and Development (ZCAHRD) conducted a study to test the impact of a package of community-based ECD interventions in rural Zambia. Intervention households were visited every two weeks by a community-based health worker (CHW) who screened and referred children for infectious disease symptoms and acute malnutrition, and provided caregivers with reminders for routine care services for children. Caregivers were also invited to attend group meetings biweekly. There, they were taught cognitive stimulation and play practices, child nutrition, sanitation and hygiene, cooking practices and self-care for mental health.

The Evaluation

This cluster randomised controlled trial was conducted in Choma and Pemba districts in Southern Province, Zambia over two years. The study participants—mainly subsistence farmers—were selected from catchment areas of five rural health centres. Six health zones were randomly selected from each catchment as intervention zones and were matched with control zones. Participant eligibility was having a child between 6 and 12 months. The primary outcomes of interest were child physical and neural growth, and secondary outcomes were infectious disease occurrence, diet and parent-child interaction.

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The Results

At the end of the year one, intervention caregivers had an average of 19 home visits from community-based health workers, and attended an average of 14 group meetings. All services were well received by caregivers. The intervention package was associated with an increase in both weight and height for age, and reduced odds of stunting. As well, stunting in the intervention groups fell from 40% to 25% over the course of the study—a significant decrease. Children in intervention households also exhibited higher rates of motor function and cognition than in control households. Larger significant impact was observed for the secondary outcomes. Caregivers in the intervention households were more likely to report engaging with their children through storytelling (47% vs. 17%), song (90% vs. 76%) or drawing (69% vs. 40%). Additionally, children in the intervention households experienced less frequent fever (36% vs. 44%) and diarrhoea (35% vs. 44%) and had more diverse diets. Overall, the interventions had a strong positive impact on key parenting behaviours related to child development including caregiver and child interaction and child nutrition.

The Lessons Learnt

During the study, a mother head and a vice mother lost interest in leading their mothers' groups. Efforts to replace these leaders were conducted immediately. Furthermore, one CHW had to be replaced due to negligence of their responsibilities. To offset future challenges, ZCAHRD: 1) encouraged monitoring of groups by CHWs to ensure they were moving forward at the same pace; and 2) conducted focus groups with the mothers' groups to understand how the participants viewed them.

Looking Ahead

Community-based delivery of ECD services was achievable in this setting, especially given the limited access to health centre-based services due to distance and resource barriers. However, the feasibility, acceptability and cost-effectiveness of platforms for delivering community-based ECD services should continue to be investigated. The findings from this study should inform ECD and nutrition policy in Zambia—a country continuing to address high rates of malnutrition and infectious diseases. Continued and sustained parental and governmental efforts are likely needed to allow children to fully reach developmental potential.

The Nutrition Embedding Evaluation Programme (NEEP) is a four-year project (Oct 2013–Oct 2017) led by PATH and funded by the UK Department for International Development. NEEP aims to build the evidence base for what works in improving nutrition by conducting credible, robust evaluations of innovative interventions implemented by civil society organisations (CSOs). The programme provides grants to 18 CSOs to evaluate their programmes in 13 different countries. For more information, see **http://sites.path.org/mchn/our-projects/nutrition/neep/.**

This document was produced through support provided by UKaid from the Department for International Development. The opinions herein are those of the author(s) and do not necessarily reflect the views of the Department for International Development.

References

[1] Central Statistical Office (CSO), Zambia Ministry of Health, and ICF International. *Zambia Demographic and Health Survey 2013-14.* Rockville, Maryland: CSO, and ICF International; 2015. Available at https://www.dhsprogram.com/pubs/pdf/FR304/FR304.pdf.

From the Publication

Rockers PC, Fink G, Zanolini A, et al. Impact of a community-based package of interventions on child development in Zambia: a cluster-randomised controlled trial. *BMJ Global Health* 2016;1:e000104. doi:10.1136/bmjgh-2016-000104

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