

The Mamanieva Project: Executive Summary A Grandmother-inclusive Approach to Improve Maternal Nutrition & Infant and Young Child Feeding in Sierra Leone

OVERVIEW

In Sierra Leone, maternal and child malnutrition persists at high levels with long-term impacts on the nation's social and economic development. For example, in 2013 approximately 38% of children under 5 years were stunted and 45% of women of reproductive age were anaemic. Poor maternal nutrition and suboptimal infant and young child feeding (IYCF) practices contribute substantially to the lack of progress on malnutrition.

In rural communities across the globe, grandmothers and elder women play a vital role in maternal and child nutrition with the support they provide during pregnancy, labour, delivery and the postpartum period. Participatory community-based research in Senegal and Malawi that targeted grandmothers as change agents reported significant improvements in knowledge, attitudes and practices of mothers and grandmothers for infant and young child feeding. In response to the slow progress on nutrition, World Vision Sierra Leone and the Sierra Leone Ministry of Health, in collaboration with World Vision Germany, Emory University, the Grandmother Project and the World Vision Nutrition Centre of Expertise, developed and piloted a socially innovative grandmother-inclusive strategy to accelerate progress on maternal and child nutrition in Sierra Leone.

Known as *Mamanieva*, which means “for grandmothers” in Mende, the pilot project implemented a grandmother-inclusive approach to social and behaviour change for nutrition. The programme ran from 2013 to 2016 in World Vision's Bum Area Development Programme (ADP), Bonthe District. The specific programme activities were grounded in extensive formative research in the programme areas including both a knowledge and attitudes survey as well as rapid ethnographic / qualitative research. The formative work identified significant gaps in maternal and grandmothers' knowledge and attitudes towards optimal maternal nutrition and optimal IYCF practices. The research also identified

Mamanieva means “for grandmothers” in Mende, a widely-spoken language in Sierra Leone, and is also a respectful way to address mothers-in-law and older women in the community.

“A house without a grandmother is like a road that goes nowhere.”

Senegalese proverb



grandmothers as critical sources of influence on nutrition and health advice for young mothers from pregnancy and their children through 2 years of life.

The approach used in the *Mamanieva* pilot project builds on the culturally-designated role of grandmothers as advisors and caregivers to women and children and aims to strengthen grandmothers' knowledge and self-efficacy to promote positive maternal and child health practices in the community.

Using a quasi-experimental design, the team allocated one section, Torma, and its 15 villages, to receive the Mamanieva programme activities. In the intervention communities, World Vision Sierra Leone, using community-based facilitators, facilitated community praise sessions for grandmothers, sponsored intergenerational forums and led participatory dialogue sessions with grandmothers on maternal and child nutrition and health topics to achieve project aims. The project also identified and capacitated grandmother leaders to liaise between World Vision staff and communities and to promote acceptability and sustainability. Fikie section, and its eight villages, was allocated to the comparison group and received the Sierra Leone Ministry of Health standard of care for maternal and child nutrition education delivered through the health facilities. Both areas received standard World Vision Health and Nutrition programming focused on strengthening Community Health Workers.

This report outlines the findings of the Mamanieva Project. Cross-sectional surveys at baseline and endline captured relevant data on maternal and infant and young child feeding knowledge and attitudes and the endline survey additionally captured information on maternal and child nutrition practices, birth weight and, in the intervention communities, programme participation and perceived impacts of the intervention on communities. Qualitative operations research conducted at midline and endline provided information on gaps and strategies for improvement, as well as challenges and opportunities for programme scale up and sustainability.

FINDINGS

Results suggest that the grandmother-inclusive strategy was highly acceptable among grandmothers (GM) and women and served to improve the knowledge and self-efficacy of grandmothers. Among GM, mean nutrition knowledge scores were significantly higher at endline compared to controls and positive beliefs about specific IYCF practices increased more from baseline to endline among intervention communities compared to control communities. For example, at baseline, 64% of GM in both intervention and control communities believed women should take more food during pregnancy. This proportion remained unchanged among control GM at endline but increased to 96% among GM in the intervention communities. At baseline, 86% of control GMs and 78% of intervention GMs believed infants should be breastfed within an hour of birth. At endline, the proportion of control GMs believing in early initiation decreased to 73% but increased among intervention GM to 100%. At baseline, just under half of GMs in both control and intervention communities believed infants should be given water before six months. By endline, less than 2% of intervention GM believed infants should be given water, compared to 25% of control GMs. We observed similar findings for pregnant women's and mothers' knowledge and beliefs.

Beyond knowledge and attitudes, results also showed differences in nutrition and health-seeking practices. Greater proportions of mothers and pregnant women in the intervention communities achieved minimum dietary diversity in the previous 24 hours (95%) compared to women in the control communities (65%, $p < 0.001$). Intervention women also consumed more meals in the previous 24 hours (2.6 ± 1.4) compared to control women (1.6 ± 1.3 , $p < 0.001$). Among pregnant women specifically, those in the intervention group intended to consume more food (88.9% vs 48.9%, $P < 0.0001$) and work less (94.4% and 88.1%, $P = 0.002$) during their current pregnancy. Among women with infants, those in the intervention group reported increased meal frequency (94.6% vs 63.6%, $P < 0.001$) and decreased work (91.3% vs 75.7%, $P < 0.001$) during their most recent pregnancy. As well, more mothers in the intervention communities reported attending ANC at least 4 times (97.1% vs 80.8%, $P < 0.001$) and delivering in a health facility (96.7% vs 90.7%, $P = 0.03$). Birthweight, a useful proxy for maternal nutrition and health during pregnancy was significantly higher in the intervention group ($3.3\text{kg} \pm 0.5$) compared to the control group ($3.1\text{kg} \pm 0.4$) at endline. While baseline data on birthweight were not available, it is useful to note that the DHS data for Bonthe in 2013 reported a prevalence of low birth weight (6.1%) more in line with that seen in the control group at endline (7.7%) than the intervention group (2.7%, $p = 0.06$).

With regards to IYCF practices, the proportion of 0–23 month olds exclusively breastfed during the first week of life was higher in the intervention group (90.2% vs 79.4%, $P = 0.01$). Among infants 6–23 months, the proportion achieving minimum dietary diversity (77.2% vs 51.8%, $P < 0.001$) and minimum acceptable diet (53.8% vs 22.6%, $P < 0.001$) was significantly higher in the intervention group than in the comparison group.

Some gaps were noted, most notably with respect to attitudes towards and knowledge of providing thicker foods beginning at 6–7 months of age and meal frequency as children age. Additionally, few differences were found in breastfeeding practices, though this is likely due to the high prevalence of optimal breastfeeding practices present in both control and intervention sites. An exception was that among infants 0–23 month olds, a significantly greater proportion of intervention infants were exclusively breastfed during the first week of life.

RECOMMENDATIONS

Based on the findings of high overall acceptability and effectiveness, the grandmother-inclusive approach should be scaled to other World Vision nutrition programmes in Sierra Leone. While additional research is needed to document and attribute impacts on longer-term child well-being indicators, such as stunting, the significant and substantial changes seen in maternal nutrition practices, birth weight and infant and young child feeding practices illustrate the potential of this approach. Below are additional specific recommendations for scale-up and sustainability considerations.

- The grandmother-inclusive approach empowered grandmothers (self-efficacy) and improved their knowledge of optimal nutrition practices. These changes permit a more enabling household environment for women to put recommendations into practice. As such, grandmothers in World Vision target communities should be intentionally and appropriately included in nutrition programming.
- Communities perceived that the grandmother-inclusive approach improved relationships between grandmothers and community members, especially daughters / daughters-in-law. Improved communication likely facilitated more effective transfer of GM knowledge to daughters and support for optimal nutrition practices. Future nutrition and child well-being programmes must consider familial and community relationships and how strengthening these through intergenerational dialogue and community praise forums may improve programme effectiveness.
- The grandmother-inclusive approach improved maternal nutrition practices including increased food intakes during pregnancy, greater women’s dietary diversity and increased consumption of iron and folic acid supplements. These changes likely explain the significant differences in birth weights observed between the intervention and control communities. Given stunted growth of children begins in utero, nutrition programmes in Sierra Leone must include maternal nutrition as a key priority if accelerated progress on child stunting is to be achieved. In this context, a grandmother-inclusive approach may be the most effective strategy to improve maternal nutrition and prevent growth faltering in utero.
- The grandmother-inclusive approach was highly acceptable in communities in part due to the participatory manner in which it engaged community members. Scale up of the grandmother-inclusive approach will require field-based personnel with skills and experience in participatory rural development, community engagement and dialogue-focused approaches to community engagement.
- Community acceptability, while high, may have benefited from more active engagement with fathers and elder men in the community. Qualitative research with mothers, grandmothers and fathers indicated a desire for greater father engagement in areas that would be most relevant to fathers, for example, preparation for safe labour and delivery, food prioritization of maternal and child health, and how and why to encourage women to consume iron-folic acid (IFA) and take diverse diets. Alive and Thrive programmes have developed successful father-engagement strategies that may be examined for relevance to the Sierra Leone context and adapted.
- Mamanieva was a pilot-scale operations research, which identified the significant promise of a grandmother-inclusive approach for nutrition social and behaviour change. More rigorous testing of the approach with larger samples, preferably using a cluster-randomized controlled design, and over a longer period of time, is needed to more robustly evaluate the approach’s impact on child growth and development outcomes and the pathways through which these changes occur.
- A grandmother-inclusive approach is not exclusive to nutrition. Research in other contexts have highlighted the potential effectiveness of the approach to address other child well-being domains,

including for example early child marriage and genital cutting. In Sierra Leone, programme officers should evaluate their programmes to identify ways in which they might benefit from a more grandmother-inclusive approach.

- To support sustainability and the transfer of the approach to the government, future iterations of the grandmother-inclusive approach by World Vision Sierra Leone should actively engage the Ministry of Health to identify potential community-based facilitators to work alongside World Vision staff for capacity strengthening and partnership.

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ADDITIONAL RESOURCES

Check out our website at the following link: <http://wvi.org/nutrition/grandmother-approach>

Hear from the grandmothers themselves in this video! <https://youtu.be/mTdC5tdyz9A>

Here's a shorter video, featuring Judi Aibel, founder of the Grandmother-inclusive approach: <https://youtu.be/ORGcJuk-QBM?list=PLr0GwhFwI5NyIAzWbAuI0hI3CJFM-051>

Check out our blog on ***Transforming communities through the power of grandmothers*** for Development Unplugged on Huffington Post! <http://huff.to/2pmuFNu>

World Vision worked with Dr. Judi Aibel to develop a guide to the grandmother-inclusive approach, entitled ***Involving Grandmothers to Promote Child Nutrition, Health and Development: A guide for programme planners and managers***:

English Guide: <http://www.wvi.org/sites/default/files/GrandmotherGuideRGBEnglishWeb%20FINAL.pdf>

French Guide: <http://www.wvi.org/sites/default/files/Grandmother%20Guide%20French%20FINAL.pdf>

