



Strategic Layering to Improve Household Gender Dynamics for Optimal Nutrition in Niger: *Program Evaluation Findings*

Photo by Caroline Agalheir for CRS

Background

Malnutrition is a pervasive problem throughout the west African nation of Niger. While the lack of availability, access to, and utilization of nutritious foods adversely affects many Nigeriens, these realities disproportionately impact Niger's most vulnerable populations, including children under 5 years (U5) of age, pregnant and lactating women, and adolescent girls. According to the World Bank, in 2022, the prevalence of U5 stunting in Niger was 47.7% while U5 wasting was 10.9%. In the Zinder region of Niger, approximately two thirds of U5 children are stunted, while roughly one in seven are wasted.

In this context, Catholic Relief Services (CRS) in Niger has been implementing an innovative, multidimensional approach to address maternal and child malnutrition in its Resilience and Food Security Activity project entitled, Girma. The [Girma project](#) is a USAID-supported program (Bureau of Humanitarian Assistance) in the Zinder region of rural Niger. The project has been implemented since 2018 and will continue through 2025 covering 622 administrative villages across 11 communes in two departments of the Zinder region. Girma was designed to improve and sustain food and nutrition security and resilience among vulnerable households and communities in Niger.



Overall, it had 11 key areas of intervention, including economic strengthening using Savings and Internal Lending Communities (SILC), nutrition education of mothers of children under five years using a Care Group model (CG), and a nutrition-integrated couples strengthening intervention entitled *Maison Familiale Harmonieuse* (MFH). This evaluation sought to understand the effectiveness of the integration, sequencing, and layering of these three intervention modalities on maternal and child nutrition outcomes

Layered Program Modalities



Savings and Internal Lending Communities (SILC):

SILC Groups were one of several household-level economic strengthening interventions included in Girma. They used a savings-led microfinance approach that support participants from poor households better manage their resources by providing financial management education and skills.



Care Groups (CG):

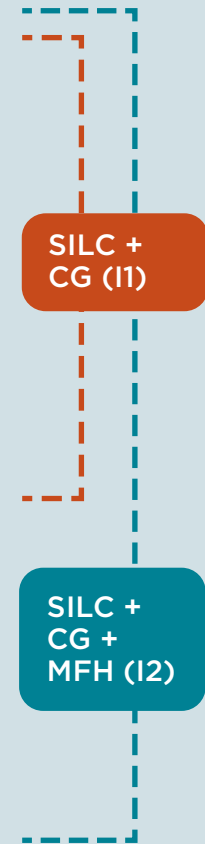
Care Groups aimed to improve maternal and child health and nutrition by involving women in education and counseling. Care Groups were led by trained lead mothers who disseminated nutrition education messages to female caregivers of children U5 and followed a 4-Star Diet curriculum.



Maison Familiale Harmonieuse (MFH):

MFH activities engaged husbands and wives (together as married couples) of children U5 to improve their communication, more equitable household decision-making, and better marital relationships. Girma was the first project that CRS incorporated a household finance and nutrition module into the MFH curriculum to promote women's involvement in budgeting, purchasing, and consumption of diverse foods.

Study Arms*



*An unexposed control study arm (471 households) was also used for comparison of I1 and I2

Girma's intervention activities are based on a growing body of evidence that supports integrated approaches for improving diet and nutrition indicators (Nguyen et al., 2017; Keats et al., 2021). In food-insecure environments, social and behavior change using nutrition education alone is usually insufficient for improving actual nutritional status and related dietary outcomes (Bhutta et al., 2013; Marquis et al., 2015). Although diverse diets — including those with foods that are nutrient-dense and animal-sourced — are one immediate determinant of child stunting, they are also expensive relative to typical household incomes in resource-constrained households like those of rural Niger (Bai et al., 2020). According to the World Bank, the number of people in Niger who could not afford a healthy diet in 2021 was 23.2 million, a figure representing 92% of the national population (World Bank, n.d.-a).

In the past decade, an increasing number of studies exploring the extent to which women's empowerment is associated with maternal or child health and nutrition has been conducted across LMIC contexts. Most published study findings focusing on nutrition outcomes have been positive: cross-sectional analyses of DHS data, and at least one randomized controlled trial, across diverse Sub-Saharan African contexts suggest positive associations between women's empowerment and maternal BMI, child linear growth, child diet diversity, child micronutrient status, and food security

(Aziz et al., 2022; Christian et al., 2022; Bliznashka et al., 2021; Jones et al., 2019; Heckert et al., 2019; Pratley, 2016).

However, the body of literature is not consistent. A 2019 review of 62 studies examining more than 1300 associations of various child nutrition outcomes found non-significant associations between women's empowerment and child stunting and wasting (Santoso et al., 2019). In South Asia, similarly inconclusive findings were reported (Kuningham, 2015). The inconsistent definition and measurement of empowerment, which is a multi-dimensional and culturally specific construct with complex underlying dimensions, has been a challenge limiting the comparability of studies conducted to date, and one reason for a lack of agreement across research settings (Carlson et al., 2015; Komakech et al., 2021).

Overall, though, the underlying assumption that greater empowerment means more freedom from restrictive social norms and thus better access to social resources for improved nutrition is generally, but not fully, supported by the current body of literature. Thus, assessing the effectiveness of the gender-focused MFH activities that were layered onto existing Care Groups and SILC Groups on maternal and child nutrition indicators was important both for this program evaluation and as a contribution to the global evidence base.

Specific Aims

- 1 To evaluate the effectiveness of layering SILC, CG, and MFH on maternal and child dietary diversity
- 2 To understand intermediary factors through which the layered activities may have impacted diets
- 3 To understand the process-related factors that may have contributed to primary dietary outcomes
- 4 To generate recommendations for improving/scaling this layered and integrated program approach

Evaluation Methods

This evaluation utilized a longitudinal and mixed-methods 'embedded' research design conducted between 2022 (baseline) and 2023 (endline). Program impact was evaluated using a 12-month, prospective, quasi-experimental design with both impact and process evaluation components comparing the relative effectiveness of **SILC + CG + MFH (I2)** ($n = 910$ households) to **SILC + CG (I1)** ($n = 655$ households) to **Control** ($n = 409$ households). Eighty-two qualitative interviews, 64 direct meal and MFH session observations, 14 focus group discussions, and 70 cultural domain analysis approaches were used to understand 'why' and 'how' the intervention activities may have impacted diets. Qualitative findings and a secondary analysis of monitoring data were used to triangulate household survey findings in an integrated evaluation approach. A guiding Theory of Change provided by the CRS program team served as the evaluation framework.



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Summary of Findings

The Girma project, which included 11 different program modalities, directly reached 770,559 uniquely-identified participants between 2020 and 2023. During the same time period, 79,693 men and women participated in SILC Group activities (58% of program target); 122,822 women attended at least one CG Group (102% of target); and 98,371 men and women joined MFH activities (74% of target). A greater proportion of men to women were reached by SILC and MFH activities relative to program targets, while the absolute number of women reached was greater in both.



Maternal and child diets. The dietary diversity scores of women increased in both SILC + CG (I1) and SILC + CG + MFH (I2) at endline, relative to those of control. Maternal knowledge (I2 only), self-efficacy (I1 and I2), and intention (I1 and I2) to consume a more diverse diet also increased at endline; however, maternal attitudes (I1 and I2) toward doing so worsened. Although a treatment effect was not observed on child dietary diversity scores, children consumed 0.14 more food groups in I2 vs I1 when using the 4-STAR diet for measurement. Maternal self-efficacy and intention to improve the diets of their children increased in both I1 and I2 study arms, while maternal attitudes improved only in I2 relative to control. There was very little positive effect of either I1 or I2 on the psychosocial outcomes of husbands/fathers toward maternal or child diets, overall.



Household savings and loans. Husbands who participated in SILC groups reported typical median savings of \$0.21 in I1 and \$0.25 in I2 study arms each week, while wives reported \$0.33 in both I1 and I2. While the reported savings fell within an expected USD amount range given program design, the qualitative data suggest that such amounts may have been insufficient for improving dietary quality in the face of limited financial means relative to food prices, lower-than-usual agricultural production in 2022, and general market inaccess. Normative views toward the importance of allocating household income for buying more diverse foods improved among SILC group husbands (but not wives) in both intervention arms; however, participants explained that doing so was difficult in practice.



Marital satisfaction and joint decision-making. Most interview respondents explained that MFH participation helped them improve their marital relationships through clearer communication, better decision making with fewer disputes, and improved understanding of one another. Survey findings corroborate qualitative findings: both husbands and wives reported improved marital relationship quality in both intervention arms and irrespective of marital structure (36% of sampled households practiced polygamy). However, there was no observed effect on the ability of wives to have more equitable inputs when making household decisions around nutrition at endline. Culturally, husbands hold most, if not all, decision-making power around household finances, health care, and food purchasing decisions in this context.



Process evaluation findings. Implementation fidelity was assessed with mixed results that may help explain program impact findings. MFH facilitators reported positive experiences coordinating with program implementers across the layered activities. However, among the 655 households eligible for participation in both a Care Group and a SILC Group activity, just 24% (156) reported doing so at endline. Among the 806 households eligible for full I2

participation in all three modalities, just 15% (117) did so. Low participation of eligible households across all three program arms limited participant exposure to key messages layered across activities, likely limiting program impact on dietary outcomes. Greater reported financial and food insecurity throughout 2022 may also have contributed to the observed results.

Interviews with both MFH facilitators and participants indicated that the religious and cultural tailoring of MFH curricula was a strength of implementation. MFH couples indicated 'high' or 'very high' satisfaction of most categories pertaining to the structural aspects of MFH sessions, for example comfortable MFH session facilities (99%), adequate session timing (96%), and understandable materials (99%). Similarly, MFH facilitators reported positive training experiences and expressed gratitude for gaining the requisite knowledge, skills, and confidence to lead those sessions.

The MFH nutrition module focusing on dietary diversity was not introduced until July 2022 and thus it reached some, but not all of the MFH participants who had finished their participation of the 16 prescribed sessions prior to that date. The fidelity of MFH content delivered was 94 - 99% during the three core MFH modules, but 64 - 74% for the two nutrition modules. Facilitators covered prescribed health topics in 62 - 77% of observations, and 4-STAR diet topics in 54 - 92% of them. The key message related to dietary diversity was covered in approximately 70% of MFH sessions observed (Figure 1).

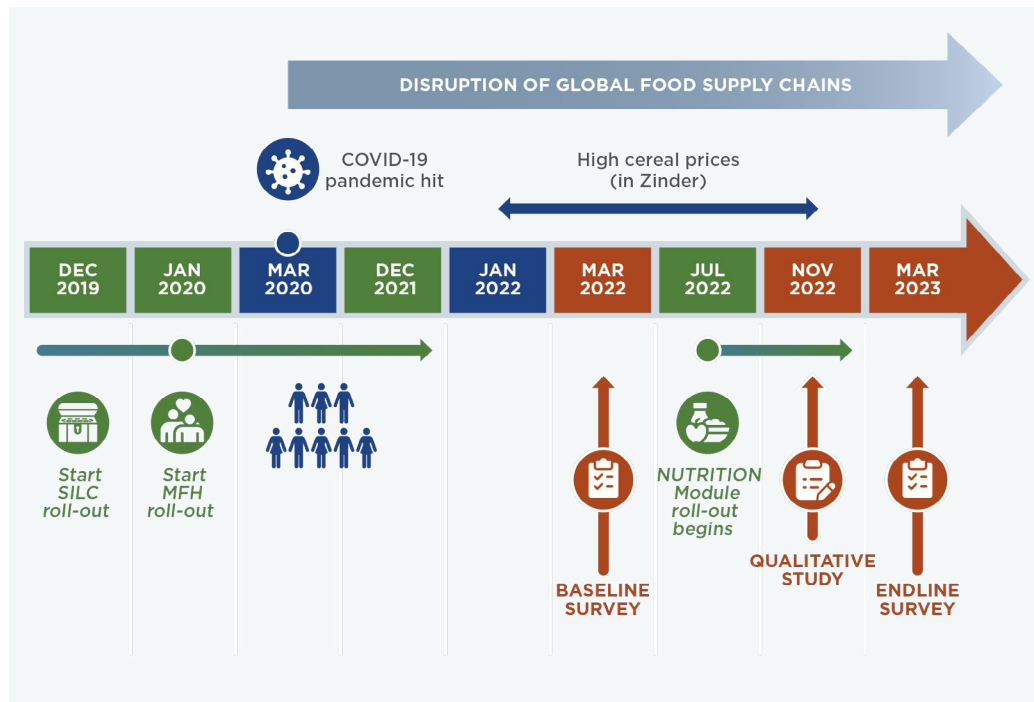


Figure 1. Timing of nutrition module roll out vis-à-vis program evaluation data collection

Recommendations

Recommendations stemming from this program evaluation were made by stakeholders, including the implementation and evaluations teams, in consideration of the findings.

- 1 Enhancing the intensity, or dose delivered, of complementary livelihood activities delivered may help participants overcome food security-related barriers currently limiting nutrition-related behavior change.** Economic empowerment, agricultural development, and livelihood development activities have complemented program activities, yet nutritious food inaccess persisted during the evaluation period among participants. A greater intensity of such activities may help improve participant access to diverse foods, even in the face of future shocks and hazards.
- 2 Enacting deliberate strategies to improve recruitment and enhance participation rates across layered activities may help ensure an adequate programming dose is received for desired behavior change.** Given the relatively low and inconsistent participation rates among husbands and wives both within and among the three program modalities, improving the layering of activities through more precise planning of concurrently integrated activities, including carefully timed roll out of staggered program activities and enhanced coordination efforts among implementers, may enhance participant exposure to messaging across modalities.
- 3 Developing a revised and more guiding Theory of Change with clear outputs, outcomes, and impacts mapped onto nuanced program impact pathways to guide programming may improve implementation and evaluation efforts moving forward.** With two years of programming remaining, revisiting the original Theory of Change and updating it with specificity, including clearly defined outputs, through a co-creation process that builds on knowledge gained since project commencement in 2018 may serve as a useful blueprint for improved implementation and evaluation.

Conclusion

The combination of three program modalities showed a modest yet positive effect on maternal but not child dietary diversity scores during 12 months. Contextual factors that contributed to increased food prices relative to incomes throughout 2022, in combination with low program participation rates across layered activities, limited the ability of those individuals who were exposed to the integrated activities to improve their diet quality in a meaningful way. Overall, these three Girma activities resulted in positive intentions of both women and men to change behaviors that might contribute to better diets but both contextual and implementation-related factors attenuated the ability of the activities to do so.

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