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A Process Evaluation of a Nutrition-Sensitive Agriculture Project in Timor-Leste

By

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Emory University

2021

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An abstract of

A thesis submitted to the Faculty of the

Rollins School of Public Health of Emory University

In partial fulfillment of the requirements for the degree of

Master of Public Health

In Global Health

2021

Abstract

A Process Evaluation of a Nutrition-Sensitive Agriculture Project in Timor-Leste

By Gabriela Georgial

Background: Timor-Leste has one of the highest rates of undernutrition in the world. These high rates of undernutrition and anemia in mother and children may be attributed to a diet high in carbohydrates and low in protein and micronutrients, as wells as insufficient consumption and availability of nutrient dense foods.

Methods: A process evaluation of a project in Timor-Leste was conducted to describe whether the project is being implemented as designed and if it has reached its intended participants. The domains of a process evaluation - fidelity, dose, reach, and participant satisfaction - were used as an overarching framework to guide the process. Data were collected using qualitative methods that included comprehensive document abstraction and key informant interviews with project staff in Timor-Leste. Barriers and facilitators to implementation were also documented as well as the extent to which the project followed best practices to social behavior change.

Results: The project has implemented four key activities in the intervention zone that draw on existing agriculture to nutrition pathways to achieve its goal. The different activities have had different levels of success so far. The agriculture and economic activities have been implemented as planned and generally been well received by the communities. The nutrition and health component have been implemented alongside the government health structure and enlisted community health workers as the primary conduit of the intervention. These components have faced more barriers to implementation, likely due to context specific factors and project design elements.

Conclusions: The process evaluation of this project revealed that it is imperative for projects to incorporate best practices into project design and implementation and to document the process. Documenting best practices and barriers to facilitation will ensure that future projects can take the lessons learned from nutrition-sensitive agriculture projects that can be scaled to achieve desired outcomes.

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Acknowledgements

This thesis would not have been possible without my thesis chair Amy Webb-Girard, PhD who gave me the opportunity to work on this project. Thank you, Amy, for your support and dedication to the field. I would also like to thank committee member Emily Faerber, PhD for her continued support and encouragement throughout this process.

I am also grateful for the support I have received from my husband, friends, and family during the past year. For their patience, willingness to reply to my early morning text messages, and all the cups of coffee brewed.

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Introduction

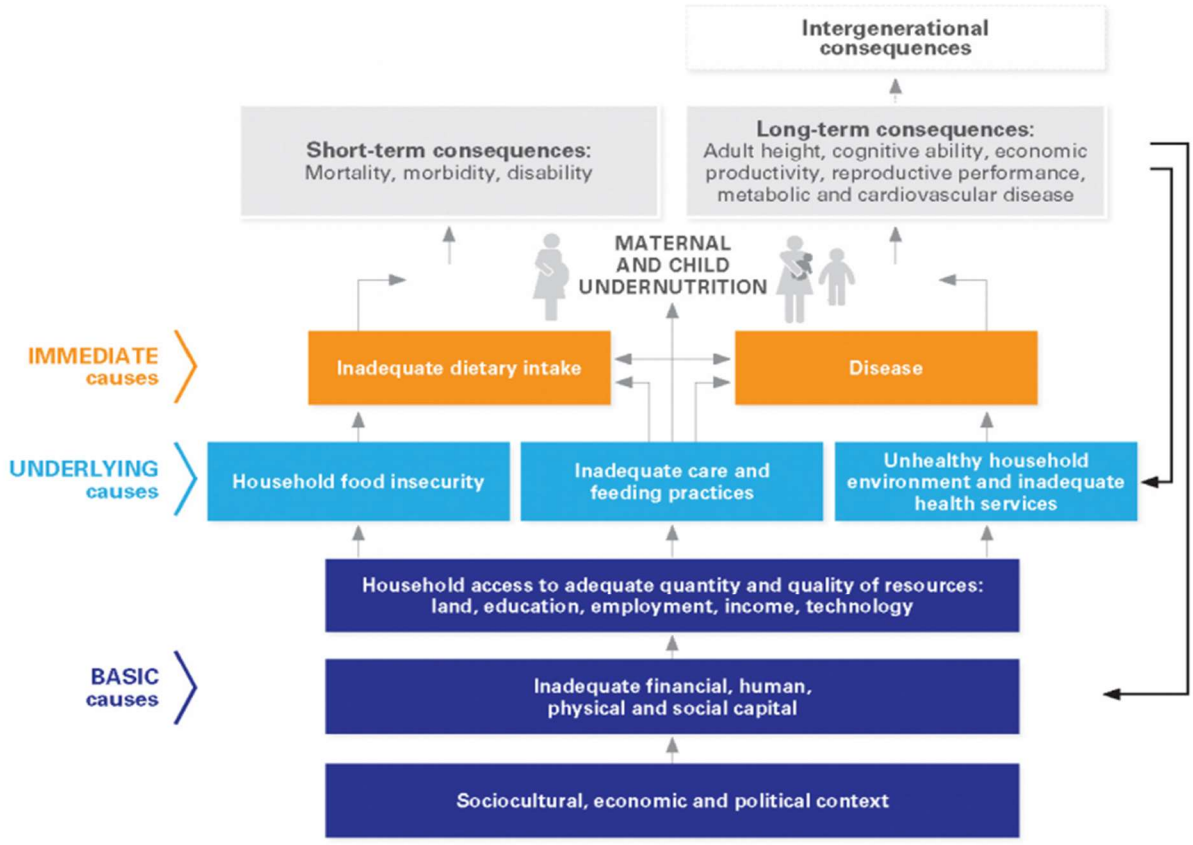
The Democratic Republic of Timor-Leste, a relatively new nation on the island of Timor, experienced decades of violence and political unrest until 2002 when independence from Indonesia was established. The years leading to independence resulted in devastating consequences to the health infrastructure of the nation. Timor-Leste is home to over 1.2 million people and is ranked 133 out of 177 nations in the 2015 UNDP Human Development Index with some of the worst health indicators in the Asia-Pacific regions (UNICEF, 2019a) (Earnest & Finger, 2009; Provo, Atwood, Sullivan, & Nkosinathi, 2017). Forty percent of the population lives on $30 per month or less, and the national median per capita income is around $40 with higher numbers in urban areas (Ministry of Finance, 2011).

Poor economic development and a fractured health system contribute to the high rates of child mortality rates in Timor-Leste (Wong et al., 2018). The mortality rate for infants and children under 5 is estimated to be between 31 and 40 deaths per 1,000 live births, meaning that 1 in 25 children in Timor-Leste do not survive to their fifth birthday (DHS, 2018). The 2016 Timor-Leste Demographic and Health Survey (DHS) found that 46% of Timorese children under 5 were stunted when using height-for-age against the international growth standard reference. This was a modest decrease from the previous DHS survey in 2009 that reported the national stunting rate to be 58%. Despite the decrease in stunting, Timor-Leste has seen a rise in wasting of children under 5. The same DHS report found that wasting rates had increased from 19% in 2009 to 24% in 2016.

The United Nations Children's Fund (UNICEF) conceptual framework (***Figure 1)*** describes the immediate and underlying determinants of undernutrition and has been adopted for addressing malnutrition on a global scale through nutrition-specific and nutrition-sensitive

interventions. In Timor-Leste, the immediate causes of child malnutrition can be attributed to a number of factors, including low rates of exclusive breastfeeding during the first 6 months of life, low dietary diversity, early weaning, and low meal frequency (Provo et al., 2017). Underlying causes of malnutrition in Timor-Leste are attributed to inadequate care of women and children due to the long-standing violence against women and patriarchal traditions of Timor-Leste, food insecurity, poor access to health services and insufficient access to water, sanitation, and hygiene systems (Provo et al., 2017).

Figure 1 UNICEF Conceptual Framework of the Determinants of Child Undernutrition, (UNICEF, 2015)



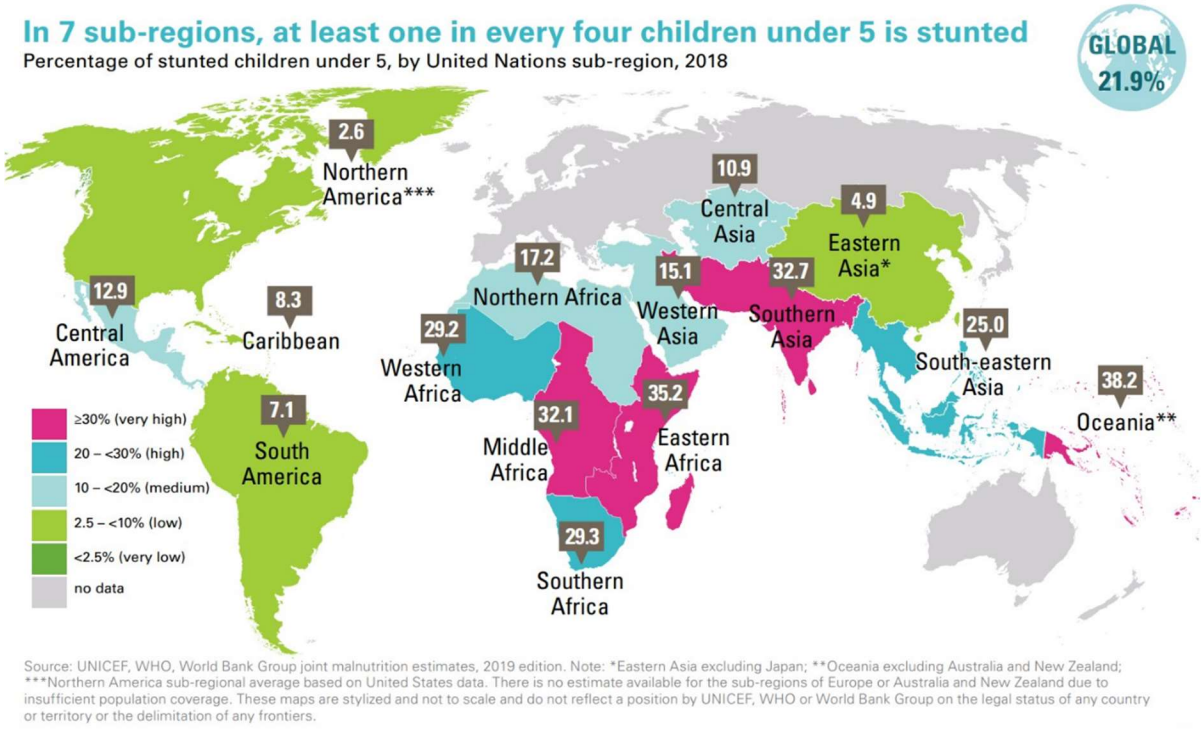
The black arrows show that the consequences of undernutrition can feed back to the underlying and basic causes of undernutrition, perpetuating the cycle of undernutrition, poverty and inequities.

UNICEF. (2015). *UNICEF's approach to scaling up nutrition for mothers and their children.*

Problem Statement

The first 1,000 days of life- from conception to a child's second birthday are a crucial period in a child's development and lifelong health (Schwarzenberg & Georgieff, 2018). Proper nutrition in the first 1,000 days provides the greatest opportunity to reduce the risk of malnutrition. Stunting is one of the primary indicators for childhood undernutrition and is most prevalent in low-to-middle income countries with South Asia having some of the highest rates of stunting as seen in ***Figure 2*** (WHO, 2019a). In Timor-Leste, almost half of children under 5 years are stunted, which means they do not receive the right amounts of food that can have significant effects on developmental growth (DHS, 2018).

Figure 2 Percentage of stunted children under 5, by United Nations sub-region, 2 (UNICEF, 2019b)



United Nations Children's Fund (UNICEF), World Health Organization, International Bank for Reconstruction and Development/The World Bank. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva: World Health Organization; 2019 Licence: CC BY-NC-SA 3.0 IGO.

The government of Timor-Leste has prioritized nutrition as part of their development agenda, and has had success in reducing stunting rates, decreasing incidence of malaria, and elimination of leprosy (DHS, 2018). Despite these successes, access to healthcare and adequate nutrition continue to pose a major challenge, especially for 70% of the Timorese population that live in rural areas, that is further exacerbated by the mountainous terrain and poor road infrastructure (WHO, 2016).

The implementing organization of the project that is the subject of this thesis began working in Timor-Leste in the mid-1990s and continues to implement health, safe water and improved sanitation, child education, reducing violence against women and children, and enhancing community resilience through livelihoods programs (WVTL, 2021). In 2016, the implementing organization piloted a nutrition-sensitive agriculture project with the goal of improving the nutritional status of children in Timor-Leste that was expanded to two additional districts in subsequent years. The project promotes the production and utilizations of six nutrient dense foods and works to improve nutrition and health seeking practices of caregivers of children under 5.

Nutrition-sensitive agriculture interventions and programs have been proven as efficacious strategies to improve maternal and child nutrition that may help in making progress toward nutrition goals (Ruel and Alderman, 2013). Program goals, design, and implementation may play a role in the success of nutrition-sensitive interventions. There is a need to assess current nutrition-sensitive agriculture programs to help build sufficient evidence to support their effectiveness in reducing child and maternal undernutrition.

This thesis is part of a larger parent study titled *Social behavior change strategies implemented in the context of nutrition-sensitive agriculture: A scoping exercise to identify*

current practice, gaps and resource needs, funded by the Bill and Melinda Gates Foundation and led by Amy Webb Girard, PhD, Associate Professor, Rollins School of Public Health. The goal is to explore how nutrition-sensitive agriculture programs are designed and implemented with respect to nutrition social and behavior change. The results of this thesis and the larger parent study will help not only to help shed light on the implementation process of nutrition-sensitive agriculture programs but also documenting best practices, gaps, and current resources.

Purpose Statement

The purpose of this master's thesis is to document challenges, success, and best practices during the implementation of a nutrition-sensitive agriculture project in Timor Leste using process evaluation methodology.

Objectives

1. Determine the extent to which the program was implemented as planned, including nutrition, agriculture, and monitoring activities.
2. Document the challenges and success of program implementation.
3. Assess the extent to which the project follows best practices in relation to social behavior change for nutrition.

Significance

This process evaluation will help inform future programs on how to implement nutrition-sensitive agricultural programs in Timor-Leste. The implementing organization staff may use the results of this evaluation to understand the challenges and success of the project to better serve the communities they work with. Additionally, this process evaluation will help inform a larger parent study led by Amy Webb Girard, PhD, Associate Professor, Rollins School of Public Health.

Literature Review

This section reviews relevant literature of the global significance of undernutrition, currents strategies, and the current nutritional status in Timor-Leste.

Global Burden & Causes of Malnutrition

Proper nutrition and food consumption are essential for everyone, but especially for children and pregnant women. Proper nutrition during the first few years of life aids in not only proper growth, but also ensures cognitive development. Malnutrition, and more specifically undernutrition, continues to be a problem globally and is one of the leading causes of childhood deaths, contributing to approximately 3.1 million child deaths each year (UNICEF, 2018). Despite the significant strides made in a global decrease in stunting in children under 5 years of age from 32.6% to 22.2% from 2000 to 2017, progress remains slow and inconsistent; 150.8 million children under five are still stunted and 90% of them live in only 36 countries. (UNICEF, 2013; WHO, 2013). It is estimated that each year 200 million children under 5 do not reach their full cognitive development potential because of poverty, poor health, and poor nutrition (Christian, Mullany, Hurley, Katz, & Black, 2015; Grantham-McGregor et al., 2007). Undernutrition cannot be attributed to one single cause, but we do know that household food insecurity, inadequate care and household environment, and access to healthcare are some main underlying factors (Tette, Sifah, & Nartey, 2015).

Food Insecurity

Food security as defined by the Food and Agriculture Organization (FAO) of the United Nations is “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with

individuals within households as the focus of concern" (FAO, 2002) . The State of Food Insecurity in the World (2019) reported that global hunger had declined in the first decade of the millennium, but those numbers have been steadily increasing since 2015 (FAO, 2019).This rapid increase in food access was most visible in countries that saw an overall economic progress especially in East and Southeast Asia (FAO, 2014b). Despite these advances, Asia continues to have the largest number of people experiencing hunger and has seen a steady increase since 2014 (FAO, 2014b). It is estimated that in 2019, 690 million people experienced hunger, an increase of 10 million from the previous year, which will only be exacerbated by the current COVID-19 pandemic (FAO, IFAD, UNICEF, WFP, & WHO, 2020).

In the last two decades, the world has seen an increase in food and fuel prices as a result of the global financial crisis in 2008 and consequences from environmental factors such as increased drought and climate variability (Brinkman, de Pee, Sanogo, Subran, & Bloem, 2010). Increases in food prices have led to a decrease in food availability and diversity in the diets of vulnerable households who spend a large percentage of their income on food (Brinkman et al., 2010). When this occurs in the first 1000 days of a child's life, it can lead to irreversible damages that can last a lifetime effecting a child's physical and mental health as well as future potential (Victora et al., 2008).

Child Care

Infant and young child feeding, and care practices can improve a child's survival rate and contribute to lifelong economic benefits. Breastfeeding is one of the most beneficial foundations for nutrition. The World Health Organization (WHO) recommends the early initiation of breastfeeding in the first hour of life and exclusive breastfeeding for the first six months of life that can help reduce the risk of infection and ensure optimal nutrition (WHO, 2011). Globally, 1

in 3 children are not exclusively breastfed putting them at higher risk of death and disease (WHO, 2018).Women are often not aware of the benefits of breastfeeding especially in low social economic settings. Even those women who do breastfeed might find it difficult to do with many competing priorities and feeling unsupported (Hector, King, Webb, & Heywood, 2005). After a child is exclusively breastfed, proper weaning and feeding practices are critical to their continued physical growth and development. Seventy-five percent of children 6-23 months in many countries do not meet the criteria for dietary diversity and feeding frequency for their age based on international standards (WHO, 2020b).

Access to Healthcare

Lack of access to food alone is not responsible for high rates of child mortalities in low-to-middle income countries, and increased food consumption may not lead to improved healthcare. Globally, infectious diseases like pneumonia, diarrhea, and malaria remain the leading causes of death for children under five (WHO, 2020a). Research has shown that access to care and treatment is one of the underlying determinants of malnutrition and can play a pivotal role in decreasing child mortality and has been incorporated into the UNICEF framework that outlines the immediate and underlying causes childhood malnutrition. Health programs that incorporate control of infectious diseases can help reduce the severity of malnutrition as well as access to nutritional care. Nutritional care includes access to vitamin A supplementation, fortification through powders, and lipid-based ready-to-eat foods. Despite this knowledge, inequities to care access remain prevalent, especially in low and middle income settings where geographic accessibility, availability, affordability, and acceptability have posed as barriers to accessing care (Jacobs, Ir P Fau - Bigdeli, Bigdeli M Fau - Annear, Annear Pl Fau - Van Damme, & Van Damme).

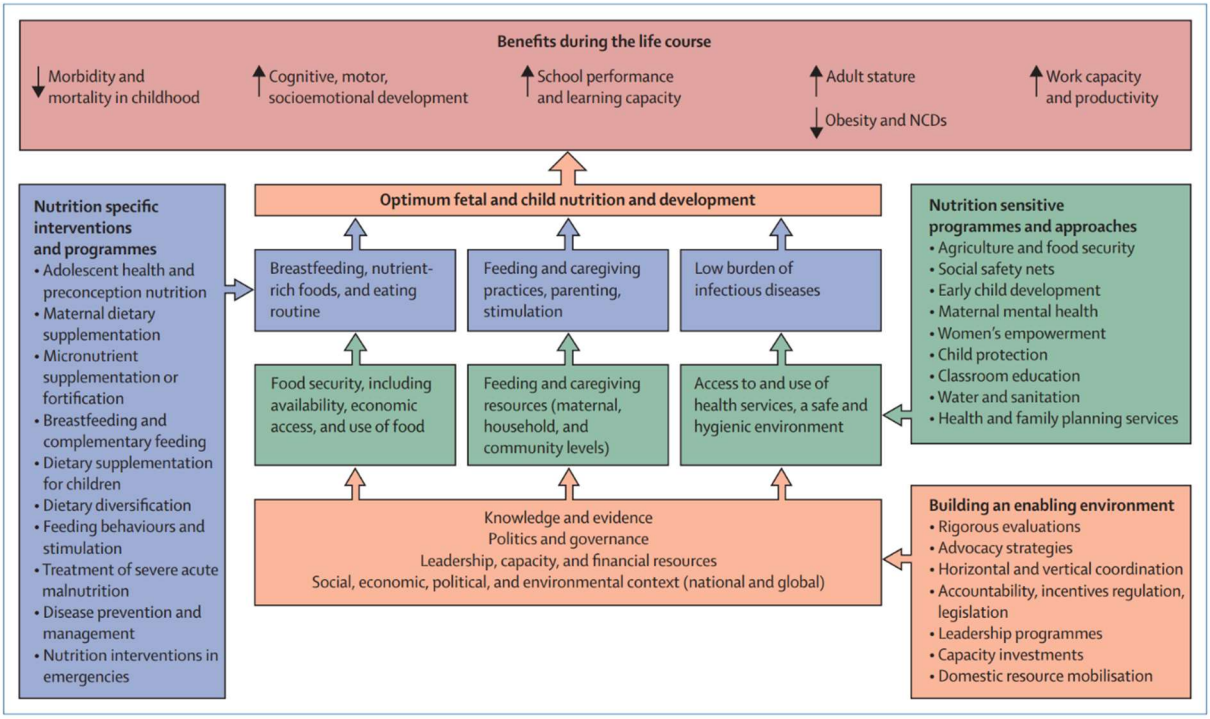
Strategies to Address Undernutrition

Global efforts to address maternal and child malnutrition focus on the "1,000 Day window of opportunity" defined as the time from conception to the first two years of life and the important role nutrition-specific interventions and nutrition-sensitive interventions play in addressing nutrition.

- **"Nutrition-specific interventions** are programs that address the immediate determinants of nutrition, including proper food and nutrition intake as well as proper child feeding practices, and low incidence of infectious diseases" (Ruel & Alderman, 2013).
- **"Nutrition-sensitive interventions** are programs that address the underlying determinants of nutrition, such as food security, proper caregiving practices, and access to health services and hygiene" (Ruel & Alderman, 2013).

Nutrition-sensitive interventions target the ***underlying*** causes of undernutrition and work within The Framework for Actions to Achieve Optimum Fetal and Child Nutrition and Development (Lancet, 2013; Ruel & Alderman, 2013). The framework **Figure 3** includes high-impact interventions for both nutrition-specific and nutrition-sensitive interventions. The framework includes the dietary, behavioral, and health determinants for optimal nutrition, growth and developments as well as the underlying causes (Black et al., 2013). The framework also includes depicts how these determinants are affected by food insecurity and caregiving practices, which are often a consequence of the individuals' social and economic status, which in turn will have lasting consequences that can affect not only health and cognitive development but can also impair work capacity and productivity.

Figure 3 Framework for Actions to Achieve Optimum Fetal and Child Nutrition and Development (Lancet, 2013)



The Lancet. (2013). *Executive Summary of The Lancet Maternal and Child Nutrition Series*. Retrieved from https://www.thelancet.com/pb/assets/raw/Lancet/stories/series/nutrition-eng.pdf

Nutrition-Specific Interventions

Nutrition-specific interventions focus on reducing malnutrition, and in low-to-middle income countries the focus has been on eliminating the burden of macro and micronutrient deficiency through dietary supplementation or fortification of commonly consumed foods and through educational programs that seek to change consumption practices (Provo et al., 2017). For example, vitamin A supplementation is one of the most common supplementation programs implemented across the world to address micronutrient malnutrition in low-income countries. Although vitamin A deficiency (VAD) is not easy to assess, the WHO estimates 5.17 million children under 5 and 9.75 million women experience VAD based on blood serum levels (WHO, 2009). The WHO recommends supplementation of vitamin A twice a year where VAD is an

issue for children under 5 (WHO, 2019b). The biggest health outcome of VAD is night blindness in children. Vitamin A is naturally found in foods like meats, dairy products, vegetables and fruits like sweet potatoes, carrots, and spinach, among others that might not be as accessible or affordable in low to middle income countries or prioritized as a need (OSU, 2021). Nutrition-specific interventions are often full coverage programs that come with a high price, and research has shown that even if scaled they alone cannot meet the global targets for nutrition (Bhutta et al., 2013; Shetty, 2018).

Nutrition-Sensitive Interventions

Nutrition-sensitive interventions try to address the underlying determinants of nutrition and require collaborations across sectors - agriculture, health, and social - to be successful (Ruel & Alderman, 2013). Nutrition-sensitive interventions target early child development, food security, women's empowerments, social safety nets, water, sanitation, and hygiene. Interventions that integrate nutrition and agriculture improve the diets of not only of mothers and children, but other household members (Girard, Self, McAuliffe, & Olude, 2012). A recent cluster-randomized control trial in Burkina Faso of a two-year enhanced-homestead food production program found that incorporating social and behavior change communication in relation to nutrition, health and gender into an agriculture program improved nutrition and women's empowerment outcomes (Olney et al., 2016). Furthermore, nutrition-sensitive interventions have been successful in reducing stunting in middle to low-income countries (Khalid, Gill, & Fox, 2019; Ruel & Alderman, 2013).

Nutrition-Sensitive Agriculture

We know agriculture and nutrition are directly linked. Agriculture plays a critical role in increasing income, improving diets, care, and maternal health outcomes and its integration into

health interventions is crucial to accelerating progress towards undernutrition outcomes (Kadiyala, Harris, Headey, Yosef, & Gillespie, 2014; Pandey, Mahendra Dev, & Jayachandran, 2016). Nutrition-sensitive agriculture is a food-based approach that focuses on improving access to nutritionally rich food crops and crop biofortification as a way of improving dietary diversity and addressing malnutrition and micronutrient deficiency (FAO, 2014a). Nutrition-sensitive agriculture programs often bring together both nutrition-specific and nutrition-sensitive interventions combined with a focus on behavior change communication and women's empowerment. The FAO has identified three key areas where nutrition-sensitive agriculture can be implemented: 1) Increasing availability and accessibility of food by increasing agricultural production, 2) increasing food diversity and increasing productions, and 3) making food more nutritious.

Food security is a key factor in nutrition outcomes, and to eliminate malnutrition there is need to increase availability and accessibility of food on a global scale. The biggest challenge to achieving this is the high cost of quality food especially among the poorest populations (FAO, 2020). Increasing diversity and production through family gardening, home gardens, and homestead food production projects can increase the number of available crops at the local level (FAO & WFP, 2013). While multiple approaches are needed to address food security, home gardens have continued to play an important role in increasing dietary diversity through the small-scale production of foods not readily available or affordable (Galhena, Freed, & Maredia, 2013; Niñez, 1987).

Biofortification of staple and widely available food crops can prevent micronutrient deficiency by increasing the bioavailability, and the concentration of micronutrients through plant breeding and DNA technology (Henley, Taylor, & Obukosia, 2010). Biofortification has

been proven to be a feasible and cost-effective intervention that can deliver micronutrients where access to diverse diets may be limited (Bouis, 2018). Sweet potatoes are often a staple crop Sub-Saharan Africa and Southeast Asia, but are often white-flesh variations that do not provide vitamin A. Biofortification of orange-fleshed sweet potatoes in Sub-Saharan Africa presents a model to address VAD. Biofortified orange-fleshed sweet potatoes are a rich source of beta-carotene, which is converted to vitamin A (Low, Mwanga, Andrade, Carey, & Ball, 2017). Research has shown that promotion of biofortified orange flesh sweet potatoes to address VAD has been successful in Sub-Saharan Africa (Low et al., 2017) .

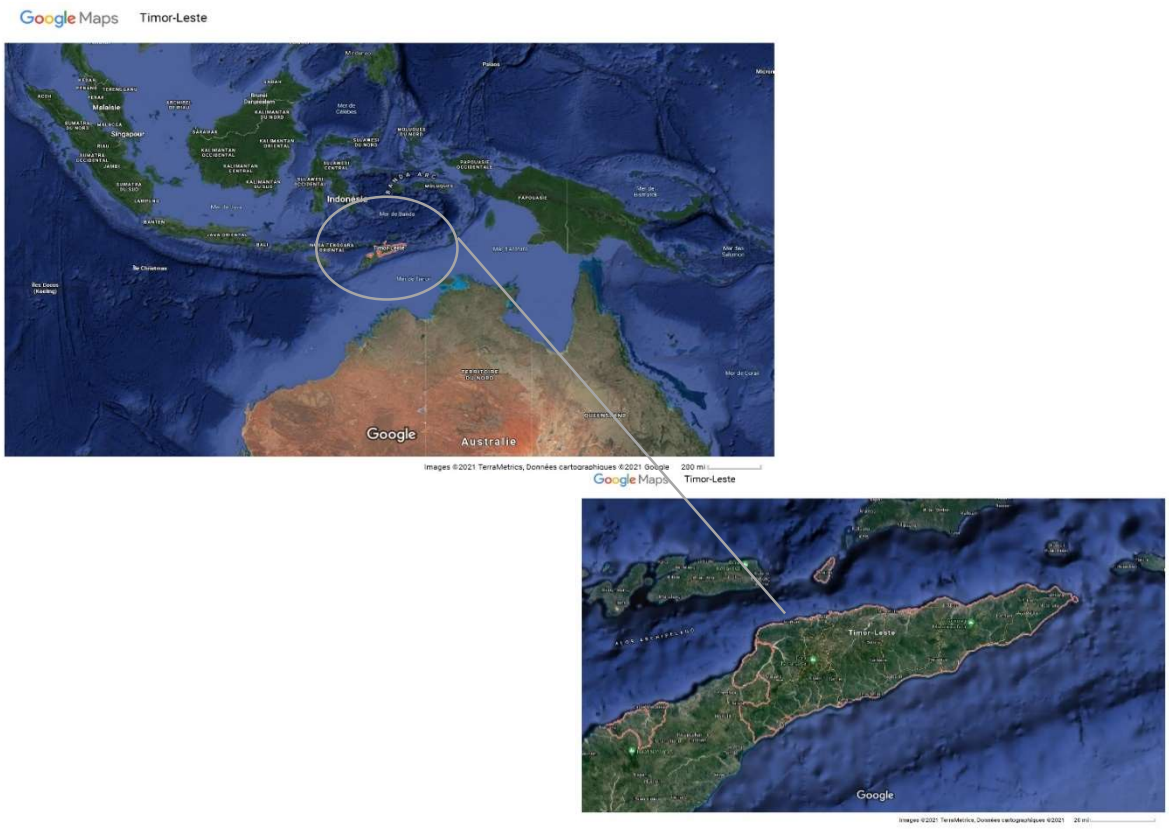
Nutrition-sensitive agriculture interventions and programs may be potentially efficacious strategies to improving maternal and child nutrition by addressing the underlying determinants of undernutrition, but evidence of nutritional impact is still limited (Ruel and Alderman, 2013). Program goals, design, and implementation may play a role in the success of nutrition-sensitive interventions, but gaps in design and evaluation methods make it difficult to measure (Ruel, Quisumbing, & Balagamwala, 2018).

Timor-Leste

The Republic of Timor-Leste is the youngest nation in Southeast Asia having only recently gained independence in 2002. Timor-Leste was occupied by the Portuguese from the middle of the 16th century until 1975. Independence was short-lived and the island nation was quickly (9 days after independence) occupied by Indonesian forces (Molnar, 2010). The Portuguese presence can still be seen today with 98% of the population being Roman Catholic and Portuguese being the official country language despite only 13.5 % of the population being able to speak it. Most of the population (91%) speaks Tetum, the second official language of Timor-Leste as well as a large percentage of the population (43.4%) speaking Bahasa Indonesia

(Molnar, 2010).The country also has one of the youngest populations in the world with 62% of the population being under the age of 25 and half of it under 19 (WHO CSS, 2019). Timor-Leste is in the eastern islands of the Indonesian Archipelago, connected to Indonesia to the west on the island of Timor and is home to over 1.2 million people (UNICEF, 2019a). The island covers a total area of about 15,007km^2, the eastern half of the Timor Island, the islands of Jaco and Atauro, and the district of Oecussi, which is located on the Indonesian side of Timor. Despite the small size of the country Timor-Leste, the population is very diverse both culturally and linguistically. In addition to the East Timorese population, Chinese, Arab, and Indonesian descents can be found throughout the country. The major ethnic groups include Mambai, Tetum, Kemak, Bunag, Fataluku, and Galoli (Molnar, 2010).

Figure 4 Map of Timor-Leste (Google, n.d)



The annual GDP per capita in Timor-Leste is estimated to be $347, and most of the population relies on agriculture for income (Molnar, 2010). In 2011, Timor-Leste attained lower-middle income status as a result of their oil, but still faces underproduction of its food supply and has seen an increase in imports of cereals and ready-to-eat, high carbohydrate foods (Provo et al., 2017). As much as 80% of the population depends on subsistence agriculture, especially in rural areas (AustralianGoverment, 2019). The mountainous terrain and poor internal infrastructure after independence have made food and nutrition insecurity a continuing major problem for the country. Prior to the implementation of the project, the implementing organization found that this reliance of rural food production limits the types of food grown, consumption patterns, and the role of the marketplace, a dynamic that affects household food security and nutrition.

The National Strategic Development Plan 2011-2030 set forth by the Timor-Leste Government aims to turn the country into a "medium-high income country by 2030, with healthy, educated, and safe population that is prosperous and self-sufficient in terms of food" (WHO, CSS, 2019). Healthcare is a constitutionally protected right in Timor-Leste and primary care is provided in Community Health Centers (CHCs), health post, and integrated community health services (Servisu Integradu da Saude Communitaria or SISCa). Despite universal coverage and government commitment, healthcare utilization remains low with over 70% of the population living in rural areas with poor road conditions making it difficult to access care.

Nutrition in Timor-Leste

Infant mortality in Timor-Leste has significantly declined over the last decade from 60 deaths per 1,000 live births to about 31-40 deaths per 1000 live births as of 2016 (DHS, 2018). Despite this reduction, the gap between the poorest and richest households has widened. Children under 5 in the poorest households are more than twice as likely to die before their fifth

birthday, a rate of 55 deaths per 1,000 live births. Timor-Leste has one of the highest rates of undernutrition in the world. The most recent Demographic and Health Survey found the prevalence of stunting, wasting, and underweight in children under five to be 46%, 24%, and 40% respectively. In addition, the prevalence of anemia was 40% among children 6-59 months (DHS, 2018). These rates are all under the World Health Organization's most severe category for nutrition outcomes, demonstrating the critical state in Timor-Leste. The government of Timor-Leste recognized the need to prioritize nutrition as part of their national health strategy and with support from the World Health Organization developed Food Based Dietary Guidelines and tools to help hospitals and community centers to assess malnutrition at the national level.

According to project documents, the key drivers of undernutrition in Timor-Leste include food insecurity at the household level and insufficient knowledge and understanding of health and nutrition issues. Currently, there is limited data on household food consumption in Timor-Leste, but the immediate causes of undernutrition can be linked to nutrient intake and infectious diseases (Provo et al., 2017). High rates of undernutrition and anemia in mother and children may be attributed to a diet high in carbohydrates and low in protein and micronutrients, as wells as insufficient consumption and availability of nutrient dense foods. As of 2019, it is estimated that about 63-85% of the population is not able to afford a nutritionally adequate diet (FAO, 2020). Access to food continues to be a barrier, because of the nation's inability to meet the food demand of its population, Timor-Leste relies on food imports, but the demand is not being met.

The Project

The project of interest to this thesis was designed to improve the nutritional status of children under 5 and their mothers. The project was first introduced as a pilot program in one of

the implementation districts and later expanded to two additional districts in 2017. The project plans to achieve its goals by addressing key drivers of undernutrition in Timor-Leste; household food insecurity and the lack of knowledge and understanding around health and nutrition. The project will achieve this goal by (1) improving nutrition and health seeking practices for caregivers of children under 5 through the establishment of parent clubs; (2) making key nutrition dense foods available for households; (3) improving household earnings and ability to purchase superfoods through market access and savings, and (4) improving the sustainability of health agricultural services by promoting the citizen voice and action (CVA) and farmer managed natural regeneration (FMNR) approaches. The project addresses undernutrition through the integration of nutrition and agriculture/economic programming (nutrition-sensitive agriculture) and aims to improve the use and demand for nutritionally diverse foods by boosting year-round availability and access.

Previous interventions by the implementing organization in Timor-Leste have demonstrated the need to include social and behavior change communication strategies to enhance child health and nutrition projects. The project draws on these lessons learned to improve nutrition and health seeking practices of caregivers of children under 5, improve access to superfoods, increase income from "superfood production," and improve the sustainability of health and agriculture systems. To achieve these outcomes, the project employs several different activities including community groups that include parents' clubs, farmer groups, food processing groups, savings and loans groups, as well as citizen voice and action groups. The project promotes and trains farmers on "superfood" production and utilization of improved agricultural techniques and technologies. The program also works on strengthening and expanding markets for products through private sector partnerships. Health program activities

include the training and supporting of community health volunteers to facilitate parent club meetings, conduct home visits, and conduct child growth and promotion activities during the Timor-Leste Integrated Community Health Service visits.

The implementing organization identified four municipalities comprised of 22 villages and 125 smaller villages to implement the project and hopes to reach 31,806 people in the implementation zone. The program also includes a special focus on gender and puts young women and children at the core of the intervention. These groups are the most affected by anemia and undernutrition. Community health workers will work with young women, and their husbands to in parent clubs to not only provide health messaging, but to also reduce gender-based violence.

Methods

Introduction

A process evaluation is a tool in the evaluation toolkit to assess health program implementation. Process evaluations are useful because they can help stakeholders understand why a program was successful or not by providing detailed insights into best practices and approaches that might not have worked as well (Bartholomew, Parcel Gs Fau - Kok, & Kok, 2001). Process evaluations can assess whether the program was implemented as planned and whether the program followed its originally intended design, as well as document adaptations along the lifespan of a project. A process evaluation can entail both qualitative and quantitative methods to measure its outcomes. There are two types of process evaluations, formative process evaluation and summative process evaluations. A formative process evaluation is done while the intervention is still being implemented and can help adjust the program before implementation ends (Devaney & Rossi, 1997) A summative process evaluation describes the extent to which an intervention was implemented as intended and reached the intended participants (Saunders et al; Devaney& Rossi 1997, Helitzer et al.). Information learned in a process evaluation can be applied to future intervention by incorporating lessons learned and best practices into future health interventions.

Population and Sample

The project is a nutrition-sensitive agriculture project that was piloted in 2016 in the Aileu District of Timor-Leste and is projected to end in June 2021. A process evaluation of the project was conducted under the umbrella of the *Social behavior change strategies implemented in the context of nutrition-sensitive agriculture: A scoping exercise to identify current practice, gaps and resource needs* study led by Amy Webb Girard, PhD, Associate Professor, Rollins

School of Public Health. The project was selected because it is a nutrition-sensitive agriculture program that incorporates social behavior change strategies to improve health outcomes and has elected to participate in the parent study funded by the Bill and Melinda Gates Foundation.

Research Design and Procedures

A process evaluation of the project in Timor-Leste was conducted to describe whether the program was implemented as designed and if it reached its intended participants. To accomplish this, the domains of a process evaluation, fidelity, dose, reach, and participant satisfaction were used as an overarching framework to guide the process. Fidelity is the extent to which the project was implemented as planned (Saunders, Evans, & Joshi, 2005). Fidelity can be measured using data sources that document the goals of the project and can be compared against the activities the project has implemented. Dose is measured using the "amount or number of intended units of each intervention or component delivered by the program" (dose delivered) and the extent to which participants engagement and interact with the materials (dose received) (Saunders et al., 2005). Reach is the 'proportion of the intended priority audience that participates in the intervention" (Saunders et al., 2005). Reach also examines barriers to participation and can be assessed by looking at project data that measure attendance. Lastly, participant satisfaction refers to the level of satisfaction with the project the target participants have (Saunders et al., 2005).

In addition to the process evaluation framework, components from the Consolidated Framework for Implementation Research (CFIR) were incorporated to this study to better answer the research questions. The CFIR is made up of five major domains: (1) intervention characteristics, (2) outer setting, (3)inner setting, (4) characteristics of the individuals involved, and the (5) process of implementation (Damschroder et al., 2009). The first domain of the CFIR framework (intervention characteristics) includes constructs that closely examine the

intervention itself and how those characteristics affect implementation. Constructs under this domain include the intervention's source (origin), evidence strength and quality, design quality and packaging to understand how these key attributes affect implementation. The second domain (outer setting) looks at external components of the intervention that includes the participants' needs and resources, other stakeholders, and policies and incentives that affect the intervention. The third domain (inner settings) includes constructs that look at internal factors that may affect implementation, which include the implementing organization's characteristics as well as the implementation climate in the intervention zone. The characteristics of individuals serve as the fourth domain and examines the different characteristics of the target population that includes knowledge and beliefs about the intervention and their perceived ability to adopt the desired behaviors to reach the intervention's goals. The final domain of the CFIR framework looks at how the process of implementation for any given intervention works with special attention to planning, engaging, executing, and reflecting and evaluating as constructs. ***Figure 5***, depicts the selected domains under each construct that were examined as part of this process evaluation.

Figure 5 Consolidated Framework for Implementation Research (CFIR)

Intervention Characteristics	Outer Setting	Inner Setting	Characteristics of Individuals	Implementation Process
▪ Intervention Sources ▪ Evidence Strength and Quality ▪ Design Quality and Packaging	▪ Participant needs and resources ▪ Cosmopolitism ▪ External Policies and Incentives	▪ Structural Characteristics ▪ Culture ▪ Implementation Climate	▪ Knowledge and beliefs about the intervention ▪ Self-Efficacy ▪ Individual Identification with Organization	▪ Planning ▪ Engaging ▪ Executing ▪ Reflecting and Evaluating

Ethical Considerations

The evaluation of this project is part of a parent study being conducted and was approved by the Emory University Institutional Review Board. The project provided written informed consent to participate. In addition, project staff who participated in interviews provided verbal informed consent before the start of the interview. No identifying information on individual project staff were collected. All interview, notes, recordings, and project documents were kept in Emory Box and then transferred to a shared, password-protected OneDrive; both drives are secure cloud-based storage systems used by Emory University.

The participating project and its staff are entitled to confidentiality, and thus efforts have been made to remove from this thesis any information that could potentially identify the project or its staff members.

Data Collection Procedures and Instruments

The process evaluation of the project was done using qualitative methods and involved multiple instruments to adequately answer the research questions. To be able to describe the project, its theory of change, and the context in which it was done, documents were reviewed and data abstracted utilizing tools developed that included document abstraction and key informant interviews. Documents for review were provided by key project staff in Timor-Leste. Project staff in Timor-Leste were made aware of the study before interviews were requested, and those interviewed did so voluntarily.

Document Abstraction

To assess the implementation of the project, a comprehensive review of program documents was utilized to understand how the program theory of change was implemented. Documents requested include, but are not limited to:

- Project proposal/funding agreement
- Formative work report/literature review
- Social and behavior change strategy
- Training curricula/schedule
- Communication tools or aids (e.g., counseling cards, radio transcripts, etc)
- Advocacy documents (e.g., PowerPoint slides, policy briefs)
- Any routine project reports (e.g., quarterly report)
- Monitoring and evaluation plan/tools
- Baseline/midline and process evaluation reports

The documents were systematically abstracted using abstraction tools created for the larger parent study (Appendix A). Each abstraction tool captured data related to different components of the intervention, that helped guide the process evaluation (**Table 1**). Each tool underwent a pilot test and was adapted to ensure it adequately captured what was needed from each document by the research team. To understand the project's theory of change and intended design, data on formative research, core design, and social behavior change strategy were used. The communication, delivery guide, training curriculum, and ongoing implementation document abstraction tools were used to understand how the program was implemented. The M&E tool was used to measure dose, reach, and its adaptability. Twenty-four documents were provided by the project and reviewed for abstraction. Of the 24 documents reviewed only 12 were abstracted using the abstractions tools, although all projects were reviewed again during the analysis phase to abstract any relevant text to help answer the research questions.

Table 1 Document Abstraction

Tool Used	Project Documents Used
Core Design	• Project Design • Grant Concept Template 2017-2018 • Annual Development Plan 2017-2020 • Project Log Frame
Formative Research	• Baseline Report
Social Behavior Change Strategy	N/A
Communication	• Parent Club Guidebook
Delivery Guide	• Parent Club Guidebook • Positive Parenting Module • Resilient and Inclusive Social Enterprises Training Handbook
Training Program/Curriculum	• Parent Club Guidebook • Positive Parenting Module • Resilient and Inclusive Social Enterprises Training Handbook
Training	• Parent Club Guidebook • Positive Parenting Module • Resilient and Inclusive Social Enterprises Training Handbook
Ongoing Implementation	• Annual Development Plan 2016-2017 • Annual Development Plan 2018-2019 • Annual Development Plan 2019-2020
Monitoring and Evaluation	• Lot Quality Assurance Sampling (LQAS) • Project Theory of Change • Project Log Frame • Baseline Report, 2018 • Midline Study Report • Annual Outcome Monitoring Report, 2020
Gender	N/A

Key Informant Interviews

Key Informant Interviews (KIIs) were conducted remotely with staff who oversee the project or participate in proposal development, strategy development, formative research, social behavior change, implementation, and monitoring and evaluation. A total of six in country staff were interviewed using the interview guide (Appendix B) for an hour over Zoom. Interviews

were recorded and detailed summaries and descriptions of what was said were created. Although the summaries of the KII's were not verbatim transcripts, detailed notes from multiple teams ensure that the data quality was maintained. Interview debriefs were done after each interview to assess whether the interview guide needed revising before each interview to better focus the data collection process.

Data Analysis Plan

The first step in the analysis of this process evaluation begins with a comprehensive description of the program goals, timeline, and implementation details gathered from the project documents provided by the implementing organization. The theory of change was examined and compared to key agriculture to nutrition pathways to understand how the project incorporated proven pathways into the design. After a complete description of the program was completed, project documents were abstracted using the abstraction tools created by the parent study (Appendix A). These tables allowed for key text to be pulled out and that was organized by the research questions to identify trends across data sources. The data were then systematically analyzed to determine fidelity, dose, reach and context as shown in **Table 2**. Fidelity of the project was assessed through a systematic review of the project documents and key informant interviews to determine to what extent the program was implemented according to its theory of change and original design. Special attention was paid to the core design components to document best practices employed during both the design, and the implementation stage. Dose delivered and reach were concurrently assessed to determine the number of people reached through the intervention as well as any reported changes to behaviors in the target population. Participant satisfaction was measured using proxy measures such as the level of engagement reported by staff members and reports from project staff during interviews. Due to the COVID-

19 pandemic and ongoing travel restrictions, data from participants was not captured; we were unable to include participant perspectives about the program or their satisfaction with the program through primary data collection methods. The study team intends to visit the site for further assessment in the summer or fall 2021, if travel to Timor-Leste is permissible. In addition to measuring participant satisfaction, the project team's perceptions of the project were incorporated to the process evaluation.

Limitations

A process evaluation measures participant satisfaction, and a limitation of this study is that this component of the evaluation was completed without any direct measures. Participant satisfaction was measured using proxy measures such as the level of engagement reported by staff members and reports from project staff during interviews, which could be susceptible to bias. This process evaluation was also limited to the documents that were made available to this study by the in-country project staff. Several of the documents provided to the team made references to other documents, including for example, a Social Behavior Change (SBC) strategy and a gender strategy; however, these documents were not provided to our team. During interviews with staff and informal communications, they appear not to have been produced. Additionally, the formative research conducted was informal and not put into a formal document by the implementing organization. The project made use of organizational knowledge and past project evaluations and reviewed relevant literature to help guide the design of the project, but this information was not documented, limiting this study's ability to assess the source of the intervention. The lack of documentation of design and implementation documents led to gaps in the overall understanding of the project's theory of change and implementation strategy making it difficult to understand how the project's design aligned to meet the project goals.

Table 2 Data Analysis Plan

Domain	Process Evaluation Question	Data Sources
Fidelity	1. To what extend was the program implemented according to its design? 2. *Design quality and packaging* • What best practices were employed during the design process? • Is the project innovative?	Project TOC Staff Interviews M&E Reports
Dose (for participants)	1. To what extend have the parent modules been delivered to the community? 2. To what extend have farmer groups received superfood training? 3. To what extent was all the content covered?	Annual Reports
Dose Received	1. To what extent were all the intended methods used, strategies, and activities used? 2. To what extent did participants engage in actitivities?	Midline Reports 2020 Annual Report Interviews
Reach	1. What proportion of the priority target population participated in each program session?	Midline Reports 2020 Annual Report Interviews
Recruitment	1. How were PSF's recruited? 2. How were men and women recruited into the different activities (i.e groups)?	Interviews
Context	1. How were needs/barriers and facilitators known and prioritized by the implementing organization?	Design Documents Baseline Reports
Gender	1. How does the project address this? 2. What strategies do they use?	Design Documents Midline Report Annual Reports
Satisfaction	1. What do staff see as strengths and weaknesses of PSFs?	Interviews

Results

Introduction

The results presented below are a result of a systematic analysis of 23 project documents and 6 interviews with staff from the implementing organization in Timor-Leste. Staff interviewed in general were in-country staff with responsibilities ranging from project design to supervising front line workers. The findings begin with a complete description of the project as intended based on its design, followed by the results of each domain within the process evaluation framework.

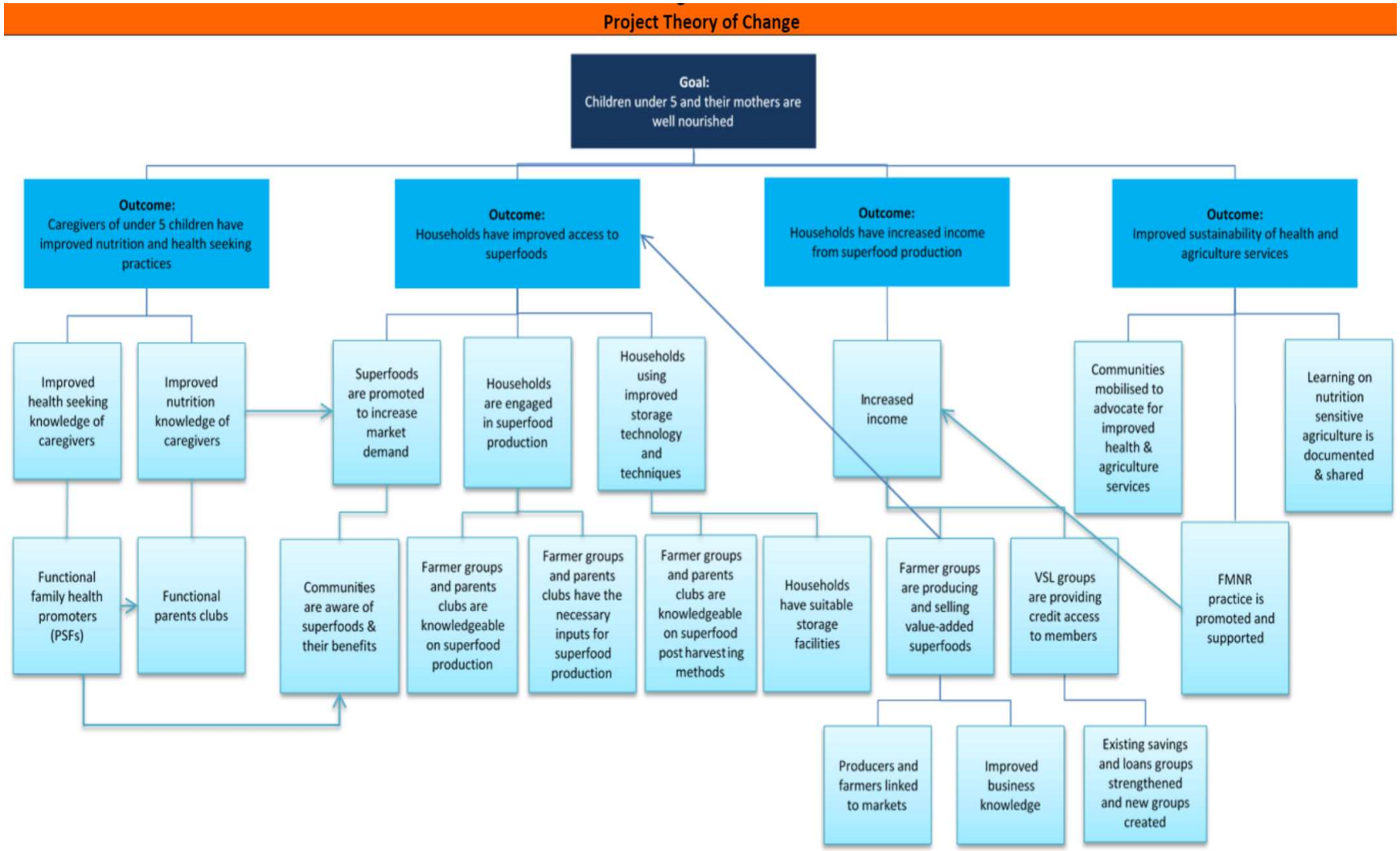
Findings

Project Description

The goal of this 5-year nutrition-sensitive agriculture project is to improve the nutritional status of children under 5 and their mothers. The project aims to achieve this by addressing some of the key drivers of undernutrition in Timor-Leste; namely, household food insecurity and the lack of knowledge and understanding around health and nutrition. The project will achieve this by (1) improving nutrition and health seeking practices for caregivers of children under 5 through the establishment of parent clubs; (2) increasing the availability of nutrient dense foods (superfoods) for households; (3) improving household earnings and ability to purchase superfoods by increasing market access and savings, and (4) improving the sustainability of health and agricultural services by promoting the citizen voice and action (CVA) and farmer managed natural regeneration (FMNR) approaches ***(Figure 4).*** The project addresses undernutrition through the integration of nutrition and agriculture/economic programming that aims to improve the utilization and demands for nutritionally diverse foods by enhancing year-round availability and access.

The project's theory of change ***(Figure 4)*** includes three of the six key agriculture to nutrition pathways as described by *Kadiyala et al*. Agriculture plays a critical role in increasing income, improving diets, care, and maternal health outcomes and its integration into health interventions is crucial to accelerating progress towards undernutrition outcomes (Kadiyala et al., 2014; Pandey et al., 2016). The first agriculture to nutrition pathway included in the theory of change is *agriculture as a source of food*. The project promotes the production of six nutrient dense crops (mung beans, moringa, orange sweet potatoes, red kidney beans, soybeans, and eggs) to increase the availability of these foods at the household level. The project relies on the education component and the success of previous interventions that have found that increasing crop diversity will lead to diet diversification (Kadiyala et al., 2014). The second pathway addressed by the project's theory of change is *agriculture as a source of income for food and nonfood expenditures*. Household income is associated with not only food availability, but also dietary diversity (Headey, Chiu, & Kadiyala, 2011; Kadiyala et al., 2014). The project promotes the superfoods production and village savings and loan groups to increase income in hopes of influencing nutritional outcomes. A third pathway that was not explicitly incorporated into the formal theory of change, but the project makes efforts to address, is women's empowerment through a gender strategy. The project promotes women's involvement in multiple project activities outside of the home, which traditionally is not a common practice for Timorese women. The project also promotes community dialogue surrounding gender-based violence in Timor-Leste through parent club dialogues. Women's empowerment has not only been associated with higher household income and higher agricultural production, but also better nutritional outcomes (Kadiyala et al., 2014).

Figure 6 Project Theory of Change



Source: Project Design Document. Reproduced with permission from the implementing organization in Timor-Leste.

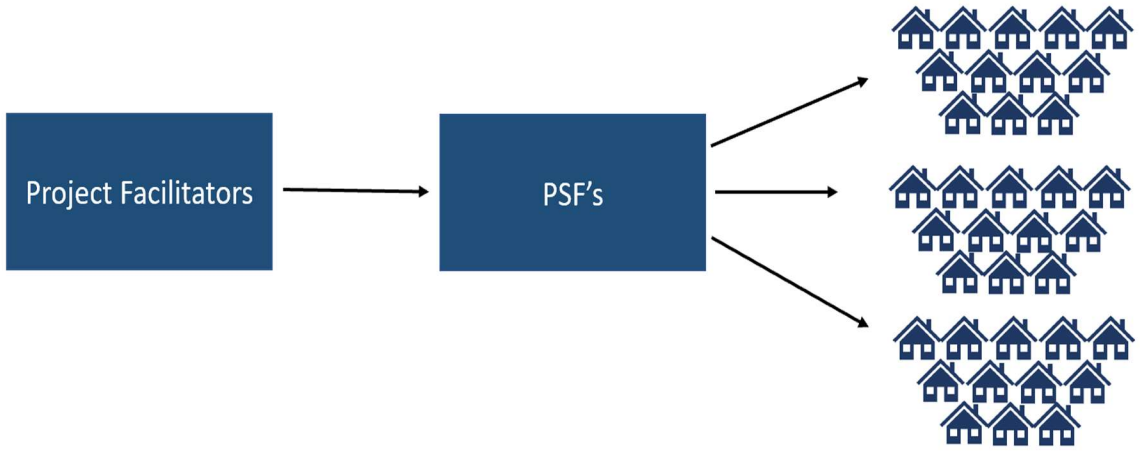
The project was first piloted in 2016, in one municipality of Timor-Leste and later expanded to two additional municipalities; it is scheduled to end in June of 2021, though it may receive an extension due to the current COVID-19 pandemic. The project works closely with Timor-Leste governments' *Promotor Saude Familia* (PSF), community health volunteers, to support the parent clubs. PSF's are mobilized to engage young mothers and fathers in the nutrition program delivered through parent clubs. The implementing organization has partnered with local traders, grocery stores, and input suppliers to help link farmers to markets and sells superfoods commercially. To achieve its goals, the project will make use of four primary activities, and the promotion of six nutrient dense foods the project calls superfoods as depicted in ***Figure 6.***

Parent Clubs

Parent clubs are a key behavior change platform implemented by the project to improve health seeking and nutrition practices of caregivers for children under 5. Parent clubs are composed of 1 *Promotor Saude Familia (*PSF) often referred to as Community Health Volunteers (CHV's) and about 15 households with children under 5, depending on the number of households in each *suco* (village). Each PSF is responsible for 3-4 parent clubs in each village and meet about once a month (***Figure 5)***. PSFs are trained by the project through project facilities, who have been hired by the project to mobilize PSFs in each of the district. Project Facilitators serve as a bridge between the parent clubs and key project staff as they live in the communities and can constantly monitor project activities. Parent clubs serve as a group where participants can discuss any household problems and receive support from their fellow members. The main activity of the parent clubs is to discuss a health topic as part of an integrated 1,000-day curriculum that covers health, nutrition, infant and young child caring practices, and WASH

practices. The curriculum also incorporates gender components to address gender roles and reduce gender-based violence by encouraging women to take more active roles in food production and civil engagement through the parent and citizen voice and action groups. The project draws on the existing Community Health Volunteer (CHV) structure set forth by the Timorese government (PSFs). PSF's are selected by the government and were enlisted by the implementing organization to help mobilize parent clubs for the project. Community Health Volunteers are volunteers and do not receive a salary for their work as part of the Timorese health structure. To help support project activities and incentivize participation in the project, all CHV's received a chicken coup starter kit, consisting of material to build the coup, 15 chickens, and one rooster.

Figure 7 Parent Club Structure



Superfood Production and Farmer Groups

To improve access to food and income at the household level, the project promotes the production of six nutrient dense foods, the project calls "superfoods"; soybeans, mung beans, kidney beans, eggs, moringa, and orange sweet potatoes. PSFs, government extension officers, and Project Facilitators are trained on the nutritional value of each crop, techniques on how to grow them, and how to increase their production yields. The project focuses on introducing new

varieties of soybeans, red kidney beans, and orange sweet potatoes. To increase the uptake of superfoods production, the project has provided seeds, cuttings, and nursery bags to farmers as well as education using demonstration plots in the communities. Parent clubs and farmer groups also receive trainings on soil conservation, soil improvement techniques (composting), and water saving techniques as well as training on the benefits of intensive farming systems. In addition to increasing superfood production, households are trained on food storage techniques and how to sell excess crop through food processing groups.

Food Processing Groups

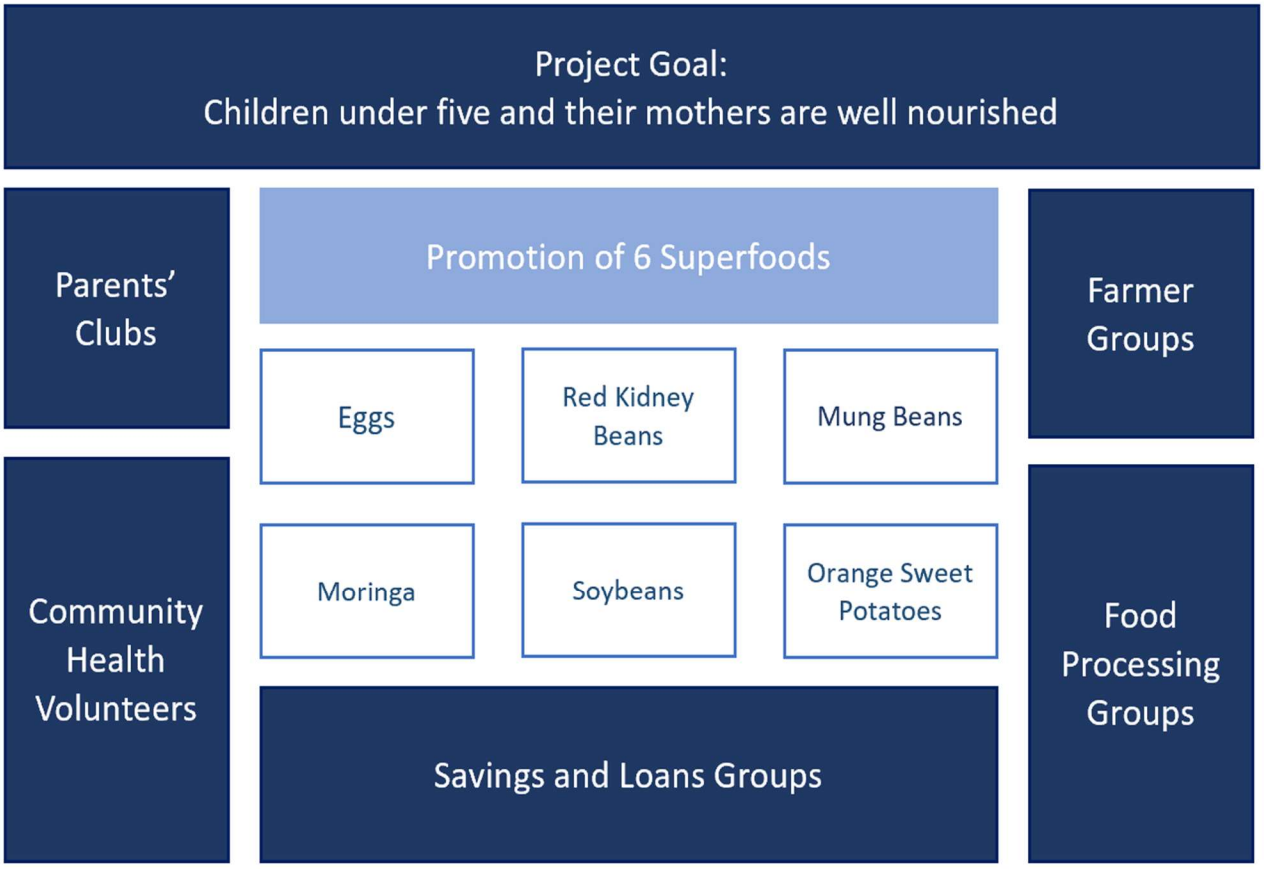
Food processing groups are groups for farmers in the implementation area that come together and learn about local value chains that can help them sell their products and crops in larger markets. The project works with existing and new processing groups to develop food products like tofu from soybeans. The project provided groups with training and market linkages. The project led a market assessment to help inform the food processing groups and determine products to be sold in the implementation zone. The project supports three farmer groups financially to procure tofu production equipment. The project offers subsidized tofu machines and provides training. Processing groups are designed to help households increase their income as a result of superfood production that will hopefully lead to improved health and the nutritional status of mothers and children under five.

Village Savings and Loans

Village Savings and Loans groups (VSL) are self-managed groups of people who meet regularly to save their money together and offer small loans to members and the community. The project utilizes VSL's as a sustainable income generating activity in the implementation zone. Farmer and processing groups are trained on VSL operation and management, as well as

financial literacy and business planning and management. Parent Club members are also encouraged to join VSL groups as means of increasing household income.

Figure 8 Summary of Project Activities



Organizational Context

Prior to the pilot of the project in 2016, the implementing organization conducted a baseline study in the municipality of Aileu to understand the program conditions, knowledge, and practices in the target population regarding child health and nutrition, superfood consumption, and production and sales products and crops. The baseline report showed that malnutrition and anemia rates remained high, despite the economic gains being made by Timor-Leste. With the results of this assessment along with the institutional knowledge brought by the

implementing organization, it was decided that a nutrition-sensitive agriculture program could challenge the assumption that these issues can be addressed with economic growth alone. Underlying drivers of undernutrition in Timor-Leste are attributable to food insecurity at the household level and lack of knowledge and understanding around health and nutrition. The project prioritized increasing knowledge and understanding of health and nutrition, increasing production of quality crops, and increasing the capacity of government health workers.

To address health and nutrition issues, the project relies on the training-of-trainer model to reach the target population at the individual household level. The project relies on the Parent clubs to serve as the conduit for this cascade of information and utilizes the existing health structure in Timor-Leste. *Promotor Saude Familia (*PSFs) are community health volunteers selected by the government of Timor-Leste and vetted by the community they serve. Working with the government of Timor-Leste, the project was unable to select the PSFs for the project and instead began to work with the existing PSFs. Once a PSF is selected, they can only be removed by the government. If the project wished to hire additional PSFs, they would have to be vetted and by both the community and government. The existing health structure has allowed the project to have a workforce that is accepted and generally respected by their communities, but it has also constricted the projects' ability to replace health workers who are not as motivated as the rest of their peers.

Existing PSFs were enlisted in the establishment of parent clubs as part of the project and are encouraged to participate through incentives designed to push forward the project goals. PSFs are not paid for the work they do in their community and to encourage their participation a chicken coop kit was provided to all PSFs as a way to generate income. The coup included 15 chickens and one rooster as well as the material needed to build the coup. PSFs have generally

been receptive to the coups, because they are able to sustain the egg production that provides them with an economic incentive to participate in the project activities. During the interviews, the project's staff shared that not all PSFs have had success with the chicken raising and egg enterprise, because the chickens died quickly after the training or PSF chose to sell them off.

PSFs also receive health, nutrition, and agricultural training as part of the program that they would not otherwise receive. During the initial assessment, the implementing organization found that capacity of PSFs and government support was low. PSFs are trained by Project Facilitators in their municipalities and periodically attend larger technical trainings with the implementing organization's technical staff. Involvement in the project helps build capacity of PSFs, who are the first line of care for community members.

Figure 9 Implementation Organizational Chart for Project

Gender

Gender-based violence is widespread and generally culturally acceptable in Timor-Leste and presents a challenge for the implementing partners' implementation of the project. As part of the design, a gender strategy was planned to help address the belief that child rearing (feeding/cooking/caring) is only women's work and to try to increase the capacity of men to also take part in the care of the children. The gender strategy was not available, but there are elements in the project activities that were clearly targeting this issue. The project uses "parent clubs" instead of "mother's clubs" to encourage men to participate in an activity that often targets women. Additionally, the project has had a separate nutrition course just for men. Interviews with staff suggest that men continue to reinforce the stereotype of cooking as women's work because men often lack the knowledge, confidence, and skills necessary to cook a nutritious meal for their children. The project makes use of common behavior change strategies to help increase men's involvement in nutrition activities, like identifying positive deviants in the community. Influential men in the community who actively participate are leveraged by the project to enlist more men in activities, such as that included a cooking competition. Women's empowerment elements are also incorporated into the parent club's curriculum by building women's confidence to discuss gender issues through the citizen voice and action groups and encouraging participation in farmer and processing groups.

The project's 2020 Annual Report shows significant improvements towards gender positive attitudes from baseline, although attitudes around male dominance remain prevalent. The report also details the growing community acceptance to women working outside of the household, which suggest the project's strategy is working as intended. Group membership across all program activities and municipalities shows that 47% of participants are men and 53%

are women, who the project considers to be a successful ration. The greater disparity in gender participation can be found in the different group activities. In one of the implementation areas only 30% of farmer group members are women and 70% of members of food processing groups are women. Areas of improvement have included creating acceptance in the community for women to work outside of the household, but women are still expected to do the majority of the child rearing and household chores.

Gender-based violence against women, and specifically intimate partner violence (IPV), is prevalent in Timor-Leste and generally acceptable in the communities as shown in the 2018 project baseline report. From the project documentss it is not clear what strategies the project has used to influence gender attitudes, however in 2020 it reported increasing awareness that violence against women cannot be tolerated. Intimate partner violence continues to be considered a private matter by the communities in which the project is working.

Dose Delivered

The four main project activities have been implemented in the three municipalities where the project is working. Parent clubs are functioning with monthly, hour-long meetings being conducted by PSFs. The project, as described in the documents, originally intended for parent club meetings to last 3 hours but were adjusted to one hour that could potentially be a more manageable time commitment for households. Participation in parent clubs is described by staff members as generally good, with parents attending "most of the

Table 3 Parent Club Lesson Plans

Parent Club Curriculum
Topics Covered
Understanding malnutrition
Eating healthy
Nutrition during first 1,000 days
Pregnancy care
Birth plans and danger signs
Maternal nutrition during pregnancy
Postnatal care
Positive Parenting Sessions
Topics Covered
Becoming a parent
Father and mother working together
Every child is special
The importance of play
Managing children's behaviors
Nurturing family

time," though participation was lower during planting and harvesting seasons and any holidays. During each session, PSFs use the parent curriculum to deliver messages around nutrition and WASH. **Table 3** shows the different topics in the curriculum. Furthermore, staff report that men do not attend frequently due to the perception that parent clubs are for women only.

Program monitoring reports, suggest that households that do not attend parent club meetings or choose not to participate do so because of the distance to meeting point. Men do not attend as frequently or not at all because child rearing and care is generally thought to be women's work in Timor-Leste with clearly defined gender roles for both men and women. Women are also encouraged to stay in the home and not do "too much work outside the home," but despite this the average group size for parent clubs is larger (19) than the intended (15), which may suggest the project gender strategy may be successful. As part of the nutrition component of the project, house visits are utilized by the project to promote and reinforce key nutrition behaviors. In addition to monthly care group meetings, PSFs also conduct house visits monthly to each of the households they work with. According to staff, the frequency and number of house visits vary from PSF to PSF.

Project monitoring reports from 2020 show that the target number (87) of farmer groups have already been met and have even surpassed the original target. The farmer groups' structure, recruitment strategies, and curriculum were not available for review, but information provided during staff interviews revealed that the project focused on promoting the six superfoods and doing demonstration plots. Data on frequency of meetings, attendance, and structure was not available. Despite the lack of documentation of parent clubs, staff shared that farmer groups have been successful in engaging not just men, but also women to take part of these groups. Staff also report that some members of the community are not as receptive and "prefer to do their own

thing" and not get involved in project activities. According to staff observations, farmer groups are a little more balanced compared to parent clubs with more women participating. Farmer groups are also described by staff and reports as doing well at increasing production of superfoods and increasing access at the household level, which can be inferred that the trainings received were successful.

Dose Received-Reach

To reach the goal of improving nutrition for children under five and their mothers, the project implemented four main activities at the household level and at the community level in each of the implementation zones. As of 2020, the project has successfully established parent clubs (289), farmer groups (136), village savings and loan groups (83), food processing groups (64), as well as farmer managed natural regeneration groups (84) and citizen voice and action committee groups (22) in each of the implementation zones (3). **Table 4** provides a summary of the initial targets set forth by the project and the progress made to date. How the project collects data on the progress being made to reach the goal of 31,806 beneficiaries is not available in any of the reports provided by the organization as of 2020, but membership (12,724) in the groups is shown in **Table 4.**

Table 4 Project Reach as of 2020

Activity	Target	No. of Groups	No. of Members	Percent Completed
Parent Clubs	287	289	5442	101%
Farmer Groups	87	136	2689	156%
VSL Groups	92	83	1600	90%
Processing Groups	21	64	1040	305%
FMRN Groups	46	84	1735	183%
CVA	22	22	218	100%
TOTAL REACH	**31,806**		**12,724**	

During the analysis phase of this study, the extent to which participants were engaged with the intervention activities was also assessed. As shown above, the project has successfully

implemented the activities and surpassed its initial goal for the quantity of groups, but participation and engagement with project activities has varied across activities and implementation areas. Interviews with program staff revealed that participation in parent clubs is a challenge especially for households that are engaged in multiple intervention activities such as farmer groups and VSL groups. Parent clubs were designed to engage men but have also been limited due to low engagement from men in the communities. Low male participation is primarily due to the traditional gender roles that men and women adhere to. A certain level of stigma exists around parent clubs being specifically for women, but staff believe that low engagement is due to a lack of confidence from males in the community.

When participants join parent clubs or when house visits are done by PSFs, they engage with project activities and are generally receptive, as reported by project staff. Some project participants have shared that there are too many project activities that lead to conflicting priorities for households, which may have unforeseen consequences. Some project participants are not as receptive to health messaging from PSFs due to varying education levels among PSFs.

Satisfaction

Due to the ongoing Covid-19 pandemic and ongoing travel restrictions' data on participants' satisfaction (dose received) was not captured. The study team has plans to visit the site and assess this in the summer. In lieu of measuring participant satisfaction, as part of the CFIR implementation framework, individuals involved with the project implementation were interviewed to understand how their perceived capacity aids project implementation.

Project documents note the successes of PSFs in facilitating parent clubs, but project staff have varying perspectives on the overall capacity of PSFs to implement project activities. As mentioned in the 2019 Midline report, there are larger than originally designed, increasing the

number of households to which each PSF is responsible for conducting monthly house visits. Traditional gender roles also increase workload for PSFs, who are women. Women PSFs are responsible for 3-4 parent clubs consisting of 15-19 households each, for a total of 45 to 76 households they provide services to. This is in addition to any other government health initiatives and are still expected to care for their own children and do the housework.

Interviews with project staff also revealed concerns with Project Facilitators and PSF trainings conducted by the project's implementing organization being done in English. Staff commented that language is a barrier to technical training. One anecdote shared around superfood production was that often staff are unsure of what to do when one of the superfoods does not grow well in their area, suggesting that additional technical training may be needed. According to project staff, PSFs need additional technical training around growth monitoring and promotion activities, like conduction anthropometric measurements and documenting results on the children's growth monitoring booklets.

Technical training, as described in the interviews is not the only barrier, but interpersonal communication skills vary across Project Facilitators and PSFs potentially affecting message delivery. Consistently across interviews, it was shared that facilitation skills were something they wished they (the staff) had received more training on.

Fidelity

To assess fidelity, the extent to which the intervention was implemented as planned, was examined using the Process Evaluation framework (Saunders et al., 2005). In this section, the project activities are not assessed quantitatively (dose), but instead assessed qualitatively to determine the extent that the project activities were implemented as planned. As mentioned previously, the project has surpassed its quantitative goal for the number of all groups (parents,

farmers, FMR, processing, and citizen voice and action committee) except for village savings and loan groups and implemented a version of each of the core activities in each of the implementation areas, but success has varied. The next section draws on the CFIR framework and takes a closer look at the design components of the project and assesses their role in implementation (Damschroder et al., 2009).

Inner Setting

Superfood promotion has been introduced as planned, but adoption and production have had varying success across project areas due to cultural taboos, different ago-geographic climates, and availability of seeds. Moringa is a nutrient dense food that grows well in Timor-Leste but has faced some resistance as a superfood due to cultural taboos. Despite the ability to grow moringa in Timor-Leste, it is not consumed in one of the implementation zones because it is thought to cause illnesses that may lead to deaths as described by staff during interviews. There are also taboos around pregnant women consuming red kidney beans and eggs that are associated with negative health outcomes during pregnancy. The project has addressed this by using village leaders who are willing to lead by example and eat and grow moringa. Project documents report that in one of the districts, negative perceptions around moringa have been "transformed" meaning people who previously did not consume moringa have incorporated into their diets. The project was able to find members in these communities who were respected village leaders willing to serve as an example. Red kidney production has also faced barriers to increasing productions and consumption due to supply and cultural taboos in some of the villages. The project intended to provide seeds for a new variety of red kidney beans but has faced delays in procuring the seeds and continues to be a delay as of 2020 according to the annual report. Orange sweet potatoes, mung beans, tofu, and eggs have generally been accepted, and the project has seen an increase not only in production, but also in household level

consumption. In 2019, the midline report showed an increase in superfood consumption when compared to baseline data.

Outer Setting

One of the outcomes of the project is to increase access to markets of farmers who grow superfoods. The project team planned to work with traders, grocery stores, and suppliers to help link farmers to market system as demand for superfoods grew because of project efforts. The project has had success in creating partnerships with larger markets in Dili, but the annual reports show that there are still farmers who want to sell their crops but are unsure on how to do this. This may suggest that market linkage has varied across farmer and producers' groups as well as by implementation area although the cause is not entirely clear.

Characteristics of Individuals

The implementation of the parent clubs is dependent on the capacity and motivation of PSFs, and as mentioned before, the project has seen limitations in capacity at different levels of the training-of-trainer cascade. The Project Facilitators train PSFs on the curriculum, and the curriculum as designed follows a facilitation framework that includes a prayer, an activity, and a discussion around a health topic as well as a basic health lesson contingent on the health topic for that month. Direct observation of parent clubs was not possible, but interviews with project staff revealed that there are varying levels of PSF capacity to facilitate these sessions. Project staff shared that there are PSFs who can interactively and dynamically deliver all components of each lesson plan, while others struggle with facilitation skills and interpersonal skills that hinder delivery. The project conducts quarterly project trainings where these issues are addressed but project staff shared during interviews that facilitation skills continue to be a barrier to quality implementation. It is still unclear how involved PSFs are in these quarterly trainings and how lessons learned, and best practices are passed down to PSFs.

Challenges to implementation in activities as designed include the heavy workload of activities and reporting associated with the project, which staff feel may affect the quality of implementation. The project has four core activities in the form of groups in addition to smaller community wide efforts that include FMNR and CVA groups and target most households at the village level. Staff reported that the same hosueholds who are part of the parent clubs also tend to be members of farmer groups and VSL groups. According to staff, this is a burden on households and often leads to lower attendance in groups. Community members have voiced that activities are time consuming. An example of this is that the community will prioritize the farmer and processing activities before parent clubs because results from those activities are tangible. The community can clearly see the benefits of growing crops and selling products where health outcomes are not as visible.

There have also been challenges to implementation because of capacity and motivation of staff and PSF's. As mentioned before, project documents are produced in English and although staff have a working understanding of English, this varies among project facilitators, which staff reported as a continued challenge and may cause a gap in the cascade of information in project's training-of-trainer model. Maintaining PSFs was also described as a challenge for the project's implementation by staff. The project initially provided a chicken coup as an income generating activity for PSFs, but success of these coups has varied. Staff shared anecdotes of PSFs who have had success and been able to grow their coups and sell eggs in the community, while other coups failed due disease and insufficient training by the project.

One of the outcomes of the project is to improve health seeking behaviors of caregivers to children under 5 in the implementation area, but the project has experienced unforeseeable challenges to linking community members to the local health points known as SISCA. SISCA's

are mobile health units that are part of the Timorese health structure, but widespread closures have not made referrals possible, and transportation is a barrier for households to be able to travel to the next avialable SISCA.

Facilitators to implementation of the project as designed include supportive community members and leaders in the villages who have become positive deviants for desired behaviors that include taking part in the parent clubs, cooking competitions for men, and eating moringa. Additionally, staff reported that superfoods overall are accepted and eaten when available, making adoption easier.

Intervention Characteristics

The projects' theory of change relies on the assumption that knowledge will cascade down the training-of-trainer model and that knowledge of optimal health behaviors, nutrition, and superfood production will be enough to sustain behavior change needed to reach the project outcome something that rarely can be achieved through education of good nutrition alone (Lamstein et al., 2014; Michie, van Stralen, & West, 2011). The project was designed using the implementing organization's institutional knowledge and understanding of Timor-Leste and the implementation areas, forgoing the traditional gold standard formative research.

The project was designed using a baseline report conducted after the 2016 initial pilot in implementation area, which uncovered lack of nutrition knowledge and high rates of anemia in pregnant women. The implementing organization designed the project utilizing the baseline report along with academic reports, and a meta-analysis of previous baseline reports and final evaluations. Early design documents include plans for a social behavior change strategy as well as a gender strategy, and other design documents, but were not available at the time of this process evaluation. Later, those same documents were referenced in annual project reports submitted to the funding agency. This may suggest a disconnect between the design documents

written prior to implementation and what project staff in country have access to during implementation. When project staff were interviewed and asked about formative research done and the social behavior strategy, they reported that they did not exist.

A strength of the design of the project is that it incorporates agriculture to nutrition pathways to the project that are key to addressing undernutrition in Timor-Leste. The project integrates both sectors and engages communities at the household level focusing on population level outcomes rather than at the individual level. The project also works within the existing health structure (PSFs) and other governmental health, economic, and agriculture bodies. The design documents report that PSF capacity is low because the Timorese government does not have the capacity to provide adequate and frequent training necessary to function optimally. The project provides additional trainings on key health topics like growth monitoring, making health center referrals for sick children, and key health (nutrition, WASH, and child and maternal health) concepts. The additional trainings may lead to increased capacity of the Timorese health system.

Weaknesses in the design can be attributed to not having a clear strategy to address barriers to the desired health behaviors and heavily focusing on the education component of the nutrition activities. The project could have addressed these gaps through formative research including a barrier analysis as well as a social behavior change strategy to address behaviors sustainably. The project also made the assumption in their theory of change ***(Figure 3)*** that providing education of nutrition and health seeking practices without additional support would be sufficient to lead to improved nutrition and health seeking practices. This assumption led to a gap (education alone is enough to lead to behavior change) in the causal pathway that was not addressed through any of the project activities outlined in the design documents. **Table 4**

provides a brief overview of how the project incorporated best practices into its design, and highlights some of the strengths and weaknesses discussed in this section.

Table 5 Best Practices for Project Design

Best Practices	Included in Project	Notes
Formative Research	Partial	Baseline assessment and a pilot was done. Used existing knowledge and previous agency reports to create a rationale for the project.
SBC Strategy	No	A plan for a strategy is included in the design documents, but project staff said it was never completed. The project primarily relied on education of key optimal health behaviors to lead to behavior change.
Ground design and implementation in theory	Partial	Drew on key agriculture-to-nutrition pathways to design the intervention. No clear theory related to behavior change.
Prioritize Key behaviors	Partial	The only behavior that is prioritized in the project documents is increased consumption of superfoods. The parent club curriculum focusses on education and not adoption of optimal health behaviors.
Target multiple audiences	Yes	The project actively incorporates men, women, and people with disabilities into their activities.
Target intervention at different levels in the social system	Yes	CVA, people with disabilities, partnerships Try to engage men who hold the most power in the communities.
Engage local stakeholders and multidisciplinary team of experts	Yes	The project works with multiple government agencies to implement its activities. This includes working with health, agriculture, and economic departments within the government.
Integrate projects with existing programs and/or systems	Yes	Used the existing system of PSF's as a delivery conduit for the intervention. Tried to work with the SISCA program to increase referrals to health post.
Use multiple, various approaches and communication channels	Partial	There are multiple project activities that include parent clubs, farmer groups, and producing groups, but the strategies within these groups focus on education.
Aim for behavior maintenance, not just behavior change.	Partial	The agricultural component design is robust and target food production and income generating activities that are sustainable and motivating for the target population. The nutrition component is weak and may not lead to long term behavior change around health behaviors.

Discussion

In this qualitative study, data on a nutrition-sensitive agriculture program's design and implementation was collected to assess the extent to which the project was implemented as designed and to document any successes or challenges to implementation. Implementation of evidence-based programs that integrate nutrition and agriculture are crucial to making progress toward the second Sustainable Development Goal (SDG) of ending hunger, achieving food security and improving nutrition and promoting sustainable agriculture (WHO, 2021). Success of an intervention can be determined by measuring outcomes through project evaluations but documenting the why and how remains a challenge. In public health, project failure can be a result of flaws in the design of the intervention or flaws in the implementation process. Separating design versus implementation failure is not clear and there are currently limited guidelines of how to determine this. The process evaluation framework allows researchers and implementing organizations to document and monitor program implementation and help understand the relationship between program elements and program outcomes (Saunders et al., 2005). The Consolidated Framework for Implementation Research (CFIR) offers an overarching framework that can be used to understand what works, where, and why (Damschroder et al., 2009). The project being implemented in Timor-Leste is a perfect example of the issue at hand. According to project documents, the project has seen progress towards the desired outcomes; 1. caregivers of children under 5 have improved nutrition and health seeking practices, 2. households have improved access to superfoods, 3. households have increases income from superfoods production, 4. improved sustainability of health and agriculture services. However,

progress may have been limited due to gaps in the design of the project that affected the implementing organization's ability to implement of the project as intended.

The project's theory of change draws on key nutrition and agriculture principles to addresses undernutrition by focusing on increasing nutrition knowledge and access to food. The project's use of existing community health volunteers within the government's health structure helps aid in the sustainability of the work being done by the project, by potentially increasing the capacity of community health workers to address the health needs of their communities through education and referrals. Despite the varying levels of capacity among PSFs, the project attempts to build the ability of PSFs to deliver the curriculum as intended through trainings. Additionally, the project includes a gender component designed to empower women that included shifting perspectives at the community level including joint decision making, work outside of the home, and issues of gender-based violence, which are critical to achieving nutritional outcomes (Headey et al., 2011; Kadiyala et al., 2014).The project focused on linking farmers to markets and generating income focusing on increasing access at the community level and not just increasing production of superfoods.

As mentioned previously, project reports showed progress made towards the project outcomes, but they were likely slowed down by design elements. A gap in the project's initial design was the assumption made in the first causal pathway of the theory of change, that knowledge of optimal health and nutrition behaviors will lead to better health outcomes. Research shows that increasing access to food and increasing knowledge is not enough to lead to sustain behavior change (Michie et al., 2011). A successful behavior change intervention as described by the COM-B models requires the targeted individuals to have the capability, motivation, and opportunity to practice the desired behaviors (Michie et al., 2011). The project in

Timor-Leste focused on increasing access (opportunity) to nutrient dense and diverse foods and capability (knowledge transfer) but it is unclear what the project is doing to address motivation to change nutrition behaviors that can impact child and maternal health outcomes.

The project relies on the success of the parent clubs to increase knowledge of nutrition and health seeking practices in hopes of improving health and nutrition seeking practices but missed a crucial step of addressing barriers to the behaviors beyond access and knowledge. The project used previous project evaluations done by the implementing organization in the implementation zone and used the organization's experience and local context to design the intervention. The project conducted a baseline study during the pilot that provided data on where project participants were in terms of adopting the desired behaviors that included the number of food groups consumed the previous day and the number of superfoods sold in the last 12 months, as well as, but did not include any formative work to determine barriers to achieving optimal health behaviors (infant and young child caring practices).

The project focuses on implementing 4 activities and for the agriculture components builds on the education and incorporates other income generating activities to help reach the project outcomes. The only strategy used to address the health and nutrition components are the parent clubs and house visits, but it appears that no other activities are incorporated into the project's design, which makes the project completely reliant on their effectiveness. The ability for education to be enough to change behavior only goes so far especially when capacity of the messengers is not efficient and consistent across the project implementation zone. The project relies on the capacity of PSF and Project Facilitators, but staff interviews revealed there was not enough training and focus on PSFs ability to provide the curriculum optimally.

Project design documents included plans for a social behavior strategy to be conducted, but it is unclear whether one was ever done. Project documents reference the strategy, but when staff were asked it was reported that it did not exist. Why an SBCC strategy was not done or why the staff were not aware of one, highlights the need for projects to follow best practices and document steps in the design and implementation process. Had the project done a barrier analysis and incorporated the results into a formal SBCC strategy the project might have seen a better uptake of the desired health behaviors beyond increasing food consumption.

Recommendations

For future iterations of the project, the implementing organization may consider formalizing a SBCC strategy and incorporating project design best practices to understand barriers to the behaviors beyond access to increase sustainability. Studies show that the delivery of social and behavior change interventions that use multiple modalities can lead to improvements in child feeding practices and stunting (Kim et al., 2019). The project might consider implementing more activities that target barriers and facilitators using proven behavior change strategies. Additionally, the project might consider increasing the interpersonal communication and facilitation skills of community promotors and community health workers. Focusing on incorporating communication and facilitation skills will enhance program delivery ensuring the curriculum is delivered as planned and the flow of knowledge is not interrupted in the training-of-trainer model.

The project should continue to implement the agriculture and gender components as they have and continue to document their success to addressing the barrier and facilitators to food consumption and gender perspectives in the implementation area. The integration of agriculture and female empowerment into nutrition interventions remains a key strategy to improving

nutrition outcomes especially where access to food is low (Heidkamp et al., 2021; Kim et al., 2019; Sibhatu, Krishna, & Qaim, 2015).

This process evaluation shows the need in public health for projects to conduct process evaluation to document the "how" of projects that if successful or not can be adopted to different context to help accelerate progress toward the Sustainable Development Goals. There is still a need to bridge the gap between implementation research and implementation of interventions in real context and investment of implementation research will be key (Heidkamp et al., 2021; Shekar, Condo, Pate, & Nishtar, 2021). Understanding what works and what does not work is necessary to creating sustainable behavior change nutrition programs that can be scaled up to meet nutrition outcomes.

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WHO. (2020b). Infant and young child feeding. Retrieved from https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding

WHO. (2021). Sustainable Development Goals Goal 2: Zero Hunger. Retrieved from https://www.un.org/sustainabledevelopment/hunger/

Wong, J. T., Bagnol, B., Grieve, H., da Costa Jong, J. B., Li, M., & Alders, R. G. (2018). Factors influencing animal-source food consumption in Timor-Leste. *Food Security, 10*(3), 741-762. doi:10.1007/s12571-018-0804-5

WVTL. (2021). About us. Retrieved from https://www.wvi.org/timor-leste/about-us

Appendix A: Abstraction Tools

Core Design

Note: Core project design documents could be: project proposal, grant agreement, contract, MOU, or other formal description of the project design.

Name of person abstracting this data:

Click or tap here to enter text.

PROJECT DESCRIPTIVES

Project Name	Code	Country
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

DOCUMENTS REVIEWED

Fill in the table below; add rows as necessary.

Document title	Saved As	Type of Document	Author/organization	Year
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STRATEGIC DESIGN AND PLANNING

Problem or needs statement

Click or tap here to enter text.

Project objectives

Click or tap here to enter text.

Theory or framework

Click or tap here to enter text.

Impact pathway (link)

Click or tap here to enter text.

Main areas/activities for intervention

Click or tap here to enter text.

Main outcomes

Click or tap here to enter text.

Partnerships proposed and roles of partners (note: document abstraction – integration and multisector engagement will request more information on this topic)

Click or tap here to enter text.

OTHER

List/state any questions or points of clarification to be addressed in interviews.

Click or tap here to enter text.

Formative Research

Name of person abstracting this data:
Click or tap here to enter text.
PROJECT DESCRIPTIVES
DOCUMENTS REVIEWED
What tools/documents were reviewed?

Document title	Saved As	Type of Document	Author/organization	Year
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

FORMATIVE RESEARCH METHODS
What was the aim of the research?
Click or tap here to enter text.
Did the project conduct **desk research/literature review**?
Choose an item.
Describe the kind of literature they reviewed. (e.g. academic publications, project gray lit, socio-cultural, health & nutrition, etc.).
Click or tap here to enter text.
Did the project conduct **primary research**?
Choose an item.
Who is/are the group(s) being investigated with the **primary research** (which groups' behaviors are of interest to the primary research)?
Click or tap here to enter text.
What was the season/month of the primary research?

Click or tap here to enter text.

What were the **primary research methods**?

Method (e.g. FGD, KII)	Population	Number
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

Any other **primary research methods** that are *not* captured in the table above?

Click or tap here to enter text.

Did the primary research methods clearly **build upon the literature review findings**? How? (explain any clear link between the literature review findings and the design of the primary research)

Click or tap here to enter text.

Describe any other formative research conducted.

Click or tap here to enter text.

Describe any methods used to synthesize findings from literature review and primary methods.

Click or tap here to enter text.

How are the data processed/analyzed?

Click or tap here to enter text.

FORMATIVE RESEARCH FINDINGS

What were the **key behaviors** investigated and **behavioral determinants** identified from the **literature review**? (fill table below)

Behavior	Current Practice	Barriers identified	Enablers identified	Other behavioral determinants/factors/socio-cultural influences
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

What were the **key behaviors** investigated and **behavioral determinants** identified from the **primary research**? (fill table below)

Behavior	Current Practice	Barriers identified	Enablers identified	Other behavioral determinants/factors/socio-cultural influences
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

FORMATIVE RESEARCH FINDINGS (CONTINUED)

Key findings on **social networks** (e.g. social dynamics, influential social roles in community/family, who is trusted, etc):
Click or tap here to enter text.
Key findings on **context** (anything significant about the socio-cultural, political, environmental context, e.g. “Area has been experiencing conflict for the last 5 years” or “There is a new president who is speaking up more for women’s rights”)
Click or tap here to enter text.
Other key findings from the literature review?
Click or tap here to enter text.
Other key findings from the primary research?
Click or tap here to enter text.
Are there stated **recommendations for SBC strategy** design, based on the FR? If so, summarize briefly, with examples (e.g. priority behaviors, selected target groups, or activities recommendations based on formative research):
Click or tap here to enter text.
Overall, how do you **assess the quality and clarity of the report**? Explain.
Click or tap here to enter text.
OTHER
List/state any questions or points of clarification to be addressed in interviews.
Click or tap here to enter text.

Training and Curriculum

Name of person abstracting this data:

Click or tap here to enter text.

PROJECT DESCRIPTIVES

Project Name	Code	Country
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

DOCUMENTS REVIEWED

What tools/documents were reviewed? Include the link(s).

Document title	Saved As	Type of Document	Author/organization	Year
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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GENERAL

Focus of training or capacity development activity

Click or tap here to enter text.

Goals/objectives

Click or tap here to enter text.

Who is the target audience for the training/activity? What is their role in the project?

Click or tap here to enter text.

What approach is used for training/support activity? Does the training use an established curriculum developed by an external source (e.g. Make Me a Change Agent, DBC, TIPS, etc) or is it custom-developed by the project team?

Click or tap here to enter text.

Does the training address findings of the formative research and how those findings apply to SBC activities? Give example(s).

Click or tap here to enter text.

TECHNICAL AND SBC KNOWLEDGE

Technical topics covered (e.g., nutrition, health, agriculture, other topics)

Click or tap here to enter text.

SBC topics covered (e.g., principles, theory, stages of change, behavioral determinants, etc.)

Click or tap here to enter text.

Proportion of time dedicated to technical and/or SBC knowledge (compared to skills practice).

Click or tap here to enter text.

SBC SKILLS

SBC skills covered (e.g. listening, problem-solving, goal-setting, counseling)

Click or tap here to enter text.

Proportion of time dedicated to skills practice

Click or tap here to enter text.

OTHER

Does any information appear to be factually incorrect? If so, what?

Click or tap here to enter text.

Clarifications needed/key questions for staff interviews.

Click or tap here to enter text.

Based on information in project progress reports, are there are other details of note about the training/capacity development activity?

Click or tap here to enter text.

List/state any questions or points of clarification to be addressed in interviews.

Click or tap here to enter text.

Gender

Name of person abstracting this data:

Click or tap here to enter text.

PROJECT DESCRIPTIVES

Project Name	Code	Country
Click or tap here to enter text.	Click or tap here to enter text.	

DOCUMENTS REVIEWED

What tools/documents were reviewed? Include the link(s).

Document title	Saved As	Type of Document	Author/organization	Year
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

FORMATIVE RESEARCH

Are gender roles explored as a behavioral determinant? If so, how?

Click or tap here to enter text.

Describe any key findings on gender

Click or tap here to enter text.

Key gender findings identified for application in implementation?

Click or tap here to enter text.

Did the project conduct a separate/formal gender analysis? If so, reference document.

Choose an item.

PROPOSAL/PLANNING

State any goals/objectives related to gender

Click or tap here to enter text.

How does the project's impact pathway or TOC incorporate gender?

Click or tap here to enter text.

IMPLEMENTATION/ACTIVITIES

Brief description of activity explicitly related to gender	Target Audience, including gender (male, female, or both)	What is this activity trying to change? (e.g., interaction, behavior, norms, etc.)	How does the activity relate to the behavioral goal of the project (e.g. dietary diversity)?
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

MONITORING AND EVALUATION

Does project collect sex-disaggregated data on training participants?

Click or tap here to enter text.

Does project collect sex-disaggregated data on activity participation?

Click or tap here to enter text.

Tool/instrument for measuring women's empowerment?

Click or tap here to enter text.

Tool/instrument for measuring gender norm change?

Click or tap here to enter text.

OTHER

List/state any questions or points of clarification to be addressed in interviews.

Monitoring and Evaluation

Name of person abstracting this data:

Click or tap here to enter text.

PROJECT DESCRIPTIVES

Project Name	Code	Country
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

DOCUMENTS REVIEWED

What tools/documents were reviewed? Include the link(s).

Document title	Saved As	Type of Document	Author/organization	Year
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

EVALUATION DESIGN

What is the overall evaluation design (for example, cluster randomized controlled trial, pre/post design, etc)?

Click or tap here to enter text.

What are the outcome indicators identified for the evaluation?

Click or tap here to enter text.

What are the basic evaluation tools/methods?

Click or tap here to enter text.

Was a baseline survey/study done?

Click or tap here to enter text.

Describe major findings/conclusions of the baseline.

Click or tap here to enter text.

Describe any changes to evaluation or monitoring indicators made as a result of the baseline survey/study?

Was a midterm evaluation done?

Click or tap here to enter text.

Describe major findings/conclusions of the midline?

Click or tap here to enter text.

Describe any changes to evaluation or monitoring indicators made as a result of the midline survey/study?

Click or tap here to enter text.

What monitoring and/or evaluation plans or metrics does the project collect that would quantify the *dose of exposure of individual participants*? For example, do survey instruments inquire about the number of sessions/activities attended or whether the respondent heard particular radio messages?

Click or tap here to enter text.

PROCESS MONITORING

Monitoring indicators used in the project?

Click or tap here to enter text.

List and briefly describe basic monitoring methods/tools used.

Click or tap here to enter text.

How often are monitoring data collected?

Click or tap here to enter text.

How are monitoring data used?

Click or tap here to enter text.

COACHING/SUPPORTIVE SUPERVISION

Who supports FLWs' activities?

Click or tap here to enter text.

What system/approach do they use for monitoring/supporting FLW's activities?

Click or tap here to enter text.

How often do they conduct performance monitoring/supportive supervision checks?

Click or tap here to enter text.

Describe any checklist/guide they use for monitoring performance [quality]?

Click or tap here to enter text.

Describe any system they use to guide coaching/giving feedback?

Click or tap here to enter text.

Based on information available, summarize progress on performance quality to date.

Click or tap here to enter text.

PROCESS EVALUATION

Was a process evaluation done?

Click or tap here to enter text.

What were the goals? (if applicable)

Click or tap here to enter text.

What were the basic methods/approach? (if applicable)

Click or tap here to enter text.

What were the main findings/conclusions? (if applicable)

Click or tap here to enter text.

If no process evaluation has been done, is one planned/anticipated? (if applicable)

Click or tap here to enter text.

LEARNING AND ADAPTATION

Does the project note any *system* they use for ongoing learning and adaptation? If so, describe.

Click or tap here to enter text.

Describe examples of any other learning and adaptation the project has undertaken. (This means, beyond M & E changes noted above, any aspects of implementation that were changed based on data from any monitoring or evaluation sources). Note the change and the impetus or data source driving the change.

Click or tap here to enter text.

OTHER

If applicable, describe any key accomplishments touted by the program through "success stories" or other public documents.

Click or tap here to enter text.

Clarifications needed / key questions for staff interviews

Delivery Guide

Name of person abstracting this data:

Click or tap here to enter text.

PROJECT DESCRIPTIVES

Project Name	Code	Country
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

DOCUMENTS REVIEWED

What tools/documents were reviewed?

Document title	Saved As	Brief Description	Author/organization	Year
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Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

GENERAL

Brief description of activity (e.g. Care Group, cooking demonstration, community theater, clinic-based counseling, home visit, etc.)

Click or tap here to enter text.

Who is the target user or facilitator of this guide? (e.g. community health volunteers/workers, nurses, etc.)?

Click or tap here to enter text.

Who is/are the intended participants for the activity (e.g. pregnant and lactating women, grandmothers, etc.)?

Click or tap here to enter text.

Does the guide specifically address building rapport between facilitator and target population(s)?

Choose an item.

If so, how?

Click or tap here to enter text.

Does the guide use any visual cues for facilitation skills? If so, what are the cues and what facilitation skills are cued (e.g. image of an ear to cue listening skills, circle to cue having participants sit in a circle)?

Comment on the *Seems we should add here something to document how text-heavy the document is. As a facilitation guide, best practice is to have minimal words, clear & effective visual cues, and just enough verbiage to cue effective facilitation. So, should think how best to word a question here to capture – roughly proportion of words on the page vs visuals, vs blank space…!??! I'm not sure yet.*

Fill in the table below using one row for a standalone guide, and multiple rows for a guide that includes multiple modules. For example, if a facilitation guide covers 10 modules for 10 sessions on different topics, then use one row for each of the 10 modules.

Title or brief description (Note: if guide is standalone and does not include multiple modules, then you will only fill in one row and you may enter "N/A" for this column)	Target behavior(s)	Goals/objectives (if specified)	Content of session	Behavioral determinants addressed (NOTE: Determinants may not be explicitly identified in the document. Behavioral determinants could be at the individual, social, enabling environment. Include a brief explanation. For example: "Self-efficacy, because the focus is on confidence building" or "Knowledge, because everything in the guide is information-based.")
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

PARTICIPATORY TECHNIQUES

What in the guide prompts the facilitator to promote discussion by participants?

Click or tap here to enter text.

What skills are to be demonstrated by facilitator?

Click or tap here to enter text.

What activities engage participants in practicing skills?

Click or tap here to enter text.

What "fun" activities are specified? – Note any games, exercises, music, dance etc. incorporated into the guide.

Click or tap here to enter text.

Does the guide specify time for different components of the session(s)?

Choose an item.

If yes, fill in the table below to indicate time allocation.

Facilitator delivering information	
Facilitator demonstrating a skill/activity	
Participants practicing a skill/activity	
Participants sharing or discussing	
"Fun" activities	

If no, what is your impression of the relative proportion of time spent on interactive activities versus didactic lectures?

Click or tap here to enter text.

If you notice marked differences between sessions/modules, comment on those differences here.

Click or tap here to enter text.

OTHER

Does anything in the guide appear to be factually incorrect or inappropriate? If so, what?

Click or tap here to enter text.

Overall, how would you describe the quality of the tool? (Specify excellent, fair, or poor, and note reasons, e.g. how well is it laid out? How clearly presented? How user-friendly? How well does it incorporate visual cues to help the facilitator do a better job, etc.)

Click or tap here to enter text.

List/state any questions or points of clarification to be addressed in interviews.

Click or tap here to enter text.

Appendix B: Staff Interview Guide

Preparation

Before the interview, review what you know from documents and previous interviews, and what you know about the interviewee, then tailor the guide accordingly. Identify sections/questions that may not be relevant, and those that are priorities. Note any new questions you have that are specific to the person to be interviewed.

Introduction

As you know, we are interested in learning about this project, in particular, anything that focused on promoting behavior change related to nutrition. I'll be asking you about different aspects of the project and want to hear your honest perspectives, based on your own experience. If you aren't familiar with something I ask about, don't worry – we can just pass those topics and focus on what you're comfortable talking about. If at any point you want to suggest colleagues who you think could shed more light on a particular issue, just let me know and we can follow up with them later.

So, let's start with clarifying your role and experience…

1. What exactly is your **role** in the project? I just want to make sure I understand what you work on—your area of expertise--and how your role may have changed since you joined the project.

Role of SBC in the program

And since we are focused on behavior change aspects of programming, can you tell me..

2. What are the **behaviors** that the project is trying to change?
    a. Among which groups of people?
3. I know different projects may use different terms to describe things related to social and behavior change. What **term** does your team use in referring to this aspect of your project related to behavior change? *Ask this only if you aren't sure already how they refer to this aspect of project. If it's not obvious that they are familiar with the term 'SBC', explain that we're interested in whatever they may be doing that aims to change behaviors, social norms, knowledge and practices. If they use another term instead of SBC, e.g. BCC, or health promotion, adjust your language as appropriate*.
4. How would you describe the **role of SBC** *[substitute their term as needed]* in the project? How significant is this aspect of the overall project implementation--the effort to promote those *[whatever they identified in question 2]* behavior or social changes?

SBC Approaches

5. So, what are the actual methods or **approaches** used in the project for SBC?
    a. *For each approach they mention, probe to clarify:* Who? What? Where? When/how often?

   b. *Probe & prompt to make sure you understand any & all **community-based** approaches used, any **peer group** approaches, any kind of **media** based or **advocacy** approaches.*
   c. *Finish by asking if there's anything else: 'Are there any other things you do to promote social or behavior change?'*
6. What approaches do you think **work best**?
   a. Can you give an **example** of how those activities contribute to behaviors you mentioned the project wants to change?
   b. **Why** do you think they worked?
7. What approaches have **not worked** so well?
   a. Can you explain what was difficult? **Why** do you think it didn't bring about the behavior changes targeted?

Strategic SBC/Project Design

So, in implementing those different activities you've described…

8. What does the team use to **guide** its work?
   a. *Probe to clarify whether there is any written SBC **strategy** or plan. If so, proceed with questions below, using their term.*
   b. *If they say there is no guiding document, probe to discover how the activities were designed? what was the basis or reason for certain approaches? what guides their work on those social and behavior change activities?*
9. **When** was the strategy developed?
10. **How** was the strategy developed? *(e.g. via stakeholder workshop? Team activity? An evolving process? One person just wrote it?)*
    a. Were there any **challenges** in that process?
11. **Who** produced it? Were you involved with its development?
12. To whatever extent you are familiar with the **content** of the strategy, can you tell me about:
    a. What **theories**/frameworks are used in the SBC strategy/design of SBC approaches? Why?
    b. What are the main behavior change **objectives**?
    c. Who are the main **target groups**?
    d. What are the main behavioral **determinants** the project aims to address? (*Elaborate if needed:* That is, what factors in people's lives make it difficult for them to adopt the key behaviors—what are the barriers to change? And, if your strategy identifies factors that support those behavior changes—what are those enabling factors?)
    e. Are there **any** [other] **cultural or social factors** you think the strategy is trying to address?
       i. How were these identified?
    f. To what extent does the project focus on **individual vs. social** change?
    g. To what extent was the project designed to **integrate with existing** structures or **build upon** previous work? *[if needed, elaborate, for example, coordinating project activities with local initiatives, linking with local institutions or building on existing resources]*
13. **How has it been used** to guide project implementation? Can you give examples of how you or other staff use the SBC strategy, or refer to it in your work?

Formative Research

14. Can you tell me what the SBC strategy (or design/plan of activities) was based on? Was there **any formative research done** before the project's SBC approach was developed? Any kind data collection or research that formed the basis for the SBC strategy/plan? *Probe to clarify what exactly they did, any kind of assessments/research, so you can follow up using their terms.*
15. **Who** conducted the research? What, if any, was your role?
16. What was the **goal** of the formative research? Why do you think it was done?
17. What kind of **desk research**/literature review was done prior to project design? *If they have no idea, skip the rest. If they are familiar, probe:*
    a. Describe what kind & how much of the **gray literature** was reviewed?
    b. Was **published** literature reviewed? Are you aware of how much? And what the focus of literature reviewed was?
        i. Do you know if **any socio-cultural studies** (anthropological research reports) were reviewed? Any effort to learn from existing research on cultural values and social factors related to nutrition practices?
18. Then, what about any community level data collection--What **methods** were used in **formative** research?
    a. [*If the respondent has not specified any FR methods, but you already know, you can prompt:*] I understand _*(TIPS, community assessment, barrier analysis, KAP studies, social network analysis, FGDs, etc.)*_was used, is that right?
    b. Why was that (those) approach(es) selected? Any other methods used?
    c. What groups/populations were studied?
19. *If they weren't able to answer any questions about the FR methods, skip this.* Do you know whether that research collected any kind of **socio-cultural data**? For example, did they use qualitative methods to collect data on social networks, social roles, family and community systems, social norms or cultural values? *Probe to have them describe.*
20. Overall, what were **key findings** of the formative research?
21. Was the staff given any kind of orientation to the formative research findings and how to apply them? *(Probe, for example, maybe they had some kind of dissemination workshop, or team meetings to process findings, or \ a training that explained how results would be applied?)*
22. **How have findings been used** in designing and implementing the project?
    a. Can you give an **example** of something learned during the research that influenced the design of your activities or materials?

SBC Implementation

Now I want to focus the rest of my questions on issues related to implementation.

Collaboration

23. **Who** do you work most closely with on this project? (e.g. government or NGO entities? local or international partners?)
    a. Are there particular partners you work with for the **SBC** aspects of the project?
24. **How** do you collaborate? What is the nature of that working relationship?
    a. *Probe about **communication:*** How **often** do you communicate? **How?** (via what method) About **what**?

25. What would you say is the value or **benefit** of the project's collaboration with partners?
26. What are some **challenges** you've faced in those collaborations?

Donor & Stakeholder involvement

27. How has your **donor been involved** with the project implementation? (e.g., maybe they mandated certain approaches, request involvement with certain aspects of program…etc.)
28. What **technical guidance** do you get from your donor or other experts on SBC implementation? What guidance do you wish you received?
29. Do you hear of any **concerns raised by external stakeholders**? How has the project addressed those concerns?

SBC capacity

30. How would you rate the **capacity** of your country team (both staff and volunteers) to implement SBC activities? What are their **strengths and weaknesses**? Give **examples**.
31. Do any project staff members **live in communities** they support? Do you think that makes a difference? *(whether answer is yes or no)*
32. Are **incentives** provided to community volunteers? To participant/beneficiaries? *(e.g., food, fertilizer, cash, transport reimbursements)* What **impact** do you think those incentives have had on performance?

Training

33. What **SBC-related training** did staff receive (yourself and others)? For example, was there any training on interpersonal communication skills, group facilitation, guidance on the SBC process, etc. *If there are multiple trainings, have them list each training they're aware of. Then, ask*
34. So, regarding those different trainings, to what extent would you say they used **different approaches**—or essentially the same training approach/methods? *If they say 'basically the same' then the following questions cover all training in general; but if they say they used different methods e.g. for FLW vs program managers, gender vs agri trainings, etc., then you need to take time to distinguish the who/what/when/how for any distinctions they've made*.
    I'd like to ask a **bit more about the training content and approaches**, so as we go, please let me know if your responses pertain to all trainings generally, or only specific trainings.
    a. **Who** did the training? **When** was it?
    b. What kind of training **methods** were used? *If they don't mention any adult learning approaches, probe:* Did training use any participatory methods? **Describe**.
    a. Did the training **include orientation to the SBC strategy**? If so, how?
    b. **What skills** did the training teach?
    c. What **% of time** during the training would you say was spent **practicing** skills?
    d. How do you think the training went? Rate it on scale from 1-5 -- 1=worst to 5=best.
    e. How do you know if the training was successful?
    f. In your own experience, can you think of SBC skills you learned in training that you continue to use in your work?
35. When **new staff** have joined the project, have they been trained/oriented to the SBC strategy? If so, how/when?

Support

36. Has the project delivered any kind of **follow-up to training**?
37. Is there any kind of ongoing **supportive supervision/coaching** provided? **How, when,** and **by whom** is support given?
38. *If interviewee is an out-of-country staff:* What kind of support do you provide to the in-country staff?
39. *If interviewee is an in-country staff* What kind of technical support do you receive from (main organizational HQ)?
40. What other support do you wish you received to help the project team perform better?

SBC Quality

41. **How do you ensure quality SBC** /any interpersonal communication activities? *(Probe:* For example, do you have **any system** for performance assessment, mentoring & coaching, quality assurance etc?)
    a. *If not yet obtained, request:* Could you share any tools you use for capacity development or QA/QI? (e.g. guides on how to facilitate peer group sessions, quality checklists, etc.)
42. **Have you observed** activities in the community? **Which** activities? **How many**/how often? *If they have not observed activities, skip the next 2 questions.*
43. Can you describe **how much interaction** there was during these activities? *Probe:* Think about how the beneficiaries were participating—how much time do they spend just listening? Do they talk a lot? To what extent are they doing some activity?
44. How do you **rate the quality of interpersonal communication skills you observed** (facilitating group discussion, conducting counseling and education, etc.)? Rate on scale from 1-5 (1=worst to 5=best).
45. What would you say are the **main challenges to implementing** your SBC activities?
46. What do you think **should be done to improve** quality and success of these activities?

Monitoring and Evaluation

47. Has there been any kind of **evaluation** done yet for the project? (whether outcome or process eval). If so, what are key **results** (even if preliminary)?
    a. **Why** do you think you are seeing those results?
48. What are the **main indicators** (monitoring and/or outcome) being used to track social and behavior change in the project?
    a. Can you give an example of how those indicators are being collected and used?
49. Sometimes projects change or adapt during implementation. Has there been anything about your project's **implementation of SBC that has changed**? Anything the project team decided to modify?
    a. What was that decision **based on**? (e.g., monitoring data, feedback from stakeholders, other conditions in the community, etc.)
    b. **How** did it go making those changes?
50. What **challenges to monitoring and evaluation of SBC** have you faced? What would make it easier?

Follow-up Qs from document review

51. Clarify anything from document review as needed. *Before interview, insert here any questions you flagged for follow-up based on your document review. If they haven't been answered already, ask now.*

Closing

This has been so helpful! I **appreciate** your taking time to talk. Before we finish, can you suggest anyone else you think I should talk to? And are there any other documents you think I should review?

IF you can take a bit more time, you can say: Can I take a moment to glance through my notes in case there is anything I missed? *...and proceed with questions.*

BUT IF you're already over time, just ask: Would you be **willing to respond to email later**, if I discover something I missed or need to clarify? What is the best way to reach you? *Confirm email address or other means.*

Thank you!