Integrating Nutrition in Value Chains in Malawi:
Using Most Significant Change Stories to Understand Community Experiences

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ABBREVIATIONS

CPHRD  Centre for Public Health Research and Development
INVC   Integrating Nutrition into Value Chains
MSC    most significant change
NASFAM National Association of Smallholder Farmers
UNC-CH University of North Carolina at Chapel Hill
USAID United States Agency for International Development
VC     value chain
EXECUTIVE SUMMARY

Feed the Future is a United States government initiative that aims to reduce hunger and poverty by accelerating growth in the agricultural sector, improving food security, addressing the root causes of undernutrition, and reducing gender inequality. Integrating Nutrition in Value Chains (INVC) was the flagship Feed the Future Malawi activity from 2012 to 2016. A value chain is a set of interconnected processes that add value to a product (Investopedia, 2017). In agriculture, a value chain (VC) program may increase value by improving the supply of agricultural inputs; planting and harvesting practices; and transport, storage, and marketing of farm products. Integrating Nutrition in Value Chains targeted groundnut and soybean VCs through farmers’ clubs and worked through community care groups to provide nutrition education to pregnant women and women with children younger than five years of age. Community care groups consist of 10–12 women who meet as a group and individually with a volunteer leader to discuss health topics and offer peer support for recommended health or nutrition behaviours.

The University of North Carolina at Chapel Hill (UNC-CH) was commissioned to conduct an impact evaluation of the INVC program. This evaluation was subsequently cancelled; however, as part of it, UNC-CH and the Centre for Public Health Research and Development (CPHRD) trained 26 volunteer nutrition promoters in Mchinji and Lilongwe Districts to use the most significant change (MSC) technique to obtain information from participants about their experiences with the program from June 2015–June 2016. Nutrition promoters met quarterly to discuss their stories and to decide which were most significant. The stories were analysed using qualitative content analysis methods.

We collected a total of 277 MSC stories from households in areas where both the nutrition and VC components of the program were implemented. The most common changes participants perceived in their lives because of the INVC program were improvements in household health status, benefits of nutrition education, economic benefits, improvements in farming practices, and improvements in household hygiene and sanitation. Participants believed that their families, especially their children, were healthier since they started participating in the program. They linked better health to their improved knowledge of nutrition, hygiene, and sanitation gained through participation in community care groups and implementation of recommended health and nutrition practices. In some cases, participants explained that their nutrition improved through household consumption of crops promoted in the VC component of the program. Participants also connected better health in their families to economic benefits. Because their children were sick less often, they spent less money on hospital visits, and they had more time for productive household activities. About one-quarter of the participants described improvements in farming practices that resulted from the program.

Participants also described gaps in or challenges with program implementation. They requested more inputs, particularly seeds, farm animals, and small loans. The late provision of poor-quality seeds was a major issue for many participants. Participants also felt that they could improve their nutrition and their livelihoods more effectively if small farm animals or small loans for business development or agricultural inputs were included in the program. Lack of monitoring and supervision affected all nutrition promoters and nearly half of the participants. Because supervision and field visits were rare, promoters did not feel supported in their activities, and community members did not think that the program managers understood issues at the ground level or adequately addressed them. In addition, about one-quarter of the participants wanted men to be more involved in the nutrition component of the program and requested evening meetings for men about nutrition.

The MSC method was useful for understanding participants’ perceptions of the key benefits of and challenges to the INVC program. However, there were some limitations to its use. Nutrition promoters wrote responses to the questions in their notebooks and may have summarized rather than writing them verbatim. As a result, the stories tended to be short, they had few details, and many of them were similar. The similarities among stories made it difficult for promoters to select the most significant change stories and to rank them. Many of the stories covered more than one domain of change, which also made it challenging for promoters to assign the stories to the domains.
Despite the method’s limitations, the stories and the similarities across them indicate that the care group model for nutrition and health promotion reached many participants in the combined nutrition and VC areas and had important perceived benefits. This component of the program was successful and should be continued or expanded in the future. The following recommendations for improving the Feed the Future program in Malawi are based on the MSC stories and input from nutrition promoters:

- Provide regular monitoring and supervision of nutrition promoters and community activities
- Improve gender integration and outreach so that both genders are equally involved in nutrition and agriculture activities
- Ensure that seeds and other agricultural inputs are high-quality and delivered to participants on time
- Expand the number of people who receive seed loans and include different terms for paying back the loans when harvests are poor
- Facilitate the formation of village savings and loan associations
- Ensure that nutrition promoters and lead mothers receive project materials and incentives in a timely manner
- Improve coordination with other agriculture and nutrition programs working in the same geographic areas
BACKGROUND

Setting
Malawi suffers from food insecurity and childhood undernutrition, both of which are closely linked to poverty. Approximately 85 percent of Malawians are rural farmers who own an average of 1.13 hectares, although one-third own less than 0.7 hectares (National Statistical Office, 2012). Maize is the staple crop, but many small and medium landholders do not produce adequate quantities of maize and they experience food insecurity after planting and before harvesting.

Stunting prevalence among children younger than five years of age—a measure of chronic undernutrition—declined from 47 percent in 2010 to 37 percent in 2015, but that share is still high (Malawi National Statistical Office & ICF, 2017; Malawi National Statistical Office & ICF Macro, 2011). The Government of Malawi has made the prevention of stunting part of its national nutrition policy (Department of Nutrition & HIV and AIDS, 2009). It has developed the National Nutrition Education and Communication Strategy to promote improved nutrition for mothers and children during the first 1,000 days—the period from conception to two years of age (Department of Nutrition & HIV and AIDS, 2011). In 2012, the Government of Malawi appointed donor partners as lead agencies for the nationwide implementation of high-impact nutrition interventions.

Feed the Future Activity Description
Integrating Nutrition in Value Chains (INVC) was a 4.5-year effort (April 2012–October 2016) by the USAID Bureau of Food Security to improve household food security and nutrition in Malawi. The INVC program had the broad goals of advancing the competitiveness of legume VCs and improving household food security and nutritional status through the following interventions:

- Value chain investments to increase legume productivity, marketing, and income for small- and medium-size landholders with land available for crop diversification
- Nutrition education to improve knowledge and practices related to legume consumption, household diet diversity, and appropriate care and feeding practices for pregnant and breastfeeding women and children younger than five years of age.

Value chain interventions are intended to target actors along the chain, from initial agricultural inputs through processing and marketing. The program worked through associations of small farmers to promote the cultivation of legumes, investments in seeds and fertilizer, and soil and water management to increase field productivity. Investments in VCs were expected to generate benefits for households in the form of additional food for consumption or income generation through marketing of surpluses.

The key nutrition intervention promoted under INVC was nutrition behaviour change communication and growth monitoring through community care groups. Local volunteer nutrition promoters were trained to support and mentor three community care groups of 12 village volunteer leaders each. The volunteer leaders were usually mothers in the community whom their neighbours identified as leaders and are described henceforth as lead mothers. Each lead mother enrolled 10–12 families to train and share information about nutrition best practices, with an emphasis on adequate nutrition during the first 1,000 days, as stipulated in the National Nutrition Education and Communication Strategy. Lead mothers targeted households with pregnant or breastfeeding women and children younger than five years of age, with a focus on children younger than two years of age, in communities where a farmers’ association, or group participating in VC activities, was active. However, the nutrition activities were implemented in target households, regardless of whether the household members participated in a farmers’ association or the VC activities.

The INVC project was led by Development Alternatives, Inc., which partnered with the National Association of Smallholder Farmers (NASFAM), the Farmers Union of Malawi, and the Catholic Development
Commission of Malawi to implement the VC intervention and Nkhoma Synod to implement the nutrition intervention.

Nkhoma Synod set forth the following nutrition and health objectives for the INVC project:

- Promote household dietary diversification through community nutrition education
- Improve nutrition and care-seeking behaviours at the household level
- Improve access to antenatal care, child growth monitoring, and nutrition counselling services
- Improve linkages and collaboration between the community and health facilities

**Planned INVC Impact Evaluation**

The United States Agency for International Development (USAID) Bureau of Food Security tasked UNC-CH with conducting an impact evaluation of the INVC program in Malawi that consisted of quantitative and qualitative components. It had a prospective, experimental design, with longitudinal data to determine whether the integrated VC plus nutrition program (hereafter referred to as VC+nutrition) was more effective in reducing chronic malnutrition among children younger than three years of age than the VC-only program. In two of the INVC target districts (Lilongwe and Mchinji), geographical areas governed by a group village headman were randomly assigned to receive the VC+nutrition program or the VC-only program. A baseline population-based survey was conducted in 2014 (Angeles, Skiles, Weaver, Mussa, & Sheahan, 2015). Our intention was to repeat the survey in 2017. However, the end line survey was cancelled, owing to contamination of the VC-only program areas. Contamination arose from a lack of awareness among nutrition promoters of the scaling plan and the implementation of a similar nutrition program, supported by another donor, using a community care group model.

As part of the evaluation, we collected qualitative data during implementation to capture information on participants’ experiences with the program. This report describes the findings from those data, which will be useful for the follow-on Feed the Future program in Malawi and for other similar programs funded by the U.S. government’s Bureau of Food Security.
METHODS

Overview

We collected qualitative data from program participants in the VC+nutrition areas using the MSC technique. Most significant change is a form of participatory monitoring and evaluation (Davies & Dart, 2005). It involves obtaining and analysing participants’ experiences of how a program changed their lives and asking program implementers to decide which of the stories are most significant and why. Most significant change is considered a complexity-awareness monitoring approach, and it fit well with the INVC program, which had a complex implementation strategy. The method has been used for monitoring interventions in a variety of contexts (Ho, Labrecque, Batonon, Salsi, & Ratnayake, 2015; Polet et al., 2015; Sango & Dube, 2014).

Data collection for MSC was overseen by UNC-CH in collaboration with CPHRD, a Malawian nongovernmental organization.

Data Collection

The University of North Carolina at Chapel Hill and CPHRD conducted a two-day training on the MSC technique for 26 nutrition promoters from Mchinji and Lilongwe Districts, in May 2015. The district nutrition coordinator and monitoring and evaluation officer from Nkhoma Synod, as well as the associate nutrition specialist from INVC, were also present at the training. The training included a presentation on the MSC process, a review of the data-collection tool and examples of MSC stories, field practice collecting stories from beneficiaries, and an MSC story selection exercise. The data-collection tool included questions about how the program changed the person’s life as well as how the program could be improved (Appendix A). The nutrition promoters trained to collect the MSC stories were divided into three geographic groups: Mchinji, Lilongwe North, and Lilongwe South. We held one-day refresher trainings in March 2016 for each group.

The nutrition promoters were volunteers engaged in the INVC program. They had a high-school education and lived in the communities where the project and data collection took place. At the time of the initial MSC training, approximately one-third of the promoters had been working with the INVC program for about one year. The rest of them had been trained two or three months before the MSC training and were still in the process of doing a census of households in their designated areas.

We asked each nutrition promoter to collect one MSC story per month from June 2015–June 2016. We regularly followed up by phone with each promoter to check that they had collected a story for that month or remind them to collect a story, if they had not already done so. We held separate quarterly meetings with the three geographic groups to discuss issues they were having with program implementation and to select the most significant stories. Promoters were also given individual feedback during these meetings on the quality of stories collected and how they could improve. During the initial training, we agreed on the following domains of change into which the promoters would group the stories: changes in knowledge or awareness, changes in attitudes or behaviours, stories of integration, other changes, and lessons learned. During the quarterly meetings, promoters read the stories out loud, posted summaries around the room, voted for the top three most significant stories, and discussed their reasons for selecting them.

Because the evaluation was cancelled, no quarterly meeting was held for the period from April–June 2016; however, the promoters obtained stories for this period in their respective communities, and some of them continued collecting stories up to September 2016.

Nutrition promoters collected the stories, by visiting the homes of lead mothers or household members participating in community care groups, asking if they agreed to participate, and then asking them the questions on the data-collection form. Promoters wrote notes about the participants’ responses in their notebooks and then transferred them to the paper data-collection form. The stories were collected in Chichewa. Promoters gave the completed data-collection forms to CPHRD during the quarterly meetings, except in the last quarter,
when no meeting was held and the stories were collected from nutrition promoters directly. CPHRD translated the stories into English and prepared electronic versions of the files. Two team members from CPHPRD then reviewed all the stories for accuracy, and discrepancies in the translations were discussed until a consensus was reached. They also checked on the clarity and logic of the stories and followed up with promoters by phone to get additional details, if needed. The original data-collection forms were stored in a locked filing cabinet in CPHRD’s office.

The MSC data collection was exempted from requiring ethical approval by the institutional review board at UNC-CH, because we did not collect any personal identifying information from the participants.

Data Analysis

We uploaded electronic copies of the MSC stories to Dedoose, where we analysed them using qualitative content analysis methods (Gibbs, 2007). We developed a codebook of deductive and inductive codes, by reading the stories from the first quarterly meeting and making a list of topics that recurred in the stories. The codebook was refined, when we coded data from subsequent quarterly meetings, by combining a few codes and adding codes to capture new topics. The new codes were also applied to stories coded during earlier rounds. The final codes and their definitions are described in Table 1. Two graduate research assistants at UNC-CH coded the stories.

Using the code reports from Dedoose, we generated a data matrix using the method described by Miles & Huberman (1994). The matrix shows the most common codes, the number of stories in which they occurred, and several examples of code excerpts for each code with the sex and age of the participant. The matrix also indicates the number and type of code co-occurrence and provides sample excerpts from the MSC stories.

Table 1. Codebook

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example of coded text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive codes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Sex of the participant</td>
<td>Male; female</td>
</tr>
<tr>
<td>Age—participant</td>
<td>Age of the participant</td>
<td>36 years</td>
</tr>
<tr>
<td>Age—child</td>
<td>Age of the participant’s youngest child</td>
<td>11 months</td>
</tr>
<tr>
<td>Date of story</td>
<td>Date when the story was submitted</td>
<td>April 2016</td>
</tr>
<tr>
<td>Q1—participant</td>
<td>How the participant first became involved and/or is currently involved in</td>
<td>“I am an agricultural counsellor for ‘farm to farm,’ which is under NASFAM. I cover</td>
</tr>
<tr>
<td>involvement</td>
<td>the nutrition program</td>
<td>encourage farmers to plant soya and groundnuts. When I heard about the good nutrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>groups, I developed an interest, because I wanted to know how I could use my soya.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This was in 2013. Our village head had called us to a meeting. I was very interested in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>this issue.”</td>
</tr>
<tr>
<td>Q2—MSC</td>
<td>Description of the participant’s most significant change (MSC) story</td>
<td>“The most significant change I have seen in my life is that I have come to know more</td>
</tr>
<tr>
<td></td>
<td>(i.e., response to Q2)</td>
<td>on the six food groups. This is helping me to lead a healthier life. I was most excited</td>
</tr>
<tr>
<td></td>
<td></td>
<td>when we met and I</td>
</tr>
<tr>
<td>Q3—MSC—reasoning</td>
<td>Reasoning given for significance of MSC story (i.e., response to Q3)</td>
<td>“The change is most significant because my child is growing in great health and his weight is increasing monthly.”</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| Q4/5—changes—proposed | Aspects of the program that participants feel should be changed (i.e., responses to Q4/5) | “There should be a cordial relationship between us farmers and those who give us seeds on how much of the seed loan to pay back. They should indicate the kilograms to be refunded at the onset, not after our harvest.”  
“‘We should be monitored frequently so that members should be encouraged.’” |
| Votes | Number of votes received for most significant change story | This story received 2 votes as most significant. |
| Location | Location of story | Mchinji, Lilongwe North, Lilongwe South |
| Reason for selection | Reasons story was chosen as most significant (listed as bullet points at end of stories) | Through the program, the family has enough food and they can sell some of the farm produce, which has helped them to build a house and buy a bicycle and some farm animals. As a family, they teach others within the community on the importance of farming and eating six food groups. |
| Domain | Domain of change assigned to most significant story | Change in knowledge or awareness; change in attitudes or behaviours; stories of integration; other changes |

**Inductive codes**

| Changes in nutrition knowledge | Descriptions of changes in participants’ knowledge of nutrition practices related to complementary feeding, nutrition during pregnancy, or general household nutrition | “The most significant change I have seen in my life is that I have come to know more on the six food groups.”  
“I have learnt how to make milk from soya and how to prepare soya porridge. I have also learnt how to prepare food for children of different age groups.” |
<p>| Changes in nutrition practices | Descriptions of changes in the participant’s nutrition practices related to complementary feeding, nutrition during pregnancy, or general household nutrition | “I see change in my family, because of the good nutrition program I took part in. My child is growing well, because of eating the six food groups daily, unlike in the past, when I was not taking part in the program. I used to struggle with sickness with my first child. In our groups, we encourage each other, especially pregnant women, to eat the…” |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in breastfeeding knowledge</td>
<td>Descriptions of changes in the participant’s breastfeeding knowledge</td>
<td>“We have learned so many things that we never used to know. Things like the way to hold a baby when breastfeeding and that the best food for a child is breast milk.”</td>
</tr>
<tr>
<td>Changes in breastfeeding practices</td>
<td>Descriptions of changes in the participant’s breastfeeding practices</td>
<td>“The most significant change that has occurred is that the child I entered the program with is no longer sicky, because of exclusive breastfeeding and feeding the child the six food groups.”</td>
</tr>
<tr>
<td>Changes in hygiene or sanitation knowledge</td>
<td>Descriptions of changes in the participant’s hygiene or sanitation knowledge</td>
<td>“I am now educated on the importance of a latrine at home for the prevention of diseases.”</td>
</tr>
<tr>
<td>Changes in hygiene or sanitation practices</td>
<td>Descriptions of changes in participant’s hygiene or sanitation practices</td>
<td>“There is a change around my home, because of this program. At the time I was taught about good nutrition, I was also taught about home hygiene. Now we are eating the six food groups and keeping our home hygienic. We wash our hands with soap, we throw away our rubbish in a safe place, we have a rack for drying plates, and we have a garden. All this has helped my children and even us parents to get sick less frequently.”</td>
</tr>
<tr>
<td>Changes in household health status</td>
<td>Descriptions of changes in family and child health that are perceived to be related to the program</td>
<td>“My child is gaining weight and is no longer sicky.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“My family is no longer getting sick and we are able to save money from fewer hospital visits.”</td>
</tr>
<tr>
<td>Changes related to sales of farm/garden products</td>
<td>References to selling farm/garden produce as a significant change that has resulted from involvement in the program</td>
<td>“There is change, because I use sales from the farm produce, like soya, to help meet my family needs.”</td>
</tr>
<tr>
<td>Changes in farm practices</td>
<td>Descriptions about changes in farming practices due to involvement in the program</td>
<td>“I am now cultivating soya, maize, groundnuts, and I’ve seen significant change, I am able to harvest more groundnuts.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I have also learned how I can obtain manure for my gardens from the toilets. This has helped me to harvest more in my soya farm, but also my vegetable garden is doing well.”</td>
</tr>
<tr>
<td>Changes in availability of time/money</td>
<td>Statements about how the participant has more time and/or money because of involvement in the program (note:</td>
<td>“I now have enough time to do my business, because my child no longer gets sick regularly.”</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Changes in health knowledge</strong></td>
<td>Descriptions of changes in knowledge related to family planning, antenatal/postnatal care, or well-child care</td>
<td></td>
</tr>
<tr>
<td><strong>Changes in health practices</strong></td>
<td>Descriptions of changes in practices related to family planning, antenatal/postnatal care, or well-child care</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—promoter role</strong></td>
<td>Statements about the participant wanting changes regarding the role of the promoter</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—leadership and supervision</strong></td>
<td>Statements about the participant wanting changes regarding program leadership and supervision</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—corruption/fairness</strong></td>
<td>Statements about corruption, fairness, and/or broken promises</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—training</strong></td>
<td>Statements about the participant wanting more training opportunities</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—provision of goods</strong></td>
<td>Statements about the participant wanting tangible items as part of the program, including loans</td>
<td></td>
</tr>
<tr>
<td><strong>Recommended program changes—outreach</strong></td>
<td>Statements about the participant wanting increased outreach of the program</td>
<td></td>
</tr>
</tbody>
</table>

**Excludes statements about money earned from farm/garden sales**

- "We save a lot of money because we don’t have hospital bills to pay."

- "We have learned the different family planning methods. Why was this story significant for you? Because if you’re planning, then you have enough time to take care of your family and you have time to look after yourself."

- "In the past, we didn’t know that our children were supposed to be going to the postnatal clinic."

- "I started going to the antenatal clinic after the first trimester and started eating the six food groups. I even know my [HIV] status."

- "We used to go the clinic late when the child was sick, but now we rush."

- "Promoters should be paid to increase their motivation."

- "Promoters should be given transport to get to our villages."

- "The supervisors should visit us."

- "The program leaders should ask the farmers about their needs."

- "The leaders should come here to monitor fairness in seed distribution."

- "Corruption is a big problem here."

- "They promised to give us potato leaves but never did."

- "The lead mothers should attend workshops."

- "They should train us on good cooking methods."

- "The program should give out soya seed to communities so that they benefit health-wise and economically."

- "The program should also give out loans to small-scale farmers so that they benefit in their families and communities."

- "The program should reach out to both males and females."
RESULTS

The nutrition promoters collected a total of 277 out of 338 MSC stories expected during the period of data collection. Some promoters were not able to collect one story per month, in part because they had not begun implementing INVC activities when they participated in the initial MSC training. Five stories were collected by promoters after June 2016, because the final quarterly meeting was not held, and we were not able to contact all promoters to let them know that they should stop. Because the INVC program was still ongoing from July–October 2016, we included all stories received. Three nutrition promoters dropped out of the program and the project’s nutrition supervisors selected other promoters to replace them. The replacement promoters received training on MSC data collection during quarterly meetings.

Significant Changes

We found many similarities across the stories. The most common themes related to significant changes the program brought about in the participants’ lives were improvements in household health status, benefits of nutrition education, economic benefits, improvements in farming practices, and improvements in household hygiene and sanitation. Many of the themes intersect and their interrelationship is described below.

Improvements in Household Health Status

Improvements in household health status was the most common theme (217, or 78% of MSC stories). Many participants described their families as being healthier since they started participating in the INVC program. Most of them said that their children were healthier than before or their youngest child was healthier than the previous ones. Participants described their children as gaining weight steadily, not becoming malnourished, and not being sick as often. One participant reported,

Since I took part in the program, there are many changes in my family. My child looks healthier because of good nutrition. She is growing fast compared to my first child, because this child does not become ill frequently. (26-year-old female with a two-year-old child)

More than half of the participants linked improved family health to the health information they were receiving through the program and their subsequent behaviour change. One participant reported,

My first child is different from my second child. I never used to go to the hospital for the under-five clinic, and my first child did not receive any vaccinations. But my second child is so healthy and has good weight because I followed the instructions. (30-year-old female with a one-year-old child)

More than one-third of the participants linked better health to home use of the soy beans they grew as part of the project. One participant said,

In the past, we used to just sell all the soya at the market. But now we keep some, and I have seen my family becoming healthier. (39-year-old female with a four-year-old child)

Whether participants thought their families’ health was improved through nutrition education or VC activities, they described better health as a significant change in their lives related to the program.

Benefits of Nutrition Education

The second most common change was participants’ perceptions of the benefits of the nutrition education they received through training to be lead mothers or through community care group meetings. Nutrition education was mentioned in 190 (69%) of the MSC stories. Of these, 154 mentioned changes in nutrition knowledge, and
108 cited changes in practices. Participants frequently described changes both in nutrition knowledge and practices.

Many participants said they learned about the six Malawian foods group (i.e., grains and tubers, meat and dairy, legumes, fruits, vegetables, and fats and oils). They explained that this knowledge helped them to make sure their families ate foods in the different groups. Some participants singled out the importance of certain groups of people, especially pregnant or breastfeeding women and children younger than five years of age, eating balanced meals from the six food groups. Two participants explained,

*I have learned that a person is supposed to eat a balanced meal from the six food groups. The program has also taught people about exclusive breastfeeding, which has helped children to grow healthier and faster. In addition to this, pregnant women have started eating balanced meals, including fruits and vegetables, to ensure that they have enough minerals and vitamins in their bodies.* (35-year-old female with a five-year-old child)

*The most significant change in my life and my family is that we are now able to eat six food groups. I have gained some knowledge on the importance of eating the six food groups and, more importantly, the need of eating the six food groups when pregnant, breastfeeding, and for children from 0–5 years old.* (36-year-old female with an eight-month-old child)

Some participants said that the program made them realize that the six food groups are locally available in their communities, not only in town, and they are not necessarily expensive foods that need to be bought from a shop. For example, these two participants explained,

*All the foods in the six food groups are found right here in our village, not in town, like most people think.* (21-year-old female with a seven-month-old child)

*Previously, we thought the six food groups were found in the shops. Now I know that there is a lot of food in the village. For example, for proteins, I thought it is only meat, but now I know that eggs, grasshoppers, and mice are proteins. When I eat groundnuts, I know I have eaten legumes and oils. The program is helping me with good nutrition.* (42-year-old female with a four-year-old child)

Other changes in nutrition knowledge and practices mentioned by some participants included preparing improved porridge for young children, exclusive breastfeeding, frequent breastfeeding, and good nutrition during pregnancy. Participants recounted the following experiences:

*I learned how to prepare food that I can give to my child, who is seven months. This food is porridge made from soya with the addition of eggs, some oil, and some vegetables. This porridge is very nutritious for the child.* (27-year-old female with a seven-month-old child)

*This story is significant to me because my child is healthy and has never been sick. This is so, because I followed the proper diet when I was pregnant and I exclusively breastfed.* (23-year-old female with a nine-month-old child)

*I am breastfeeding my child frequently, while in the past I used to wait until the child cried before I could put him to the breast. This was making my child to grow poorly.* (22-year-old female with a 16-month-old child)

These excerpts indicate that the program had specific nutrition benefits for young children and pregnant or breastfeeding women, but the stories also show how knowledge of the six food groups helped all family members, by increasing the variety of foods consumed.

**Economic Benefits**

Ninety-four (34%) of the MSC stories described how the INVC program had a beneficial impact on families’ finances and time availability. Many of the stories explained that by borrowing seeds from NASFAM, and
selling their farm products as a business, beneficiaries could build a more solid house, buy fertilizer or farm animals, or pay for basic household necessities or school fees. For example, one participant said,

*It is difficult in the village to build a house with a corrugated roof. We depend on farming, for which we earn just enough to eat. But through this program, I have learned the importance of doing farming as a business. That is why I am saying that the most significant change is my building this house.* (24-year-old female with a two-year-old child)

Some participants also described how the program helped them to expand their economic opportunities by using their farming proceeds to get access to more land or start a new business. One male participant said,

*After I harvested the soya beans, I had 16 bags, which I sold at 29,000 Malawi Kwacha. I used the money to fix my bicycle, which helps me to get to the field, and I also bought four bags of fertilizer. I have rented a two-acre field, where I want to grow more soya beans, since I kept one bag. I gave back 24 kilograms of soya and I managed to buy clothes for my family.* (29-year-old male with a five-month-old child)

Some female participants also explained that the program helped them improve their economic status and gain a measure of economic independence. One participant reported,

*After selling farm produce, I have managed to buy a plot where I want to build a house. I also bought clothes for my children and household necessities. And I started selling wrappers [pieces of cloth].* (26-year-old female with a two-year-old child)

In addition to economic gains through the agriculture component of the program, many participants described improvements in family finances, because they followed the health advice they received. This helped them to keep their family members, especially children, from getting sick as often, and they saved money by not going to health facilities or traditional healers as often. As one participant recounted,

*I am able to practice what I have been trained and my child doesn’t get sick. This has enabled us to use the money from the sales of the harvest to do some developments. Unlike in the past, when it was mostly used to pay hospital bills.* (26-year-old female with a two-year-old child)

In households where the children were sick less often, another benefit was that the woman had more time to do other work. One said,

*My child no longer gets sick, and I am now able to participate in development work.* (33-year-old female with a two-month-old child)

These quotations show the synergies in terms of time and money saved or gained through both the nutrition and VC components of the program.

**Improvements in Farming Practices**

Sixty participants (22%) described improved farming practices as the MSC they experienced from the program. Some participants explained how the new farming practices helped them get a bigger harvest from their land. One reported,

*My farm has regained the fertility it used to have, due to good crop farming methods, compared to local methods. I have learned how to harvest more from the small piece of land that I have, and this has helped my family a lot. I also manage to have vegetables for my family because of the garden that I have at my house.* (29-year-old female with a nine-month-old child)

Other participants learned to grow a new crop or to use existing resources to improve their crops. Two participants disclosed,
This year I managed to do groundnut farming, a thing I have never done in my life. . . . I gained knowledge of groundnut planting, caring, and harvesting. (28-year-old female with a three-year-old child)

I have learned how I can obtain manure for my gardens from the toilets. This has helped me to harvest more in my soya farm, but also my vegetable garden is doing well. (51-year-old female with a two-year-old child)

Learning and practicing improved farming techniques helped participants grow more and different crops and increase their income.

Improvements in Household Hygiene and Sanitation

Sixty-four participants (23%) mentioned how the program made a significant change in their lives through the construction of household latrines and through their knowledge of good hygiene practices. Two participants explained,

*Before I didn’t know when to wash my hands. Now I do. Now I wash my hands before I feed my child and before I prepare food. What has changed most is that I never used to wash hands after changing the child’s nappy, but now I do.*

(32-year-old woman with a one-year-old child)

*I am finding the program very beneficial in my family, because previously, we didn’t have a toilet. When we were taught, we realized the importance of a toilet and we built one. We know the importance of good hygiene. For example, we wash hands with soap after visiting the toilet and after changing a baby’s nappy. We wash our hands before eating and before preparing any food in the home.*

(27-year-old woman with a one-year-old child)

Of participants who provided most significant change stories related to hygiene and sanitation, 33 mentioned changes in their knowledge and 48 said they made changes in their practices. Participants frequently linked hygiene and sanitation practices to better household health and farming practices.

**Suggested Program Improvements**

The following were the most common themes related to program improvements: the provision of inputs, better monitoring and supervision, outreach to more or different types of people, and more training.

**Provision of Inputs**

The provision of various types of inputs was the most common program improvement suggested by participants (214, or 77% of MSC stories). Participants mentioned several different types of inputs that would be helpful, including seeds, small loans, and farm animals.

**Seeds**

Participants most often talked about needing seeds. They requested that they be given different types of seeds. They also said that seeds should be given early enough in the planting season, should be able to germinate, and should be given to cluster members (e.g., all members of the community care groups), not just lead mothers. Several participants expressed this point:

*I would request that you help us with vegetable seeds so that we have another food group* [referring to the six food groups]. (27-year-old female with a one-year-old child)

*They should just give us seeds in good time, so we plant as the rains start. . . . They should provide the seeds in October before the rains, so we can plant in good time.* (30-year-old female with a two-year-old child)
On the seeds we have been given, most of them do not germinate well. (29-year-old female with a nine-month-old child)

The soya that the lead mothers are given should also be given to the cluster members. They should also add groundnuts, so that we should harvest some in our households. They should distribute soya and groundnuts to everyone, not just the lead mothers. (28-year-old female with a two-year-old child)

Lead mothers also thought that the program should be expanded to provide seeds to others in the community. One explained,

There is a need to help with more soya seed as well as groundnut seed on loan. . . . This is because some people lack seed and cannot improve their eating habits. They want to be able to farm the necessary food and sell some to earn money to buy more food so that they can provide the six food groups to their families. . . . Those leading the good nutrition program need to find a partner who can supply seeds on loan, which the farmers will refund after harvest, just as is done by NASFAM. (36-year-old female with a five-month-old child)

A few participants also mentioned their desire for fruit trees seedlings and how the money from selling the produce could improve their families’ nutrition. One said,

If you can provide us with early productive seed crops and fruit trees, so that we can reduce our problems . . . [Please] give us seeds such as pawpaws, avocado pears, and dambo [seasonal wetland] crops, so that after selling them, we can buy some other food items to maintain good eating habits. (27-year-old female with a one-year-old child)

Participants’ comments indicate that it would be important to identify an organization that can provide a variety of good-quality seeds in a timely manner to facilitate agricultural expansion in their areas.

Loans

Participants mentioned the need for loans for starting village savings and loan groups or small businesses or for purchasing agricultural inputs. Two of them indicated,

The program should give loans and provide seeds to us cluster members, so that we can start small businesses and create clubs, like village banking, so that we should be able to save money and pay back the loans. (23-year-old female with a nine-month-old child)

It will be better if you provide us with agricultural loans so that we can do better in our lives through this program. (24-year-old female with a two-year-old child)

Lead mothers noticed that women in their groups found it difficult to feed their families the six food groups, because the women were too poor to afford some of them. The lead mothers suggested having loans to start small businesses. One reported,

When I am advising the women in my group on how they can feed their children, they always say that they really want to follow this program, but they fail to do so due to poverty. They can manage to follow it for two to three days, then they stop. . . . It’s either they don’t have a fruit or meat . . . so we want to start small-scale businesses, so that we can buy the basic needs in our families. (26-year-old female with a four-year-old child)

Although the program provided loans of seeds to some farmers, small loans of cash or savings and loan groups could be a way to increase agricultural and nutritional impacts.

Many participants who received seeds on loan talked about needing fairer practices in terms of repayment. They wanted to know the terms of repayment upfront and felt there should be a plan for different terms if the rains were inadequate and the harvest insufficient.
Animals

Some participants wanted the program to provide them with livestock to improve their families’ animal-source food consumption, to provide manure for their gardens or farms, or to sell to earn income to buy other food or household items. Two responses exemplify this view:

*It would be useful if families can be given some animals, such as goats, chickens, and pigs, to keep in their homes. This will help farmers to have manure, which they can use in their gardens to increase the harvest, and eventually have healthy families.* (24-year-old female with a one-year-old child)

*The program should provide us with livestock, such as goats or chickens, so that we should manage to eat the six food groups. We should also be able to earn money after selling our livestock, so that our families should be independent.* (29-year-old female with a four-month-old child)

Requests for livestock were less common than requests for seeds and loans, but would be important for increasing dietary diversity, especially in rural areas where animal-source food consumption is low.

Need for Better Monitoring and Supervision

Community members and lead mothers explained that they felt there was not enough supervision of activities by the people leading the program. This was mentioned by 121 MSC participants (44%). They wanted the program staff to visit their villages to see their progress and to understand the issues they face. Participants explained,

*The program should take a step by visiting us, so we could explain how we have benefited through the program and the problems we are facing. We always tell the lead mother in our group to explain to the promoter, so that he should tell their leaders. But we have never seen any single person coming to visit us in our village.* (29-year-old female with a four-month-old child)

*What needs to be changed is that those implementing the program should visit us regularly and this will motivate us to work hard to follow the advice given to us by the promoters.* (22-year-old female with a three-year-old child)

*I will be happy if the program leaders hear our challenges and address them as soon as possible, so that this program goes further and we end child malnutrition.* (29-year-old male with a four-year-old child)

Participants said that their requests or issues were not addressed by the program or they lost motivation, because no one from the program visited them.

Need for More Outreach and Training

Two topics that were mentioned by participants, but not as frequently as inputs and supervision, were the need for outreach to more types of people in the community (62, or 22% of MSC participants) and for more training (60, or 22% of MSC participants). Several participants said that both men and women should be involved in the nutrition component of the program. One of them said,

*It would be good for these groups to be teaching every member in the evening at their home, so that men should be available. . . . It can be good sometimes if chiefs are told to encourage or motivate men to participate in these groups, because a lot of men do not take part in these teachings.* (37-year-old woman with a two-year-old child)

Participants requested additional training on cooking, nutrition, farming, and education. Two stated,
We should be taught on the right food preparation of healthy foods so that our children should grow healthy. (25-year-old female with a three-month old child)

We would appreciate if they teach us better farming methods and also how to keep our gardens free of weeds and better ways of preserving the soil, so that our families should have enough food and be able to have good nutrition. (24-year-old female with a one-year-old child)

Promoters’ Experiences

We met with nutrition promoters quarterly to review INVC participants’ stories and select the most significant among them. During the meetings, we also asked the promoters to share their experiences with implementing the nutrition activities.

They described several positive aspects of the program. They said that the communities are participating in the activities and are happy with the program, because community members have learned how to feed their children better. Participants now know about the six food groups and they understand that these do not have to be eaten in one meal, but can be eaten throughout the day. They have learned how to make soya milk and improved porridge with added groundnut flour, vegetables, and eggs. They are also participating in child growth monitoring. Community members want the program to continue, because they are benefitting from vegetable gardens and better nutrition.

Promoters reported that they, themselves, gained some benefits from the program. They said that participating in the project enhanced their knowledge, and they acquired new farming and childcare skills through the training courses provided to them by the project. They felt they were perceived differently by others in their communities since they started working as promoters, and they followed what they learned from the program to serve as role models in their communities.

Nutrition promoters also told us about many challenges with program implementation. They received infrequent supervision from the nutrition assistants, who were paid by the program to oversee nutrition activities. Nutrition assistants did not respond to phone calls from promoters and delayed collection of their monthly reports. Although nutrition promoters were volunteers, they were supposed to receive a small monthly stipend to maintain the bicycles they used to travel between villages. Promoters received their stipend only once every five to seven months and then it would not be for the whole period (e.g., allowance for three of the seven months). These two factors—lack of supervision and no stipend—were demotivating for the promoters.

Promoters described several other issues with the program:

- Competition between INVC and other programs doing similar nutrition or agriculture work in the same geographic areas.
- Nutrition promoters did not have anything (e.g., a t-shirt, bag, or badge) to identify them as part of the INVC program.
- Community members thought the nutrition promoters were paid, but were not sharing the money or incentives with the community.
- Some lead mothers did not receive project materials (e.g., pens, notebooks, t-shirts, and tote bags), so they failed to do their work. Some nutrition promoters bought materials for the lead mothers with their own money.
- Cluster members wanted to receive the same incentives as lead mothers.
- Some people in the community adopted the messages and others were not interested.
- Men were not involved in the nutrition component of the program, so they often sold all the farm products and did not save any for the family to eat.
- Participants had to return the seeds they borrowed after the harvest. This was not always possible if the rains were not adequate.
• During the last year of the INVC program, neither NASFAM nor Nkhoma Synod were involved in program implementation. The program supplied seeds directly to mothers and there were no links to suppliers.
DISCUSSION

The MSC stories we collected generated an understanding of this complex program from the participants’ perspective. We obtained many stories and identified clear themes related to beneficial impacts that the INVC program had on participants’ lives and how it could be improved in the future. Information from the nutrition promoters about their experiences with intervention implementation provided another angle to round out the picture of the program.

Participants reported benefitting from the INVC program through nutrition education, economic advantages, and improved farming and household hygiene and sanitation practices. They described how nutrition education, hygiene, and sanitation activities provided through community care groups led to economic improvements resulting from fewer episodes of childhood illness and fewer hospital visits. Household health status and changes in nutrition knowledge and practices were the codes that co-occurred most frequently in our analysis, indicating that the health components had the biggest perceived impact on participants’ lives. This is not surprising, given that most interviewees were involved in the nutrition component of the program and were women, whose gender role in Malawian society is to care for children (Chinkonde, Sundby, & Martinson, 2009; Gipson et al., 2010), indicating that health benefits of the program would be among the most salient for them.

Although program activities were implemented separately by agriculture and nutrition organizations, some integration took place at the household level, particularly in households that participated in both parts of the program. For example, integrated agriculture and nutrition activities encouraged some households to keep part of the food they grew (e.g., soy beans and vegetables) for family consumption, thereby improving child nutritional status. However, integration could be furthered in future programming by better incorporating men in the nutrition activities, which were primarily addressed to women with children younger than five years old.

In terms of gaps in the program, participants asked for additional inputs of seeds, animals, and small loans. The timely delivery of quality seeds was an important issue, as was the desire for more community members to receive seeds. Future programs should ensure that seeds are delivered early enough in the rainy season to be useful and consider distributing seeds to a wider swath of the community. Participants also requested better monitoring and supervision of activities, more outreach to men, and training for different groups in the community. In programs that use volunteers, supervision is an important motivator (Crigler, Gergen, & Perry, 2014). Future iterations of the INVC program in Malawi would benefit from a better and more regular system of supervision both for nutrition promoters and lead mothers. It is telling that the nutrition promoters enjoyed the quarterly MSC meetings because they perceived the meetings as an opportunity to share the problems they were facing and get some feedback. A better monitoring and supervision system would have helped alleviate the frustrations that community members and nutrition promoters felt when their problems or issues related to the program were not heard or addressed.

Limitations of the MSC Method

In using the MSC approach for the INVC evaluation, we received feedback about the method from nutrition promoters and we also documented some challenges with its use. Nutrition promoters told us that some husbands did not like it when male nutrition promoters collect MSC stories from their wives, especially if the husbands were not at home. Some women asked for incentives for giving their MSC stories, and promoters asked for incentives for collecting the stories.

From the evaluators’ perspective, the stories felt “thin,” without many details, and many stories were similar. We do not know if this was an artefact of the level of education of the nutrition promoters or because the stories were not digitally recorded and transcribed. In writing the stories in their notebooks, and then transferring them to the data-collection forms, nutrition promoters may have summarized the key points of the stories, rather than writing them down verbatim.
During the first few quarterly meetings, promoters tended to vote for their own stories, rather than voting for those that were most significant. Promoters also had difficulty justifying why they selected certain stories as most significant, in part, because many stories were similar. In addition, most stories covered more than one domain of change, making it challenging for promoters to assign them to the domains. Considering these issues, we decided not to present the MSC stories by domain or the story rankings and their justifications.

We were not able to implement the participatory aspect of the MSC method, because we were using it as part of an evaluation and did not want to influence the program implementation process in some VC+nutrition areas and not others. If our goal had been to use the MSC method to improve program implementation, nutrition promoters were volunteers and would not have been the appropriate people for this process. They did not have the decision-making power or adequate knowledge of the overall program to be able to make changes to program implementation.

An understanding of the limitations of the MSC method and other complexity aware process evaluation methods is important as USAID and other international donors, such as the U.K. Department for International Development, encourage their use. Application of the “pure” MSC method may not be feasible or even useful in all situations, and adaptations of the method may be needed.

Despite the limitations of the MSC method within the INVC evaluation, the data we collected provided valuable insights into the participants’ and implementers’ experiences with the program – both the benefits and challenges – which can be used for planning new Feed the Future programs in Malawi and other countries.

**Recommendations for Follow-on Feed the Future Activities in Malawi**

In conclusion, the MSC stories collected in the INVC project indicate that the care group model for nutrition and health promotion had important perceived benefits for participants in the VC+nutrition areas and should be continued or expanded in the future. Recommendations for improving the Feed the Future program in Malawi are as follows:

- Improve monitoring and supervision of nutrition promoters and community activities
- Improve gender integration and outreach so that both genders are equally involved in nutrition and agriculture activities
- Ensure that seeds and other agricultural inputs are high-quality and delivered to participants on time
- Expand the number of people who receive seed loans and include a provision for poor harvests when participants pay back the loans
- Facilitate the formation of village savings and loan associations
- Ensure that nutrition promoters and lead mothers receive project materials and incentives in a timely manner
- Improve coordination with other agriculture and nutrition programs working in the same geographic areas
REFERENCES


APPENDIX A. MOST SIGNIFICANT CHANGE STORY DATA-COLLECTION FORM

We are collecting stories about the impact of the nutrition program in your area on you and your family. We are also interested in aspects of the program that you think could be improved. It’s okay if you decide not to tell us a story about your experiences with the nutrition program. Your decision to tell a story or not will not affect your participation in the agriculture or nutrition programs. We will not include your name with the story.

Are you willing to tell your story?  ___ YES  ___ NO

We will not include your name with the story.

Is it okay if we share your story with other people or include it in a publication?  ___ YES  ___ NO

If the person answered NO to either question above, please find another respondent.

1. Date:  _______________________

2. Name of person collecting the story: ___________________________

3. Sex of the storyteller:  ___ MALE  ___ FEMALE

4. How old are you?  ____ ____ (Please record age in years)

5. How old is your youngest child?  ____ ____  months  years  (Circle either months or years)

Questions

6. Tell how you first became involved in the nutrition program and what your current involvement is.

7. From your point of view, describe a story that illustrates the most significant change that has resulted from your involvement in the nutrition program in your area. (Who was involved, what happened, where and when)

8. Why was this story significant for you?

9. From your point of view, describe a story that best illustrates how the nutrition program should be changed or improved to address the needs of participants. (Who was involved, what happened, where and when)

10. How should the program address this issue?