



# Towards more nutritious diets for young children in southern Bangladesh

Assessing the contribution of Community Nutrition Scholars and identifying constraints to utilization of orange-fleshed sweetpotato

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Gordon Prain



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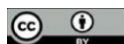
A community nutrition scholar delivers a session on nutrition, hygiene and agriculture including the nutritional benefits of orange fleshed sweetpotato. Credit S.Quinn

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## Summary

This study seeks to assess progress so far towards achieving Output 4 of the project '*Strengthening food system resilience in Asia's mega deltas with salt-tolerant sweetpotato and potato*', namely increased utilization of improved OFSP and P varieties by target households (HHs), especially to support and improve the nutrition of small children. The intervention strategy to achieve that output involved combining nutrition and hygiene education given by a cadre of community nutrition scholars (CNS) to mothers of small children combined with the distribution of planting material of nutritionally beneficial crops to those women. This assessment uses sex-specific Focus Group Discussions (FGDs) with selected women participants in the training and selected male spouses or other male relatives of women who participated, with one female and one male FGD located in each of the sub-districts (*upazilas*) targeted in the training interventions. In addition, two FGDs were conducted with CNS, one in each of the target districts. FGDs were adapted to the conditions of the coronavirus pandemic, so numbers of women and men were smaller than a normal FGD and the timing of the FGD shorter. The CNS FGDs were maintained at a more regular size (10 persons) to capture experiences from the different sub-districts. The FGDs aimed to understand whether the participation by mothers in the CNS training program resulted in changes in mothers' and fathers' knowledge and behavior that in turn contributed to children's improved nutrition and health. The study also examined what were the specific constraints and opportunities involved in the utilization of OFSP as a nutritional food for young children.

Overall findings suggested that the training had been successful in focusing women's attention on improved child nutrition and care, especially exclusive breastfeeding and complementary feeding during the first 1000 days. Women also prioritized alternative, nutrient-conserving forms of food preparation that they had learnt in the course, which is also highly relevant for small children. Women's explanation for their choices of the most important elements of the course indicated a focus on practical issues. The CNS, who not only conducted the training but who distributed the planting material and made support visits to households, corroborated this finding by considering that the large majority of women who had undergone the training were able to absorb the new knowledge and to apply it in their domestic situations. They also identified the characteristics of some of the women who had not been so successful with the learning and its application. The men's FGDs who had participated in the introductory session confirmed that this session helped them understand the relevance of the training and stimulated their support for their spouses' participation. All the men's groups indicated that the large majority of men discussed the training with the women who attended from their households and this contributed to their support for the training. Most of the men indicated that their own observations confirmed the changes in child feeding practices and food preparation practiced by the women. On the issue of intra-household food distribution, most men denied that it was practiced in their household, even though some recognized it as an older practice in the community and several indicated that women themselves sometimes insisted on taking smaller portions. The CNS estimated that about 25% of households continued with these practices.

Among the changed practices that affected health, hand-washing was most widely adopted, especially in relation to using latrines and associated with the preparation of children's food. These declarations by women about health issues were supported by the men's groups, and also confirmed that the changes in hygiene practices were adopted by other members of the household.

All of the women planted the vegetable seeds that were received as part of the homestead gardening component of the course and adopted the bed-planting technique taught in the course. Twenty nine out of thirty women also planted the OFSP cuttings that were provided. Men reported their own contribution to

preparing land and sometimes to planting, but it was not always clear if they were assuming symbolic ownership of the gardens and the work done in them as head of the household. As well as being cultivated by all but one of the women, they also confirmed having introduced OFSP into their family diet, especially for children. Men's FGDs also confirmed the own and their family's acceptance of OFSP in the diet. Although women and men talked of the nutritional benefits of OFSP, most said it was too early to indicate any health benefits from consuming this novel food.

The assessment attempted to understand the likelihood that the new nutrition and health practices would be sustained in the households and communities where they were introduced and the extent to which they were being scaled within and beyond those communities. Sustainability was understood in terms of changed social norms that accepted the new practices and the extent to which the new practices entered into the social networks of the women who participated in the training. Resistance to the new practices were reported within many of the communities by mothers-in-law and other older members of the village communities. Several women reported their spouses playing an important role in convincing their mothers of the value of the new practices. Once the content of the training was more widely known, the new practices were more readily accommodated, in many respects because they supported the socially accepted role of the woman and mother as homemaker, carer and protector of family health. There was good evidence that knowledge of the new practices entered into the social networks of the women. Extrapolating from the dissemination efforts of the sample of women who participated in the assessment to the 5000 women who participated in the training, a conservative figure of scaling was estimated at 50,000 households.

The assessment also tried to understand the extent to which the mothers who participated in the training had been empowered by the experience. There was strong evidence from the women's own testimony and also from the observations of the CNS, that women felt better able to take decisions, that they were listened to more and that they were better able to take independent action. The CNS themselves also reported that their own experiences had led to them being much more respected and to have a 'voice' in their communities.

The assessment also tried to briefly understand how the pandemic had affected health and hygiene practices in their households, how it had affected their livelihoods and how it had affected food and beverage consumption. All households reported major changes in their practice of hand-washing, in keeping the house cleaner and in more frequent clothes washing. The testimony from the men's groups, with more frequent need to move outside the house, was more dramatic, describing the need to bathe and change clothes when they came in from the market, the use of masks, the purchase of hand sanitizer, the location of soap at washing stations outside the house and at different points within the house. In terms of livelihoods, both women and men described the severe effects of the pandemic in terms of depressed prices for agricultural products because of the absence of traders from other locations, the loss of production that could not be sold, the loss of different kinds of jobs or reduced wages. Only one person, among the men and women groups, spoke of having taken advantage of the lack of products coming in from other locations and being able to sell at higher prices. The changed picture with regard to consumption mainly concerned increase consumption of tea with lemon and ginger, based on the idea that vitamin C could fight off the virus. The loss of income led some families to reduce intake of more expensive foods like meat, egg and some types of vegetables. On the other hand, many families, seeming to recall the lessons of the CNS training, talked of ensuring a healthy, high nutrient diet to increase their resistance to the coronavirus.

## Acknowledgements

This assessment was led by Dr. Ebna Habib Md Shofiur Rahaman (Sohag), who is also the CIP Principal Investigator of the project '*Strengthening food system resilience in Asia's mega deltas with salt-tolerant sweetpotato and potato*', funded by the German Government. He was supported with expert social science and gender inputs by Dr. Nozomi Kawarazuka, CIP Scientist. The teams who carried out the fieldwork on which the assessment is based were as follows: Facilitating and notetaking for the Focus Group Discussions (FGDs) with the sample of women who participated in the training were undertaken by Nilufar Sultana and Farhana Hussain Ibrahim. They also facilitated and documented the FGDs with the Community Nutrition Scholars (CNS). Facilitating and notetaking for the FGDs with a sample of men from households in which a woman member participated in the CNS training were Ebna Habib Md Shofiur Rahaman (Sohag) and Md Farid Uddin. Local coordination support for the FGDs was received from Durgapada Sarker, Project Officer, Field Facilitator and CNSs of Prodipan. [Field Facilitator - Debasis Mondal, Monir Hossain, Azgor Ali, Tanuz Goldae, Alom Bari, Md Farid; CNS - Joyasree Halder, Chompa Debnath, Anjona Das, Khadiza Khatun, Roly Das, Nazma Begum, Chonda Choudhuri]. Farhana Hussain Ibrahim, Nilufar Sultana, Md Farid Uddin and Ebna Habib Md Shofiur Rahaman translated the documentation into English.

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# 1 Introduction

The project ‘Strengthening food system resilience in Asia's mega deltas with salt-tolerant sweetpotato and potato’ led by the International Potato Center and funded by GIZ was initiated in 2018 in partnership with national private sector actors (ACI Seed Ltd and Supreme Seed Co. Ltd), the public agricultural research sector (BARI), a civil society organization (Prodipan) and with an international research institution (the University of Hohenheim).

The goal of the project is to contribute to increased agricultural system productivity, food security, and healthier diets in Bangladesh’s delta region through adoption of resilient and nutritious potato (P) and sweetpotato (SP) varieties (including beta-carotene rich orange fleshed sweetpotato or OFSP), better agronomic practices, and improved utilization of the crops by households. Food system resilience involves both ecological and food and nutrition security dimensions and cultivated crops need to successfully overcome abiotic and biotic stresses to yield a good harvest, but that harvest needs to provide not just calories, but also culturally acceptable and micronutrient-rich food. This project seeks to address the development of ecologically resilient and locally adapted P and SP varieties that can yield well in saline conditions of southern Bangladesh and be accessible through effective seed systems. The project addresses food and nutrition resilience through including improved micro-nutrient rich varieties that are locally adapted, especially OFSP, the distribution of seeds of micronutrient-rich vegetables and to strengthen demand for these crops among households, nutrition, feeding and hygiene education interventions. To achieve its goal, the project is organized into four interrelated Outputs. Output 1 tests and adapts accelerated breeding methodologies and identifies improved phenotyping tools and evaluation methods to support development of salt-tolerant potato and sweetpotato varieties by BARI and several advanced clones of P and SP have been selected over the two seasons so far completed. Output 2 introduces improved methodologies and capacities in the seed value chain for the sustainable and socially inclusive production, distribution, and marketing of high-quality seed of released salt-tolerant and nutritious P and SP varieties. Output 3 involves the participatory selection of P and SP varieties and agronomic practices best suited to local cropping patterns, agro-ecologies, and farmer and consumer preferences. Output 4 expands the utilization by target households (HHs) of improved OFSP and P varieties, especially to support and improve the nutrition of small children and does this through combining nutrition education given by a cadre of community nutrition scholars (CNS) and the distribution of planting material of nutritionally beneficial crops. Through combining nutrition education with the distribution of OFSP cuttings, Output 4 also contributes to Output 2.

The current study seeks to assess progress so far towards achieving Output 4. It will use a qualitative research approach to understand whether the participation by mothers in the CNS training program resulted in changes in mothers’ and fathers’ knowledge and behavior that in turn contributed to children’s improved nutrition and health. The study also examines what were the specific constraints and opportunities involved in the utilization of OFSP as a nutritional food for young children. A quantitative end-line survey will be undertaken towards the end of the project to measure individual changes. For this study, a qualitative methodology will enable a more detailed subjective understanding of the linkages between knowledge obtained via the CNS sessions, any change in attitude to child feeding, consumption and nutrition and hygiene issues among the mothers and the introduction of new feeding practices, new choices of food provided to their children and any hygiene-related practices newly introduced. Because of the inclusion of OFSP in local participatory trials, planting material distribution activities and in the training sessions given by CNS, there is an expectation that OFSP may be part of the new high nutrient food options for children. We want to explore if there are any characteristics of OFSP as a new crop or as a new food which inhibits or encourages women to use it for their children’s food.



## 2 Methodology and site description

### 2.1 Methods

Because of the presence of the coronavirus pandemic in Bangladesh during 2020, it was necessary to make major revisions to the originally proposed methodology. The original plan envisaged 12 Focus Group Discussions (FGDs) with about 10 women who had participated in the CNS-led training in each FGD. Two FGDs would be held in each *upazila* (sub-district). For the men's FGDs, 3 were planned in each of the two Districts involved in the study, the 10 or so participants drawn from the different target *upazilas* in each District. Men who participated in the first CNS session and those who did not would have been distributed across the different FGDs. In the case of the CNS themselves, 5 FGDs were planned to cover the total of 50 CNS who participated in the training and outreach. In addition, it was planned to include between 12 and 18 Key Informant Interviews (KIIs), distributed across the six *upazilas* of the study.

When it seemed that the conditions of the pandemic would make any face-to-face interviewing impossible, a complete redesign was undertaken to balance safety with the special requirements of qualitative data gathering. With the new method we still hoped to identify outcomes resulting from the CNS training, such as changes in current household diets, feeding practices and hygiene. The new method was also expected to provide information on uptake of OFSP, current use as weaning or complimentary food for small children and perceived constraints on its uptake both as a crop and as a food. The new method also included a sample of CNS, to provide their own perspectives on change processes.

The new method, known as **The Virtual Mini-FGD (VIMI-FGD)**, combined the use of structured Focus Group Discussions (FGDs) with remote survey techniques. The normal FGD is a mostly qualitative research tool which aims to capture a mixture of different kinds of data through same-sex group interviews of 2 hours or more with between 10 and 12 persons. The VIMI-FGD would be conducted via telephone or online interview with 3 socially distanced persons from the same village for about 1 hour. Interviewers would be based in Dhaka, but a local member of the partner NGO PRODIPAN would be physically present with the interviewees under social distancing conditions to support the technical communication, especially if possible to channel the cellphone output to a speaker for better audibility and ensure that questions were clearly heard and answers also heard by the telephone interviewers.

Those conducting and documenting the VIMI-FGD would be the same as in a face-to-face FGD: namely a **facilitator** who is the same sex as the interviewees and who interacting directly with the three persons participating and asking the questions, and a **note-taker**, also of the same sex as those being interviewed, who would record the answers and occasionally intervene to clarify answers. A set of guide questions were developed for the FGDs with women, with men and with the CNS. A more detailed description of the VIMI-FGD method is in Annex 1.

A virtual training was carried out with the two women and two men who formed the two teams to carry out the study<sup>1</sup>

This method was pre-tested with a sample of women, men and CNS who were not part of the main sample for the assessment. Results of the pre-test indicated that given the lack of access to means to amplify the cellphone

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<sup>1</sup> The women's team consisted of: Nilufar Sultana (facilitator) and Farhana Hussain Ibrahim (note-taker); the men's team consisted of Ebna Habib Md Shofiur Rahaman (Facilitator) and Md Farid Uddin (note-taker). Trainers were Gordon Prain and Nozomi Kawarazuka.

internal speakers or to provide an external microphone, communication was very constrained for both the participants and the remote facilitator and notetaker conducting the VIMI-FGD. Questions were not easily heard and those not directly talking felt excluded from the interaction. It was impossible to stimulate interaction among the three participants, which is a key ingredient of the FGD. The conclusion of the pre-test was that a remote FGD is possible, can generate information, but is severely constrained, mainly for technical reasons, in the quality and completeness of the data that can be collected.

Given the improving situation with the coronavirus in southern Bangladesh, it became possible to opt for an alternative method with better chance of more complete data collection. This was the **COVID-adapted face-to-face FGD**. Adaptations compared to standard FGDs included:

- Reduced number of participants to allow social distancing (from the normal 10 participants to 5)
- Reduced duration of the FGD (from up to 3 hours for a normal FGD to between 1 and 2 hours)
- Reduced total number of women FGDs compared with original methodology (from 12 to 6)<sup>2</sup>
- Retention of the number of men FGDs (6, 1 in each *upazila*)
- Reduction of the number of CNS FGDs (from 5 to 2).

As already mentioned, all spouses were invited to attend the first session of the CNS training in order to understand the content of the training and to promote their support for allowing the women to attend the full training, but only about 50% of spouses attended. In order to understand any differences in the attitudes and experiences of men who attended that first session of the training and those that did not, the participants of three men's FGDs all attended that session, and the participants of the other three FGDs did not attend.

Based on the results of the pre-test, the guide questions for all three interview groups were also revised (see Annex 2).

Note that both for the VIMI-FGD and the COVID-adapted face-to-face FGD methodologies, research ethical procedures were followed, involving the reading of a detailed informed consent text at the beginning of all FGDs and the collection of signatures by participants.

The qualitative responses to guide questions and follow up questions were written down by the notetaker, as far as possible in the words of the participants. In most cases participants gave consent for the meetings to be recorded, and recordings were used where necessary to validate the written notes. Complete transcriptions of the recordings were not made. Shortly after FGDs had been completed, facilitator and notetaker went over the notes to clarify and complete. These notes were subsequently translated from Bangla into English. Variables were derived from the formulation of the questions. These were analyzed using simple text searches across the FGDs and manual data compilation.

## 2.2 Physical location of the FGDs

### 2.2.1 Geographical description

FGDs were organized in each of the six target *upazilas* distributed in the two districts of Khulna and Satkhira, three in each district (see Map).

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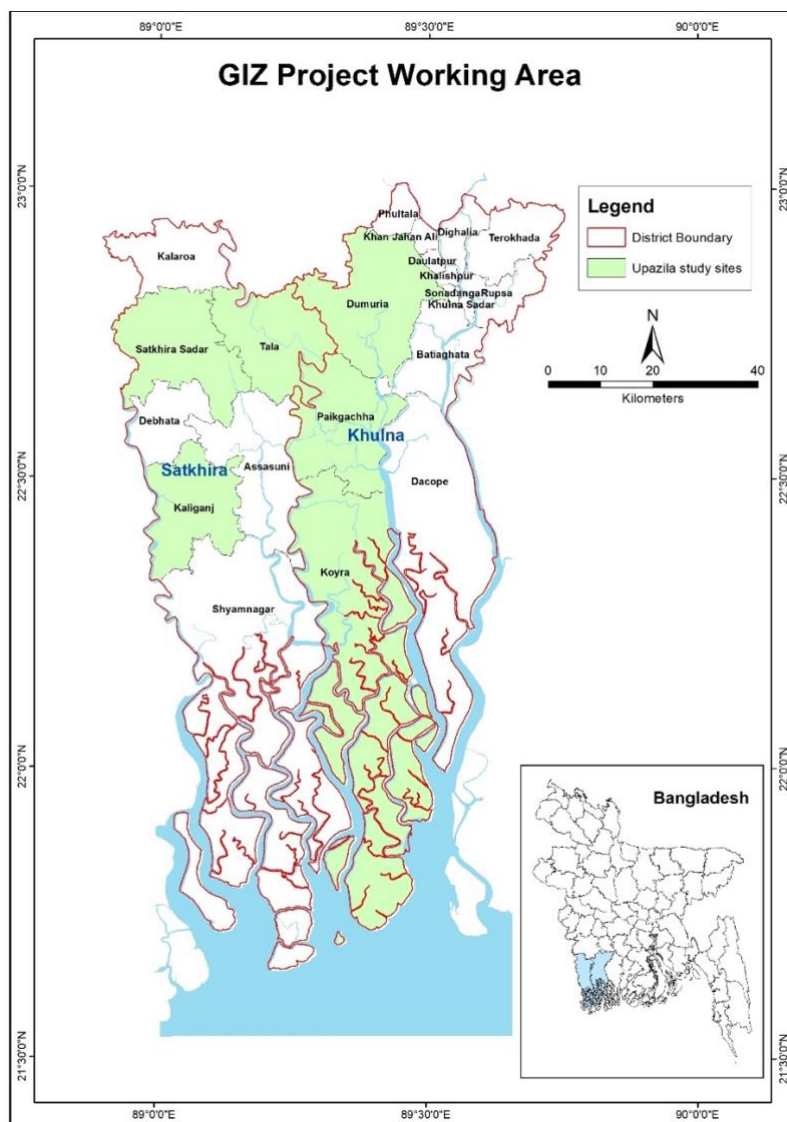
<sup>2</sup> The larger sample of women's groups compared to men's groups in the original design reflected their direct experience of the training and introduction of recommended changes into their domestic tasks. The constraints of COVID-19 meant that it was not feasible to retain the larger sample, with likely reduced robustness of the results.

**Khulna** is one of the coastal districts of southern Bangladesh, with the Sundarbans, the largest mangrove forest in the world, occupying 1668 square kilometers in the southern part of the district, nearly 40% of the total land area. Agriculture includes both saline and non-saline ecosystems and is mainly dominated by rice. Year-round vegetable cultivation is also practiced, including potato and sweetpotato, often in dyke cropping systems. Aquaculture (shrimp and other species) is second only to rice in importance, with vegetable also grown in rice-fish rotation systems. Other important crops include jute, wheat, pulses, tobacco, betel leaf, maize, spices and aromatic crops.

**Satkhira** lies to the west of Khulna district and borders India. It also has a southern coastline with large areas of mangrove forests. The district consists of both saline and non-saline ecosystems and like Khulna, its agriculture is mainly dominated by rice, with year-round vegetable cultivation, including important quantities of potato and sweetpotato, grown in open fields as well as in dyke cropping systems. Aquaculture is second to rice in importance with shrimp a major export commodity. Vegetables are also grown in rice-fish rotation systems in saline and non-saline areas. Other important crops include jute, sugarcane, mustard seed, wheat, pulses, and betel leaf.

Agricultural land use in these coastal districts is poor, with average cropping intensity of 127% in Khulna and 151% in Satkhira, compared to a national average of 173% (BBS, 2015). The major part of this region is affected by different degrees of salinity. These southern coastal districts are also highly vulnerable to periodic cyclones and flooding.

Both districts have relatively low population density (528 and 520 persons per square kilometer respectively) but quite different levels of urbanization, with Satkhira having only 10% urban, compared with 34% in Khulna. Both districts are predominantly Muslim, but both have higher Hindu populations than the national average, especially Khulna, with over double the national average at 23%.



**Map Khulna District and Satkhira District**

The three target upazilas in Khulna District, Koyra, Dumuria and Paikgacha, mostly share the characteristics of the whole district. There is deficit in vegetable production in Koyra and Paikgacha, but excess production in Dumuria with vegetables traded to other *upazilas*. Sweetpotato has been cultivated traditionally in Koyra and Paikgacha, but potato has so far been rarely grown in these two *upazilas*. In Dumuria, potato is cultivated traditionally, but sweetpotato production is rare.

The three target *upazilas* in Satkhira District, Kaliganj, Satkhira Sadar and Tala mostly share the characteristics of the whole district, though in terms of cropping intensity, all three upazilas are above the District average, with cropping intensity similar to or above the national average, with Satkhira Sadar achieving an intensity of 221%. In both Satkhira Sala and Kaliganj farmers are growing both potato and sweetpotato traditionally whereas in Tala, potato is grown, but sweetpotato cultivation is rare.

### 2.2.2 FGD contexts

Although the easing of the pandemic situation made it possible to undertake the COVID-adapted FGDs, conditions still made logistics more difficult. Travel time was difficult to calculate to the target villages and

organizing the participants to ensure social distancing also more complicated, so that for some meetings the FGD participants were waiting up to an hour and a half before the meeting started. This sometimes affected the willingness of participants to continue to the end of the FGD. This was especially the case for women, for whom the late mornings are a busy time for domestic work<sup>3</sup>. As part of COVID-related precautions, participants were provided with face masks.

Finding suitable locations for the FGD meetings was also a challenge. Community spaces continue to be mostly closed so that the meetings had to adapt to either open spaces within villages or the front porches of the PRODIPAN or CNS coordinators or of a participant. Sometimes extraneous noises of vehicles or children made communication more difficult for some FGDs and in two cases, the other villagers not part of the FGD joined the meeting. The coordinators were able to manage this situation and were able to minimize the disturbance.

The men's groups seemed notably more relaxed than the women's groups, in part because it was more of a social gathering, without pending domestic responsibilities or children to look after. For the women, they were keen to leave to prepare lunch or feed children. Children were present at all the women's meetings, so that mothers in some cases found it difficult to concentrate on the questions and answers. Some of the women participants also showed quite a lot of nervousness in the early stages of the meetings, especially the expectation to express their opinions openly. The facilitator and notetaker were eventually able to put them at ease.

For the CNS, two FGDs were held, one in Khulna and one in Satkhira district. Ten CNS attended each FGD and were drawn from all three upazilas in each district. In the Khulna FGD, heavy rain just prior to the meeting meant that the CNS arrived wet. The location was an empty girls' religious school without lighting and these two factors contributed to challenging conditions for the meeting. The FGD in Satkhira was located on the secluded porch of an empty house with sufficient light and privacy.

## **2.3 Limitations of the sampling and possible bias in responses**

The conditions of the COVID-19 pandemic with the requirements for social distancing meant that the FGDs were about half the size of the normal FGD, reducing the diversity of opinion. Because of widespread concerns about any kind of social gathering, it is possible that those who did agree to participate may have been less risk averse which may in turn be reflected in their willingness to try out new practices learnt during the CNS training.

The participants in both the women and the men's FGDs mostly knew that those conducting the meetings were representatives of the project which was the subject of the assessment and the dominant Bangladeshi cultural pattern in these contexts is to avoid criticism of your hosts. To try to counterbalance this cultural tendency, each FGD was preceded by requests from the facilitators to feel completely free to make all kinds of comments and contributions, both positive and critical. The facilitators especially underlined that the project was especially interested to learn about aspects of the training and follow up which was not so successful, so that improvements can be made in the future. Several of the exercises were designed to be anonymous, so that participants were able to express their free opinions without others being aware. Nevertheless, it is possible that answers were biased towards favorable opinions, though as is reported below, criticisms were certainly made.

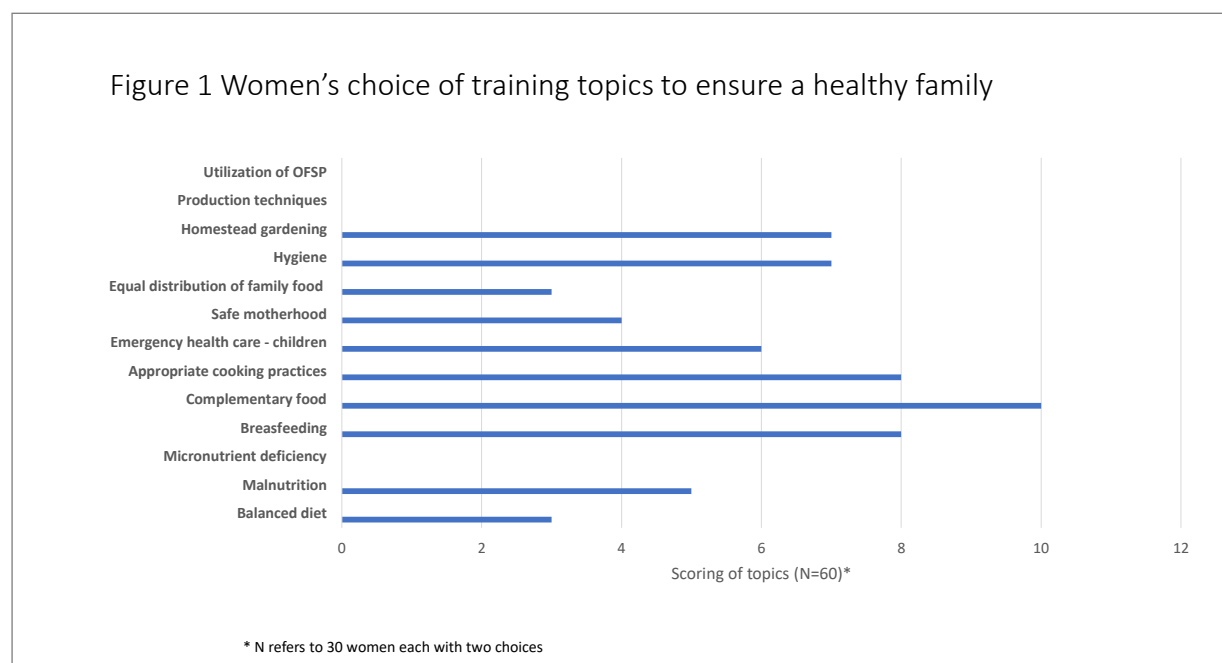
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<sup>3</sup> Consideration was given to conducting the FGDs in the afternoon, but the logistical and safety issues of women having to return home when it would be nearly dark after finishing the FGD and the team needing to make the 2-3 hour return journey to the town also in the dark led to the decision to hold the meetings in the mornings.

## 3 Findings

### 3.1 Overall perceptions by women and men about the CNS nutrition and health training

As part of an initial discussion in each of the women's FGD groups about which of the topics of the training had been most important for them, the participants were asked to choose two out of all the topics that they would recommend to other mothers to help them have a healthy family. The resulting total of 60 choices are displayed in Figure 1. What emerges from these results is that the course was successful in focusing women's attention on improved child nutrition and care, especially for under-5s. A little under half the choices (40%) concern direct feeding of children during the first 1000 days. Another common topic chosen concerns food preparation, also highly relevant for small children as other discussions in the FGD make clear. As can be seen in Figure 1, the topics dealing with nutrition theory (Balanced diet, Malnutrition and Micronutrient deficiency) were chosen in only 8 cases and it seems that for most women the key learnings they wanted to share with other women were about the practical application of improved nutrition through immediate and exclusive breastfeeding, complementary feeding and alternative food preparation. Women's attitude to the topics on Balanced diet, Malnutrition and Micronutrient deficiency were further illuminated by the observations of the CNS during their two FGDs. These topics were able to correct an idea widespread among the women of the link between nutritious food and expensive food. They learnt that inexpensive vegetables and OFSP are nutritious and can contribute to a balanced diet. They also paid a lot of attention to the nutritional value of yellow fruits and vegetables. CNS in the Satkhira District FGD observed that after the discussion about the nutritional value of different foods and their contribution to a balanced diet, many women did not want to hear about the 'negative' topics of malnutrition and micronutrient deficiency.



Women's comments explaining why they made the choices in Figure 1 also indicates their focus on the practical lessons from the training. In relation to breastfeeding and the use of complementary food, many women showed their understanding between the theory and the practice:



*"I have understood the importance of breastmilk that is why I like this topic. It is very important to feed the child first milk within 45 mins of birth and must be fed. Must breastfeed for six months and after, give additional food. After 6 months half bowl, after 9 months one full bowl and keep on feeding as much as he can. Egg, milk, fish and meat is essential for children. An egg in the morning and later whatever he wants to eat. Need to keep a check on his height and weight, whether he is growing as he supposed to".* (Woman's group participant, Khaliganj upazila, 17<sup>th</sup> October, 2020).

Also, in relation to food preparation, the women focus on the practical application of nutrition:

*"I did not know that you can cook food while keeping nutrients. After the training learned that if you cover food during cooking then nutrient content stays in the food. Cut vegetables in big pieces. All these practices have benefitted me."* (Woman's group participant, Koyra upazila, 15<sup>th</sup> October, 2020)

However, when the women were asked about how their ideas and attitudes about nutrition, young child feeding, growing healthy food etc, had changed, their answers were more diverse. Some commented on the changed behavior of their relatives (to be discussed in a later section), some mentioned changed practices that they had learnt in the training. But a few women focused on the basics of nutrition that they had learned in the training and how this new knowledge led them to think differently about nutrition and health in the context of their children and their own well-being.

*"Now I think differently regarding nutrition. Not only children but mothers should also take nutritious food. Such as, calcium, vitamin, carbohydrate etc. If you consume nutritious food, then you will be infected with less diseases".* (Woman's group participant, Koyra upazila, 15<sup>th</sup> October, 2020)

*"I think differently now. All of us became careful as to how to feed, what to feed the child to keep him healthy. So that I and the family stay healthy."* (Woman's group participant Paikgacha upazila, 19<sup>th</sup> October, 2020)

All spouses or senior males in the households of the women participants in the training were invited to attend the first session of the CNS-led course and about 50% of spouses attended. The men in the Koyra, Dumuria and Tala FGDs who attended the first session were asked what two memories of that session really stuck with them. In all three locations men remembered the nutritional needs of pregnant and lactating mothers as well as the food and care need of their small children, with one participant in Dumuria referring to the importance of the first 1000 days. Closely aligned to this, in all three FGDs they had clear memories of the discussion of the importance of equal food distribution in the family:

*Pregnant mother needs more nutritional food. I learned that equal food distribution to all family members that increased awareness to family members.* (Men's group participant, Tala upazila, 20<sup>th</sup> October, 2020).

Other common memories reported in all three FGDs included the importance of the homestead garden as a source of leafy vegetables for the family.

When these men were asked how their participation in the first session had influenced their attitudes to the whole CNS training, they were generally positive. Some men indicated having negative reactions to the training before they knew the content, but then changed their minds. Others indicated that their participation confirmed the positive content of the course:

*I have learnt that the training discussion was a good thing that will be helpful for my family. They did not discuss bad things. This has increased my confidence (in the course) and that's why I encouraged my wife to participate in the training.* (Men's group participant Koyra upazila, 15<sup>th</sup> October, 2020)

For one father-in-law in Dumuria, participation resulting in him supporting his ‘progressive’ daughter-in-law to attend the course:

*My daughter-in-law is very progressive and very much interested as she has a small baby. I encouraged her to join rest of the sessions (Men’s group participant, Dumuria upazila, 16<sup>th</sup> October, 2020).*

All of the men, both those who had participated in the first training session and those who had not, were asked for their opinions about the fact that the course was offered exclusively for women. In three of the six FGDs, men suggested that they were busy with farming work so it was better that the women attended. Others added that in any case, the subject matter was better suited to women, who had more direct responsibility for food choices, food preparation and feeding practices, as well as keeping the children healthy. In the Dumuria group where they had participated in the first session of the training, they suggested that it would be helpful for men to be offered some sessions to support their spouses. In Kaliganj, where the men had not participated in the first session, it was suggested that some shortened sessions could be helpful for the men.

Asked whether their communities accepted that the women attend this training course, five out of six FGDs were unanimous in describing negative reactions at first, especially by older men, but that this changed as more information became available:

*“The general feelings of the men of this village was good, people knew this was a good training. But very few peoples, those who are aged, had negative feelings as they always believe in old traditions and it is difficult for them to accept new things. However, I think day by day they became more enlightened about the training, and they no longer opposed this training” (Men’s group participant Paikgacha upazila, 19<sup>th</sup> October, 2020).*

*“Initially there was a negative idea (about the training) by other village members but when they came to know from me and other members who received training (in the first session) that training topics were good and appropriate for health and nutrition of family member they realized their mistake and were impressed and showed supportive attitude to the organizer and others” (Men’s group participant, Koyra upazila, 15<sup>th</sup> October, 2020)*

The men were also asked how the absence of the women from the home during the training sessions affected the family. All of the FGDs unanimously agreed that there was no disturbance, that other family members stood in and carried out household tasks. One man indicated that he himself took on some of the household tasks, including looking after children. This unanimous opinion contrasts with the reported anxiety of the women who participated in the morning training about needing to get back to their domestic tasks, which accumulate in the late morning<sup>4</sup>.

The men’s FGDs gave a similarly unanimously positive response about community attitudes to the CNS. They described appreciation for the important information they were teaching the mothers, for the correct behavior and ‘gentleness’ of the CNS in their conduct of the training and also for the energy and commitment of these young CNS women to help improve the situation of the community.

During these discussions about overall perceptions in the first session, men were in addition asked about the actions that they themselves take to ensure that their family is healthy and well fed. The responses to this question were not always easy to interpret. In four out of the six FGDs the men highlighted their construction of

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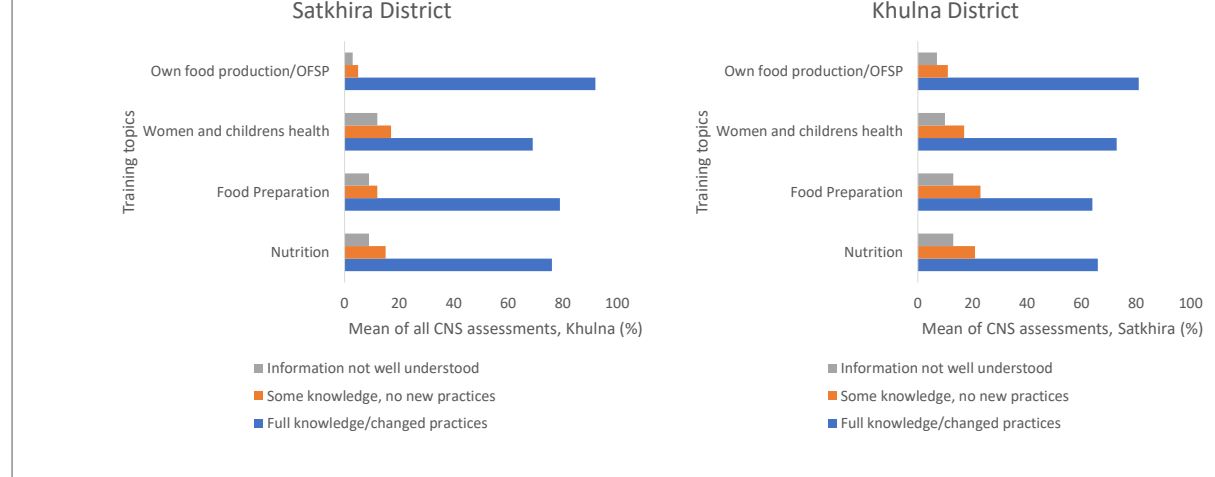
<sup>4</sup> Owing to the logistics of the training course, one CNS needed to conduct training sessions for two groups of women on the same day, one in the morning and one in the afternoon. So in all, 50% of the trainings were held in the mornings and 50% in the afternoons.

latrines as an important contribution to family hygiene and in two cases the construction of tube wells to provide clean drinking water. Men in all the FGDs referred to their purchase of nutritious fish, vegetables and fruit in the market - in one case specifically pesticide-free vegetables – but it is not clear if they are following the requests of their nutrition-trained spouses or making independent purchasing decisions. In all the FGDs men talked about their own cultivation of vegetables in the homestead garden. There is some evidence from other parts of the FGD that in one or two cases men did work together with their spouses in the garden. But in other cases, it seems that because the garden exists within the household of which he is head, he may assume the gardening as his own, even if his spouse is actually doing the work. This is also the case with livestock raising, which is mentioned in four FGDs as the contribution of the men to household nutrition. It is known that women are almost always responsible for tending the family cow or cows and for milking them. Similarly, they are the ones to tend the poultry. A few men mentioned their own contribution to keeping the homestead clean, but the same doubt exists in this case.

### **3.2 CNS general self-assessment of the training, classification of women, observations about acquisition of new knowledge**

As part of their general assessment of the training they gave, based not only the interactions with mothers during the training but also through weekly house visits over the course of the agricultural season following the training, the CNS were asked to estimate the training outcomes for the women trainees in terms of three levels of outcome and for each of the four main topics of the training (Figure 2). The outcome levels ranged from having gained a full knowledge of the content and made changes to practices, to having gained some understanding of content but not showing evidence of changed practices, to having had difficulty understanding the information content of the course with no change of practices. Looking at the summarized means for assessments by CNS in Khulna and Satkhira Districts in Figure 2, according to the CNS, the large majority of the women in both districts understood the content of the different topics and applied that knowledge in practice. There is some variation in these assessments between districts and between topics. According to the CNS in Satkhira, more women experienced difficulty understanding the nutrition and women and child health topics than food preparation. In Khulna, slightly more women understood and applied the knowledge of women and children's health compared to food preparation. It is perhaps not surprising that the CNS in both Districts found these farming women most comfortable and most able to put into practice the topic on own food production in homestead gardens and the uptake of OFSP.

Figure 2 CNS assessment of women's learning achievements by training topics (%)



When asked to characterize the women who achieved the different levels of outcomes the Satkhira CNS briefly described the majority who understood and put into practice their learnings as *“Those who were more interested and listened attentively. Some of them were educated and understood the issues”*. They were more detailed in their comments on the characteristics of women with the other two types of outcomes. In the second group they identified women who were fully occupied in agriculture with little time to test new ways of doing things in the home. It is likely these would have been poorer women. Others were dismissive of the capacities of the CNS trainers (*“you are too young, what do you know?”*), or were stuck in old habits and were not willing to change. They also identified those with no incentive or interest and those without energy. Among the women who understood little of the content of the different topics and made no change in their practices, the CNS identified the older participants who were set in their ways<sup>5</sup>, often hard of hearing and seated at the back of the group. Others in this group were the young daughters-in-law who had been sent in the place of the mother-in-law who was originally enrolled, so probably unwilling trainees. A third characteristic of this group were those coming from religious households where there was resistance to their participation and perhaps doubts in themselves about the new information and practices.

### 3.3 Improving child feeding and food consumption through new nutrition knowledge

The FGDs with both women and men provided the opportunity to understand in more detail how the course teaching on child feeding and food consumption had been received and acted on in the household. The interviews with the CNS in the two target Districts provide additional insights into women's reactions to this topic and adoption of practices that they had witnessed.

<sup>5</sup> Although the CNS training targeted mothers with at least one child under 5, it was not possible to recruit all 5000 participants with these characteristics, so there were some older women in the trainings.

### 3.3.1 Changes in breast-feeding, complementary feeding, other aspects of feeding

The most important changes with regard to breastfeeding reported by the women was to start breastfeeding immediately after birth and to abandon the traditional practice of *shaal dudh*, throwing away the antibody-rich colostrum or first breastmilk, which was a key element of the CNS training on breastfeeding. Following the focus in the training on exclusive breastfeeding, the mothers also reported abandoning the practice of giving honey water or sugar water to the new-born, although it seems that this latter practice was already being discouraged by doctors:

*“During my childbirth, there were different opinions. Some said to give sugar water to the newborn, some said to give honey water. I was scared of whom to listen to. What if something bad happens to my child? Then eventually first milk came... doctor’s recommendation was to give first milk to the child, did not give sweet water.”* (Women’s group participant, Satkhira Sadar upazila, 18<sup>th</sup> October, 2020)

The message about exclusive breastfeeding seems to have been well adopted:

*First milk works as vaccine for the newborn. Till 6 months child need to be breastfeed only, no extra food needs to be given during that time. It might be harmful.* (Women’s group participant, Satkhira Sadar, 18<sup>th</sup> October, 2020).

A second important change widely reported by the women was the practice of complementary feeding for small children over six months of age. The change in practice involved both not prolonging exclusive breastfeeding beyond six months, but also preparing special dishes for the weaning child rather than giving any food that the family were consuming, which according to several of the women was often just rice.

*“Earlier did not give emphasis for child’s food. Whatever I cooked for others (in family), I used to feed him also, for example rice, fish, meat. Now, I cook separately for my child. I cook Khichudi<sup>6</sup> for the child mixed with all vegetables”.* (Women’s group participant, Koyra upazila, 15<sup>th</sup> October 2020).

As well as starting to prepare easily digestible and nourishing dishes that complemented breastfeeding in weaning children many women reported the equally important change of devoting greater attention and time to feeding:

*I did not used to give much time to feed my child. She did not want to eat. Now I take time to feed her and feed her timely in every meal.* (Women’s group participant, Kaliganj upazila, 17<sup>th</sup> October 2020)

*Before I used to feed him less in quantity and frequency. Now I give him more. Sweetpotato vines, apple, noodles, egg (everyday), liver. I did not know that children need to be given additional food for their growth. I did not feed my eldest son like this.* (Women’s group participant, Satkhira Sadar upazila, 18<sup>th</sup> October 2020).

Having discussed the changes they had made in child feeding, the women’s groups were asked to explain why they had made those changes and what benefits they saw from the changes. The explanations about why they had made changes were given mostly in terms of the benefits they saw in their children. Out of the 30 women making up the FGDs, 14 identified health benefits as the main reason why they were practicing the new feeding methods. With great honesty, one woman related improved health from the new feeding practices to reduced whining, admitting that *‘whenever a child is not healthy, he irritates’* (women’s group participant, Kaliganj FGD). Seven women focused specifically on weight and height gain as the major benefit they identified, and two women referred to improved intelligence and memory.

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<sup>6</sup> A mash made mainly with rice and lentils

*These sorts of food are required for a child. He is growing up well. According to the age weight and height is right. When I take him to Healthcare Center, they check and tell me he is alright.* (Women's group participant, Kaliganj upazila, 17<sup>th</sup> October 2020)

In four of the FGDs, the women also mentioned less visits to doctors as an important benefit of the new feeding practices.

In order to understand the retention of new knowledge by the women and their interest in sharing it, the men's groups were asked what information from the training the women had shared with them. Only two men in Paikgacha FGD indicated that they had not heard from their spouses about the training, in one case because the demands of a very large family made communications between them difficult and rare, and in the other due to seeming absence of marital communication. However, despite there being a total of 29 instances when men mentioned elements of the training they had learned about from the women attending the course, there were only three instances of sharing of information about breast-feeding and complementary feeding, two of them in the same *upazila* of Koyra. This may be because these topics were considered more the mother's personal domain. On the other hand, when men were asked about what changes they had observed in the practices of the women who attended the training, in four out of six FGDs men mentioned seeing their spouses taking more care and time for feeding their small children:

*"She takes care of children more and feeds nutritious food to children with patience and gives more time for child feeding"* (Men's group participant, Tala upazila, 20<sup>th</sup> October 2020).

In the FGD in Satkhira Sadar *upazila*, the men also mentioned that their wives no longer obtain food for their small children from kiosks outside the home. She only gives the food made in the house.

CNS observations on uptake of feeding practices by women tends to confirm these observations by the men. CNS in the FGD in Satkhira District noted that women previously did not breastfeed *"while sitting properly, following feeding recommendations"*. Another CNS in the same meeting commented that the women *"did not know that the baby should be fed extra food after 6 months of breast-feeding. This will strengthen the body and the brain will develop"*.

A large part of the discussions about complementary feeding by women, men and CNS concerned new types of food preparation for young children in the weaning period and the results of the assessment of the new knowledges and practices will be considered in the following sub-section

### **3.3.2 Changes in food preparation and consumption**

As indicated above, an important change in food preparation made by the women after the training was to make special complementary food for their weaning babies, rather than just giving them small amounts of the food prepared for the whole family. Many women also said that they had increased the feeding schedule for small children from 3 to four times a day. The most common special foods they prepare for the children is *Khichudi*, a kind of semi-liquid puree of rice and lentils with added vegetables. The basic dish is widely prepared, but the women describe a special preparation that is more nutritious.

*Earlier I used to feed her only rice, now I give egg, milk. I used to cook Khichudi with rice and pulse only now I add vegetable and egg with less spices and oil. I didn't know this earlier so did not feed my eldest child, now I know, and I now give him seasonal fruits to eat* (Kaliganj FGD, 17<sup>th</sup> October, 2020)

Out of the 30 women in the FGDs, 14 mentioned prepared *Khichudi* in this way. Eggs are now also being prepared as a complementary food, with 13 women mentioning this preparation. In the Koyra FGD one mother said that



she previously sold all her duck and chicken eggs to the market but now uses some as complementary food for her child. There were a total of 31 references by women to giving their children milk, either in more quantity or more frequently covering all the FGDs. No women mentioned the source of the milk, but there were 11 references by men to either assuring supply of milk for children from their own cows, or purchasing milk in the market, or in one case increasing the quantity of milk provided to the family with less sold to the market. One man mentioned that his spouse was rearing a cow to provide milk for the family. Other animal source foods (ASFs) mentioned by women in five of the six FGDs included liver, preparation of a paste from the heads of small fish and other fish products. Ten women explicitly mentioned giving leafy vegetables as complementary food and ten women also mentioned using either sweetpotato tops as leafy vegetable or boiled sweetpotato roots or potatoes for their child's food.

In their discussions of changes in the food preparation and consumption for the whole family the women most strongly emphasized either the introduction of leafy vegetables as a new component of their diet or increasing the quantity consumed:

*"Every day eat vegetable as well as leafy vegetable. We take leafy vegetable one meal per day such as, red amaranth, aroid leaves, spinach, stem amaranth, kangkong, sweetpotato leaves. I did not know that these leafy vegetables are nutritious, so I eat them now regularly which I did not do before"* (Women's group participant, Dumuria upazila 16<sup>th</sup> October, 2020)

*"No one in my family wanted to eat vegetables before. We have to eat 250 grams of vegetables every day. Before we eat leafy vegetable as we wish, now we eat leafy vegetable and vegetables every day. After training, I cultivate vegetables at home no matter how hard it is"* (Women's group participant, Tala upazila, 20<sup>th</sup> October, 2020)

This reference to the source of the vegetables and other nutritious food in the last quotation was another area of discussion with the women. In three out of the six FGDs, women said that all their vegetable needs came from their garden. In other cases, the leafy vegetables came from the garden and other vegetables from the market. Except in one case, fruits were purchased in the market. All women indicated that their husbands made the purchases of nutritious food in the market and as a woman from the Paikgacha FGD said, *"We tell husband what to bring, he brings. When he asks why, we tell him the benefits"*.

The topic that men say they most frequently heard about from their wives as feedback from the training was about types of nutritious food like vegetables and fruits and methods of conserving the nutrients during food preparation (10 mentions out of 30 elements of learning that the men remembered in the six FGDs). When asked about changes that the men observed in women's practices after the training, food preparation was frequently mentioned in considerable detail, both concerning better conservation of nutrients and also better food safety practices:

*"In my family I see changes in cooking method. Previously (before training) she was firstly slicing vegetable with small size and after that she clean vegetable for cooking, but after training firstly she clean vegetable with safe water and after that she is doing slicing with comparatively big size for cooking. While cooking she is using a cover to the pot to protect nutrients from being lost by vapor. Earlier she was not practicing that"* (Men's group participant, Satkhira Sadar upazila, 18<sup>th</sup> October, 2020).

*"Before training my wife kept food open, which is unhygienic or cooked food in a less nutritious way. But after training she always try to give nutritious food like different kind of seasonal fruits, mixed food with pulses, egg,*

*green pea and rich etc. Some time she prepared mixed food with rich vegetables which contain more nutrients.* (Men's group participant, Dumuria, 16<sup>th</sup> October, 2020).

These two examples of men's observations are repeated in most of the FGDs and must have been a topic of conversation in the family. In the CNS FGDs, one of the CNS observes that *"they were not aware about the techniques of cooking, such as to cut vegetables in big pieces and cover when cooking. Wash first, then chop"* (Khulna CNS FGD). This component of the course seems to have been widely adopted.

### 3.4 Protecting women and children's health

In relation to personal hygiene and cleanliness affecting their children's and their own health, many of the women testified that they have changed practices as a result of the training. The direct link between women's own behavior and their children's well-being is beautifully captured by one of the woman:

*"Nowadays, children will be as healthy as the mothers are alert"* (Women's group Paikgacha upazila, 19<sup>th</sup> October, 2020)

There is evidence that the training helped women to be more alert and self-sufficient in looking after their children:

*I suffered a lot with my eldest daughter. She used to be very sick and needed to go and see doctor very often. I have learned a lot from the training. The 'sisters' (CNS) told us many things. I don't need to go to see a doctor now. I can now take care of my young child very well, better than (I was able to do with) my eldest daughter* (Women's group, Satkhira Sadar upazila, 18<sup>th</sup> October, 2020).

Out of a total of 43 mentions of changed practices, 18 refer to increased hand-washing, especially in relation to use of latrine, but also in relation to food preparation and eating. In one case there was reference to hand-washing when a child returned from tutoring sessions outside the house. The training and the practices under consideration mostly predated the emergence of the COVID-19 pandemic in Bangladesh, but in the final section of these results we asked directly about how the pandemic had affected behavior.

The second most common set of reported changes mentioned 17 times by the women concern personal hygiene, including more frequent cloths washing, use of soap in clothes washing, frequency of showering and nail cutting.

Improved hygiene in the use of latrines was less widely discussed. Most comments were about using separate sandals in the latrine. In only one case (in Koyra FGD) did a woman participant comment on upgrading the latrine structure itself, having *"plastered the floor and covered the latrine with bamboo walls..."* (women participant, Koyra FGD). One other person indicated plans for making structural improvements. Financial constraints have limited the ability of participants to follow best hygiene practices introduced in the training. In Koyra, six families are using one latrine because they cannot afford their own. Only one woman commented on the issue of clean water availability. That was also in Koyra where there was limited access to clean water for domestic use, with most women taking their bath in the local pond.

Regarding more general comments on the constraints to following the recommended hygiene practices, one participant commented on the difficulty of making these changes in the family:

*"At first these practices were not followed by the family members. It is not possible to change behavior in a day. Had to nag family members to follow these practices"* (Women's group participant, Dumuria upazila, 16<sup>th</sup> October, 2020)

Another commentary in Kaliganj also supported the experience of having difficulty with family members making hygiene changes, but identified old people as those mainly resistant to change:

*"I notice that they do not wash their hands after using bathroom. I point this out to them. Now they wash their hands after I am saying it repeatedly"* (Women's group participant, Kaliganj upazila, 17<sup>th</sup> October, 2020).

Men's recollections of the information that women shared with them on health and hygiene were less than those about nutritious food and food preparation or about gardening, but they were still substantial. There were 10 comments about ensuring the health of mothers and children, including through hand-washing, use of clean water, vegetable washing and other aspects of hygiene, out of the total of 32 mentions of things learnt from the women. In terms of observing changes in health practices by women, men in the Koyra FGD noted that previously *"small children play on the ground, but now she spreads a mat where my child can play"*. Similarly, with regard to hand-washing, men in Koyra identify changes:

*"Now, at any time when she gives food to my children, firstly she washes her hands with soap then gives food to the children. And she also ensures that my children do hand washing when they take food by themselves"* (Men's group participants, Koyra upazila, 15<sup>th</sup> October, 2020).

A number of the comments from the men on the issue of mother and child health were notable: *I have learned to take more care of the pregnant women and newborn baby that will save them from different types of diseases"* (Men's group participant, Koyra upazila 15<sup>th</sup> October, 2020). Men also commented in the same location on the need to provide pregnant women with additional, nutritious food:

*Women work harder compared with men, so they need more food for their health. It is very essential to give more food for pregnant women and children for their good health and to have healthy grown-up children"* (Men's group participant, Koyra upazila, 15<sup>th</sup> October, 2020).

Similar comments were also made in other men's FGDs in Dumuria, Kaliganj and Satkhira Sadar. Many of these comments were in response to a direct question about whether there were practices in their community that privileged men and male children with greater quantity and quality of food portions. Some men indicated that they had learnt from the women about the importance of equitable distribution of food within the household, but all men indicated that they were very much against the practice. In Dumuria FGD, it was suggested that the practice may have existed in the past, but in the present, there was equal distribution of food, even suggesting the need for pregnant women requiring extra food. But in three FGDs, Dumuria, Satkhira Sadar and Paikgacha the men indicated that the women themselves tried to give the men more food and themselves less.

In the two FGDs in Satkhira and Khulna Districts, the CNS were also asked for their perceptions about the issue of food distribution within families. In the Satkhira FGD one CNS described the motivation of women:

*Mothers get a form of pleasure from feeding everyone in the family. And they end up having food at last (for themselves) from the bottom of the pot which is not even a portion of one person. This is changing. Now they all sit together and eat together"* (CNS participant, Satkhira FGD 21<sup>st</sup> October, 2020).

*Mothers used to give more food to their sons, now they give equal portions to their daughters as well. It is difficult to change the way of thinking that has been followed from grandmother's time.* (CNS participant, Khulna FGD, 22<sup>nd</sup> October, 2020).

But when the CNS in both FGDs were asked to estimate the percentages of families whom they visited where there were changes in the older practice of women and girls receiving less food, the estimates ranged from a high of 90% with changed practices to a low of 50% with an average of about three quarters having changed. This suggests that

unequal distribution of food in the family continued to be much more common than indicated in the men's responses. It is also worth noting that the mean of these estimates for Khulna was 80% of households with changed practices on food distribution, whereas in Satkhira it was 72%. The key factor according to the CNS has been the practice of women and sometimes girls eating after the men. The key factor in equal distribution according to the CNS seems to be when "all sit and eat together" (CNS participant, Satkhira FGD).

Regarding the module on Women and Child Health, the CNS undertook an independent scoring exercise, and they mostly confirmed a high level of interest by the women in the three topics making up the module, namely Emergency health and diet, Safe motherhood and Hygiene. Confirming observations made by the women participants and their spouses, the CNS reported generally positive support by the mothers-in-law for the women trainees:

*"The mothers-in-law encourage (their daughters-in-law) by saying the mothers-in-law's own time has already passed and that they should listen to these issues (in the training), it will be good for them"* (CNS participant, Satkhira FGD, 21<sup>st</sup> October, 2020)

The CNS also provide corroboration that the women are mostly following recommended practices for female health. For example, the CNS also indicate that there has been an improvement in the hygiene surrounding menstruation<sup>7</sup>, with increased use of sanitary pads. Women have learned new ways to ensure a safe pregnancy, including the need for routine checkups and how to deliver their baby whilst maintaining hygiene.

In relation to water use, the CNS note that women in Satkhira invest a lot of energy to ensure there is clean drinking water for the house:

*At least they are free from water borne diseases. The clean water tap is very far away, but they take the trouble to go and fetch water from there and only drink this water. Water from tap in their houses, they use it to wash clothes and utensils. Drinking safe water is another name for life"* (CNS participant, Satkhira FGD, 21<sup>st</sup> October, 2020).

### **3.5 The benefits and limitations of own food production and use of Orange-fleshed Sweetpotato (OFSP)**

The activities of the Resilience project to contribute to better health of mothers and young children in target households in Southern Bangladesh addressed not only improvements in food selection, preparation, young child feeding and the health and hygiene environment of the household, but also sought to improve the capacity of households to produce their own nutritious food through homestead gardening and increased production and consumption of pro-Vitamin A rich orange-fleshed sweetpotato (OFSP). The CNS training included a module to support improved production practices for homestead gardens, including production of OFSP for increased consumption of roots and tops and distributed vegetable seeds and OFSP cuttings for planting in the garden.

#### **3.5.1 Importance and uptake of homestead gardening**

All 30 of the women who participated in the FGDs planted the vegetable seeds that were distributed through the CNS. The women mentioned four major reasons for planting:

- Satisfy nutritional needs of the family
- Save on purchases of vegetables

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<sup>7</sup> This has been an important component of several health initiatives supported by the Government, for example the Bangladesh Nutrition Activity funded by USAID.

- Enjoy pesticide free vegetables
- Have access to extra income

One or more of the women in all of the FGDs mentioned the nutritional benefits for the family of planting the vegetables in their gardens. They described the reason in slightly different ways, such as satisfying vitamin or consumption needs of the family, or that *“nutrients...will meet the deficit”*, or as consuming *“homegrown fresh vegetables”*. Five out of the six FGDs focused on the financial savings that own production of vegetables permitted, or simply on the sales of excess vegetables from the garden providing extra money. Different women framed this reason slightly differently, for example as supporting household expenses, as reducing the need to buy vegetables or as providing a buffer for the household when vegetable prices are high in the market. In two FGDs, women cited the availability of vegetables that were pesticide-free as a major reason for cultivating their garden. In the Dumuria FGD the women mentioned gifting of vegetables to relatives or neighbors and the happiness this generated as a reason for own production.

The module on own food production was the second most popular topic recalled by those members of men’s FGDs who attended the first session of the CNS training. It was mentioned 9 times in five out of six FGDs. This included the nutritional value of new crops that could be grown in the garden, including OFSP.

In the discussions with the men’s FGDs on this topic of own production of vegetables, the focus was on the men’s reactions to new crops and new cultivation methods that the women who attended the training were to introduce into their homestead gardens. A difficulty with some of the men’s responses was the extent to which some men assumed ownership over ‘their’ homestead garden, the new species of vegetables and the new cultivation techniques:

*“After training I cultivate...preparing bed and row and maintain row in my homestead gardening”* (Men’s group participant, Koyra upazila, 15<sup>th</sup> October, 2020).

In other cases, there is ambiguity between collaboration and assumed ownership of the garden. In several cases it seems that the men helped their spouses by preparing the land in the homestead gardens, but in several cases the next steps are unclear who is responsible:

*I have prepared the seed bed as suggested by my wife and planted those in the bed... It is very easy for me to take care of vegetables and SP fields as I planted in bed method”* (Men’s group participant, Kaliganj upazila, 17<sup>th</sup> October, 2020).

Some of the cases of ambiguity may be explained by preparation and sowing/planting of the new, nutritious crops in field plots. These are mostly under the responsibility of men and their assignment of space for the new nutritious crops is a sign that the training has influenced the allocation of this normally commercial space.

Other evidence confirms women’s control of homestead garden decision-making and the contribution of men to land preparation in that space. In this perspective, men are cooperating with their spouses, not ‘taking over’ what is almost always a ‘woman’s space’:

*“I helped my wife for land preparation. Both me and my wife planted vines and seeds in a prepared seed bed maintaining row to row distance which I never did earlier. She irrigated the field regularly and provide organic matter, not used any chemical fertilizer, not spaying any insecticides or fungicides. So, my product was fully safe that we are taking for our household consumption regularly.”* (Men’s group participant, Paikgacha upazila, 19<sup>th</sup> October, 2020)

Though even in this last comment, this man refers to ‘my product’ from his spouse’s garden.

As well as commenting favorably on the new species of vegetable that were sown in the homestead gardens, all the men's FGDs appreciated the row planting in beds recommended to the women in the training. These were very widely adopted and were commended for ease of weeding, for good drainage and for avoidance of water-logging.

The CNS confirm strong interest by the women in the topics of home-gardening and production techniques, with slightly lower interest in production techniques in Khulna District. They note the lack of familiarity among the women of the possibility of planting in beds in their gardens and this also confirms the observations of the men about the novelty of the technique. In both Satkhira and Khulna Districts they observed that a lot of the backyard lands were left uncultivated, because of lack of money to purchase seeds. When the seeds were made available by the project, all the women planted their gardens. This raises the question of the sustainability of vegetable production in these household spaces once the project comes to an end. This is especially important, since the CNS FGDs in both locations also suggested that the women do not have money to buy vegetables in the market, or that they weaken their own domestic position by needing to “ask money from mother-in-law to buy vegetables”. The key issue of sustaining seed systems will be taken up again in the discussion.

### 3.5.2 Uptake of OFSP

As part of the CNS activities, sweetpotato vines were distributed to all of the women who participated in the nutrition and health trainings, including the 30 women who agreed to be part of the FGDs. Twenty nine of the 30 women planted the vines. The exception was a woman who said she could not prepare the land in time. Common reasons for planting OFSP across the different *upazilas* are displayed in Table 1. The most common reason given was for the nutritional benefits that women had learnt about in the training, which were mentioned in all FGDs. Sometimes the nutritional benefits were understood by some women in terms of the vitamins they thought OFSP contained, or of preventing or eliminating disease. Some of the women's observations about the relief of disease reflected clinically proven characteristics of OFSP, such as night-blindness. Others, such as cancer and diabetes, are not supported by clinical evidence.

**Table 1** Women's reasons for planting OFSP and including in food preparation

<i>Upazila</i>	Why plant OFSP?	Why use OFSP in cooking?
Koyra	Nutrition; nutrition from vine and roots; Source of income; as gift for relatives	For the vitamins, including iron; can be added to dishes (Khichudi); for children's growth and disease prevention; children like sweetness
Dumuria	Prevent disease, such as night blindness; nutritious; as source of income	For children's food; removal of night blindness, anemia; helps brain development;
Kaliganj	Nutritious food; substitutes for eggs or milk; nutrition from vine and root	For children's food, for their nutritional needs
Satkhira Sadar	Nutritious food; children like to eat; nutrition from vine and root; source of income	N/I
Paikgacha	Food from roots and vines; flexible for replanting; vines can be sold (as seed?); roots and vines good for nutrition; source of income; contains vitamins A,B,C, prevents disease	For children's nutrition, to keep them healthy
Tala	To obtain leaves as vegetable; nutrition; prevents cancer, diabetes;	Babies like the taste of OFSP; for better nutrition; OFSP contains vitamin A, B, C, K

Another important thread running through most of the responses in Table 1 is the strong interest in the beneficial properties and culinary opportunities of both the roots and the vines of OFSP. In some responses,



there seemed to be more interest in the vines than the roots for use as a vegetable (*“Planted OFSP so that we can eat sweetpotato leaves...”* – Tala FGD) and that interest resonates in comments in other parts of the FGD discussing food preparation. Participants in four of the six FGDs also mentioned as a reason for planting OFSP the chance to earn extra income and, in one case, as a suitable gift for relatives. In one FGD an agronomic property of OFSP was valued, namely the ease with which vines can be cut and replanted in other locations.

Table 1 also summarizes responses from the women about why they are interested to use OFSP in cooking. Some of this information emerged in the earlier discussions about food preparation, but this information confirms its popularity with babies and children and at the same time, its beneficial properties for them:

*At first my child did not like to eat. I cooked Khichudi, noodles with sweetpotato leaves and vegetables and pakora (rice flour & sweetpotato leaves) and boiled sweetpotato for my child. He likes eating boiled sweetpotato.* Women’s group participant, Dumuria upazila, 16<sup>th</sup> October, 2020).

The discussion with the men’s FGDs about the uptake of OFSP covered general attitudes to the crop, the way women in their households who attended the training discussed the crop the level of interest in training for men on OFSP and their attitudes and experiences of the crop as a new food in the household. There were variable opinions and experiences about sweetpotato as a commercial crop across the different locations. In the western *upazilas* of Satkhira Sadar and Kaliganj, the men indicated that there was good demand for sweetpotato, although some participants in Kaliganj also considered that the OFSP varieties were too long maturing to be located in the field. A general consensus was that it was well suited to being a crop for the homestead garden, where its main benefit is as a leafy vegetable, because of low root production. In three *upazilas*, Satkhira Sadar, Paikgacha and Tala, where there was earlier experience of growing sweetpotato, there was a consensus that OFSP was suitable as a field crop for the production of roots and as a homestead garden crop as a leafy vegetable. There were some observations about the agronomic properties of the crop, for example in Dumuria where it was considered easy to grow and higher yielding than potato. But in that location, all agreed that there was low demand and so low prices.

Men reported that the women who attended the training mostly discussed them both the high nutritional value of OFSP and also the practical question of planting the 250 vines that were provided by the project and the bed method of planting which the training recommended. All of the men who commented on receiving the information from women trainees about the bed method accepted this as a good way to plant the vines. As earlier discussed in relation to land preparation and sowing of vegetables, the level of involvement of men may have depended on whether the planting was in the homegarden or the field. In two FGDs most of the men suggested they took on both land preparation and planting with limited discussion, which may suggest that the planting was in the field. In two FGDs most men said that the women asked them to prepare the land and plant, which may have been in the homestead garden. In the other two FGDs men reported that they shared tasks with the women and in these cases, it again seemed that it was in the homestead garden.

In all but one FGD most men reported having received training for different crops, but men in three FGDs, Dumuria (5 men), Satkhira Sadar (2 men) and Koyra (1 man), reported having received training on sweetpotato. There was not a clear demand coming from any of the FGDs for this kind of training, even though in Satkhira Sadar OFSP had become an important crop:

*“OFSP is very good as a future crop and its yield is high. If we planted in good sandy soil its yield will be 120-130 mond/bigha. It is very important crop for me now”* (men’s group participant, Satkhira Sadar upazila, 18<sup>th</sup> October, 2020).

Almost unanimously the men said that the women did not discuss with them the inclusion of OFSP as an ingredient in their daily diet, although as discussed in Section 3.3.2 the men reported hearing a lot from the women about the value of OFSP as a nutritious food. As an insight into what may be a common occurrence around the involvement of men in food preparation, one of the participants noted:

*If a guest comes to my house that is the only time my wife discusses with me about food preparation. Otherwise she does not. Most of the time we discuss about the food during eating, not before cooking. I have never discussed with my spouse about including OFSP in food preparation. Whenever she likes she uses the leaves to make vegetables”* (Men’s group participant, Kaliganj upazila, 17<sup>th</sup> October, 2020).

There was also considerable consensus across the FGDs that though OFSP is very good for children and they like the sweet taste of the roots, most of the family eat both the roots and the leaves as vegetable, even to the extent of eating OFSP-based khichuri prepared for the children. Except for one example of a thin, sick daughter who gained strength on an OFSP diet in Satkhira Sadar, most FGD participants indicated that they had consumed too small a quantity and over too short a time to be able to talk about the health benefits of OFSP.

CNS perceptions about the importance of OFSP for women matched those identified by the men’s FGDs. In both the CNS FGDs all scored the women as considering OFSP as of greatest interest. This interest was stimulated by the information about the nutritional benefits which the CNS shared with them. The CNS in Khulna District noted that despite the traditional cultivation of white fleshed sweetpotato in some of the *upazilas*, orange-fleshed varieties were not known, nor their nutritional benefits.

### 3.6 Sustainability of the new nutrition and health knowledge at scale

The possibility that new agricultural or health technologies and practices become sustainably established within household-level agri-food systems and achieve larger-scale uptake throughout particular agri-food systems is complex, but two factors are of great importance. The first involves the social norms supporting or constraining exposure to and uptake of the new practices by different segments of the local population where the new technology or practice is introduced. Is learning about, testing and exploring the new practice encouraged, discouraged or prohibited? Do these pressures lead to abandoning new practices after a short experiment? The second element involves the horizontal communication channels that exist between the innovators and other members of the population.

As part of this assessment, women, men and the CNS were all asked about local attitudes towards new technologies and practices that were taught to women and were designed to improve mother and child nutrition and health. Women were asked whether there was any desire or pressure for them to revert back to the earlier practices. The women and the CNS were also asked about their sharing of the new practices with relatives and neighbors.

With regard to the feeding practices for small children and new food preparations, none of the women’s groups indicated any return to earlier, more traditional practices. Women in Kaliganj said that *“going back to previous habits would be a loss”*, and that they *“faced the difficulties to change those habits”*. In Satkhira Sadar, they recognized where the authority of the earlier habits resides, but they *“don’t heed anymore to what grandmothers say”*.

The women were also asked about the reactions of other family members or the community to the new practices and whether they had to get permission to adopt the new practices. The overwhelming feedback from all the FGD groups was that there was no need to obtain permission for these changes. In five out of six FGDs women mentioned the support they received from husbands in relation to the new practices and the role of husbands

in some cases to overcome time constraints faced by the mother. Women in Koyra mentioned some “taunts from neighbors”, and in Paikgacha, some opposition from mothers-in-law, but also the support from sisters-in-law and husbands to overcome that opposition. Other women, for example in Dumuria and in Satkhira Sadar, mentioned the support they had received from mothers-in-law and even fathers-in-law:

*“My mother-in-law says, ‘I have grown somehow, you people are growing in a better way now’. My father-in-law gave me books on childcare to read. Got support from my family”*

An important constraint on inclusion of new foods in complimentary feeding and overall improvement of diet is financial, mentioned by women in Tala.

The picture regarding the adoption of new practices for mother and child health is equally positive, with no reporting of the need to seek permission in any of the FGDs. It is clear from the comments of the women and considering the cultural avoidance of overt expression of criticism of family members, that it took time for the rest of their family to fully embrace things like hand-washing after use of the latrine. The lag between the women’s new health and hygiene practices and those of the family may have produced tension, but all talked about the family eventually adopting the new practices.

The women’s FGD groups were also consistent in confirming that they have not abandoned the use of OFSP as part of their families’ diet, except when the crop is out of season, when they consume other vegetables. As a woman from the Tala FGD pointed out, babies like OFSP, so why would they stop using it in the meals? Once again however, when discussing constraints to use OFSP, the issue of financial resources emerged as important. In the Paikgacha FGD, one participant pointed out that *“there is no problem giving (as food for the family), those items which we don’t have to buy”*.

Testimony was also collected from women about the extent to which they shared their new knowledge and practices with other women beyond those who participated in the training. Table 2 collates the information about this scale-out of information by the 30 women who participated in the FGDs. In the case of Koyra, two women were very active ‘connectors’<sup>8</sup> for the transmission of knowledge about the CNS training, one via her small grocery store, the other via involvement in a local NGO. Another active connector in Dumuria also used her involvement in a local NGO to share knowledge with large numbers of local people. In Tala, the women provided sex-disaggregated information about knowledge sharing, showing that of the upper figure of 139 people to whom nutrition and health knowledge had been shared, 105 were women. A woman participant of the Paikgacha FGD observed that she *“tells (information) to women wherever I go”*.

**Table 2** Scale-out of nutrition and health knowledge by women participants of 6 FGDs

	Family/neighbors	Locality	Other areas	Total
Koyra	28 - 38	3000 – 4000*	2000**	3028 - 6038
Dumuria	95 - 120			595 – 720***
Kaliganj	30 - 35			30 - 35
Satkhira Sadar	58 - 91			58 - 91
Paikgacha	27 - 46			27 - 46
Tala	71 - 139			71 - 139
<b>TOTAL</b>	<b>309 - 469</b>	<b>3000 – 4000</b>	<b>2000</b>	<b>3809 - 7069</b>

\*Contacts via a local grocery store

\*\*Via membership of a local NGO

\*\*\*Includes combination of family/neighbors and local NGO contacts of 500 – 600 for one woman

<sup>8</sup> Gladwell, M, 2000. The Tipping Point. Little, Brown and Company, New York

Even setting aside the high numbers involved in the sharing by the two women in Koyra and the one woman in Dumuria, the lower estimate of sharing with family and neighbors suggests a scaling on average of about ten times the 30 participants in the FGDs. If this is extrapolated to the 5000 women who participated in the CNS training, this suggests a conservative estimate of perhaps 50,000 other women who had been reached with knowledge about innovations in mother and child nutrition and health.

Further insights into the social norms surrounding adoption of new nutrition and health practices by women can be gained through the views expressed in the men's FGDs. Section 3.1 above provides some results of men's observations about their and the community reactions to the women's participation in the CNS training. In five out of the six men's FGDs – Kaliganj being the exception – negative feelings towards the women's participation in the course were described, sometimes linked to 'old men' or 'old aged people' in the village, sometimes left as a more general negative reaction.

*"A few people, especially those who are old aged, had negative feelings, since they always believe in the old culture and it is difficult for them to accept new things"* (Men's group participant, Paikgacha upazila, 19<sup>th</sup> October, 2020)

Nevertheless, in all the cases, the men reported that local opinion changed when there was greater understanding about the content of the training, which is closely aligned with the normative responsibility of women – reproduction, childcare, food preparation and family health.

Within the immediate family, where there seems to have been quite a good understanding of the content of the training from early on, the men report considerable support, including in four out of six FGDs the confirmation that other family members covered the duties of the women in the household when she was at the training, learning about the new practices. This family support may not have been without cost – the anxiety of the women participating in the FGDs to return to their houses as midday approached suggests that an absence from key domestic tasks may have given rise to tensions, however culturally acceptable the content of the FGDs or the earlier training.

In relation to scaling men were asked about sharing of information about the training among the men themselves, especially for those who were not able to attend the first session. None of the men reported hearing any information about the training from other men. Although the men were not asked directly about the scaling of the new practices by women, in the context of the discussion about reactions of the community to the women's participation in the training, one of the participants did observe that *"other women and village people have been changing their behavior through sharing in the knowledge of the training* (from the women trainees) (Men's group participant, Tala upazila, 21<sup>st</sup> October, 2020). Another comment also provides an insight into the ease or difficulty of scaling practices that are mostly under the responsibility of women:

*"All the good things (the women) have learned because it does not cost much, are not harmful, and are not too hard to practice, so we are trying to follow all training information because it is helpful for the good health of our family members."* (Men's group participant, Koyra upazila, 15<sup>th</sup> October, 2020).

The observation captures the idea that technologies and practices can more easily be scaled if they have minimum cost implications, do no harm and can be adopted relatively easily.

Although the CNS were not asked directly about community resistance to the training or about the scaling activities of the women trainees, they were asked about their own sharing of the content of the training with their own social networks. All of them recounted having shared either knowledge of food preparation and conservation of nutrients or shared vegetable seeds and OFSP cuttings with different relatives.

### 3.7 Transformative potential of the CNS training

One important component of the assessment was to try to understand the extent to which the training was personally useful for the women who attended and how far it contributed to empowering, as both mothers and women, the 5000 trainees who passed through the CNS training. Was there a transformation in their agency?<sup>9</sup> A related question was about the effect of the course on the CNS trainers. How has their own positions as young women in their communities changed?

Regarding the usefulness of the course, 70% of the FGD participants considered that the training had been a very good use of their time, and 30% that it had been a good use, but with perhaps a few reservations (Table 3). When asked about the benefits, out of 31 comments on what they found useful about the training, 14 mentioned aspects of diet and nutrition, food preparation or cooking. There were 10 comments mentioning the benefits of food production, and the provision of seeds by the project was highlighted in three comments from one FGD. Also, there were three comments in relation to food production that highlighted the chance to earn additional income. Seven of the comments highlighted benefits of an improved capacity to look after personal and family health.

**Table 3** Personal importance for women of attending the CNS nutrition and health training (# = 30)\*

FGDs	Not worth my time (1)	(2)	(3)	(4)	Very good use of my time (5)
Koyra				1	4
Dumuria				3	2
Kaliganj					5
Satkira Sadar				2	3
Paikgacha				1	4
Tala				2	3
<b>Total</b>				<b>9</b>	<b>21</b>

\*These were blind responses by the 30 women

There were other more general comments that related benefits to individual empowerment. This issue was explored through blind agree/disagree responses to three statements:

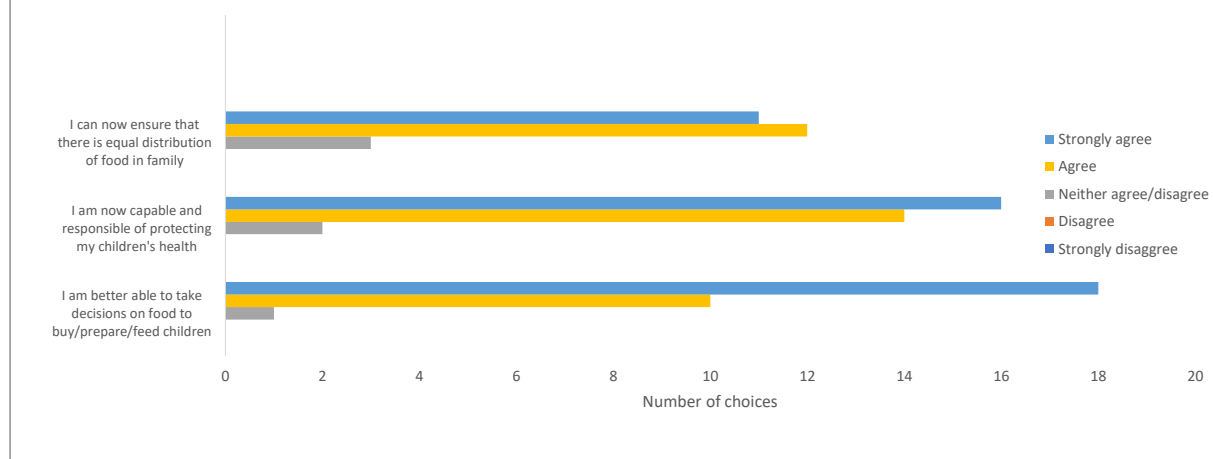
1. I am much better able to take decisions about which food to buy, prepare and feed to my children
2. I am fully capable and responsible of protecting my own and my children's health
3. I can now fully ensure that there is equal distribution of nutritious food within my family

On the issue of decisions about food, about two thirds of the women (18/29) strongly agreed with the statement (Figure 3) with most of the rest agreeing. In the case of the capacity to protect health, the vast majority are still positive about their capacity after the course, but less strongly, with an almost even division between agreeing and strongly agreeing. The third question about now being able to ensure equal distribution of food within the household, there is more uncertainty (neither agree or disagree) than with the other two questions and more agreeing than strongly agreeing. This may reflect their own ambivalence about the practice of favoring men and boys with higher quantity and quality of food, as was indicated earlier in the report in Section 3.4, or it may suggest a hesitancy about being able to assert themselves over a practice that is more likely to be contested by a spouse or other family member<sup>10</sup>.

<sup>9</sup> Agency is "the ability to define one's goals and act upon them", either independently or jointly with others. (Kabeer, N. 1999. Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. Development and Change 30: 435–64)

<sup>10</sup> Even though the evidence from the men's FGDs is that they themselves favor equal distribution of food in the family

Figure 3 Blind agree/disagree responses to three statements (# = 29)



Supporting the overall picture in these responses of a stronger sense of personal capacity and decision-making ability after the training are some comments that were made during the earlier discussion about the benefits of the training:

*“My acceptance has increased in my family. Now I can give my opinion in my family”* (Women’s group participant, age 39, Dumuria FGD, 16<sup>th</sup> October, 2020).

*“I planted vegetable seeds. I have been able to replace the earlier lack of vitamins. Now that I know so much, I can move ahead, I can progress”* (Women’s group participant, age 26, Paikgacha FGD, 19<sup>th</sup> October, 2020).

*“Earlier I had to take permission from husband. Now we both discuss and consult together. I used to be negligent, now when the child is sick, I take him to the doctor immediately. I have become very aware”* (Women’s group participant, aged 30, Tala FGD, 20<sup>th</sup> October, 2020).

The CNS were also asked to make observations about whether the women had changed through the training, whether their level of confidence, independence and decision-making had increased. Several off the CNS referred again to the specific changes in practices that were discussed in the earlier topics, such as in relation to overcoming anemia through a new leafy-vegetable-rich diet or describing the hygiene practices that now accompany child feeding. They also note the increased confidence in production, observing that *“wherever they find an empty spot, they are planting vines”*. But the CNS in Satkhira also noted *“mothers can work independently now”*, that they have *“gained knowledge, have become more aware”*. The independence and increased awareness translate into greater confidence, enabling them to *“give advice to other mothers”*, according to the CNS. In the Khulna FGD, CNSs observed the following:

*Mothers lose their confidence by staying indoors. To attend the training, they had to step out of the house, and this has increased their confidence level. They are growing vegetables at their own homestead garden and are feeding the family”* (CNS group participant, Khulna FGD, 22<sup>nd</sup> October, 2020).

*“Mothers used to cover their face for shyness, were hesitant to speak in public. Now they can freely talk. They can independently step out of the house now”* (CNS group participant, Khulna FGD, 22<sup>nd</sup> October, 2020)



The Khulna CNS FGD also commented that *“husbands now value their wives’ decisions and listen to their opinions”*, something that was also frequently mentioned by the men themselves throughout the men’s FGDs, but especially during a final discussion with the men about how the training had changed their spouses. As with the CNS discussions, most men reiterated with approval the improved practices of the women regarding hygiene and cleanliness, especially in regard to childcare, the cultivation of the homestead garden and their choices about healthy food and improved ways to prepare meals. But some men considered the broader changes:

*“My wife is now more confident to take decisions independently, take few of my household decisions independently specially any decision for my kids that is also good for me that’s give me relief / reduce burden, now I can concentrate on other activities”*. (Men’s group participant, Koyra upazila, 15<sup>th</sup> October, 2020)

*“(My wife’s) acceptance in the family and also in the community and society has increased and changed her previous situation....the training has increased the power of my wife in my family to make decision and give decision”* (Men’s group participant, Dumuria upazila, 16<sup>th</sup> October, 2020)

The men were also asked to respond to a statement that the participation of their spouse or other woman from their household in the CNS training has made a big improvement in the health and well-being of their children and their spouse. They were asked to score their response between 1 and 10, with 1 signifying no improvement and 10 a very large improvement. The median score of their answers was 8.5 and the mean 7.7 which suggests a high appreciation of the impact of the training. The mean was pulled down by two low scores: one of 2 in Kaliganj and the other of 3 in Tala.

Finally, what kinds of transformations occurred in the CNS themselves, who gave the training and provided the follow up and support during the production season and at the harvest? They were also asked to respond to a statement – ‘the experience of working as a Community Nutrition Scholar in this project has made me a more independent, self-confident woman, better able to make my own decisions’ and to score it on a scale of from 1 to 10. A total of 15 out of 20 CNS scored this statement a 10 and 5 scored it 9. Some of the sentiments lying behind these scores were illuminated right at the beginning of the FGD, when the CNS were asked about their positive experiences from the training and follow up activities with the women:

*“I could not talk to anyone before, now I talk very freely. Everyone listens to me. I am valued by everyone, they take advice from me”*.

*“I could not talk before, could not gather the village people to listen. Had to explain a lot to gather them. Gradually they were drawn to me and started to listen to me”* (CNS participants, Satkhira FGD, 21<sup>st</sup> October, 2020).

*“I had this inertia in me, which is not there anymore. No one knew me before, now they respect me”*.

*“I can talk freely with anyone”*.

*“Giving good advice to the mothers make me feel proud and good”* (CNS participants, Khulna FGD, 22<sup>nd</sup> October, 2020).

The overall assessments by both the women participants and the men from their households are testimony to significant behavior change and even gender transformation spearheaded by the cadre of Community Nutrition Scholars.

### 3.8 How is the coronavirus affecting family health, nutrition and livelihoods?

At the end of the FGD sessions with women and men, participants were asked whether their hygiene practices had changed because of the pandemic, what impact the pandemic had had on livelihoods, and how it had affected their consumption of food and drink.

All the women's groups mentioned more frequent hand-washing and maintaining higher levels of cleanliness around the home, including through use of bleach. Three groups mentioned washing clothing when they returned from outside the house and two groups mentioned more careful washing of vegetables brought from the market. Only two groups mentioned the use of masks and only one the use of hand sanitizer. Although it was not explicitly discussed, it is clear that the messages from the CNS training on hygiene, including hand-washing, must have prepared the women well for adopting the stricter practices to reduce spread of the coronavirus.

The women describe serious declines in several of their own livelihood activities, especially related to the reduced numbers of customers for their businesses, due to depressed prices and restrictions on movement between villages. This has affected grocery stores, fish selling businesses vegetable and betel leaf sales. They also report the prices of rice, pulses, onions and bananas as increasing. They also mention that their husbands' employment has been affected, with the self-employed not getting work and some factory workers received half-wages. The effect of these economic downturns has been serious for many families – *"we had more than enough food before, now we are suffering"* (Women's group participant, Paikgacha upazila, 19<sup>th</sup> October, 2020).

The women's description of changes in food and drink intake had a few common themes. One was the increased consumption of hot water or hot tea, mentioned in five of the six FGDs, and another was increased consumption of lemons/sour fruits, sometimes with ginger, mentioned by all FGDs, even to the extent of acknowledging that before the pandemic, they disliked lemon. It seems that hot beverages, lemon and ginger were considered prophylactics against the virus. Another common theme was the idea of cooking food more thoroughly than before, especially such foods as eggs, meat and fish, with the implication that the virus could contaminate undercooked food. This also applied to food stored in the fridge, which before may have been consumed directly, but now needs to be heated. Several women also mentioned the need for the family to eat greater quantities of healthy food such as leafy vegetables, milk, eggs and meat to conserve their health.

The men's perspectives on the impacts of the coronavirus were more detailed and diverse compared to the women, in large part illustrating the gendered differences in responsibilities and experience of the spatial threat of the virus. Like the women, the men emphasized the strong household response in terms of hand washing and keeping the house clean, including through use of disinfectants. This was on top of the changes recorded in response to the CNS training. But because the men are much more frequently outside the house and therefore exposed to the virus, they emphasized the dramatic actions taken when they returned to the home from outside, especially from markets: hand-washing with soap, washing of clothes worn outside and full bathing. Hand washing was a major focus of attention for the men, including comments that children no longer needed to be told to wash their hands with soap, and even the older people, who had been previously resistant to the messages from the CNS training, now did not need reminding. Men emphasized ensuring sufficient purchase of soap to locate it throughout the house, from cleaning stations before entering the house to outside the kitchen and the latrine. In at least two FGDs, men referred to being 'scared' of the virus, trying to avoid crowded locations like teashops and markets, and trying to remain at home as much as they could. Only one woman mentioned the use of sanitizers, but this was mentioned in three of the men's FGDs, as something they had never heard about before, but which were now important. Because women's experience is mostly in the

household, they mentioned mask wearing on only two occasions, and never referred to social distancing. Men referring to social distancing in four FGDs, and mask wearing in three.

Men reported detailed experiences of the impact of the coronavirus on their livelihoods. In most cases the effects were severely negative. For the farmers, the restrictions on trade had a major impact on sales, with reports of unsold, rotting vegetables, up to 50% in one case, and in another instance, rotting of the major cash crop of betel leaf. Men talked of the coronavirus having “destroyed the local economy”. In a few locations, men reported a positive effect, mainly due to lack of competition from outside traders for local produce, so they were able to sell their own product door-to-door at higher prices. The picture in terms of changing prices is complex, with some men reporting declining prices for their produce because of reduced demand from outside the village, but also comments about increased prices for staple foods like rice and pulses, again because of the restrictions on trade. There was consensus that the prices for essential items such as cooking oil and fuel increased. The picture for those in agri-business was also negative, including for cooperatives, poultry businesses and fish enterprises, the latter through lack of supply of fish feed. Agricultural laborers could not go looking for work, so also experienced loss of income. For those involved in the service sector, like grocery stores, the picture has been bleak, mainly because of restrictions on opening times and the difficulties of sourcing stock. In the non-agricultural sector, those in the construction industry lost their jobs, those in teaching had salary cuts.

The negative impact of the coronavirus on livelihoods had consequences on food and beverage intake according to the men, some of it seeming to reverse the positive changes from the CNS training. Men reported buying less food and considering price rather than nutritional quality in their choices:

*“At this moment I am not considering nutritious vegetables or foods, only consider the price, which price is low I try to buy those because my income reduced due to coronavirus. For example, now red amaranth price is very high, one small bundle is 10 Taka – I know it is very nutritious and good for health. But with the same amount (10 Tk), I can buy 2 kg of sponge gourd. So, I try to buy sponge gourd - survival is the question now!”* (Men’s group participant, Koyra upazila, 15<sup>th</sup> October, 2020).

The men emphasized their focus on buying basics like pulses and potatoes, rather than meat, fish or milk. They also emphasized the importance of their own homestead production because they can’t afford to buy. In this context, men in Dumuria mentioned gifting by neighbors from their own homestead gardens to those families that were struggling. Men also commented on their storage of some dry foodstuffs because of their fear of a ‘war-like’ situation.

Men echoed the women’s comments about consuming more lemon, especially in tea together with ginger. They rationalized this in terms of the intake of vitamin C, which they understood could help resist the coronavirus. They also concurred with women’s comments about giving longer cooking time for foods to make them safer, and avoiding stale food or cold food. There was clear awareness about the benefits of fresh, vitamin-rich foods based on the CNS training, but the application of that understanding varied. For the man in Koyra cited above, economic difficulties made them go for the cheapest foods. For others:

*“We came to know that those who are sick, he or she will be attacked easily by the coronavirus. So, we try to eat nutritious food as much as we can manage. Nutritious food like vegetables, eggs, milk, lemon, wood apple, taro etc. – most of these food items we get from our home garden”* (Men’s group participant, Tala upazila, 20<sup>th</sup> October, 2020).

## 4 Discussion

The findings from the 14 FGDs conducted during October 2020 provide good evidence that the nutrition and health intervention with 5000 mothers from two Districts in southern Bangladesh resulted in changes in behavior, not only of the women themselves but by their families. Although there is a strong cultural pressure on participants in these kinds of assessments to minimize the negative and maximize the positive, the triangulation afforded by having three different perspectives on the same set of training events and implementation of the practices learnt in the training, provides additional assurance that the behavior change and even the gender transformation in some cases, was real. Nevertheless, there are still some issues that emerged in the responses of women, men and the CNS that deserve greater analysis, to understand better why change occurred or did not occur and to point up ways that projects of this kind can do their jobs better.

The first point concerns the fundamental issue of women's participation outside the home in training events. It is well known that an influential element of Bangladeshi culture concerns the seclusion of women, on the one hand as a form of protection from physical or sexual harm, and on the other as part of an expectation of devotion to the responsibilities of the household. For logistical reasons, the training sessions on nutrition and health were held for some women in the mornings and for others in the afternoon. Late mornings are the busiest time for mothers, with child-caring, food preparation and child feeding all needing to take place. Reports about the morning training sessions and also direct feedback about the recent women's FGD sessions which were held in the mornings, indicate that the women were anxious to get back to their domestic responsibilities. The unhappiness and criticism from various members of the community voiced at the beginning of the women's training and reported by the men's FGDs, probably relates to the breach of both aspects of seclusion. The men's FGDs explained that once these village critics had been more fully informed about the content of the training, they became more supportive, because actually the training was assisting the women to perform the domestic duties more effectively, but also, to be more enterprising within the domestic space as homestead gardeners.

The men's FGDs also reported that the domestic tasks, including child-caring, were taken up by other household members during the absence of the mother. A doubt remains about whether that was a source of tension in the household, especially from the mother-in-law towards the daughter-in-law where the latter was involved in the training. Several comments made in the women's groups did refer to the husband needing to defend the spouse from her mother-in-law, and some voiced mild criticism of the mother-in-law for not being aware of new practices. A guiding principle of these kinds of trainings is that they should 'do no harm'. So, they should do everything possible not to exacerbate what are very sensitive domestic relationships. This can be achieved wherever possible by timing trainings and FGDs when women are not very occupied with their already full domestic tasks. Another option might be to do for mothers-in-law what had been done for spouses in the training, that is, invite them to participate in an introductory session where they could learn directly about the benefits the training would provide to their daughters-in-law.

A discussion point in relation to the content of the training also concerns the multiple responsibilities and vulnerable social status of young mothers living in the household of their spouse. Part of the training on nutrition and child feeding recommends the preparation of different food for complementary feeding of children from six months to 2 years. Preparing this complementary food instead of giving the child whatever food is being eaten by adults – sometimes only rice – was described with pride by the women's FGDs and by the men's groups. Whilst nutritionally important, this represents additional work for the mother on top of many other

responsibilities. Unless both men and women within households review this important, additional work in the context of overall burdens on the woman, there is the chance that there will be a reversion to the less nutritionally appropriate but less burdensome earlier practices. None of the women reported returning to those earlier, 'easier' practices, but that is no guarantee that there can be no regression in the future, if the whole set of tasks of the mother are not understood and shared by other members of the family. What is needed are shifts in the norms that place the exclusive burden of childcare on the mother, towards norms of shared responsibilities. Some of the comments of the men seemed to indicate the beginnings of such a normative shift.

A very similar situation applies to the equally important behavior change reported in a number of both women and men's groups of preparing fresh food two or three times a day rather than cooking once for the whole day and even using some for the next day's breakfast (*"Before training my wife prepared food one time in a day and we eat that food three times. But after training, she cooks two to three times a day so we take meal as fresh food"* (Men's group participant, Satkhira Sadar upazila, 18<sup>th</sup> October, 2020). Nutritionally, preparing fresh food is certainly preferable and there is a warning trend in urban contexts where the increasing use of fast food like instant noodles and other highly processed foods as a way to shorten food preparation times has led to severe nutritional consequences like obesity, heart disease, diabetes etc. But again, there is a need to review the workload of the young mother to ensure that she is able to prepare fresh food, whilst other household members share her other tasks.

A set of discussions in the men's FGDs that also deserves some further consideration relates to the preparation of land in the homestead garden, the sowing of vegetable seeds in beds and the planting of OFSP vine cuttings, also in beds. In agricultural and nutrition studies focused on Bangladesh, homestead gardens are characterized as women's space, a place where women can produce crops and ASFs both as household food and also as a small source of income<sup>11</sup>. In other studies, conducted on gender norms in southern Bangladesh women have expressed pride and underscored the importance to them of the homestead garden<sup>12</sup>. In the discussions on this topic in the men's FGDs, there was some ambiguity about the men's role in these production systems. In some cases, it seemed clear that they had been asked by the women to help with land preparation, and to join the woman in sowing the vegetable seeds and planting the OFSP vines. In other cases, it appeared unclear whether men were assuming ownership of the garden as part of the resources of the household of which they were head. In light of the increasing burdens on women that could be involved in providing more nutritious household food, help from the man with tasks in the garden could be welcome. Yet if there is little or no contribution or even a lack of endorsement from the man, but only an expression of symbolic ownership, that is not helpful and would mitigate against women's empowerment trends identified in Section 3.7 above. Women could be totally discouraged from engaging in gardening because of the additional work burden, with potential negative consequences for the children's health. Men's cooperation in these important activities is very important both for the woman's empowerment and the nutritional health of the family<sup>13</sup>. This is an issue that deserves further exploration.

An important part of the assessment was to consider the opportunities and constraints associated with uptake of OFSP as a nutritious new crop and family food. In relation to inclusion of OFSP in homestead gardens, this

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<sup>11</sup> Ali, A.M.S. Homegardens in Smallholder Farming Systems: Examples From Bangladesh. *Hum Ecol* **33**, 245–270 (2005).

<https://doi.org/10.1007/s10745-005-2434-8>; Webb, Patrick and Eileen Kennedy, 2014. Impacts of agriculture on nutrition: Nature of the evidence and research gaps. *Food and Nutrition Bulletin*, vol. 35, no. 1

<sup>12</sup> GENNOVATE RTB-HT team (2017). Gender in Agricultural Change: Towards more inclusive innovation in farming communities. GENNOVATE Report to the CGIAR Research Programs on Roots, Tubers and Bananas and Humidtropics. GENNOVATE Research Paper, RTB, Lima, Peru.

<sup>13</sup> Petesch, P *et al*, 2018. Community typology framed by normative climate for agricultural innovation, empowerment, and poverty reduction. *Journal of Gender, Agriculture and Food Security* Volume 3, Issue 1, 2018. pp131-157

occurred in 29 out of the 30 women participants and in most of the men's households as well. OFSP was unanimously accepted as a new nutritious food for the family and was especially liked by children, though all members ate it. Two further elements support the potential sustainability of uptake of OFSP. One is the widespread recognition of the dual use of OFSP as a starchy root that can be mashed as a complementary food or included in curries, and also as a leafy, nutritious vegetable that can be cooked and eaten with main meals. The second positive element is the recognition by men in a number of the upazilas that OFSP has the potential to be both a homestead garden crop, primarily as a vegetable, and also as a commercial field crop, primarily for the roots. Opinions among men about the demand for the crop in the market and the price offered was variable across different *upazilas*, but there was seriousness about its potential. Of course, the high level of uptake for planting was clearly linked to the free distribution of cuttings just as the high level of sowing of nutritious vegetable seed was linked to the free distribution of vegetable seed. Whether women have the means or incentive to purchase planting material of OFSP or vegetables is still not clear. One brief indication by the CNS participants suggested that women did not have money to buy vegetables from the market, so would they be able to buy seed? This brings the discussion back to the link between the project's nutritional and health concerns in Output 4, and its concerns about the sustainable distribution of planting material in Output 2. Ways will need to be found through micro-credit mechanisms or other benefits to facilitate access to planting material over the long term.

Some of these issues are relevant to the results presented in Section 3.6 on Sustainability of the new nutrition and health knowledge and sharing at scale. The results showed that potential resistance to the women's involvement in the training disappeared once it became clear that the content of the training contributed to the core activities of the mothers in the home. The rest of the evidence seems to suggest that there is potential for scaling the new practices also for the same reason: they are closely aligned with the normative responsibility of women – reproduction, childcare, food preparation and family health. We should not suggest that normative change has not occurred. It has, in terms of exclusive breast-feeding, in terms of hygiene practices and in many other ways. Also, it appears that women have achieved greater agency through the training. But the question arises whether these new practices would have been as readily accepted if they had dealt with women's enterprise. That is why the issue of the homestead garden and the men's reaction to new practices there requires greater understanding. It is hoped that the homestead garden component of the training can lead to greater opportunities for women as economic actors and not only strengthening their role as carers and guardians of the family's well-being, extremely important as that is.

Finally, and taking into consideration the issues of family support mentioned already that is needed to enable women to change their practices, there is evidence of women's empowerment brought about through the training and also CNS empowerment through giving the training and being involved in follow up actions with the women. There are a few examples of households where the man's involvement in multiple employment obligations linked to poverty of too large families or a combination of both, men were uninvolved in their spouse's new learnings and gave low assessments of the value of the training. But in the majority of cases women expressed a sense of greater power of decision-making and having their opinion given greater weight. This empowerment in the women seems to be strongly linked to changes in spouses' behavior and attitudes.

## 5 Conclusions and recommendations

The findings of this assessment indicate that there has been attitudinal and behavior change among women and their families in relation to child feeding practices, food choices and preparation, hygiene and health and own food production, including the cultivation and consumption of OFSP roots and tops as vegetables. These changes are confirmed among the 60 sample families interviewed for the assessment and there is no reason to doubt that the changes occurred in many of the other 5000 families involved in the CNS trainings and interventions. Despite initial critical reaction to women's participation in the training coming from family members and the community, the content of the training, once better understood, was quickly seen as contributing to improvements in family well-being, especially the healthy development of small children. The recognition of these benefits almost certainly lay behind the solid evidence that the new knowledge and practices learnt in the training was scaled to other family members, neighbors and in some cases to other locations. A conservative estimate based on the evidence from this assessment suggests that as many as 50,000 other women and families have gained access to the knowledge and practices included in the training.

Some of the evidence provided by the CNS themselves suggests that this dissemination of knowledge may not be socially uniform. They indicated that the most attentive learners and adopters of new practices may have disproportionately included the better educated and the better off women, although the high numbers of adopters suggests that less educated and poorer women were also taking up the new practices. More detailed assessment through the endline survey of the relationship between education and adoption of new practices should be undertaken.

There was widespread evidence in the responses of women themselves, their spouses and the CNS that women had been empowered through their exposure to the training. They felt able to be involved to a greater extent in decision-making, to take independent action and to have their opinions listened to. The mostly young women who worked as CNS also felt themselves transformed through their experience, to have become people with a voice in the community that people pay attention to. However, the positive aspects of women's empowerment and greater proaction within the house and the homestead garden is tempered with concerns about the potentially added burdens represented by the new practices. A dramatic example was provided during the assessment by a CNS participant who observed the cost associated with women's determination to provide safe, clean drinking water for the family. The women had to fetch it from a distant location, even though the family had running water in the house, which was not safe for drinking. This practice, in combination with other nutrition and health related behaviors become sustainable when they are supported by other members of the household who share the set of tasks which women shoulder as main carers of the home, children and the family's food and health needs. Encouraging the sharing of responsibilities starts with involvement of key members of the households such as spouses and mothers-in-law in orientations linked to any women-directed training. This should be standard practice in future trainings and a major focus of effort. In the CNS training, about 50% of spouses did not attend the first orientation session. Follow up will be needed to try to involve those men at other opportunities.

As was indicated in the Introduction, this assessment focused on Output 4 of the project. But in the Discussion, reference was made to the women's access to OFSP (and vegetable) planting material for maintaining their homestead gardens over the long term as a contribution to improved mother and child nutrition and health. The strong uptake of the planting material that was provided free and the almost 100% inclusion of OFSP as a food

in the 60 households represented in the assessment, is not a guarantee that OFSP or nutritious vegetables will be included in gardens or in food preparation over the long term. This raises the question of the linkage between Output 4 and Output 2 of the project, the concern with the sustainable distribution of OFSP planting material. It is recommended that the project explores multiple methods, involving micro-credit or other types of benefits, that can help to sustain cultivation of the crop in gardens and as a field crop in relevant cases.



## Annex 1

### Revised design document for the Output 4 Assessment under COVID 19 conditions

Gordon Prain

#### 1. Justification

The project '*Strengthening food system resilience in Asia's mega deltas with salt-tolerant sweetpotato and potato*' led by the International Potato Center and funded by GIZ was initiated in 2018 in partnership with national private sector actors (ACI Seed Ltd and Supreme Seed Ltd), the public agricultural research sector (BARI), a civil society organization (Prodipan) and with an international research institution (the University of Hohenheim).

The goal of the project is to contribute to increased agricultural system productivity, food security, and healthier diets in Bangladesh's delta region through adoption of resilient and nutritious potato (P) and sweetpotato (SP) varieties (including beta-carotene rich orange fleshed sweetpotato or OFSP), better agronomic practices, and improved utilization of the crops by households. Food system resilience involves both ecological and food and nutrition security dimensions and cultivated crops need to successfully overcome abiotic and biotic stresses to yield a good harvest, but that harvest needs to provide not just calories, but also culturally acceptable and micronutrient-rich food. This project seeks to address the development of ecologically resilient and locally adapted P and SP varieties that can yield well in saline conditions of southern Bangladesh and be accessible through effective seed systems. The project addresses food and nutrition resilience through including improved micro-nutrient rich varieties that are locally adapted, especially OFSP, the distribution of seeds of micronutrient-rich vegetables and to strengthen demand for these crops among households, nutrition, feeding and hygiene education interventions. To achieve its goal, the project is organized into four Outputs. Output 1 tests and adapts accelerated breeding methodologies and identifies improved phenotyping tools and evaluation methods to support development of salt-tolerant potato and sweetpotato varieties by BARI and several advanced clones of P and SP have been selected over the two seasons so far completed. Output 2 introduces improved methodologies and capacities in the seed value chain for the sustainable and socially inclusive production, distribution, and marketing of high-quality seed of released salt-tolerant and nutritious P and SP varieties. Output 3 involves the participatory selection of P and SP varieties and agronomic practices best suited to local cropping patterns, agro-ecologies, and farmer and consumer preferences. Output 4 expands the utilization by target households (HHs) of improved OFSP and P varieties, especially to support and improve the nutrition of small children.

The current study seeks to assess progress so far towards achieving Output 4. It will use a qualitative research approach to understand the nature and circumstances of any changes in young children's diets that can be linked to their mothers' participation in CNS interventions and to document identifiable constraints to utilization of OFSP as a nutritional food for young children. A quantitative end-line survey will be undertaken towards the end of the project to measure individual changes. For this study, a qualitative methodology will enable a more detailed subjective understanding of the linkages between knowledge obtained via the CNS sessions, any change in attitude to child feeding, consumption and nutrition and hygiene issues among the mothers and the introduction of new feeding practices, new choices of food provided to their children and any hygiene-related practices newly introduced. We are also interested to capture more subjective changes in terms of increased confidence, improved status in the community because of their new knowledge and expertise and expanded

social networks. Because of the inclusion of OFSP in local participatory trials, planting material distribution activities and in the training, sessions given by CNS, there is an expectation that OFSP may be part of the new high nutrient food options for children. We want to explore if there are any characteristics of OFSP as a new crop or as a new food which inhibits or encourages women to use it for their children's food. The assessment will interview a sample of male spouses whose wives have participated in the CNS sessions to get their own perceptions about the capacity strengthening, any changes in their own knowledge of or attitudes towards food, including OFSP, nutrition or health and their contribution to or constraints on changing practices.

### **Methodology to be used under Covid 19**

Because the pandemic has severely limited the possibility of fieldwork in the Districts and upazilas where project activities took place, or the ability of women who participated in the project or their husbands, to meet in groups of 10 or more as would be expected using the normal Focus Group Discussion (FGD) approach, an alternative methodology has been developed which seeks to balance safety with the special requirements of qualitative data gathering. With this method we still hope to identify impacts of the CNS training, changes in current household diets, changes in nutrition and hygiene knowledge compared to previous situation, and to identify changed practices. The new method will also be used to provide information on uptake of OFSP, current use as weaning or complimentary food for small children and perceived constraints on its uptake both as a crop and as a food. We will also include a sample of CNS in the modified sample, to provide their own perspectives on change processes.

**The Virtual Mini-FGD (VIMI-FGD)** The normal FGD is a mostly qualitative research tool which aims to capture a mixture of different kinds of data through same-sex group interviews of 2 hours or more with between 10 and 12 persons:

- common experiences among participants (eg participating in the CNS training sessions)
- common agreements about new trends or tendencies (eg ability of OFSP varieties to grow under local conditions)
- Agreements about new options or practices
- different viewpoints and opinions among the participants (eg on ease or difficulty of preparation of new dishes for small children)
- Strong disagreements about experiences (eg appropriateness of certain foods for very young children)

The VIMI-FGD will be conducted via telephone or online interview with 3 socially distanced persons from the same village. Interviewers will be based in Dhaka, but a local member of PRODIPAN will be physically present under social distancing conditions to:

- Support the technical communication, that will deploy a speaker to enable the three interviewees at a minimum to hear the telephone questions at the same time, and where possible, to participate in the VIMI-FGD via video conferencing (eg Zoom).
- Ensure that VIMI-FGD remains private and not interrupted by non-participants
- Mediate the questions from the interviewer and their reception by the participants to ensure that the question is understood and that the participants are able to respond.

Because of the difficulties of retaining interest and involvement during a VIMI-FGD compared to a standard FGD, **interviews should aim to be completed in between 45 minutes and one hour.**

The local PRODIPAN organizers of the VIMI-FGDs will ensure that correct gender protocols will be in place. The appropriate organizer will explain to the spouses of women who will participate about the invitation, the social distancing procedures that will be put in place so as not to pose a risk to the women or their families and that the timing of the meeting will be arranged when it will not disturb the women's domestic and childcare responsibilities. The VIMI-FGD will be gender-specific, and the team involved in organizing the VIMI-FGD, asking the telephone or online questions and taking notes will be the same gender as the participants of that VIMI-FGD.

**Interviewing, notetaking and documentation:** Standard FGD involves a facilitator who both asks the group questions, but also puts them at ease, stimulates answers, motivates and maintains interest, and animates dialogue and interactions between participants. In the VIMI-FGD there is limited room for facilitation, since the interaction is virtual. So an **interviewer** will be responsible for asking the assessment questions. The interviewer should introduce her or himself by name and allow the notetaker (see below) to also introduce themselves. Explain clearly to the participants the purpose of the interview and the reasons for use of telephone/audio-visual (the pandemic), engage the interest of the three participants at the beginning, be familiar with their names and ensure that all three participants get chance to express opinions and respond to questions. Clearly elicit from participants their informed consent for taking part in the VIMI-FGD. The statement to be read to participants is included in the document on Guided Questions. Participants should be encouraged to identify themselves by name when they answer ("Nilufar, this is Begum. I think.....") In order to compare between FGDs in different upazilas, the interviewer should stick closely to the *same* questions in the guide, although follow up or supplementary questions may vary.

The guide questions have a logical sequence, which is linked to the analysis and reporting of this assessment. If possible, the interviewer can try to keep to the sequence. But if participants answer a question that relates more to another set of questions (for example, you ask about any change in feeding practices and the participant starts to talk about the ease with which OFSP can be mashed and fed to her child, which relates to the section on uptake of OFSP), they should be encouraged to continue with this answer, and the interviewer can return to the discussion of feeding practices afterwards. If questions from the interview guide are already answered, these should be skipped. Mention has been made about follow up or supplementary questions. Interviewers are strongly encouraged to probe more deeply on issues that emerge as important or that spark animated discussions, within the time limits of the interview. It is a delicate judgement to pursue important supplementary questions and allowing discussion of a single topic to go on too long, with the risk that there is no time to obtain answers to important questions. Time-keeping is very important.

In qualitative data collection careful note-taking during focus groups is *critical*, so the **Note-taker** has a key role in the success of the study. This also applies to the VIMI-FGD. The telephone or audio-visual interviews can be recorded, if the participants have no objection, but the main purpose of the recording is to check gaps in written notes and to recover actual statements made by participants. The main documentation of the interview should be through computer-based (preferable) or hand-written notetaking, using the interview guides as the format for the documentation. Notes can be in Bangla or in English. As with standard FGD note-taking, the following guidelines apply:

*Capture people's own voices:* To the fullest extent possible, document in people's own words their responses and reasons. Notes should be in the first person ("I feed my children fresh vegetables...." NOT "X feeds her children fresh vegetables..."). It may be necessary to paraphrase especially long responses, but endeavor to capture in full quotes the most important statements made by the informants.

- *Keep language simple*: Please use everyday language. This research does not demand complicated terminology. Simply record local people's own terms, proverbs and sayings.
- *Note the mood of the discussions*: Please use parentheses to convey additional information about the participants, such as when strong emotions emerge, or if disagreements or strong agreements emerge among the participants.
- *Separate the researcher*: It is critical to self-consciously distinguish your (the researcher's) own interpretations from what is being reported by participants. Please do not impose your opinions and biases. Put aside your own world view. Endeavor to see the world view of the participant. For example, if a participant responds to an interview question with: "we help each other out with childcare; we share each other's workload" please report this in the same words spoken, even if the researcher has access to other information that suggests there is little cooperation among women in relation to childcare. These discrepancies can be included in the later analysis.
- *Review notes immediately after completion of the interview*. Note takers will need to set aside time very shortly after every interview to review what they have written (ideally within 30 to 60 minutes), together with the interviewer. The notes will likely need to be edited, expanded, or explanatory comments added. If too much time passes before the notes are reviewed and refined, valuable information will be lost due to notes that may only be partial, confusing, or contradictory. If there are doubts, the recording can be checked for confirmation and direct quotations added.
- *Work as a team*: After a day's work, the notetaker, interviewer should share and discuss the notes and give feedback on important findings that seem to be emerging and additional questions that the team may need to ask to better understand emerging findings. Also discuss what has gone well with the FGD sessions and what needs to be improved.

## 2. Proposed sampling framework for location and composition of FGDs

The sample for the VIMI-FGDs will be drawn from the 5000 women involved in the nutrition education sessions with CNS, distributed across the six upazilas. Each VIMI-FGD will be made up of 3 persons, who will be identified from one single village in each upazila, to reduce risks associated with COVID 19. If possible, the three persons should be of different ages, to offer the chance to register variability by age in the answers. All women selected should have at least one child below the age of 5 years. The selection of men will be from the same village as the women. The criterion is to be the spouse of a woman in the village who has participated in the CNS training and use of OFSP, but not necessarily the spouse of one of the three women participating in the VIMI-FGD. The composition of the CNS VIMI-FGD in each upazila should bring together three CNS from different villages.

**Table 1 Summary of distribution of VIMI-FGDs across target sites**

District	Upazila	VIMI-FGD Women	- VIMI-FGD Men	- VIMI-FGD-CNSs
Khulna	Dumuria	x 1	x 1	x 1
	Koyra	x 1	x 1	x 1
	Paikgcha	x 1	x 1	x 1
Sathkhira	Sadar	x 1	x 1	x 1
	Kaligang	x 1	x 1	x 1
	Tala	x 1	x 1	x 1

### 3. Capacity building

The virtual capacity building of the women and men teams who will carry out the virtual assessment will last approximately 4 hours. It will consist of the visual presentation of the methodology followed by discussion and clarifications. The main part of the training will be to study, discuss and possibly to revise the questions in the interview guide. Trainers will be Gordon Prain and Nozomi Kawarazuka.

A **pre-assessment exercise** will be undertaken with participants not included in the main sample, to test and adjust the methodology. Following the pre-assessment exercise, a virtual follow-up review will be organized between the trainers and the teams.

**Participants:** The interviewer/notetaker team for women's interviews will be made up of Nilufar Sultana and Farhana Ibrahim. The men's team will include Farid Uddin and another person to be identified.

### 4. Data processing, analysis and report preparation

Led by the notetaker, the interview teams will organize their notes (and drawing as necessary from the recordings of the interviews) into 18 **case reports** in English, highlighting key findings in relation to the research questions which are the basis of the interview guide.

Depending on the volume of data generated by the 18 VIMI- FGDs, an option could be to process the data using Nvivo, a software that was used for the GENNOVATE RTB studies that included 2 cases from Bangladesh<sup>14</sup>. This decision can only be taken after completion of the VIMI-FGDs and review of the complexity of the data. The handling of data in terms of security and confidentiality will follow the protocol prepared for the processing and storage of the GENNOVATE data in Lima<sup>15</sup>.

Analysis and report writing will be based on the 18 case study reports.

### 5. Timeline for methodology preparation, capacity building, interviews and report writing\*

Event	Timing
Methodology preparation	2 -18 September, 2020
Capacity building	24 September, 2020 (13.00, Dhaka time, for approx. 4 hours)
Pre-assessment exercise	28 September – 01 October, 2020
Main interviews and case report preparation	6 – 26 October, 2020
Analysis and report preparation	29 October – 15 November, 2020

\*For further discussion and revision

<sup>14</sup> GENNOVATE RTB-HT team (2017). Gender in Agricultural Change: Towards more inclusive innovation in farming communities. GENNOVATE Report to the CGIAR Research Programs on Roots, Tubers and Bananas and Humidtropics. GENNOVATE Research Paper, RTB, Lima, Peru. <https://www.rtb.cgiar.org/publications/gender-in-agricultural-change-towards-more-inclusive-innovation-in-farming-communities-gennovate-report-to-the-cgiar-research-programs-on-roots-tubers-and-bananas-and-humidtropics/>

<sup>15</sup> Rojas, Lucila, 2016. CIP Data Management Protocol for GENNOVATE. Gender Research Unit, GENNOVATE Project. CIP, Lima, Peru.

## Annex 2

Guide questions under COVID conditions, using the adapted FGD tool.

### 1. WOMEN'S GROUPS

**Towards more nutritious diets for young children in Southern Bangladesh: assessing the contribution of Community Nutrition Scholars (CNS) and identifying constraints and opportunities in the utilization of OFSP**

**Introduction**

As described in the Design Document, three types of VIMI-FGDs will be carried out for this project:

- With a small sample of mothers of under-5 children who participated in the CNS food, nutrition and health capacity-building sessions
- With a small sample of male spouses of women who have participated in the capacity building sessions
- With a sample of Community Nutrition Scholars (CNS) who led the sessions with mothers on food, nutrition and health

Separate guide questions will be prepared for these 3 types of VIMI-FGD.

#### General information about participants

The PRODIPAN organizer takes the names and personal details of the participants in all three VIMI-FGDs on the printed sheet below (multiple copies of this roster format need to be prepared in advance):

#### VIMI-FGD

Male \_\_\_\_ Female \_\_\_\_

Name of the village: \_\_\_\_\_

Name or organizer: \_\_\_\_\_

Date: \_\_\_\_\_

VIMI-FGD members (family name not needed)	Age	Ethno-religious group*	Relationship to Household Head	Marital Status**	Level of education completed***	# of children	# of children under 5 years	# of household members	Primary Occupation	Secondary Occupation	Signature or mark
1.											
2.											
3.											
4.											

## INFORMED CONSENT

*Thank you for joining us today. We are going to be discussing your participation in the project on child feeding, nutrition and health involving training from the CNS and also the introduction of OFSP. We are very interested to know how useful you found the project, what you learnt, whether you have changed as a woman and a mother because of your participation, and whether you are feeding your children differently and whether you are doing things differently to keep them and you healthier. We also want to know about your use of OFSP and whether or not you are including it in the family diet. We encourage you to tell us about all kinds of experiences with OFSP or the other recommendations made in the trainings, whether they are positive or negative experiences. We can learn a lot from any negative experiences and it can lead us to improve our project.*

*We are having these discussion groups with women in other villages who have also participated in the project so that we can understand whether the project has been helpful for child-feeding and nutrition, as well as for family health. We are also talking to some of the husbands of women who participated in the project to see what their opinions are about the project, about the importance about child nutrition and health and about OFSP.*

*Your participation today is voluntary and confidential. We will not be using your names or the name of this village in any publication with the information that we collect today. We request that you respect the confidentiality of the others participating today by not repeating outside this space anything that was said during the discussion. We hope that each of you will feel free to express your opinions fully and share your own experiences with the topics that we will be discussing. You are of course each free not to answer any question and to leave the discussion whenever you like. However, we very much hope you remain for the full period of the meeting, which will be between 45 minutes and 1 hour, and you enjoy the discussions on our questions. To make sure that we do not miss what you are saying, (NAME OF NOTETAKER) will be taking notes and we would like your permission to record the discussion so that we can capture your comments accurately. If you prefer us not to record the meeting, we will not do so. Your views and experiences are very important to us. We want to hear about all of your experiences in this project, whether positive or not so positive. All of your experiences will help us to improve what we do and be better able to support improved nutrition and health among Bangladeshi families. We cannot promise that you and your village will receive additional benefits beyond what this project is already doing, but the information that we are collecting will help to improve agricultural research and development activities in Bangladesh.*

*Are there any questions before we begin?*

## MODULE 1 CNS TRAINING

**Question 1.1 (MOST IMPORTANT TOPICS IN THE TRAINING)** First, I want to ask you about the training sessions with the CNS you all participated in 12 sessions in two seasons. Do you remember that the training covered a number of topics [FACILITATOR READS OUT THE LIST OF TOPICS AND THEY ARE ALSO AVAILABLE AT THE MEETING OF THE WOMEN]. If you had to pick just **two** of those topics to recommend to other mothers to help them have a healthy family, which would it be and why you chose them? [THE COORDINATOR OR CNS READS THE LIST OF TOPICS TO EACH PARTICIPANT SEPARATELY TO AVOID COPYING ANSWERS AND THEY INDICATE WHICH TWO THEY WOULD RECOMMEND]

[FIRST OBTAIN THE TWO TOPICS EACH WOMAN IDENTIFIED, THEN INVITE THEM TO SHARE THE REASONS FOR THEIR PREFERENCES AND TO DEFEND THEIR CHOICES AND TO GET ALL THREE WOMEN TO COMMENT ON THE MOST IMPORTANT LEARNINGS FROM THOSE TOPICS]

**Question 1.2 (SCALING OF NEW KNOWLEDGE)** I just asked you about the two CNS topics you thought most important to recommend to other mothers. Can I now ask whether you actually shared your new knowledge from the CNS training with relatives or neighbors after the first season or the second season? Who did you talk to and about what topics?

**Question 1.3 (ATTITUDE CHANGE)** So now that you have gone through the training with the CNS, do you think differently about nutrition, how you feed young children, the food you grow and they eat and keeping yourself and them healthy?

**[THIS QUESTION IS AIMING TO GET A DISCUSSION ON WHETHER THE WOMEN'S GENERAL IDEAS ON THESE TOPICS HAVE CHANGED, BECOME MORE IMPORTANT]**

## **MODULE 2 CHILD FEEDING, NUTRITION AND FOOD CONSUMPTION**

**Question 2.1 (BEHAVIOR CHANGE IN CHILD FEEDING)** You remember that the CNS talked about good ways to feed your small children **[THIS REFERS SPECIFICALLY TO THE CHILDREN UNDER 5 YEARS]** so they are well nourished. To what extent did you make changes in the way you fed your under-5 children, including exclusive breast-feeding and complementary feeding in response to the CNS trainings?

**Question 2.2 (BEHAVIOR CHANGE IN CHILD FEEDING)** You remember that the CNS talked about good ways to feed your small children **[THIS REFERS SPECIFICALLY TO THE CHILDREN UNDER 5 YEARS]** so they are well nourished. To what extent did you make changes in the way you fed your under-5 children, including exclusive breast-feeding and complementary feeding in response to the CNS trainings?

**Question 2.3 (TEMPORARY OR PERMANENT BEHAVIOR CHANGE)** Can you tell me whether any of you returned to your previous feeding practices, despite the recommendations of the CNS? Why did you do that? What factors made it difficult to change?

**[IF NOT YET DISCUSSED IN 2.3] (FAMILY INFLUENCE ON BEHAVIOR CHANGE)** What were the reactions from other household members such as your husbands and mother-in-law. Did they fully understand and support you? Did you need to get permission from them?

**Question 2.5 (BEHAVIOR CHANGE IN FOOD PREPARATION AND MEALS)** You remember that the CNS talked about a balanced diet, nutritious food and reasons for poor nutrition. They talked about different kinds of nutritious foods and dishes that you can feed your children and the whole family so you can all be healthier. Did the new knowledge lead you to include new foods in family meals or to eat some foods more frequently? What kinds of food?

**Question 2.6 (SOURCING NEW FOODS AND SPOUSE SUPPORT)** Did this new food come from your garden or was purchased in the market? Did you explain the value of new food to your husband so he buy it for you?

**[TRY TO STIMULATE A DISCUSSION ABOUT WHETHER AND HOW THE MOTHERS RESPONDED TO THE DIFFERENT NUTRITIONAL VALUE OF DIFFERENT FOODS BY MAKING DIFFERENT PURCHASES IN THE MARKET, EITHER THEMSELVES DIRECTLY, OR, MOST COMMONLY VIA THEIR SPOUSES, AND WHAT WAS THE RESULT]**

**Question 2.7 (BEHAVIOR CHANGE IN FOOD PREPARATION OR FREQUENCY)** What food preparations were given as new dishes to your young children or given more frequently? To what extent have you changed the foods and dishes that you and other household members eat?



[MAKE SURE YOU GET INFORMATION FROM ALL WOMEN ABOUT THE EXTENT TO WHICH THERE HAS BEEN CHANGE IN THE DIETS OR FOOD PREPARATIONS THEY HAVE PREPARED AND WHETHER THEY HAVE GIVEN UP ON SOME CHANGES. THEN ENCOURAGE DISCUSSION BY WOMEN ABOUT THE DIFFERENT NEW FOODS THEY HAVE ADDED AND/OR NEW DISHES. IF WOMEN MENTION INTRODUCING OFSP, TAKE NOTE AND SAY YOU WILL DISCUSS LATER. IF NONE HAVE, CHANGED THE DIET/FOOD PREPARATION, CONTINUE TO NEXT QUESTION]

**Question 2.8 (REASONS FOR BEHAVIOR CHANGE IN FOOD PREPARATION OR FREQUENCY)** Can you tell me something about why you chose that new food and/or particular food preparations in your children's diets?

**Question 2.9 (CONSTRAINTS ON CHANGING FOODS, FOOD PREPARATION OR FREQUENCY)** What factors made it difficult to adopt new food and/or make new food preparations and/or change the frequency of certain foods?

**Question 2.10 [IF NOT YET DISCUSSED IN 2.7] (FAMILY INFLUENCE ON BEHAVIOR CHANGE IN FOOD CHOICES)** What were the reactions from other household members such as your husbands and mother-in-law to the new diet or more frequent consumption of some foods you introduced? Did they fully understand and support you? Did you need to get permission from them?

### MODULE 3 WOMEN AND CHILDREN'S HEALTH

**Question 3.1 (BEHAVIOR CHANGE IN HEALTH AND HYGIENE PRACTICES)** The CNS also taught you about hygiene with your children, like hand-washing and keeping food clean. Have any of you followed this hygiene advice in the way you look after your children and the household?

[MAKE SURE YOU GET INFORMATION FROM ALL WOMEN ABOUT THE EXTENT TO WHICH THEY HAVE CHANGED HYGIENE AND OTHER HEALTH PRACTICES. THEN ENCOURAGE DISCUSSION BY WOMEN ABOUT THESE DIFFERENT PRACTICES THEY HAVE INTRODUCED AND BENEFITS]

**Question 3.2 (CONSTRAINTS ON BEHAVIOR CHANGE IN HEALTH AND HYGIENE PRACTICES)** Can you tell me something about the hygiene and health practices given in the CNS training you could not introduce or gave up. Why were you not able to introduce these practices?

**Question 3.3 [IF NOT YET DISCUSSED IN 3.2] (FAMILY INFLUENCE ON BEHAVIOR CHANGE IN HEALTH AND HYGIENE PRACTICES)** What were the reactions from other household members such as your husbands and mother-in-law to these new hygiene and health practices you introduced? Did they fully understand and support you? Did you need to get permission from them?

### MODULE 4 OWN FOOD PRODUCTION AND USE OF ORANGE-FLESHED SWEETPOTATO (OFSP)

**Question 4.1 (USE OF VEG SEEDS AND OFSP VINES IN GARDEN)** Have you planted vegetables, including OFSP in your homestead garden provided by the CNS?

[QUICKLY FILL IN THE BELOW TABLE FOR THE THREE WOMEN. ASK EACH WOMAN IN TURN. IDENTIFY NEW VEGETABLES PLANTED. IDENTIFIED IF OFSP PLANTED]

	Garden, no new crops	Garden, new vegetables	Garden, OFSP
Participant 1			
Participant 2			
Participant 3			

**Question 4.2 [FOR THOSE WITH GARDEN BUT NO NEW CROPS]** What were the main reasons for not introducing the new vegetables provided by the CNS?

**Question 4.3 [FOR THOSE WHO INTRODUCED NEW VEGETABLES BUT NO OFSP]** What were the main reasons for introducing new vegetables? And why did you choose not to plant OFSP?

**Question 4.4 [FOR THOSE WITH OFSP]** What was the reason for planting OFSP?

**Question 4.5 [FOR THOSE WHO PLANTED OFSP AND THOSE WHO DIDN'T] (USE OF OFSP IN HOUSEHOLD)** Did you introduce OFSP into food preparation for you small children? Can you give me some reasons why you did that?

**Question 4.6 [FOR THOSE WHO DID NOT GIVE OFSP TO THEIR CHILDREN] (NONE USE OR ABANDONMENT OF OFSP AS FOOD PREPARATION)** What were the main reasons why you either chose not to give your children OFSP or stopped giving it to them?

**Question 4.7 (FAMILY INFLUENCE ON BEHAVIOR CHANGE WITH OFSP)** What were the reactions from other household members such as your husbands and mother-in-law to feeding your children with OFSP? Did they agree? Did you need to get permission from them?

## **MODULE 5 PERSONAL BENEFITS AS WOMAN AND MOTHER FROM THE CNS TRAINING**

**Question 5.1 (PERSONAL IMPORTANCE OF TRAINING)** Your participation in the CNS training was quite a big commitment of your time. On a scale of from 1 (not worth my time) to 5 (a very good use of my time) how important was it to you to attend the trainings?

**[ALLOW EACH WOMAN TO GIVE HER SCORE ON LEVEL OF IMPORTANCE OF THE COURSE FOR HER.]**

**Question 5.2 (PERSONAL BENEFITS OF TRAINING EXPERIENCE)** What were the most important benefits for you personally, as a woman and a mother, of attending those training sessions?

**[ALLOW EACH WOMAN TO IDENTIFY HER ONE OR TWO BIGGEST BENEFITS AND TO SAY SOMETHING ABOUT HOW THEY AFFECTED HER AND THEN FOR ALL TO DISCUSS THESE BENEFITS]**

**Question 5.3 (FAMILY INFLUENCE ON PARTICIPATION IN TRAINING)** Did anyone in your family try to dissuade you from participating?

**Question 5.4 (PERSONAL IMPORTANCE OF TRAINING)** Comparing your situation before and after the training, and on a scale of from 1 – strongly disagree to 5, strongly agree, please respond to the following statements:

*I am much better able to take decisions about which food to buy, prepare and feed to my children*

*I am fully capable and responsible of protecting my own and my children's health*

*I can now fully ensure that there is equal distribution of nutritious food within my family*

## **PANDEMIC SITUATION**

Finally, we cannot leave you without asking how you are managing with the coronavirus that is causing so much hardship for people in Bangladesh.

**Question 6.1** How has this disease affected your behavior in relation to hygiene?

**Question 6.2** How has this disease affected the work that your family members are doing and the income you receive?

**Question 6.3** Has the disease changed the kind of food you are now feeding to your family?

*Thank you for being so generous with your time today and for sharing your views and experiences. It has been a pleasure to talk to you!*

## 2. MEN'S GROUPS

### Introduction

As described in the Design Document, three types of VIMI-FGDs will be carried out for this project:

- With a small sample of mothers of under-5 children who participated in the CNS food, nutrition and health capacity-building sessions
- With a small sample of male spouses of women who have participated in the capacity building sessions
- With a sample of Community Nutrition Scholars (CNS) who led the sessions with mothers on food, nutrition and health

Separate guide questions will be prepared for these 3 types of VIMI-FGD.

### General information about participants

The PRODIPAN organizer takes the names and personal details of the participants in all three VIMI-FGDs on the printed sheet below (multiple copies of this roster format need to be prepared in advance):

VIMI-FGD											
Male ____ Female ____											
Name of the community: _____											
Name or organizer: _____											
Date: _____											
VIMI-FGD members (family name not needed)	Age	Ethno-religious group*	Relationship to Household Head	Marital Status**	Level of education completed***	# of children	# of children under 5 years	# of household members	Primary Occupation	Secondary Occupation	Signature
1.											
2.											
3.											
4.											

## INFORMED CONSENT

*Thank you for joining us today. We are going to be discussing the participation of your spouses in the project on child feeding, nutrition and health involving training from the Community Nutrition Scholars who also introduced your spouses to the production and consumption of Orange Fleshed Sweetpotato (OFSP). We are very interested to know your impressions of the project, in which some of you participated in the first Session, how useful it was for your spouses and what benefits or problems it caused them or yourselves. We also want to know about whether your spouses produced OFSP in the homestead garden or your fields, whether they included it in the family diet, especially for the children and what your opinions are about this food. We are having these discussion groups with spouses of women in other villages who have also participated in the project so that we can understand whether male spouses consider that the project has been useful, and in what ways, or whether the project has been an interference in your family's life. We encourage you to tell us about all kinds of experiences with this project, whether they are positive or negative experiences. We can learn a lot from any negative experiences, and it can lead us to improve our project.*

*At the same time as we are talking to male spouses, we are also having meetings with small groups of women who participated in the project to listen to their experiences, hear about what they learnt and what changes they have made in their childcare and food preparation.*

*Your participation today is voluntary and confidential. We will not be using your names or the name of this village in any publication with the information that we collect today. We request that you respect the confidentiality of the others participating today by not repeating outside this space anything that was said during the discussion. We hope that each of you will feel free to express your opinions fully about the topics that we will be discussing. You are of course each free not to answer any question and to leave the discussion whenever you like. However, we very much hope you remain for the full period of the meeting, which will be about 45 minutes, and you enjoy the discussions. To make sure that we do not miss what you are saying, (NAME OF NOTETAKER) will be taking notes and we would like your permission to record the discussion so that we can capture your comments accurately. If you prefer us not to record the meeting, we will not do so. Your views and experiences are very important to us. We cannot promise that you and your village will receive additional benefits beyond what this project is already doing, but the information that we are collecting will help to improve agricultural research and development activities in Bangladesh.*

*Are there any questions before we begin?*

## MODULE 1      CNS TRAINING

**FOR MEN WHO ATTENDED THE FIRST SESSION OF CNS TRAINING:** Although it is some time back now, do you remember the first session of the nutrition and health training that you attended together with your spouses? To help you remember, I will remind you of the topics covered in that first session:

- 1. Overall briefing of the training- mainly what their spouses/women members will learn from the training (all the topics of the training described briefly) and, emphasis given on the following;*
- 2. Importance of first 1000 days of the child and the women*
- 3. Domestic violence*
- 4. Household discriminations among men and women*

**Question 1.1 (Key memories of joint session of training)** Tell me two memories that really stick with you about what you heard or what you learnt in that session.

**Question 1.2 (Effect of joint session on man's opinion of training)** How did your participation in that session affect your opinion about your spouse's attendance at the whole training?

**FOR MEN WHO DID NOT ATTEND THE FIRST SESSION OF CNS TRAINING**

**Question 1.1 (Reasons for not attendance)** Right at the beginning of the CNS training your spouse attended, you were invited to attend with her the first session, but you were not present. Can you tell us why you did not attend?

**Question 1.2 (Feedback on joint session from other men)** Did you hear from other men in the village who did attend what happened at the meeting? Please tell us about it.

**FOR ALL MEN**

**Question 1.3 (Men's practices to ensure family nutrition and health)** Can you explain to me what actions you personally take to make sure your family is healthy and well fed?

**[THE IDEA OF GETTING THE OVERVIEW OF WHAT MEN THINK ABOUT NUTRITION AND HYGIENE]**

**Question 1.4 (Strengthening women's domestic role)** This training was only give to women and not men. Is that a good idea? How has it benefitted the way your spouse carries out her duties in the home?

**Question 1.5 (Reactions to women's absence in training)** What were the general feelings among men in this village that women with young children were absent from home for training?

**Question 1.6 (Challenges of women's absence)** What challenges did you and other members of your family have when your wives went for training?

**Question 1.7 (Opinion of CNS)** You know that the training at which your spouse attended was conducted by young women from the upazila who have been trained as Community Nutrition Scholars.

What do people say in your community about these young women and the training work they have been doing?

**MODULE 2      NEW KNOWLEDGE ABOUT NUTRITION, FOOD PREPARATION AND HEALTH AND NEW PRACTICES IN THE FAMILY**

**Question 2.1 (Women's sharing of training information)** During the course of your spouses' training, what new information from the course do you remember her bringing back to the family?

**[SHARE WITH THE MEN'S GROUP THE A4 SHEET ON THE DIFFERENT INFORMATION IN THE TRAINING ABOUT MICRO-NUTRIENT DIFFICIENCY, CHILD FEEDING, FOOD PREPARATION AND MOTHER AND CHILD HEALTH]**

**Question 2.2 (Observed changes in women's practices)** What differences have you noticed in the way your spouse prepares food and feeds the children or looks after their health, following the course?

**Question 2.3 (Changes in shopping requests)** Let's talk about shopping for food. Is it normal for men in this village to do the food shopping for the family? Were there any changes in the types of food your spouse asked you to buy in the market during her attendance at the training? Has she continued to ask you to buy these foods after the training finished? What was your reaction when she first made these requests? Do you still buy these foods?

**[PROBE ABOUT ANY REACTIONS TO REQUESTS FOR DIFFERENT KINDS OF FOOD. IF NO NEW FOOD REQUESTS REPORTED BY ANY OF THE MEN, MOVE TO QUESTION 2.4]**

**Question 2.4 (Difficulties in changing practices)** Your spouse learnt many new things about nutrition, child feeding, food preparation and child health in the training. How well has she been able to change the way she feeds and looks after the children to follow the recommendations of the training? What things do you think prevent women in this village from introducing new ways to feed and look after their children?

**[IF NOT MENTIONED BY THE MEN, RAISE THE POSSIBILITY THAT THE FAMILY ITSELF MAY PREVENT WOMEN CHANGING THEIR PRACTICES]**

**Question 2.5 (Changing family food distribution)** We understand in your village that it is normal that women provide more food to husbands and boys compared to women and girls **even when men may prefer to have an equal distribution**. Is this correct? Do you know that one of the changes discussed in the training was about making food distribution in the family more equal, so that all will be well-nourished. What do you think about that idea? Has it happened in your family?

### **MODULE 3 OWN FOOD PRODUCTION AND USE OF ORANGE-FLESHED SWEETPOTATO (OFSP)**

**Question 3.1 (Changes in garden cultivation)** Your spouse is cultivating a homestead garden. Did you notice anything different about the crops she planted or the way she cultivated the garden after the training?

**[IF NO MENTION OF NEW CROPS, ASK WHETHER SHE PLANTED NEW VEGETABLES OR OFSP]**

**Question 3.2 (OFSP ideas)** What is your opinion about OFSP as a garden or field crop and as a food from men's perspectives? For the market? For household consumption, especially for small children?

**Question 3.3 (OFSP discussion with spouse)** What kind of discussions did you have with your spouse about the idea of planting Orange Fleshed Sweetpotato (OFSP) after the training either in the field or the garden? What was the result of the discussion?

**Question 3.4 (Interest in OFSP training)** If training on sweetpotato was organized for men, what topics would you be interested? How would this new learning benefit your spouses and children?

**Question 3.5 (OFSP as new food)** Did you discuss with your spouse the idea of including OFSP as a food preparation for the family? What was the result?

**Question 3.6 (Consumption of OFSP)** If OFSP was included as a new food preparation for the family, who mainly consumed it? Did you see any benefit in introducing that food for yourself or other family members?

### **MODULE 4 CHANGES IN SPOUSES FROM THE CNS TRAINING**

**Question 4.1 (Perceptions of change in spouse)** These are the final questions. In what ways has your spouse changed, both as mothers and as women, because of their participation in the course?

**Question 4.2 (Impact of training on family)** Considering how the participation of your spouse in the CNS training has affected the family, please indicate on your Post It stickers how far on a scale of 1 to 10 you disagree or agree with the following statement, where 1 is to most strongly disagree and 10 is to most strongly agree:

***The participation of my spouse in the CNS training has made a big improvement in the health and well-being of my children and my spouse***

## MODULE 5 FINAL QUESTION ON COVID 19 FOR MEN

Finally, we cannot leave you without asking how you are managing with the coronavirus that is causing so much hardship for people in Bangladesh.

**Question 5.1** How has this disease affected your behavior in relation to hygiene?

**Question 5.2** How has this disease affected the work that your family members are doing and the income you receive?

**Question 5.3** Has the disease changed the kind of food you are now feeding to your family?

*Thank you for being so generous with your time today and for sharing your views and experiences. It has been a pleasure to talk to you!*

### 3. CNS GUIDE QUESTIONS

#### VIMI-FGD

CNS

Name of the Upazila: \_\_\_\_\_

Name or organizer: \_\_\_\_\_

Date: \_\_\_\_\_

VIMI-FGD members (family name not needed)	Age	Ethno-religious group*	Marital Status**	Level of education completed***	Upazilas and villages where assigned	Number of women trained	Signature
1.							
2.							
3.							
4.							
5.							

#### INFORMED CONSENT

*Thank you for joining us today. We are going to be discussing your work as a Community Nutrition Scholar (CNS) for the project 'Strengthening food system resilience in Asia's mega deltas with salt-tolerant sweetpotato and potato'. We are very interested to know your assessment of the nutrition, consumption and health training that*

*you have completed with mothers over two seasons. We are having these discussion groups with CNS in all the upazilas targeted by the project in order to understand how successful you think the trainings were with the women's groups, what the challenges and difficulties were and how things could have been improved. Do you think that the project has been helpful for child-feeding and nutrition, as well as for family health? Have you seen changes in women's understanding of nutrition, feeding practices and the health of themselves and their children? Have you seen changing practices in their homes and in their production of healthy food in their homestead gardens or fields? We are also talking to some of the husbands of women who participated in the project to see what their opinions are about the project, about the importance about child nutrition and health and about OFSP. We are also interested in your own opinions about the way men have supported or complicated the participation of the women in these trainings.*

*Your participation today is voluntary and confidential. We will not be using your names or the name of this village in any publication with the information that we collect today. We request that you respect the confidentiality of the others participating today by not repeating outside this space anything that was said during the discussion. We hope that each of you will feel free to express your opinions fully and share your own experiences with the topics that we will be discussing. You are of course each free not to answer any question and to leave the discussion whenever you like. However, we very much hope you remain for the full period of the meeting, which will be between one and one and a half hours, and that you enjoy the discussions. To make sure that we do not miss what you are saying, (NAME OF NOTETAKER) will be taking notes and we would like your permission to record the discussion so that we can capture your comments accurately. If you prefer us not to record the meeting, we will not do so. Your views and experiences are very important to us. The information that we are collecting will help to improve agricultural research and development activities in Bangladesh.*

*Are there any questions before we begin?*

## **MODULE 1      OVERALL ASSESSMENT OF THE TRAININGS WITH MOTHERS**

**Question 1.1 (CNS positive experiences)** Having gone through two seasons of providing training for mothers in nutrition, child feeding, food preparation, growing healthy crops and mother and child health issues, what were your own positive experiences of working as a CNS? How far were you able to share the new knowledge you acquired in your training with the mothers in your groups?

**Question 1.2 (CNS negative experiences)** And what about the challenges you experienced? These may be to do with organizing and running the meetings, your own personal challenges as trainers, or the problems faced by the mothers or maybe some other issues?

**Questions 1.3 (Women's different capacities to understand topics and make changes in practices)** Thinking about the different modules you taught to the women during the training, how did the women respond in the different modules? Were they fully able to absorb the new knowledge and to make changes in their corresponding practices? Or they acquired the new knowledge, but did not change practices in their homes? Or they found it difficult to understand the training and made no changes? Please fill in the table on the sheet of paper with the approximate proportion of the women in these different categories. Please tell us something about the women in those categories.



**Table 1** Different capacities to understand modules and make changes in practices

	1	2	3
	Information fully acquired, evidence of changes in practices	Some information acquired, but no change in practices	Information not well understood
Nutrition			
Food preparation			
Women and children's health and hygiene			
Own food production and use of OFSP			

**Questions 1.4 (Future improvements)** If you had the chance to do another season as a CNS and trainer, what would you do differently to help more mothers to be in column 1 in the table and less in column 3? How can they be better caregivers to their small children and be stronger women?

## **MODULE 2      NUTRITION (Balanced diet/nutritious food, Malnutrition, Micro-nutrient deficiency)**

Now I would like to discuss with you in a bit more detail the different topics you provided training on to the groups of mothers. First, we will consider nutrition, and the three areas you covered in the training on **Balanced diet/ nutritious food, Malnutrition and Micro-nutrient deficiency**. From the training itself, and from your visits to their homes, please tell us a bit more about how the women responded to these topics

**Question 2.1 (Topics that were most and least interesting for the women)** Out of the three topics covered in this module, which was best received by the women, captured their attention and curiosity, made them excited, which was quite interesting but less exciting and which was the least interesting for them?

**Table 2** Interest in nutrition topics among women

	Very interesting (1)	Quite interesting (2)	Least interesting (3)
<b>Balanced diet/ nutritious food (B)</b>			
<b>Malnutrition (M)</b>			
<b>Micro-nutrient deficiency (D)</b>			

[THE CNS SHOULD BE GIVEN THREE POST-ITS EACH. THEY USE THE POST-ITS TO RANK THE DIFFERENT TOPICS. THEY MUST USE ONE POST-IT FOR EACH TOPIC. THEY CAN RANK ALL THREE TOPICS VERY INTERESTING, OR ALL THREE LEAST INTERESTING. OR THEY CAN DISTRIBUTE THEM IN OTHER WAYS AS THEY LIKE, BUT MUST SCORE EACH OF THE TOPICS. THEY WRITE ON THEIR POST-IT THE INITIAL OF THE TOPIC (EITHER 'B', OR 'M' OR 'D') AND THEN THE NUMBER FOR THE RANKING. ONCE THEY HAVE SCORED EACH TOPIC ON THEIR THREE POST-ITS THEY POST THEM IN THE CELL ON THE CHART. SO THE RANKING IS PRIVATE.

THE TABLE SHOULD BE DRAWN ON THE FLIP CHART, SO THAT THE CNS CAN APPROACH THE FLIP CHART TO STICK THEIR POST-ITS.

COUNT UP THE NUMBER OF POST-ITS IN EACH CELL FOR EACH TOPIC AND WRITE THE NUMBERS IN THE CELL.

**Question 2.2 (Reasons for strong interest in the topic)** [CHOOSING THE TOPIC THAT SCORED MOST NUMBER 1s] For those of you who gave this topic a 1, why do you think this topic created a lost of interest among the women?

**Question 2.3 (Reasons for lack of interest in the topic)** [CHOOSING THE TOPIC THAT SCORED THE MOST 3s] For those of you who scored this topic a 3, why do you think this topic had limited interest for the women?

**Question 2.4** [CHOOSING THE TOPIC NOT YET SELECTED] Do you have any comments on how the women reacted to this topic?

[NOTE, IF TWO TOPICS SCORE THE SAME NUMBER OF '1's DISCUSS EACH OF THEM IN TURN IN 2.2. THEN DISCUSS THE THIRD TOPIC IN 2.3. QUESTION 2.4 WOULD NOT BE ASKED IN THIS CASE. SIMILARLY, IF TWO TOPICS HAVE THE SAME NUMBER OF '3's, DISCUSS BOTH IN QUESTION 2.3 AND QUESTION 2.4 WOULD NOT BE ASKED. IF ALL THREE HAVE AN EQUAL NUMBER OF '1's, IN QUESTION 2.2 ASK CNS ABOUT WHAT WAS INTERESTING FOR THE WOMEN ABOUT EACH TOPIC IN TURN. THEN GO TO 2.3 FOR THE TOPIC THAT HAD THE MOST NUMBER OF '3's AND ASK THOSE CNS THAT GAVE THAT TOPIC A '3' AND DON'T ASK QUESTION 2.4. SIMILARLY, IF ALL THREE HAVE AN EQUAL NUMBER OF '3's IN 2.3, ASK ABOUT EACH IN TURN FROM THE CNS WHO RANKED THEM AS '3' AND DON'T ASK 2.4. IN THE UNLIKELY EVENT THAT THE SAME TOPIC RECEIVES THE MOST 1s AND THE MOST 3s, IN 2.2 ASK THE CNS WHO GAVE THAT TOPIC A 1 WHAT WAS VERY INTERESTING FOR THE WOMEN AND THEN FOR 3.3 ASK FOR THE SAME TOPIC THOSE CNS WHO GAVE THE TOPIC A '3' WHY THEY THOUGHT IT WAS LEAST INTERESTING. IN 2.4 ASK IF THERE ARE COMMENTS ON HOW WOMEN REACTED TO THE OTHER TWO TOPICS NOT MENTIONED].

### **MODULE 3 FOOD PREPARATION (Breastfeeding, Complementary food and Cooking practices)**

Now I would like to discuss with you the different topics you provided training on to the groups of mothers in relation to Food preparation, which included **Exclusive breastfeeding**, **Use of complementary food** and **New cooking practices**. From the training itself, and from your visits to their homes, please tell us a bit more about how the women responded to these topics.

**Question 3.1 (Topics that were most and least interesting for the women)** Out of the three topics covered in this module, which was best received by the women, captured their attention and curiosity, made them excited, which was second and which was the least interesting for them?

**Table 3** Interest in food preparation topics among women

	Very interesting (1)	Quite interesting (2)	Least interesting (3)
<b>Exclusive breastfeeding (B)</b>			
<b>Use of complementary food (C)</b>			
<b>New cooking practices (P)</b>			

**Question 3.2 (Reasons for strong interest in the topic)** [CHOOSING THE TOPIC THAT SCORED MOST NUMBER 1s] For those of you who gave this topic a 1, why do you think this topic created a lost of interest among the women?

**Question 3.3 (Reasons for lack of interest in the topic)** [CHOOSING THE TOPIC THAT SCORED THE MOST 3s] For those of you who scored this topic a 3, why do you think this topic had limited interest for the women?

**Question 3.4** [CHOOSING THE TOPIC NOT YET SELECTED] Do you have any comments on how the women reacted to this topic?

[NOTE, IF TWO TOPICS SCORE THE SAME NUMBER OF '1's DISCUSS EACH OF THEM IN TURN IN 3.2. THEN DISCUSS THE THIRD TOPIC IN 3.3. QUESTION 3.4 WOULD NOT BE ASKED IN THIS CASE. SIMILARLY, IF TWO TOPICS HAVE THE SAME NUMBER OF '3's, DISCUSS BOTH IN QUESTION 3.3 AND QUESTION 3.4 WOULD NOT BE ASKED. IF ALL THREE HAVE AN EQUAL NUMBER OF '1's, IN QUESTION 3.2 ASK CNS ABOUT WHAT WAS INTERESTING FOR THE WOMEN ABOUT EACH TOPIC IN TURN. THEN GO TO 3.3 FOR THE TOPIC THAT HAD THE MOST NUMBER OF '3's AND ASK THOSE CNS THAT GAVE THAT TOPIC A '3' AND DON'T ASK QUESTION 3.4. SIMILARLY, IF ALL THREE HAVE AN EQUAL NUMBER OF '3's IN 3.3, ASK ABOUT EACH IN TURN FROM THE CNS WHO RANKED THEM AS '3' AND DON'T ASK 3.4. IN THE UNLIKELY EVENT THAT THE SAME TOPIC RECEIVES THE MOST 1s AND THE MOST 3s, IN 3.2 ASK THE CNS WHO GAVE THAT TOPIC 1s WHAT WAS VERY INTERESTING FOR THE WOMEN AND THEN FOR 3.3 ASK FOR THE SAME TOPIC THOSE CNS WHO GAVE THE TOPIC A '3' WHY THEY THOUGHT IT WAS LEAST INTERESTING. IN 3.4 ASK IF THERE ARE COMMENTS ON HOW WOMEN REACTED TO THE OTHER TWO TOPICS NOT MENTIONED].

#### **MODULE 4 WOMEN AND CHILDREN'S HEALTH AND HYGIENE (Emergency health and diet, safe motherhood, hygiene)**

Now I would like to discuss with you the different topics you provided training on to the groups of mothers in relation to Women and children's health and hygiene, which included **Emergency health and diet, Safe motherhood** and **Hygiene**. From the training itself, and from your visits to their homes, please tell us a bit more about how the women responded to these topics.

**Question 4.1 (Topics that were most and least interesting for the women)** Out of the three topics covered in this module, which was best received by the women, captured their attention and curiosity, made them excited, which was second and which was the least interesting for them?

**Table 4** Women and children's health and hygiene

	Very interesting (1)	Quite interesting (2)	Least interesting (3)
Emergency health and diet (E)			
Safe motherhood (M)			
Hygiene (H)			

**Question 4.2 (Reasons for strong interest in the topic)** [CHOOSING THE TOPIC THAT SCORED MOST NUMBER 1s] For those of you who gave this topic a 1, why do you think this topic created a lot of interest among the women?

**Question 4.3 (Reasons for lack of interest in the topic)** [CHOOSING THE TOPIC THAT SCORED THE MOST 3s] For those of you who scored this topic a 3, why do you think this topic had limited interest for the women?

**Question 4.4** [CHOOSING THE TOPIC NOT YET SELECTED] Do you have any comments on how the women reacted to this topic?

[NOTE, IF TWO TOPICS SCORE THE SAME NUMBER OF '1's DISCUSS EACH OF THEM IN TURN IN 4.2. THEN DISCUSS THE THIRD TOPIC IN 4.3. QUESTION 4.4 WOULD NOT BE ASKED IN THIS CASE. SIMILARLY, IF TWO TOPICS HAVE THE SAME NUMBER OF '3's, DISCUSS BOTH IN QUESTION 4.3 AND QUESTION 4.4 WOULD NOT BE ASKED.

IF ALL THREE HAVE AN EQUAL NUMBER OF '1's, IN QUESTION 4.2, ASK CNS ABOUT WHAT WAS INTERESTING FOR THE WOMEN ABOUT EACH TOPIC IN TURN. THEN GO TO 4.3 FOR THE TOPIC THAT HAD THE MOST NUMBER OF '3's AND ASK THOSE CNS THAT GAVE THAT TOPIC A '3' AND DON'T ASK QUESTION 4.4. SIMILARLY, IF ALL THREE HAVE AN EQUAL NUMBER OF '3's IN 4.3, ASK ABOUT EACH IN TURN FROM THE CNS WHO RANKED THEM AS '3' AND DON'T ASK 4.4. IN THE UNLIKELY EVENT THAT THE SAME TOPIC RECEIVES THE MOST 1s AND THE MOST 3s, IN 4.2 ASK THE CNS WHO RANKED THIS WITH A 1 WHAT WAS VERY INTERESTING FOR THE WOMEN AND THEN FOR 4.3 ASK FOR THE SAME TOPIC THOSE CNS WHO GAVE THE TOPIC A '3' WHY THEY THOUGHT IT WAS LEAST INTERESTING. IN 4.4 ASK IF THERE ARE COMMENTS ON HOW WOMEN REACTED TO THE OTHER TWO TOPICS NOT YET MENTIONED].

## MODULE 5 DISTRIBUTION OF FOOD IN THE FAMILY

**Question 5.1 (Understanding/agreement of women on food distribution)** Another topic that was included in the training concerned the need for more equal distribution of food between men and women and girls and boys in the family. In your experience in the sessions and in your visits to the mothers, how far were the messages about this topic understood by the women? How far did they agree with the importance of the issue?

**Question 5.2 (Changes in food distribution)** In your estimation, what percentage of the families you visited made changes in the way food was distributed, and made it more equal?

**Question 5.3 (Own changes in food distribution)** In your own families, have you influenced how food is distributed among members of the family?

## MODULE 6 OWN FOOD PRODUCTION AND USE OF ORANGE-FLESHED SWEETPOTATO (OFSP) (Homestead gardening, Production techniques, Utilization of OFSP)

Now I would like to discuss with you the different topics you provided training on to the groups of mothers in relation to Own food production and use of OFSP, which included **Homestead gardening**, **Production techniques** and **Utilization of OFSP**. From the training itself, and from your visits to their homes, please tell us a bit more about how the women responded to these topics.

**Question 6.1 (Topics that were most and least interesting for the women)** Out of the three topics covered in this module, which was best received by the women, captured their attention and curiosity, made them excited, which was second and which was the least interesting for them?

**Table 4** Own food production and use of ofsp

	Very interesting (1)	Quite interesting (2)	Least interesting (3)
<b>Homestead gardening (H)</b>			
<b>Production techniques (P)</b>			
<b>Utilization of OFSP (S)</b>			

**Question 6.2 (Reasons for strong interest in the topic)** [CHOOSING THE TOPIC THAT SCORED MOST NUMBER 1s] For those of you who gave this topic a 1, why do you think this topic created a lost of interest among the women?

**Question 6.3 (Reasons for lack of interest in the topic)** [CHOOSING THE TOPIC THAT SCORED THE MOST 3s] For those of you who scored this topic a 3, why do you think this topic had limited interest for the women?

**Question 6.4** CHOOSING THE TOPIC NOT YET SELECTED] Do you have any comments on how the women reacted to this topic?

[NOTE, IF TWO TOPICS SCORE THE SAME NUMBER OF '1's DISCUSS EACH OF THEM IN TURN IN 6.2. THEN DISCUSS THE THIRD TOPIC IN 6.3. QUESTION 6.4 WOULD NOT BE ASKED IN THIS CASE. SIMILARLY, IF TWO TOPICS HAVE THE SAME NUMBER OF '3's, DISCUSS BOTH IN QUESTION 6.3 AND QUESTION 6.4 WOULD NOT BE ASKED. IF ALL THREE HAVE AN EQUAL NUMBER OF '1's, IN QUESTION 6.2, ASK CNS ABOUT WHAT WAS INTERESTING FOR THE WOMEN ABOUT EACH TOPIC IN TURN. THEN GO TO 6.3 FOR THE TOPIC THAT HAD THE MOST NUMBER OF '3's AND ASK THOSE CNS THAT RANKED THAT TOPIC 3 WHY IT WAS LEAST INTERESTING AND DON'T ASK QUESTION 6.4. SIMILARLY, IF ALL THREE HAVE AN EQUAL NUMBER OF '3's IN 6.3, ASK ABOUT EACH IN TURN FROM THE CNS WHO RANKED THEM AS '3' AND DON'T ASK 6.4. IN THE UNLIKELY EVENT THAT THE SAME TOPIC RECEIVES THE MOST 1s AND THE MOST 3s, IN 6.2 ASK THE CNS WHO RANKED THIS 1 WHAT WAS VERY INTERESTING FOR THE WOMEN AND THEN FOR 6.3 ASK FOR THE SAME TOPIC THOSE CNS WHO GAVE THE TOPIC A '3' WHY THEY THOUGHT IT WAS LEAST INTERESTING. IN 6.4 ASK IF THERE ARE COMMENTS ON HOW WOMEN REACTED TO THE OTHER TWO TOPICS NOT YET MENTIONED].

## **MODULE 7      HOW HAVE PARTICIPANTS BENEFITTED AS WOMEN AND MOTHERS?**

**Question 7.1 (Empowerment of participants)** In this final module, I would like to ask your opinions about how you think the participants of the trainings changed as women and as mothers between the beginning and the end of the training sessions? I am asking you about their level of confidence, the levels of independence, their decision-making.

**Question 7.2 (Empowerment of CNS)** Now I would like to ask you a similar question about yourselves! Think about the following statement about yourselves and tell me how far on a scale of 1 to 10 you disagree or agree with the following statement, where 1 is to most strongly disagree and 10 is to most strongly agree:

***The experience of working as a Community Nutrition Scholar in this project has made me more independent, self-confident woman, better able to make my own decisions***

**Question 7.3 (Scaling by CNS)** And finally, can I ask you to what extent have you been recommending some or all of the practices you have been teaching in this training to your own families and neighbors? Which practices and what was the response?

***Thank you for being so generous with your time today and for sharing your views and experiences. It has been a pleasure to talk to you!***

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