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SOMALILAND (2013):
INFANT AND YOUNG CHILD FEEDING PRACTICE AND ACCEPTABILITY OF AND WILLINGNESS TO PAY FOR MICRONUTRIENT POWDER AND LIPID-BASED NUTRIENT SUPPLEMENT IN MAROODI-JEEX REGION, SOMALILAND

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Somaliland (2013): Acceptability of and Willingness to Pay for Micronutrient Powder and Lipid-based Nutrient Supplement

PSI Research & Metrics
2013

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Table of Contents

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BACKGROUND

Nutritional deficiencies in children under five constitute a major health concern in Somaliland. The national micronutrient and anthropometric nutrition survey 2009 highlighted widespread anemia and iron and vitamin A deficiencies. Anemia prevalence among children 6-59 months was 45.2 %[1]. Iron deficiency is similarly high in children 6-59 months (59.6%) and prevalence of vitamin A deficiency (25.6%) also indicates prevalence levels exceeding the 20 % WHO cut off for severe[2]. Moreover, a low coverage of Vitamin A capsule distribution in children under 5 (39.8%) highlights the elevated risks of vitamin A and iron deficiency in Somaliland[3]. A deficiency of zinc is likely to follow similar pattern although no data is available.

Iron, vitamin A and zinc deficiencies have a lifelong impact on children and can cause impaired cognitive and physical ability, stunted growth, and increased risk of morbidity and mortality[4].

Factors that contribute to the problem in Somaliland are high food prices and limited access to diversified food sources, leading to a reduced consumption of balanced diets and a high dependency on a cereal-based diet. Findings from the survey indicated that diets consist mainly of cereal (maize or rice), oil, sugar, seasonal access to milk and occasional access to meat. Fresh fruit, vitamin A rich vegetables, fish, egg and organ meat were rarely consumed[1].

Supplementation of vitamins and minerals (vitamin A, iron, zinc, iodine and folic acid) can help relieve the burden of micronutrient deficiencies among children under five[5]. Population Services International/Somaliland (PSI) is thus planning to expand its nutrition interventions by strengthening social behavior change communication (SBCC) on infant young child feeding practices (IYCF) and by distributing micronutrient powders (MNP) targeting children 6-59 months[6].

Efficacy and effectiveness of MNP have been evaluated in at least 16 studies in Africa, South Asia, South East Asia and North America and MNP is proven to prevent and reverse iron

[1] National anthropometric and micronutrient survey. (2009). FSNAU, FAO, UCL.
[2] WHO. (1996). Indicators for assessing Vitamin A deficiency and their application in monitoring and evaluating intervention programmes.
[3] UNICEF. Multiple Indicator Cluster Survey (2011).
[4] WHO. FAO. 2006. Guidelines of food fortification with micronutrients.
5 Bhutta, Z.A., et all. (2008). What works? Interventions for maternal and child undernutrition and survival. The Lancet, 371, p.417-40.
[6] The age group of the target audience will be decided together with the MOH and UNICEF as to follow the national strategy.

deficiency anemia in infants[7][8]. This evidence led to the WHO's approval of MNP to prevent and treat anemia.

In order to design an appropriate campaign promoting improved IYCF and MNP, PSI conducted a research study to examine nutrition practices related to nutritional supplementation, acceptability of nutrient supplements, and willingness to pay (WTP) for supplements. PSI also included another product, lipid-based nutrient supplement (LNS), and examined acceptability of and WTP for this product in addition to MNP, in order to test the marketability of both products.

STUDY OBJECTIVES

The objectives of this study were to:

- Generate information about home feeding and purchasing practices
- To assess acceptability of MNP and LNS products
- To assess WTP for MNP and LNS products
- To identify potential marketing strategies for MNP and LNS

METHODOLOGY

This study consisted of three main components:

1. **Focus group discussions with men.** As men play a central role in decision-making within Somali households, focus group discussions (FGDs) were conducted with married men who have a child aged 6-23 months. The FGDs covered topics including: feeding practices; men's involvement in nutrition decisions and budgeting; and perceptions of MNP and LNS. While it was hypothesized that women would be the primary target audience for promoting nutritional supplements, the study sought to better understand men's role in making decisions about nutrition, feeding, and financing as a secondary audience.

2. **Trial of MNP and LNS.** Married female caregivers of children aged 6-23 months were selected from high and low socioeconomic groups within urban, rural, and IDP areas. Each woman trialed both LNS (Nutributter 20 mg) and MNP (MIX ME). The women trialed one product for a period of two weeks, then had a washout period of one week where they didn't use any product or participate in study activities in order to distance themselves from the first product before trialing

[7] S. Zlotkin, K.Y.Antwi, C. Schauere, & G. Yeung. (2003). Use of microencapsulated iron fumarate sprinkled to prevent recurrence of anaemia in infants and young children at high risk. Bulletin of the World Health Organization, 81:108-115

[8] S.H.Zlotkin, C.Schauer, A. Christofides, W. Sharieff, M.C. Tondeur, & S.M. Hyder. (2005). Micronutrient sprinkles to control childhood anaemia. Health in Action, Vol. 2, Issue 1

the second. Following the washout period, they trialed the second product for two weeks. In addition to trialing each product, each woman participated in the following activities:

- An initial interview conducted prior to the first trial, covering home nutrition practices associated with uptake of MNP or LNS;
- A follow-up interview after each trial period, on use and impressions of the nutrition product;
- A WTP exercise for the product they had just trialed (see below);
- A FGD on nutrition and perceptions of the product they had just trialed and how it should best be marketed and distributed to caregivers.

3. **Willingness to pay for MNP and LNS.** WTP activities were conducted among two groups: women who had trialed the products and a group of control women who had not trialed the products but received a verbal description of the product and its nutrition benefits. The control group was included to test whether trial influences WTP, to ascertain the feasibility of an information-only campaign to promote a new nutritional product.

Trialists were asked at the follow-up interview five questions from the price sensitivity meter (PSM) - the ideal/normal price, a cheap price, a price that is too cheap at which one doubts quality, an expensive price, and a price that is too expensive. This type of stated WTP often overestimates true WTP, and was solicited to compare stated WTP with the findings of the simulated auction.

Both groups (trial and control) participated in a simulated auction for each product using the Becker-DeGroot-Marschak (BDM) method[9], which has been used in commercial and increasingly social marketing to ascertain prices. In this method, participants make bids with real money on actual products (or no money at all, if they don't want the product) without knowing what the market price is (which is variable). If their bid is equal to or greater than the randomly selected market price, they pay money and receive the product (and change, if applicable). This method seeks to better approximate true WTP as participants must give only the amount they want to pay without knowing the price, and then must exchange actual money for product.

[9]J.Berry, G.Fisher, & R. Guiteras. (2012). Eliciting and Utilizing Willingness to pay: evidence from field trials in Northen Ghana. International Growth Centre

STUDY SAMPLE

This study included three populations: male caregivers; female caregivers who trialed the products (trial); and female caregivers who did not trial the products (control). All participants were married and were caregivers to at least one child aged 6-23 months, and were drawn from urban, IDP, and rural areas in the Marodi-Jeex region.

Male Caregivers

The sample size for male caregivers was set at 30, to gain a basic understanding of men's role in nutrition. A total of 30 men were recruited, 10 each area (see table below).

Male caregivers

	Urban Hargeisa	**IDP Hargeisa**	**Rural**	**Total**
FGDs	10	10	10	**30**

These men were recruited with the help of PSI Interpersonal Communication (IPC) community organizers (COs) and other survey guiders, including local health post/MCH staff and, local school staff or local community committee members who are well known among the community. All staff were trained and provided with eligibility criteria for recruitment. Potential participants were provided with information about their participation and consented prior to the FGD.

Female Caregivers (Trial and Control)

The sample size for female caregivers in the trial and control groups was determined based on the WTP exercise, with a calculation set at identifying a difference of WTP between 0 and 5.4 cents (the price needed for cost recovery), necessitating 14 in each group (SD: 5 cents, $p<.05$, power = 0.80), doubling to be conservative, thus 28 per stratum. As such, the trial and control groups were recruited to ensure 32 per stratum (urban/IDP/rural and high/low SES), in case of loss to follow up. Fewer participants were assigned to the trial component, given the burden of data collection with the trial population. In addition, the control group more closely approximates the real world scenario wherein most will not have trialed the product before first purchase, thus giving additional weight to control makes sense. (See table below.)

Female caregivers (trial and control)

	Urban Hargeisa Low SES	Urban Hargeisa High SES	IDP Hargeisa Low SES	IDP Hargeisa High SES	Rural Low SES	Rural High SES	Total
Trial Caregivers	12	12	12	12	12	12	72
Control Caregivers	20	20	20	20	20	20	120
Total	**32**	**32**	**32**	**32**	**32**	**32**	**192**

For the control caregivers, 120 were recruited by PSI IPC COs and other survey guiders. All 120 completed the WTP exercise.

For the trial caregivers, 72 were initially recruited by the COs and survey guiders. All completed the initial interview. In round one, four women were lost to follow-up and did not complete the follow-up interview, FGD, or WTP exercise. In round two, four women were also lost to follow-up. There was one woman who was lost to follow-up in both rounds, but the other six lost to follow-up participated in either one round or the other (three who participated in round one didn't in round two, and vice versa). While 68 women participated in each round, some questionnaires went missing during field data collection or data was missing. As such, findings from the follow up interviews and WTP data range from 65 to 67 cases (depending on product and round).

DATA ANALYSIS

This study collected several types of data. These include: focus group discussions with males on their role in child nutrition; focus group discussions with female trialists following each round of trial of the product on their impressions of the product; an initial interview on nutrition with female trialists; a follow-up interview on perceptions of the product and WTP for it; and a WTP activity using the BDM method.

For the focus group discussions, main themes were summarized across the groups and presented in aggregate, highlighting which ideas were most commonly heard and select minority opinions.

For the initial interview and follow-up interviews, which were a mix of quantitative and short-answer questions, SPSS was used to generate frequencies and main ideas in the short answers were summarized.

For the WTP data, the data was analyzed with STATA, using frequencies and bivariate analyses.

CHALLENGES

1. IDP trialists completed FGD and WTP exercises for both products at the first round, not only the product they had just trialed. This methodological error was detected and not repeated with other groups at the first round and was corrected at the second round for this group. The superfluous data is not included in the analysis, and we tested the WTP data to see if there was any effect on the IDP group overall. The IDP group had significantly lower WTP for MNP than the other two groups, but this may be a result of the fact that residents in IDPs were already familiar with similar products to LNS and many had already trialed it, and also that all of the adverse events with MNP occurred among control participants. However, participating in a combined FGD where both products and adverse reactions were discussed may have also negatively affected the WTP for MNP, particularly as this difference was not observed in the control sample.
2. The study design intended half of the trialists to begin with MNP and half to being with LNS; 36 in each group. However, two of the recruited caregivers had multiple children in the age range and asked for product for both children, leading to shortage of MNP in the field. As such, 38 caregivers received LNS in the first round and 34 received MNP.
3. Three completed questionnaires for the WTP component were lost in transport for the second round for the rural group. This does not appear to have affected the findings.

ADVERSE EVENTS

Five caregivers in the IDP area (one trialist of LNS and four trialists of MNP) complained that their children developed diarrhea after trialing the products. No children required hospitalization or special care. PSI staff (a qualified health professional) visited the caregivers and children and none had symptoms of dehydration. Adverse events were recorded with an adverse event form. Several trialists of LNS also complained of loose stools in their children but not diarrhea, and one complained of itching, though none of these reactions were severe.

KEY FINDINGS

Nutrition Knowledge and Practices

Feeding Practices

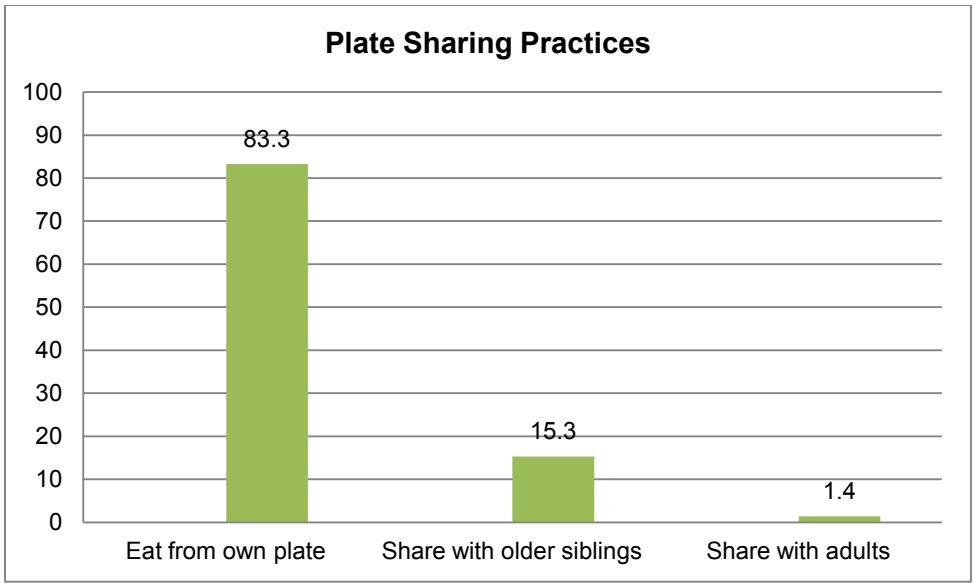
In the FGDs with both women and men, the most commonly cited foods that were intended for children from 6-23 months included:

- Biscuits
- Potatoes
- Shuuro
- Carrots
- Porridge
- Bread (boiled)
- Cabbage
- Rice with milk
- Barley
- Mooshaali

In FGDs with women, the most frequent reasons cited for choosing foods for children were that the food has protein or vitamins/nutrients, that it gives energy or power, and that it helps the child grow. Many also cited softness and giving the child a full tummy. These findings were similar across all locations and SES strata.

In the initial interview, female trialists were split on preparation of separate foods for children; 46% reported preparing a special meal for children, whereas 54% said that children ate the same meal as the rest of the family.

Regardless of type of meal, most children ate off their own plate; a small percentage shared with siblings and almost none shared with adults. Children eating from their own plate is a cultural practice in Somaliland.



The majority of female trialists (92%) reported that they themselves feed their child most often, with 7% reporting that their mother or mother-in-law feeds their child, and 1% reporting other siblings feeding them. The men in the FGDs echoed these findings, with most reporting no role in feeding children, though men in rural areas did say they may feed a child if the mother has more than one child to feed.

Purchasing Habits

The female trialists reported spending 100,000-1,700,000 Somaliland Shillings (SS)[10] on food per month, with an average spend of 596,373 SS (about $92).

Most, (81%) respondents in the initial interview reported purchasing their food at the market, while 19% cited other sources, mainly shops in their neighborhood.

Likewise, 81% reported not using any packaged foods, while 19% said that they did. The main packaged food that the women noted purchasing was biscuits.

When asked what motivated choice of foods at purchase, the two main considerations cited were quality of product and taste of the food, though some also mentioned the perceived nutritional content.

[10] $1 = 6,500 SS

Household Roles for Nutrition

Most of the female trialists (86%) reported that they made the decisions about what to feed their child 6-23 months of age; 15% said they decide jointly with a spouse.The men's FGDs support this finding, as most reported that their wife decided what to feed their child, though a few reported being involved in these decisions.Some respondents (both women and men) noted that grandparents played a role in deciding on feeding of children, but these were the minority.

Men viewed their role in supporting nutrition as covering the costs of food and buying food at the market. Other ways they reported involvement included in offering advice or accepting the woman's suggestions on nutrition and ensuring that livestock were cared for so there was enough milk for children (in rural areas).

Men noted that there was no specific budget for children's nutrition and health, but that they provided a sum of money to their wives who disbursed it as they saw fit, though they did mention paying additional money if children needed medical care. Nearly all men felt that it was the woman's role to both decide what to feed the child and how to budget for the child's nutrition.

Findings on LNS and MNP

Feasibility of using LNS and MNP

All except one trialist expressed confidence that she could use the products throughout the trial periods. When asked what meal they would add the supplement to, most (59.7%) said lunch, and the rest were evenly split between breakfast (20.8%) and dinner (18.1%).

Perception and use of LNS

Perceptions of LNS among Men

During the FGDs, men were shown the LNS product and its uses and purpose was described. Men were then asked how they would describe the product to someone else. Many were familiar with LNS already, mainly Plumpy'nut and Plumpy'doz that are distributed through maternal and child health centers ("the biscuits at the MCH") and felt that this product was similar to what is locally available but better.

They described its role as providing vitamins, minerals, and protein to prevent malnutrition and help children gain weight. Some men described the product as a type of food or better than food. They also likened it to biscuits, breast milk, and porridge.

Men were also asked about what challenges might be faced in the marketing and distribution of LNS. Men noted that some fathers may refuse the mother's use of the product due to lack of awareness about what it is or its benefits. There was also some concerns about safety - what was in the product and who had verified the safety of the ingredients. They also noted that if there were side effects like diarrhea, people may discontinue its use.

All of the groups stated that they would be willing to give the product to their children, as it has complete vitamins and nutrients and helps children grow and develop. Most saw their role primarily as encouraging others, such as their wife and neighbors, to use the product. A few reported that they would purchase the product themselves.

Use and Perceptions of LNS among Female Trialists

Following the trial of LNS, the trialists completed a short follow-up interview and a FGD providing information on their use and perceptions of the product.

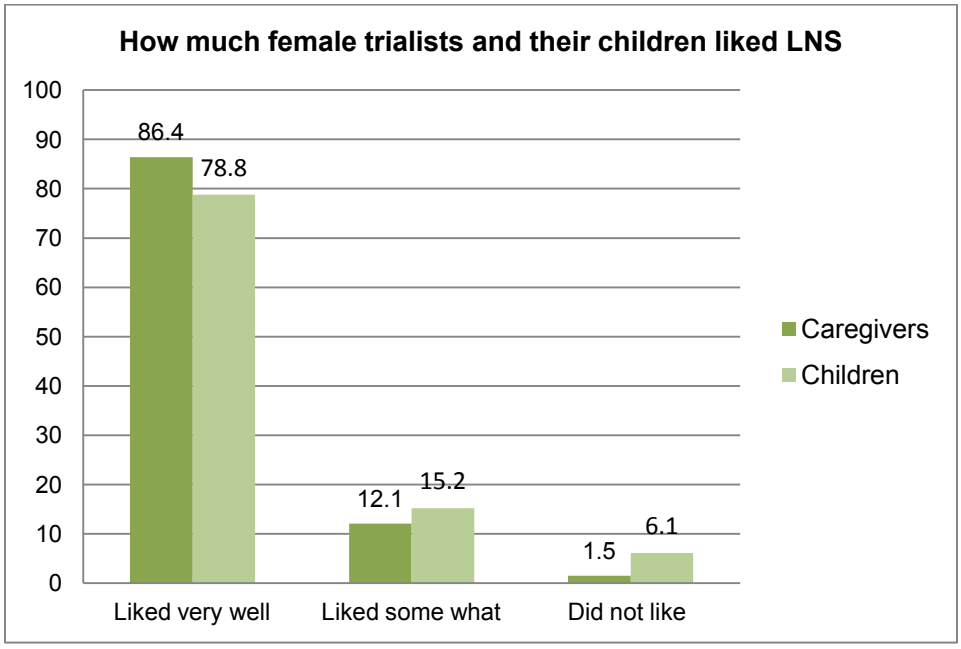
In the follow up interview, all except one of the trialists reported having used the LNS product; the one who did discontinued was because her child had diarrhea.

The majority of the trialists (78.5%) reported using the full trial dose of 14 sachets (N=65). The minimum used was 4. The observed reasons for not using the full dose were lose stools and forgetfulness.

Number of sachets used

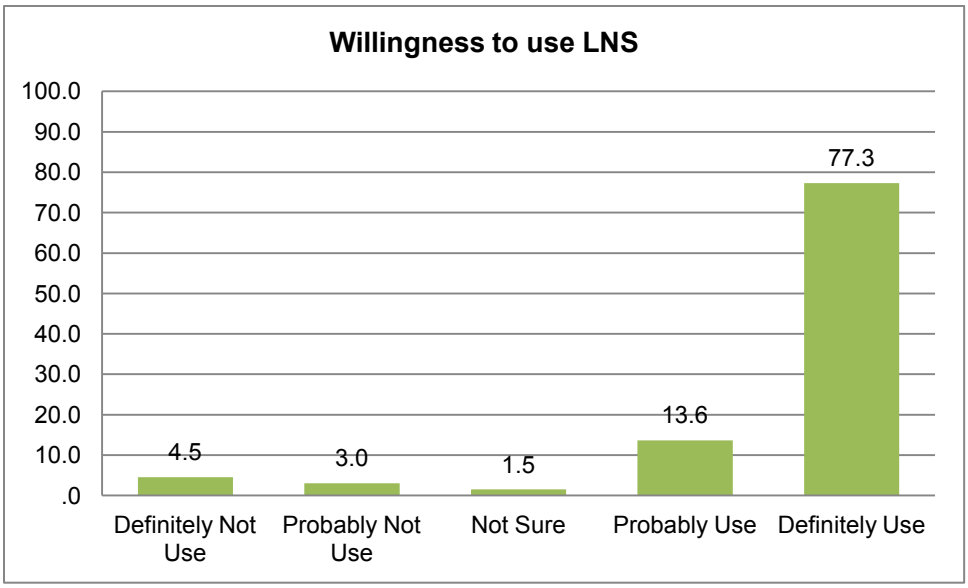
# of sachets	Frequency	Percent
4	1	1.5
5	1	1.5
7	4	6.2
8	1	1.5
10	3	4.6
12	3	4.6
13	1	1.5
14	51	78.5
Total	**65**	**100.0**

Participants were also asked how much they liked the product and how much they thought their child liked the product. Most caregivers reported that they liked the product very much, and that they also perceived that their child liked the product very much.



Respondents were also asked how relevant LNS is to them and their households; 78.8% said it was very relevant, 18.2% said it was somewhat relevant, and 3% felt it wasn't relevant.

Participants were also asked if they would use LNS in the future; again, the majority reported that they would; one of those who had an adverse event did not want to use in the future.



Trialists were also asked how much they liked specific aspects of the LNS product. Although some elements, like color and design, may change if a different type of LNS is procured, they were nonetheless explored to examine overall reactions. There was high approval of all aspects of the product. Almost all caregivers liked the color and design of the pack. Most liked the size, but nearly one in three reported that they didn't like the size.

Please indicate specific aspects you liked about this product.	
(a) Liked taste	84%
(b) Liked color of pack	91%
(c) Liked texture	80%
(d) Liked smell	78%
(e) Liked size of pack	69%
(f) Liked design of pack	91%

The most common perceived benefit cited in the FGDs of LNS was weight gain or that it "*builds body*." Weight gain was a perception mentioned by participants, potentially due to familiarity with other similar nutritional supplement products, but may be due to actual changes, as well. Most also said that it improved appetite and provided protein as well as vitamins and nutrients. Many also said that it helps children resist disease. A few noted improved sleep.

The main challenge that participants stated regarding the LNS was softening of stools or diarrhea, and one participant noted itching.

Most groups of women correctly recalled that children 6-23 months are the target audience for LNS, though many just said "young children." Most felt that the product was appropriate in all contexts, though some noted it was especially important for the poor.

All of the groups said that they would recommend the product to others. They said they would describe LNS as a product that has vitamins, nutrients, and protein, builds the body, and improves appetite. Some noted they would say that “it is a product that tastes like beans that can be consumed by itself”. Others noted that they would caution other users that it may soften the bowel.

Marketing of LNS

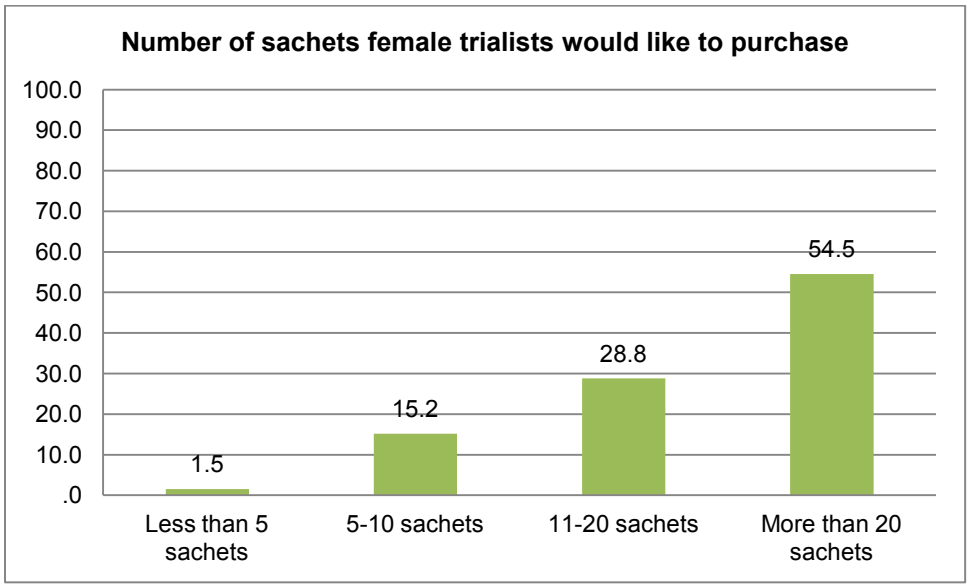
When asked where they would like to purchase LNS, most respondents reported that they would like to get it from pharmacies or MCHs. Those who reported other outlets noted shops.

Source for LNS		
Source	# of respondents	Percentage
Pharmacies	37	56.1%
MCHs	31	47.0%
Hospitals	0	0%
Community distributer	0	0%
Other	4	6.1%

Findings varied on how often they would like to purchase LNS, but most said once per week.

Frequency of Purchase		
How often	# of respondents	Percentage
Everyday	17	25.8%
Once a week	28	42.4%
Twice a week	13	19.7%
Once a month	15	22.7%
Other	3	4.5%

In terms of quantity of purchase, most women reported wanting to purchase LNS in quantities larger than 20 sachets. Most of those who wanted to purchase once per month also wanted to purchase in large quantities, but results were mixed. This suggests that participants may not have considered these questions together, and that more than one model may need to be tested.



Proposed Changes to the LNS Product

The majority of the female trialists had no concerns about the LNS product's appearance, though some groups noted that the size of the packet was small and could be increased. Although it was explained to trialists that the size was adequate for the daily nutritional needs, this finding may be influenced by the fact that the product used is smaller in size than PlumpyNut, which participants are familiar with.

Perceptions and use of MNP

Perceptions of MNP among Men

During the FGDs, men were shown the MNP product and its uses and purpose was described. Men were then asked how they would describe the product to someone else. They described it as a powder to be added to food, like Jumbo (a packaged seasoning) that builds the body and imparts vitamins and nutrients. They described its role as improving nutrition and "increasing blood" (which they perceive to mean a reduction of anemia). .

Few challenges were cited other than lack of awareness, that may result in women and men refusing to use it with their children. They noted that side effects or concerns about the product's expiry date may be a problem, as well.

Most of the participants indicated that they were willing to provide the product to their children, as it provides important vitamins. Most men reported that their role was to encourage others to use MNP, or to provide funds for its purchase.

Perceptions of MNP among Female Trialists

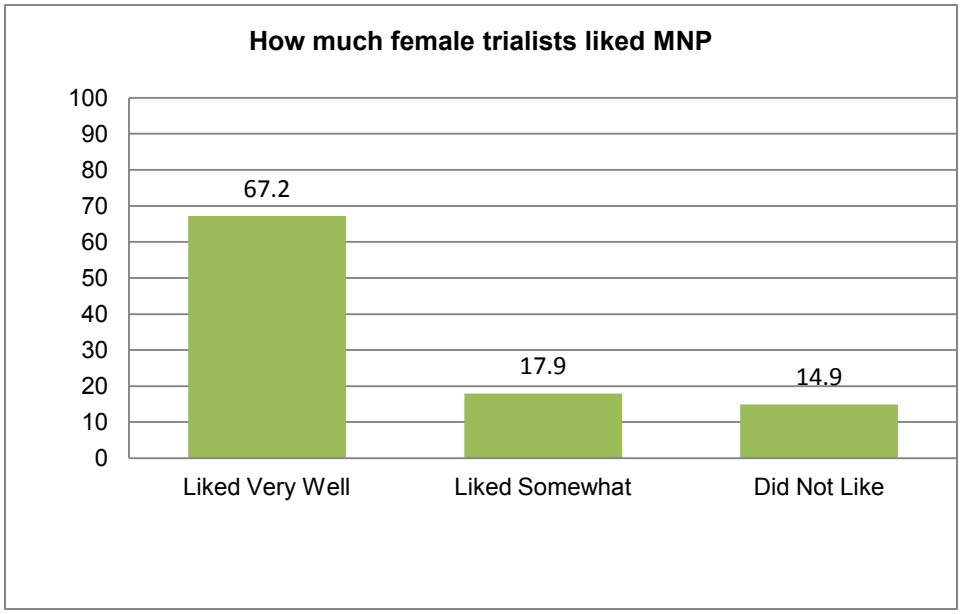
The majority of the trialists reported using the MNP (95.7%), though one didn't provide it to her child as her child got infected with measles and she decided not to give the product to the child and another refused to use it based on the taste and color of the product. While MNP does not have a taste or color, this may reflect the sensitivity of the caregiver to a new product that is unfamiliar or the specific food used with MNP.

Close to two-thirds of the caregivers reported using all 14 sachets, with some using fewer of the sachets. Those who used fewer sachets were those who reported diarrhea or loose stools in conjunction with the product trial.

# of sachets	Frequency	Percent
1	1	1.5
2	4	6.0
3	2	3.0
5	3	4.5
9	2	3.0
10	6	9.0

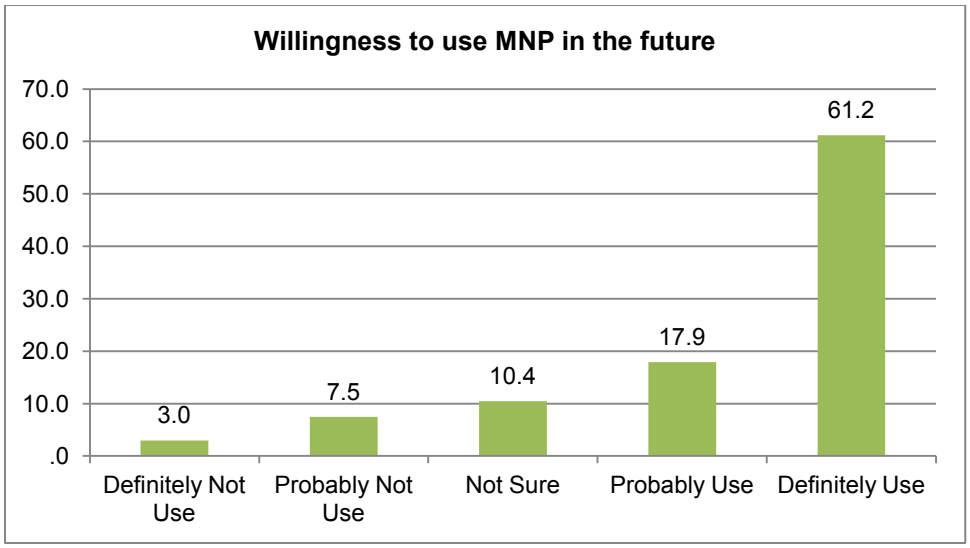
12	4	6.0
13	2	3.0
14	43	64.2
Total	**72**	**100.0**

Participants were also asked how much they liked the product. Most caregivers reported that they liked the product very well (67.2%).



Respondents were also asked how relevant they think that MNP product was to them and their households; 64.2% said that this product is relevant, 23.9% said that it is somewhat relevant while 11.9% stated that it is not relevant to them; of these, 3 were participants whose children experienced diarrhea during the trial.

Over half reported that they would definitely use the product in the future, in line with the percentage of caregivers who liked it very well.



Trialists were also asked how much they liked specific aspects of the MNP product. Again, the type of MNP used may not be the type procured, so color and design of pack are less relevant. However, these wer included to explore acceptability. There was moderate approval of most aspects of the product, with little variation.

Please indicate specific aspects you liked about this product.	
(b) Liked color of pack	74%
(c) Liked texture	71%
(e) Liked size of pack	66%
(f) Liked design of pack	77%

The most common perceived benefits of MNP cited in the FGDs included the provision of nutrients and protein, an improvement of the child's appetite, and that it helped the child gain weight, build body, and increase blood. While there is no proven effect on weight of MNP, this was nonetheless a perception of the trialists. Likewise, while no protein is contained in MNP, many associate protein with good nutrition and thus the product without fully understanding what protein means or whether or not MNP contains it. Most groups also noted that this product stops children from eating sand. Many Somalis believe that nutritional deficiencies can cause children to eat sand, and this product was seen as preventing or correcting that.

In addition, some perceived the MNP as a means of resisting disease or as a treatment for pneumonia, diarrhea, and the common cold. A few noted perceived improvements in the child's appearance or demeanor.

Most respondents had no challenges in using the product, though some noted forgetting to add the product or that the child didn't like it (refused the food with MNP mixed into it). The main issue faced by a few respondents was that they felt the product caused diarrhea, though participants didn't make the distinction between loose stools and diarrhea.

All groups of women correctly recalled that the target audience for MNP is children 6-23 months. Many felt that this product was most appropriate for the poor or rural dwellers, populations for whom they perceive the product to be more relevant given nutrition constraints; this was predominantly noted by urban and high SES groups. Others noted, however, that the product is useful for all children, urban or rural.

Most women said that they would recommend the product to others, with the exception of those who had encountered diarrhea as a side effect of the product. Female trialists said they would describe MNP to others as a quality product that provides vitamins and nutrients (a few cited iron), something that gives power and energy to children and would help their child stop eating sand.

Marketing of MNP

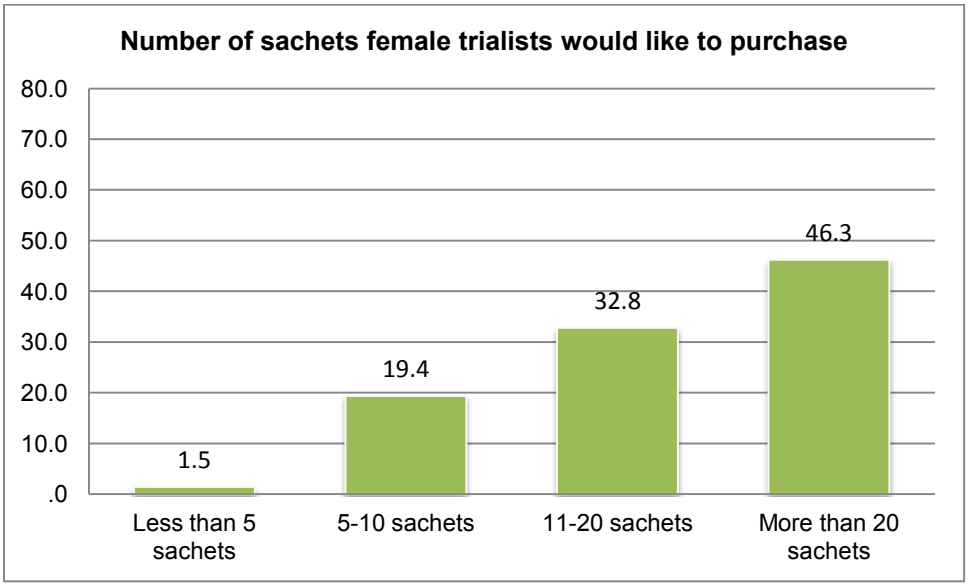
When asked where they would like to purchase MNP, most said pharmacies or MCHs. Those who reported others mentioned shops.

Source of MNP		
Source	# of respondents	Percentage
Pharmacies	43	64.20%
MCHs	19	28.40%
Hospitals	1	2%
Community distributer	0	0%
Other	8	11.9%

As for how often they wanted to purchase the product, results varied, but most said once per week.

Purchase frequency for MNP		
How often	# of respondents	Percentage
Everyday	13	19.40%
Once a week	31	46.30%
Twice a week	10	14.90%
Once a month	16	23.90%
Other	7	10.40%

In terms of quantity of purchase, most trialists wanted to purchase more than 20 sachets at a time, though nearly one-third preferred 11-20 sachets.



Proposed changes to the MNP product

Most female trialist groups felt that no changes were needed to the product. However, some groups raised concerns about the packaging size and appearance. The most common issue was that they felt the size of the packet was too small. While participants had been informed that one packet contained the appropriate daily dose, they nonetheless perceived it as small.

One group also noted that the current appearance of the packet was similar to a rat toxin sold in Somaliland, so the appearance should be changed to reduce any associated confusion. Another group also felt that the current image of the child on the package was satanic. Groups recommended putting a photo of a child with good nutritional status on the packaging.

Channels for message delivery

Both men in the FGDs and female trialists were asked about sources of information and where information about nutritional products should be shared.

Sources of Information on Nutrition

Most women reported that their main source of nutrition information was health facilities and IPC sessions. For other sources of information, caregivers noted their own parents or elders.

Source of information about child feeding

Source	Frequency	Percentage*
T.Vs	7	9.7%
Radio	9	12.5%
Health facilities	29	40.3%
IPC sessions	13	18.1%
Other	31	43.1%

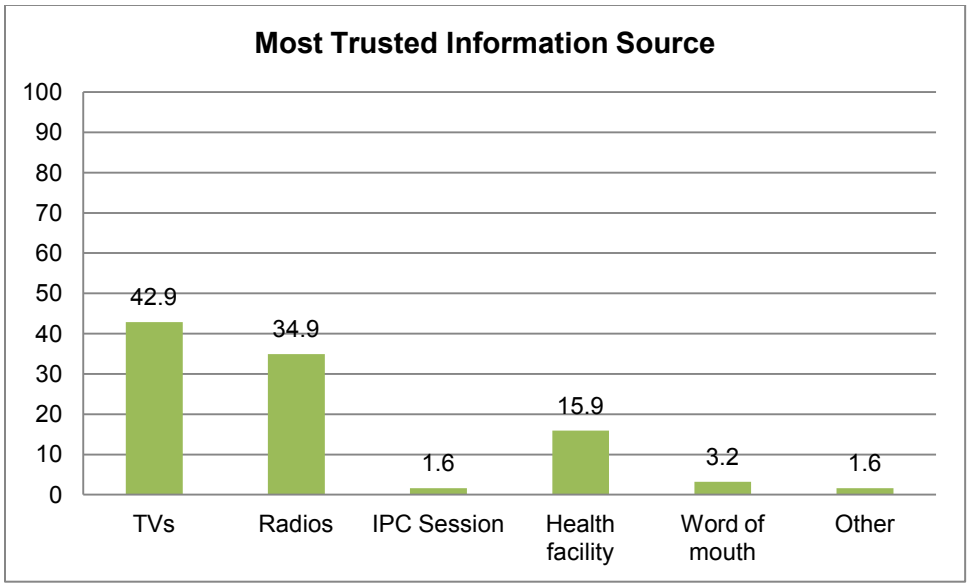
*The total is more than 100% as respondents were allowed to cite multiple sources.

Women reported getting information on brands and foods most from television and grocery stores or other food shops.

Sources of information on brands and food they consume in their houses

Source	%
T.Vs	30.3%
Radios	20.0%
Newspapers	0%
Poster	1.5%
IPC session	3.0%
Health facility	12.1%
Grocery store	30.3%
Word of mouth	18.2%
Other	25.8%

Of the sources of information, women were most likely to trust TV, radio, and health facilities. While IPC was not very trusted, this may be an effect of the fact that few people have experienced IPC overall, and specifically not nutrition IPC.

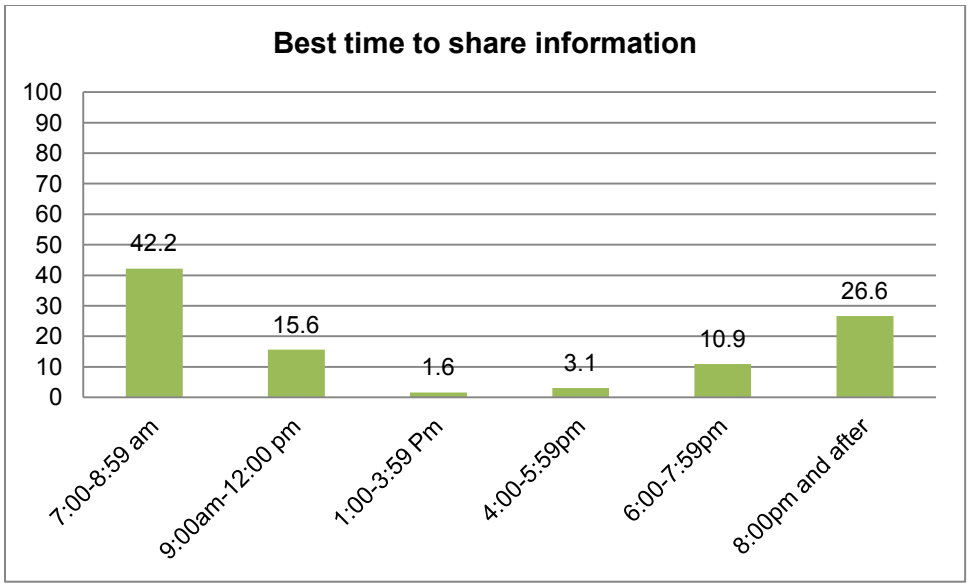


How to Share Information about Nutrition

The findings on how most women thought nutrition information should be told to the community followed a similar pattern as the trusted media, with 59.1% of women stating TVs, 68.2% encouraging radio, and 27.3% suggesting health facilities.

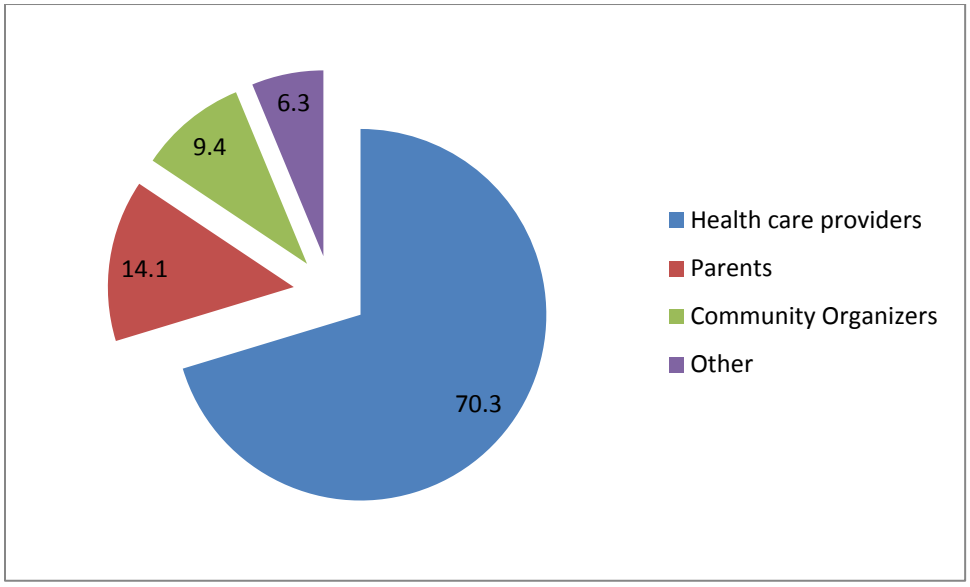
When asked which TV channels should be used, 59.0% said HCTV and 41.0% said SNTV. For radio, 88.9% said Radio Hargeisa and 11.1% said BBC Somali section.

Women felt that the best time to share this information is in the early morning or late evening.



Most people thought that the appropriate spokesperson for nutrition products would be a healthcare provider.

Who should teach caregivers about the importance of nutrition products



Men recommended that information about nutrition should be shared with them via mass media - television, radio, and banners or billboards. They also cited schools, health centers, local organizations, and their wives as potential sources of information. They felt that the best promoters of the product would be healthcare workers or village committees, though school teachers and peer education were also mentioned.

Willingness to pay for LNS and MNP

Two methods were used to examine WTP: the PSM and BDM methods. The PSM questions were asked at the follow-up interview, prior to the FGD. The BDM exercise was conducted as part of the FGD. Female trialist (n=72) and female control (n=120) participants participated in the WTP exercises.

The PSM asked about the ideal price, as well as expensive, too expensive, cheap, and too cheap at which one doubts quality for a seven day supply. The findings indicated a stated ideal price of around 4,500 Somali shillings (SS) for both products. As one United States Dollar is about 6,500 SS, this translates to an ideal price of 0.69 USD. Inexpensive prices for LNS and MNP were around 2,500 SS, and both products were perceived as too cheap around 1,500 SS . For both products, they would be assumed to be expensive at over 8,000 SS.

The stated ideal prices were higher than the actual cost for a seven day supply[11]. For LNS, the ideal price was 4,495 SS, and the estimated cost is 4,177 SS. For MNP, the ideal price was 4,596 SS and the estimated cost is 2,958 SS.

Price Sensitivity Meter Findings

	LNS	MNP
What price would you consider normal/ideal for a 7 days supply?		
Range	200-14000	200-15000
Mean (stddev)	4495 (2569)	4596 (3194)
Median	3500	3500
What price would you consider cheap?		
Range	200-7000	200-8000
Mean (stddev)	2530 (1496)	2523 (1633)
Median	2100	2000
What price would you consider too cheap to question the quality?		
Range	100-5000	200-7000
Mean (stddev)	1554 (1127)	1594 (1350)
Median	1400	1000
What price would you consider to be expensive?		
Range	1000-70000	300-35000

[11] The market price for both products have been estimated based on cost of commodity, sampling and testing, shipping and handling.

Mean (stddev)	8408 (9737)	8194 (6951)
Median	5000	7000
What price would you consider to be too expensive?		
	1000-60000	1500-69000
Range	11040 (9150)	15530 (13058)
Mean (stddev)	9000	11000
Median		

These findings would suggest the possibility for cost recovery. However, the WTP reflected in the BDM exercise is below the cost recovery threshhold.

During the BDM exercise, all women were given the opportunity to bid to purchase a seven day supply of each product, stating the price they were willing to pay without knowing the true market price. If they bid the same or higher than the market price, they purchased the product. Women were given a practice round to bid and then a real round to bid, after which money was exchanged.

During the practice round for LNS, all women (trial and control, N=192) bid on the LNS product. For LNS, practice bids ranged from 1,200-17,500 SS.

During the real bidding for LNS, 7.6% of all participants (trial and control) did not bid any money on LNS (entered a bid of zero, indicating they did not want to purchase the product at any price); among trialists one did not bid on LNS and among control 13 did not bid.

The average bid for LNS was 3,267 SS among trial participants and 4,272 SS among control participants, for a combined mean of 3,922 SS. Overall, 75.8% of participants purchased the LNS, meaning that they bid higher than the market price; 16.6% of participants bid for the product but their bid was lower than the market price (which was drawn at random), and 7.6% did not bid.

In all cases, the average bid was higher than the median bid, as some participants bid large amounts for the product.

Practice and Real Bids for LNS

	LNS TRIAL (N=72)	LNS CONTROL (N=120)	LNS COMBINED (N=192)
Practice bid	Range: 1400 to 14000 Mean: 3685 Stddev: 2236 Median: 3000	Range: 1200 to 17500 Mean: 5480 Stddev: 3347 Median: 4900	Range: 1200 to 17500 Mean: 4843 Stddev: 3115 Median: 3500
Real bid	Range: 0 to 10000 Mean: 3267 Stddev: 1578 Median: 3000	Range: 0 to 15000 Mean: 4272 Stddev: 3112 Median: 3500	Range: 0 to 15000 Mean: 3922 Stddev: 2717 Median: 3500
Purchased	67%	81%	76%

During the practice round for MNP, all but three women bid on the MNP product. For MNP, practice bids ranged from 0-17,000 SS. During the real bidding for MNP, 18.4% of all participants did not bid on the product; among trialists 11 did not bid and among control 23 did not bid.

The average bid for MNP was 2,462 SS among trial participants and 2,945 SS among control participants, for a combined mean of 2,773 SS. Overall, 45.7% of participants pruchased the MNP, meaning they bid higher than the market price; 35.9% bid for the product but their bid was lower than the random market price, and 18.4% did not bid.

Practice and Real Bids for MNP

	MNP TRIAL (N=72)	MNP CONTROL (N=120)	MNP COMBINED (N=192)
Practice bid	Range: 0 to 15000 Mean: 3519 Stddev: 2340 Median: 3000	Range: 0 to 17000 Mean: 4354 Stddev: 2985 Median: 3500	Range: 0 to 17000 Mean: 4053 Stddev: 2731 Median: 3500
Real bid	Range: 0 to 10000 Mean: 2462 Stddev: 2029 Median: 2000	Range: 0 to 16000 Mean: 2945 Stddev: 2722 Median: 2500	Range: 0 to 16000 Mean: 2773 Stddev: 2502 Median: 2000
Purchased	47%	45%	46%

Practice bids and real bids were compared for each product for all participants; for both LNS and MNP, practice bids were higher than real bids ($p<0.001$ for both). This trend is in the expected

direction, as practice bids did not involve real monetary exchange. There was no relationship between the practice bid or practice price and subsequent real bids or real market price.

Mean Practice vs. Real Bids

	LNS	MNP
Practice bid	4843	4052
Real bid	3922	2773
Change from practice to real bid	-921	-1279

Overall, control groups bid higher than the trial groups on both LNS and MNP.

Real bids - control vs. trial

	Control	Trial	Control - Trial
LNS real bid	4272	3267	1005
MNP real bid	2945	2462	483

For control, trial, and overall groups, mean real bids were compared by location (urban, rural, or IDP) and by SES (low or high).

For the control group, urban dwellers were more likely to bid higher on MNP than rural or IDP dwellers ($p<.05$). There was no effect of location on LNS. This may be due to the fact that rural and IDP populations are more familiar with LNS and prefer it to MNP. Conversely, for LNS, high SES participants bid more for LNS ($p<.05$), but there was no effect on MNP. This may be an effect of the popularity of LNS, such that those with higher incomes had more WTP for this product, but the SES status did not affect MNP since interest in that product is lower.

For the trial group, rural location was associated with higher bids for both LNS and MNP ($p<.05$). This may be due to the greater perception of need for nutritional supplementation among this population, which was expressed during the FGDs. Living in IDP areas was associated with a much lower bid for MNP ($p<.01$). This may be due to the IDP group having been exposed to both products and reporting greater familiarity with and preference for LNS. There was no effect of SES.

Overall, living in IDP was associated with a lower bid on MNP and higher SES was associated with a higher bid on LNS but not MNP, possibly for the above noted reasons.

Mean Real Bids by Location and SES

Variables	LNS Bid	MNP Bid
Overall control mean	4272	2945
Location		
Urban	4553	3688*
Rural	3663	2590
IDP	4600	2550
Socio-economic status		
Low	3558*	2708
High	4985*	3186
Overall trial mean	3267	2462
Location		
Urban	2979	2391
Rural	3804*	3457**
IDP	2955	1400**
Socio-economic status		
Low	3283	2609
High	3253	2324
Overall combined sample mean	3922	2773
Location		
Urban	4046	3214
Rural	3714	2911
IDP	4016	2167*
Socio-economic status		
Low	3467*	2674
High	4359*	2871

* bivariate correlations statistically significant at p<0.05, **p<0.01, ***p<0.001

Given the IDP trialists' comparatively lower WTP for MNP, additional analyses were conducted to see if there was an effect of having been exposed to discussion about products in the first round. There was no statistically significant effect of round on WTP for either product, though this may be an effect of small sample sizes. Overall, the trend shows that bids were higher during the first round, and lower during the second, with a larger drop for MNP. However, this trend wasn't significant.

IDP Real Bids by Round

Variable	All	Round 1	Round 2	Correlation and significance
LNS real bid	2955	3071	2750	0.167 (0.459)
N for LNS	22	14	8	
MNP real bid	1400	2400	1067	-0.382 (0.10)
N for MNP	20	5	15	

However, for the trial group overall, the effect of having started with with LNS had a negative effect on price for MNP.

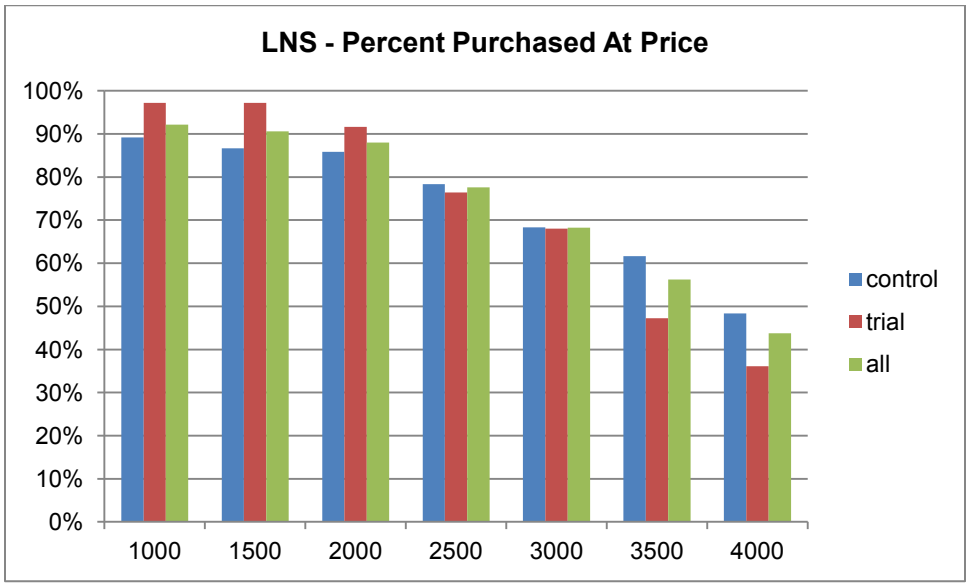
Association of Starting with LNS on Real Bids for LNS and MNP

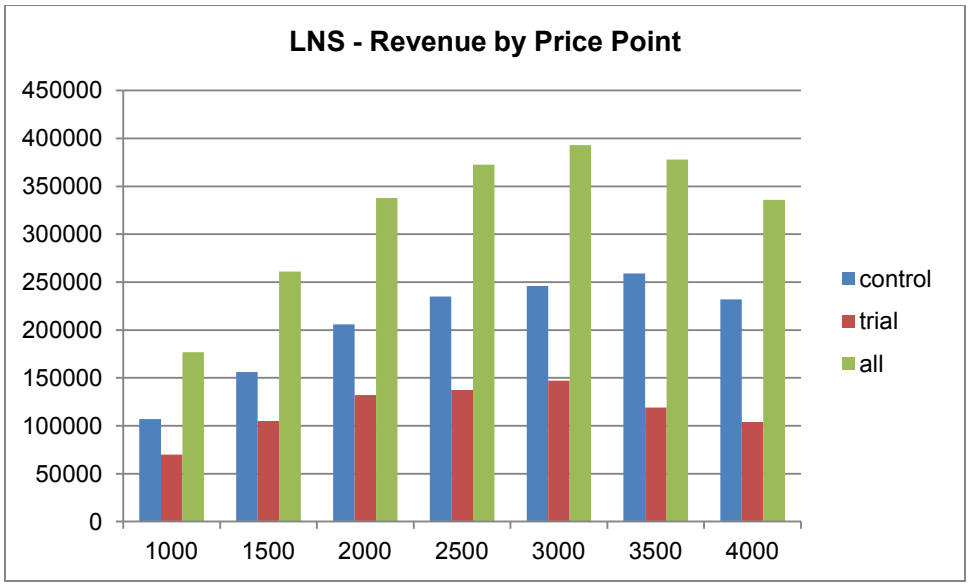
Variable	Trial	Control	Combined
LNS real bid	0.163	0.088	0.096
MNP real bid	-0.357**	-0.063	-0.149*

bivariate correlations statistically significant at p<0.05, **p<0.01, ***p<0.001

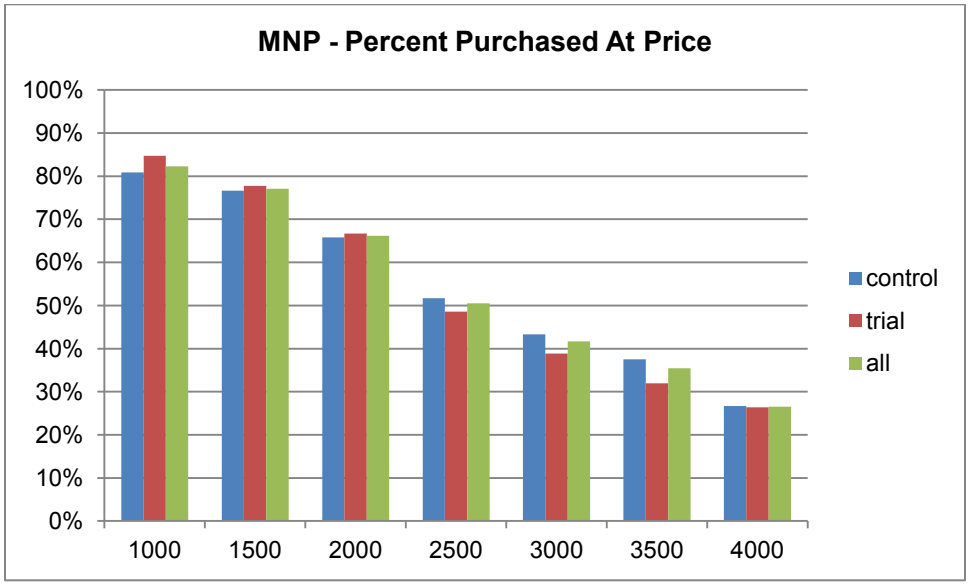
In order to examine price and revenue, analyses were conducted to show what percentage of the participants bid on each product at various price points. From these, the ideal price to maximize revenue was determined (based on profit maximization of the number of consumers willing to bid by price, not factoring in cost of goods).

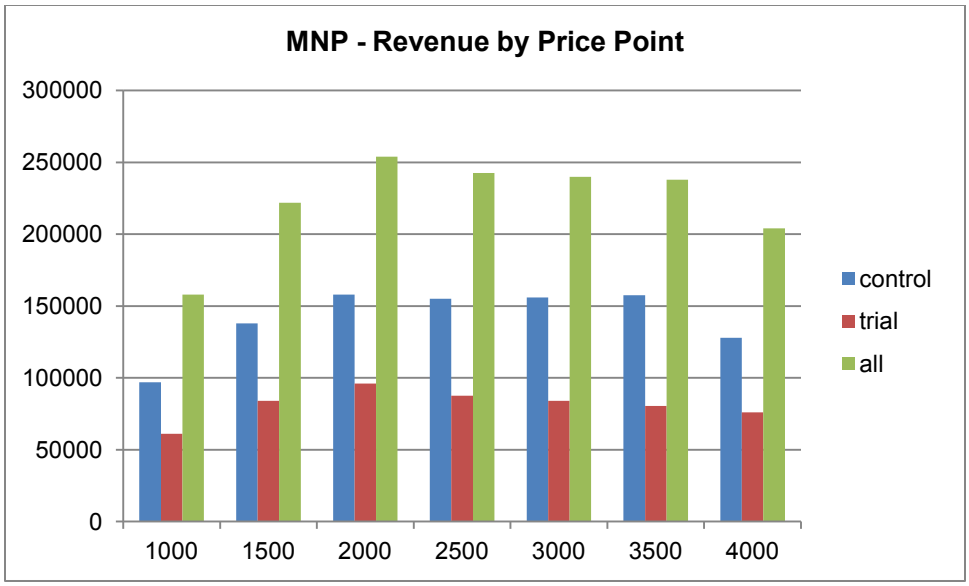
For LNS, the majority were willing to pay 3,500 SS or less, and profit would be maximized at 3,000 SS.





For MNP, the majority were willing to pay 2,500 SS or less, and profit would be maximized at 2,000 SS.





The findings for the PSM were compared with those for the BDM exercise among the trial group. Overall, there was no association between the ideal prices and later prices actually paid in the BDM simulated auction, with the exception of low SES participants bidding on LNS. In all cases, the stated ideal price was higher than what trialists actually paid for the product. This finding is similar to other research demonstrating that individuals often overstate their own WTP for a product.

Mean Stated Ideal Price (PSM) vs. Mean Real Bid (BDM)

Product	Mean Ideal Price	Mean Real Bid	Correlation and Significance
LNS	4495	3267	0.242 (0.056)
Urban	4426	2979	0.430 (0.067)
Rural	3904	3804	0.196 (0.369)
IDP	5170	2955	0.263 (0.250)
Low SES	3975	3283	**0.437 (0.016)**
High SES	4985	3253	0.132 (0.463)
MNP	4596	2462	0.240 (0.061)
Urban	4317	2391	0.416 (0.061)
Rural	5154	3457	0.173 (0.431)
IDP	4238	1400	0.019 (0.941)
Low SES	5324	2609	0.201 (0.269)
High SES	3823	2324	0.322 (0.083)

While the PSM findings suggest that cost recovery may be an option, the BDM findings show that the product would have to be subsidized to be inviting to most consumers, as during the experimental auction fewer than one-third of trialists bid higher than the cost recovery price for LNS and fewer than 40% did for MNP.

CONCLUSIONS

Nutrition and Knowledge Practices

Somali caregivers demonstrated a basic knowledge about the benefits of good nutrition and the consequences of poor nutrition, though held some misconceptions about ways to prevent malnutrition. One important gap in knowledge is about which foods provide protein and which vitamins, as many Somalis used these terms interchangeably to mean something with good nutritional content.

Participants, both male and female, identified similar reasons for choice of food for children 6-23 months, including nutritional content (vitamins and protein), texture, fullness, ability to provide energy, and growth promotion; these terms were regularly used throughout the study and should be incorporated in discussion of nutritional choices. Very few supplementary foods were used, but biscuits were often mentioned, and were associated with a nutritional product.

Female caregivers are acknowledged by both men and women to play the primary role in nutrition. While men provided the financial support, they do not participate in budgeting decisions for nutrition and women are generally expected to make the decisions about what to feed their children. Women also serve the primary role in feeding. Female grandparents may also play a role, particularly in providing advice about nutrition.

Perceptions of LNS

Caregivers overall provided positive feedback on LNS; many were already familiar with similar products, particularly IDP residents, as they are available in healthcare settings in Somaliland. Most felt that their child liked the product, that it was relevant to them, and were interested in using it in the future. Many perceived advantages such as weight gain, provision of protein and nutrients, and improved appetite.

Concerns that were noted included clarity about what ingredients were in LNS, expiry dates, and changes to or loosening of the stool as a result of use of LNS.

Not all participants adhered to the full dose of the product; this was because some noted changes in stools and discontinued use temporarily or for the remainder of the trial.

Perceptions of MNP

Caregivers overall provided positive feedback on MNP, though did not prefer it as much as LNS. This may be because they were less familiar with this product than with LNS, and because as a powder the effect of consuming it is less easily observed. As such, launching these two products

in the same space may pose a challenge, as the effect of exposure to LNS (having trialed it first) decreased interest in MNP, whereas the reverse was not observed.

Nonetheless, most liked the product and felt that it was relevant to them and provided benefits such as building body, "increasing blood," (reducing anemia) and preventing children from eating sand.

Concerns noted included expiry dates for the product (ensuring that the product was good when purchased), size of the packaging, and diarrhea. Multiple participants reported that their child got diarrhea from the product; while it is difficult to know if the MNP caused the diarrhea or it was a result of unsanitary food/drink practices, this is a side effect that needs to be carefully addressed and managed.

Although the majority of the participants adhered to the full dose, many did not; the main reasons for this were a few cases of diarrhea and forgetfulness. The importance of adherence is something that will need to be promoted, and monitored in non-trial settings.

Marketing of Products

Most participants preferred to buy nutritional supplements on a weekly basis, but often preferred to purchase them in larger quantities (more than 20 sachets). The diversity of opinion on this suggests that different models could be explored for quantity of purchase.

In terms of receiving health information, most got nutrition information from health centers or family but the sources they trusted the most were mass media (TV and radio). TV, radio, and health centers were the most recommended sources of information about nutritional supplements. Many also reported getting information about food from grocery stores, which may be another channel of potential information about nutritional products. In terms of distribution, pharmacies and MCHs were preferred.

Willingness to Pay for LNS and MNP

For both products, stated WTP was higher than actual WTP among trialists during the experimental auction; this confirms findings elsewhere that people often overestimate their own WTP for a product. Also for both products, actual WTP for all groups was less than the cost of product, suggesting that cost recovery may be difficult.

Overall, WTP was higher for LNS than MNP, most likely because LNS as a product was preferred overall. Having trialed LNS first was associated with having lower WTP for MNP in the second

round. The reverse effect was not observed. WTP was also higher among rural groups, an effect that was also not anticipated, but may be due to higher perceived need for the product to supplement less nutritious diets.

WTP was also higher among control participants than trial participants; this may be because trial participants were affected by trialing both products, and preferred one to the other, or because they had a negative experience with the product. The control price may be the best measure of WTP, as most caregivers won't trial the product before purchase; however, repeat purchase at the same price may be an issue, particularly if they have a negative experience with the product.

Overall Findings

In general, male and female caregivers are interested in nutrition and open to nutritional supplementation. However, launching both products in the same space will present challenges, as Somali caregivers are more familiar with and prefer LNS. If both were to be launched, there would need to be significant education about appropriate use of each.

Somali caregivers are willing to pay for both products, as shown by the high percentage who bid to purchase the product. However, the prices participants were willing to pay are below cost recovery and may need to be subsidized. Furthermore, education about and management of side effects will be critical to ensuring adherence and further purchase of the product.

PROGRAMMATIC RECOMMENDATIONS

- Provide education on what foods and products contain protein and which vitamins and nutrients; this is particularly relevant for MNP, to address that it is intended to supplement a diet and is not a protein replacement
- Given the focus on quality, energy, power, and growth in food selection, nutritional supplements should market themselves using this language
- MNP/LNS are often likened to biscuits, so it would make sense to sell them in stores on nearby shelf space, as they occupy the same mental category; similarly, MNP was compared to a seasoning spice, which may be another opportunity for co-marketing (seasoning adds flavor, MNP adds nutrition)
- Female caregivers should serve as the primary target audience for nutritional information and promotion of supplements as they have the largest role in nutrition decision-making
- As content of LNS was a concern for some, the ingredients should be clearly labelled
- Expired product was stated as a concern for both products, so packaging should very clearly display the expiry date
- LNS and MNP both have the potential to cause loose stools/diarrhea; as this can cause caregivers to discontinue use, this side effect should be proactively communicated about, possibly through salespeople in order to manage reactions; allergy to nuts should also be clearly addressed for LNS
- LNS and MNP, if both available, would need to be carefully launched to differentiate their uses, given consumers' preference for LNS
- MNP can be promoted as stopping children from eating sand, as this is a common cultural understanding of malnutrition. Interpersonal communication sessions could be an appropriate channel for disseminating this message
- As lunchtime is the preferred time to add supplements, it would make sense to market these products as a lunchtime addition
- Both weekly and monthly supplement amounts can be explored to see what amount consumers prefer
- The packaging/quantity for LNS and MNP was perceived as small; either the size should be increased or it will need to be marketed as tiny but mighty, emphasizing that the size is all that is needed for the daily dose
- Health centers and mass media should be utilized as promotional channels, but grocery stores should also be explored as potential channels for promotion as they are where consumers get information about food
- Key distribution channels include pharmacies, markets, health centers, and grocery stores
- Subsidy models will need to be explored to make both LNS and MNP inviting to consumers

- Along with the continuous monitoring of MNP's use and adherence to the recommended regime, a follow up research is recommended in order to understand the possible influence of other nutritional products already in the market on acceptability and use of MNP.
- Consider undertaking a ProPAN (process for promotion of child feeding) process to better understand and explore nutritional and dietary problems in Somaliland and the context in which these problems occur. This could assist in designing an appropriate behavior change communication plan for practices that are to be promoted and messages that should be disseminated in Somaliland.

ANNEX. A INITIAL INTERVIEW GUIDE WITH FEMALE CAREGIVERS

(*N.B: if the caregiver has more than one child between 6 and 23 months, ask her experience on the younger child*)

1) At what age did you start giving [**name of child**] foods and drinks other than breast milk?_____ months

2) Does [name] eat the same meal as the rest of the family or is a special meal prepared? (Circle one)

   a) Prepare special meal

   b) Prepare same meals for all family members including children

3) Does [name] eat from his/her own plate or share with other siblings? (Circle one)

   a) Eat from own plate

   b) Share with older siblings

   c) Share with adults

4) Who feeds [name]most often: (Circle one)

   a) caregiver(*The interviewee herself)*

   b) caregiver's mother/mother-in law

   c) older siblings

   d) other, specify----------

5) Where do you get information about child feeding? (Interviewer: *Circle all that participant mentions*)

   a) TVs

   b) Radios

   c) health facilities

   d) health education sessions in communities or homes

   e) other, specify----------

6) Who makes decisions in the household as to what to feed children 6-23 months? (Interviewer: *Circle all that participant mentions*)

a) Caregiver herself

b) father

c) mother and father

d) Other, specify----------

7) What is the role of the father in deciding what to feed his children?

_____

8) What is the role of a child's grandparents as to what to feed him/her?

_____

9) How much do you spend on foods per month?

----------Shillings

10) Where do you usually buy your food?

a) Market
b) Gas station/grocery store
c) Other: _____

11) Do you use any packaged food?

a) Yes
b) No

11b) What packaged foods are those: _____

12) What influences your decision during shopping? How do you decide what to buy and not buy?_____

B. *(Please explain what MNP or LNS is to the respondent and how to use them)*

1. What do you think about feeding 'MNP/LNS' to your children between 6 and 23 months? (Circle one)

a) Can use
b) Cannot use (If she says cannot use, close the interview)

1b. If cannot use, why not?

a) Too difficult to administer
b) Afraid of side effects
c) Cannot trustd) Other, specify……

2. (*If respondent answered can use on 11)* Which meal would you add the 'MNP/LNS' to?

a) Breakfast
b) Lunch
c) Dinner
d) Snacks

13) Do you have any concerns about using MNP/LNS?

_____

Thanks for helping us

ANNEX B. FOLLOW UP QUESTIONS (AFTER THE TRIAL OF THE PRODUCT)

Type of Product_____
Upon return after 2 weeks trial period:

Q1. Have you tried the MNP/LNS that I left with you?

Yes	1
No	0

IF RESPONDENT HAS NOT TRIED, ASK FOR REASONS WHY AND THEN CLOSE INTERVIEW

Q2. What are your reasons for not trying the product?

REASONS FOR NOT TRYING TEST PRODUCT WRITE IN VERBATIM RESPONSE(S)

Q3. How much of the product did you use?.....pieces.

Q4. Which statement best describes how much you think YOUR CHILD liked or disliked this product? SINGLE ANSWER

Like very well	2
Like somewhat	1
Did not like	0

Q5. Which statement best describes how much YOU like or dislike this product?SINGLE ANSWER

Like very well	2
Like somewhat	1
Do not like	0

Q6. How relevant do you feel that this product is to you and your household? SINGLE ANSWER

Not relevant	0
Somewhat relevant	1
Very relevant	2

Q7. Which of these phrases best describes how you feel about using this product in future? SINGLE ANSWER

Definitely use	5
Probably use	4

Not sure	3
Probably not use	2
Definitely not use	1

Q8. Please indicate specific aspects you liked and did not like about this product.
READ THE OPTIONS OR SHOW THE TABLE TO THE PARTICIPANT. FOR EACH THERE SHOUL DBE A SINGLE ANSWER

Did not like Taste	1	2	3	4	5	Liked Taste	(-)
Did not like Color	1	2	3	4	5	Liked Color	(-)
Did not like Texture	1	2	3	4	5	Liked Texture	(-)
Did not like Smell	1	2	3	4	5	Liked Smell	(-)
Did not like Size of Pack	1	2	3	4	5	Liked Size of Pack	(-)
Did not like Design of Pack	1	2	3	4	5	Liked Design of Pack	(-)

Q9. How would you share information about this product to your colleagues/friends?
_____
_____
Q9B. If you are asked to convince your colleagues/friends, what would be the best message you would tell them about this
product?_____
___

Q10. Where would you like to get ['MNP/LNS]' from? (Circle all the respondent names)

2. Pharmacies
3. MCHs
4. Hospitals
5. community distributor
6. Other, Specify

Q11. How often would you want to purchase them? (Circle one.)

a) Every day
b) Once a week
c) Every two weeks
d) Once a month?
e) Other, Specify……

Q12. If it comes in sachets, how many sachets should be in a box? (Circle one.)

a) Less than 5
b) 5-10 sachets
c) 11-20 sachets
d) More than 20 sachets

Q13. Where do you normally get information on brands and food that you consume in your house? (Circle all the respondent names)

a) TV
b) Radios
c) Newspapers
d) Poster
e) IPC sessions
f) Health facility
g) Grocery store
h) Word of mouth (friends, neighbors, etc.)
i) Other, specify……

Q14. Which type of media do you trust the most?

a) TV
b) Radios
c) Newspapers
d) Poster
e) IPC sessions
f) Health facility
g) Grocery store
h) Word of mouth
i) Other, specify……

Q15. How do you think the information about 'MNP/LNS' should be told to the community?

a) TVs
b) Radios
c) Newspapers,
d) Poster
e) IPC sessions
f) Health facility
g) Grocery store/pharmacy
h) Other, Specify……

Q16. If TVs, which ones channel would you prefer?

a) HCTV
b) SLNTV
c) Universal
d) Bulsho TV
e) Somsat TV
f) Somali Channel TV
g) Other, Specify……

Q17. If radios, which ones would you prefer?

a) Radio Hargeisa
b) BBC Somali service
c) VOA Somali service
d) Radio Djibouti
e) Radio Ethiopia Somali service
f) Other, specify……

Q18. Who should teach caregivers about the importance of the 'MNP/LNS'?

a) Health care providers
b) Parents
c) Community organizers
d) Other, specify: _____

Q19. When should mothers and caregivers be told about MNP/LNS?

a) 7:00- 8:59 am
b) 9:00am-12:00 pm
c) 1:00-3:59 pm
d) 4:00-5:59 pm
e) 6:00-7:59 pm
f) 8:00 pm and after

Q20. Is there anything else you would like to say?

WTP QUESTIONS

Q1. What price would you consider to be **normal / ideal** for a 7 days' supply of MNP/LNS?

Q2. And what price would you consider to be **cheap**?

Q5. And at what price would you consider this product to be **too cheap** that you would question the quality of the product?

Q3. Now can you tell me at what price you would consider to be **expensive**?

Q4. And at what price would you consider this product to be **too expensive** that you would consider not buying it?

WRITE AMOUNT IN THE SPACES BELOW

Q1 Normal/Ideal	Q2 Cheap	Q3 Expensive	Q4 Too expensive	Q5 Too cheap

ANNEX C. FOCUS GROUP DISCUSSION

General food habits at home

Today we shall be talking about food. Remember that there are no wrong or right answers, all we want is your opinion and it is ok to disagree with what other people say

- Are there foods that are for children that are separate for those that are for adults? Which ones? (***Write them down on a flip chart)***
- Tell us how you go about choosing the foods that you feed to your children of 6-23 months?
  - ✓ What do you look for in these foods? (full tummy of the child, strength, healthy, school performance, less illness episodes)

- What types of complementary food products are you aware of?
- What types of complementary food products do you normally use in your house? Why?
- Are there types of complementary food products that are better than others? Why do you say so?

Understanding the test product

I would now like us to focus on the LNS/MNP that we all used. *(Explain this to the respondents and how it is used).*

- How would you describe this product to someone who has never seen it?
- What does this product mean to you?
- If you are asked to give a Somali name to this product, what would you give? Why?
- How did you find the package of the product? (color, photos, material, size)
- Are recommending any changes? What changes?
- Who do you think this product is meant for

Probe for;

- ✓ *Age (Babies, Children, All?) Why?*
- ✓ *Social Class (Rich, Middle, Poor, All?) Why?*
- ✓ *Geography (Urban, Rural, All?) Why?*

- What benefits do you think you get from consuming this product? Please explain?
- What challenges did you face in using this product?
- Would you recommend this product to someone else? Why? Why not?

THANK YOU FOR YOUR PARTICIPATION

ANNEX D. FGD GUIDE (MALE CAREGIVERS)

1. Can you tell us how are children between 6 and 23 months of age normally fed? What types of foods and drinks are given?
2. Who decides what food should be given to children?
3. Who usually feeds children?
4. What is the role of men in the nutrition of the children? (feeding, planning, decision making)
5. How do you support your wife in regards to the nutrition of your children?
6. How do you budget for family foods?

   Is there a separate budget for nutrition of babies and for their health?
   Who determines the budget of child feeding (husband, mother or other people)?
7. What do you think the role of vitamins in child's growth and development?
8. What is anemia? What are the causes of it? How can it be prevented?
9. What is malnutrition? What are causes of it? How can it be prevented?

Understanding the test product

I would now like us to focus on the LNS. *(Explain this to the respondents and how it is used).*

- How would you describe this product to someone who has never seen it?
- What Somali name would you give to this product?
- What do you think could be the challenges of adding this product to foods?
- What, in your mind, is the reason someone should use this product?
- Would you be willing to give your child LNS? Why or why not?
- What role would you play in providing LNS to your child?

Understanding the test product

I would now like us to focus on the MNP. *(Explain this to the respondents and how it is used).*

- How would you describe this product to someone who has never seen it?
- What Somali name would you give to this product?
- What do you think could be the challenges of adding this product to foods?
- What, in your mind, is the reason someone should use this product?
- Would you be willing to give your child MNP? Why or why not?

🗣 What role would you play in providing MNP to your child?

Communication

10. Where would you like to get nutrition information from? Who should give you information about this product?

11. How should the information about this product be told to the community? (through TV, radio, IPC, drama, etc)

ANNEX E: MARKET SIMULATION DATA COLLECTION TOOL

NAME OF INTERVIEWER: _____
DATE THE QUESTIONNAIRE WAS COMPLETED (DD/MM/YY):
|____|____|/|____|____|/|____|____|
NAME OF MODERATOR_____
GROUP NUMBER_____

How well did the participant understand the market simulation? Not very well 1 2 3 4 5 Very well

		Participant's ID: |_____|
SOAP AUCTION	C1. Practice bid:	SH |___|___|.|___|___|
	C2. Practice market price:	SH |___|___|.|___|___|
	C3. Real bid:	SH |___|___|.|___|___|
	C4. Real market price:	SH |___|___|.|___|___|
	C5. Did participant purchase the Soap?	[1] Yes [2] No
MNP/LNS AUCTION	N1. Practice bid 1:	SH |___|___|.|___|___|
	N2. Practice market price 1:	SH |___|___|.|___|___|
	N3. Real bid:	SH |___|___|.|___|___|

	N4. Real market price:	SH |___|___|.|___|___|
	N5. Did participant purchase MNP/LNS?	[1] Yes [2] No