Refresher Course for Community Hunger Fighters

Koraput, Odisha

08 March 2018

Background

Nutrition awareness programme is being conducted in seven study villages in Boipariguda block of Koraput district as a complementary activity to the nutrition sensitive agriculture interventions in the Farming System for Nutrition (FSN) study under the research programme on Leveraging Agriculture for Nutrition in South Asia (LANSA). For sustainability of the nutrition awareness initiatives and the FSN approach itself, it was felt that the people should understand the meaning of nutrition sensitive agriculture and practice it on a continuing basis. , It was therefore decided to work on building community level capacity through the "Community Hunger Fighter (CHF)" approach. This was initiated in mid 2016 under the guidance of Dr. Rama Narayanan. Each village was asked to select and nominate upto 5 adults (both men and women) for training. 25 members (13 men and 12 women) were identified and underwent training in nutrition literacy through two residential training workshops in 2016-17. Follow up observations were done in order to understand the spread effect of nutritional messages and the progress of the approach. Endline evaluation of the programmes conducted in late 2017 revealed the need for a refresher course. Based on this and in order to further reinforce and strengthen the knowledge of CHFs on nutrition, it was decided to conduct a one-day refresher course. The CHFs had already identified some themes on which they would like to be trained; these are included in the objectives. In addition to the already trained CHFs, a few new members from the community also participated in the training.

Objectives

1. To provide refresher training to CHFs and also re-introduce some key nutrition concepts.
2. To revisit the concept of balanced diet, key nutrients and deficiency diseases such as anaemia and Vitamin A deficiency
3. Importance of diet during adolescence
4. Pregnancy and lactation – dietary requirements and government schemes and support
5. Government Entitlements

Duration of course: The CHF refresher course was held on Thursday 08 March 2018 at MSSRF Biju Patnaik Medicinal Plant and Research Centre, Jeypore, Odisha. The agenda is in Annex 1.

Coordinators: Mr.Akshaya Kumar Panda and Dr. D.J.Nithya

Invited Guest: Ms.Trupti Mohapatra, Anganwadi Supervisor, Jeypore, Odisha

Participants

26 participants including 19 CHFs, LANSA volunteers and Ward members attended the programme. Profile of the participants is given in Annexure 2.

1. Recap of the previous training

The experience and the usefulness of the previous trainings were discussed and CHF . Ghasamani Dalei from Banuaguda shared her experience at her village. Budri Mundagudia from Rauliguda said that earlier they did not get good seeds on time and now after the FSN intervention it was easy to get good quality seed.

2. Introduction

The objectives of the refresher training and needs were explained by Akshaya Kumar Panda.

Akshaya Kumar Panda explaining the purpose of the course

3. Discussion on endline survey result

The endline survey results of the FSN study was shared with the participants by Akshaya Kumar Panda and there was discussion on the same. The following are some of the points of clarification that emerged with regard to comparison of the endline survey results with the baseline:

- ✓ In Banuaguda, the decrease in use of tube well water is due to damage of tube well pipeline and so the villagers started using other sources for water
- ✓ In Chikima, there is decrease in use of piped water as a tube well was newly constructed near the households and so villagers started using tube well for sourcing water.
- ✓ Government is providing LPG gas connection for free and so the usage of LPG in all villages has increased.
- ✓ Gupta Prasad Ghadei, volunteer from Chikima village said that FSN interventions have covered all crops except oilseeds. Currently oil seed cultivation is there but there no processing unit for it.

Participants agreed on the result that area under both crop and vegetable cultivation had increased. Consumption of pulses and vegetables had also increased in their regular diet. It was explained that they should regularly include different pulses and vegetables in their diet factoring in seasonal availability, to meet the requirements of a balanced diet.

Akshay Kumar Panda discussing the FSN endline results

4. Group activity

Existing consumption pattern

Participants were divided randomly into three groups. Each group was requested to plan a day's diet based on their existing food consumption pattern for a season i.e. rainy, / winter / summer. The results were compiled together and are presented in Table 1.

Group activity on existing consumption pattern

Table 1. Existing consumption pattern based on 3 seasons

Meal Pattern	Meal Time	Season wise menu plan		
		Summer	**Rainy**	**Winter**
Available foods based on seasons		***Cereals and millets:*** Rice, finger millet, maize ***Pulses:*** groundnut, green gram, pigeon pea, black gram, ***Vegetables:*** brinjal, tomato, potato, cucumber, bottle gourd, onion, chilly, amaranthus, beans, long bean, pumpkin, bitter gourd, cluster bean, jackfruit, cabbage, broad bean, lady's finger, pea, coriander, ivy gourd ***Fruits:*** water melon, mango, guava, papaya, lemon, orange ***Animal foods:*** fish, egg, chicken, mutton ***Others:*** tamarind, *barada saga,* , **wild fruits and berry**: *(kanta koli, char koli, kendu, dimiri koli, amala)*	***Cereals and millets:*** Rice, finger millet, maize ***Pulses:*** groundnut, green gram, pigeon pea, black gram, ***Vegetables:*** spine gourd, ivy gourd, brinjal, lady's finger, beans, long bean, tomato, bitter gourd, pumpkin leaves, snake gourd, ridge gourd, amaranthus, chilly, indian spinach, colocasia, radish, papaya, drumstick, ***Fruits:*** papaya, guava, banana, ***Animal foods:*** small fish, crab ***Others:*** Mushroom, mushroom wild, Bamboo mushroom, bamboo shoot, wild edible tuber (*targai kanda, pith kanda, sarenda kanda, pita kanda*)	***Cereals and millets:*** Rice, finger millet, maize ***Pulses:*** pigeon pea, black gram, horsegram ***Vegetables:*** amaranthus, cauliflower, radish, beans, tomato, cabbage, ridge gourd, green pea, pumpkin, banana, papaya, broad bean, cow pea, colocasia, drumstick, carrot, brinjal, potato, yam ***Fruits:*** custard apple, guava, banana, papaya ***Animal foods:*** fish, egg, chicken, mutton, crab ***Others:*** Wild edible tuber *(targai kanda, sarenda kanda, sika kanda)*
Morning	6.30 - 7.00am	Milk tea, bada, pakudi	Tea with suji upma/ bada/pakudi/biscuit/mixture	Tea, pakudi/ bada/upma
Breakfast	8.30-9.00am	Ragi gruel or watered rice (leftover rice from previous day), *Ambilia* (Rice powder, tamarind, dhal and vegetables), raw mango chutney, green chilly, salt	**10.00-10.30am:** Rice, ragi gruel, *Ambilia* (Rice powder, tamarind, dhal and vegetables), small fish / crab curry.	**10.00-10.30am:** Rice, ragi gruel, dhal, vegetable curry, amaranthus
Lunch	12.00-1.00pm	Rice, ragi gruel, mix vegetable curry (jackfruit, broad bean, green pea)/ green leafy vegetables/ lady's finger fry	Rice, ragi gruel. guava	**2.00-2.30pm:** Rice, ragi gruel, dhal, vegetable curry,
Post Lunch	3.00-5.00pm	Small quantity of rice, ragi gruel, *Ambilia* (Rice		

		powder, tamarind, dhal and vegetables), green chilly, salt, ripe mango, leftover curry from lunch time.		
Evening	6.00pm	Black tea/ Milk tea/ Ragi gruel	Tea, biscuit, mixture, maize fry	**5.00-5.30pm:** Tea
Dinner	9.30pm	Rice, ragi gruel, dhal, vegetable curry/ non-veg curry/ vegetable fry	Rice, dhal, vegetable fry, small fish/crab curry.	**7.00-8.30pm:** Rice, dhal, vegetable curry, small fish/ crab
Frequency of foods consumed		**6 times**	**5 times**	**5 times**
No of food groups included		**5**	**5**	**5**

Discussion

- ✓ In summer the frequency of foods consumed is more as the requirement for water and food in more in comparison to the other two seasons.
- ✓ In rainy season the consumption of animal source foods is more than vegetables, as availability of fish is easier from both the field and / or from market. Availability of wild roots and tubers and fruits are also high. It was advised that all available vegetables should be inlcuded in daily diet.
- ✓ In winter the frequency of foods consumed is less as the hours of daylight is less. It was observed that fruits were not inlcuded in the diet and it was advised to include some in the daily diet.
- ✓ To the question, do you follow balanced diet daily in your life, the answer was that ***it is possible daily based on the availability according to seasons***

5. Lecture on Balanced diet

The following topics relating to balanced diet were explained by Akshaya Kumar Panda with thehelp of a powerpoint presentation:.

- ✓ Food groups
- ✓ Importance of macro and micro nutrients
- ✓ Food Pyramid
- ✓ Diseased due to nutrient deficiency

One page briefs in Odiya on the following topics were distributed to participants (Annex 3).

- Importance of balanced diet and its importance for good health
- Different cooking methods and preserving nutrients while cooking
- Anemia and VAD: definition, symptoms and how to overcome the problem through diet
- Requirements during different stages of life cycle particularly adolescence, physiological changes in boys and girls and dietary requirement, importance of personal hygiene especially during menstruation; Pregnancy, lactation and dietary requirement

Akshay Kumar Panda explaining about balanced diet

6. Lecture by Ms.Trupti Mohapatra, Anganwadi Supervisor

Topics on anemia, VAD, importance of diet during adolescence, pregnancy and lactation, and government schemes related to anganwadi and pregnant and lactating women were explained in detail.

Trupti Mohapatra explaining about Health and Nutrition

7. Government Entitlements:

The Entitlement passbook listing all schemes on agriculture, food and nutrition was distributed and Jaganath Naik explained the schemes in detail to the participants.

Jagnath Naik explaining about entitlements

8. Assessing the knowledge gained by the participants

Participants were asked to pick a chit each from a box containing of chits with different topics on food groups, nutrients and diseases listed. They were then asked to say few words on the topic listed in the chit they had picked. This helped the participants to refresh the learnings from the training.

It was emphasized they should share the knowledge gained with their family, friends and neighbours.

Assessing the knowledge gained by the participants

The utility of the workshop by the organizers;

1. Helped the participants particularly the CHFs and volunteers to refresh their knowledge on nutrition.
2. The materials that were distributed in local language will be useful for the CHFs, as a tool for sharing the messages to the community.
3. Knowledge of planning a balanced diet according to the season.

Annexure 1

Agenda of the CHF refresher course

Timings	Agenda	
11.00 am	Recap of previous training and sharing of experience	All
11.30 – 12.00 noon	Sharing of FSN endline results Objective of the training	Akshaya Kumar Panda
12.00 – 1.15 pm	What do we eat? How do we eat? - Participants are divided into three groups and each group is requested to outline a normal day's household food intake. The time of each meal and what is eaten should be listed out. Each group is given one season (rainy, winter and summer) and requested to write the dietary pattern according to that season.	All
1.15 – 2 pm	Lunch	
2.00 – 3.00 pm	• Importance of balanced diet and its importance for good health	Akshaya Kumar Panda
3.00 – 3.45 pm	• Anemia and VAD: definition, symptoms and how to overcome the problem through diet • Pregnancy, lactation and dietary requirement • Govt schemes related to anganwadi, pregnancy and lactating women	Trupti Mahapatra
3.45 – 4. 15 pm	Government entitlements	Jaganath Naik
4.15 - 5.00 pm	Understanding the knowledge gained by participants	Akshaya Kumar Panda
	Final Note	Akshaya Kumar Panda

Annexure 2

Details of the participants

S N	Name of Participant	Gender	Designation	Village
1.	Mr. Sania Hantal	M	CHF	Atalguda
2.	Ms. Raila Guntha	F	CHF	Atalguda
3.	Ms. Kamala Murjia	F	Ward member	Atalguda
4.	Mr. Shyam Naria	M	CHF	Rauliguda
5.	Ms. Dasu Maundagudia	F	CHF	Rauliguda
6.	Ms. Budri Mundagudia	F	CHF	Rauliguda
7.	Ms. Ghasamani Dalei	F	CHF	Banuaguda
8.	Ms. Naimati Dalei	F	Ward member	Banuaguda
9.	Ms. Naina Sukri	F	CHF	Banuaguda
10.	Mr. Dambaru Paroja	M	CHF	Banuaguda
11.	Mr. Balaram Harijan	M	CHF	Bhejaguda
12.	Mr. Niranjan Khada	M	CHF	Chikima
13.	Mr. Sahadev Pujari	M	CHF	Chikima
14.	Ms. Manika Gouda	F	CHF	Chikima
15.	Ms. Janaki Nayak	F	CHF	Chikima
16.	Mr. Padaman Katia	M	CHF	Kurukuti
17.	Mr. Madhav Paroja	M	CHF	Kurukuti
18.	Mr. Pitabas Khada	M	CHF	Kurukuti
19.	Mr. Mahendra Mali	M	CHF	Maliguda
20.	Ms. Surya Mali	F	CHF	Maliguda
21.	Ms. Sunadei Mali	F	CHF	Maliguda
22.	Mr. Nira Nayak	M	Volunteer	Banuaguda
23.	Mr. Sadasiba Majhi	M	Volunteer	Atalguda
24.	Mr. Trilochan Muduli	M	Volunteer	Rauliguda
25.	Mr. Gupta Prasad Ghadei	M	Volunteer	Chikima
26.	Mr. Jagannath Khara	M	Volunteer	Kurukuti

27.	Mr. Ghasi Takri	M	Project Assistant	LANSA-MSSRF
28.	Mr. Max Aurthor Gill	M	Project Assistant	LANSA-MSSRF
29.	Mr. Susanta Kumar Mishra	M	Project Assistant	LANSA-MSSRF
30.	Mr. Balaji Mohanty	M	Project Assistant	LANSA-MSSRF
31.	Mr. Santosh Raj Benia	M	Project Assistant	LANSA-MSSRF
32.	Mr. Jaganath Naik	M	Technical Assistant	LANSA-MSSRF
33.	Mr. Naresh Chandra Patro	M	Technical Assistant	LANSA-MSSRF
34.	Mr. S. Raju	M	Social Scientist	LANSA-MSSRF
35.	Dr. D.J.Nithya	F	Nutrition Scientist	LANSA-MSSRF
36.	Mr. Akshaya Kumar Panda	M	Coordinator , FSN Study, Koraput	LANSA-MSSRF
37.	Ms. Trupti Mahapatra	F	Anganwadi Supervisor	Jeypore

Annexure 3

I. Balanced Diet - Meaning and Importance

A balanced diet is nutritionally adequate and should be consumed through a wise choice of a variety of foods. A balanced diet is one that gives your body the nutrients it needs to function correctly. It can be achieved through consuming proper combination of basic five food groups.

- Cereals, grains and millets
- Pulses and legumes
- Vegetable and fruits
- Milk and milk products
- Fats, oils and sugars

The quantities of the foods to be consumed are based on person's age, gender, physiological condition and physical activity. Men usually need more calories than women, and people who exercise need more calories than people who don't.

A balanced diet is a combination of carbohydrates, proteins, fats, vitamins, minerals, fiber and water. Each of these is essential for survival and disease free life. A balanced diet should ideally provide 65-70 % of the total calories from carbohydrates, 10-12% of the total calories from proteins and 20-25% of the total calories from fats.

Vitamins and minerals in the diet are vital to boost immunity and good health. A healthy diet can protect the human body against diseases, particularly non-communicable diseases such as obesity, diabetes, cardiovascular diseases, certain cancers and skeletal conditions.

To ensure a balanced diet one should include the following in their diet-

- ✓ A mix of different cereals like –wheat, rice, jowar, bajra, ragi etc.
- ✓ Different pulses like –red gram dal, green gram dal, soy etc.
- ✓ At least one leafy green vegetable like fenugreek leaves, drumstick leaves, coriander , mint, spinach
- ✓ Minimum one other vegetable like bottlegourd , pumpkin , bittergourd , beans
- ✓ At least a fruit daily, like guava, papaya, mango, amla, banana
- ✓ Fats and oil
- ✓ Sugars like jaggery or dates
- ✓ Seeds and nuts like gingelly, groundnuts, flax seeds, sunflower seeds
- ✓ A glass of milk or curd
- ✓ An egg or a piece of non-vegetarian food
- ✓ Spices like turmeric, ginger, garlic, cumin which are rich source of antioxidants

Apart from eating a balanced diet, regular exercise, good sleep and abstinence from alcohol and tobacco is also needed for a healthy and happy life.

II. Preservation of Nutrients and Different Cooking Methods

Good nutrition also includes correct cooking practices to get the best benefit out of the food consumed. Cooking makes the food more digestible, more flavorful, tasty and appealing. But wrong cooking practices or overcooking results in loss of nutrients and also makes the food unpalatable. Cooking practices include storage, preparation and actual cooking of foods. A few important practices are listed below:

Storage of foods: All dried foods need proper storage. Improper storage can lead to food spoilage. Cereals, pulses, spices should be sun dried or roasted and should be stored in clean, dry and air tight containers.

Vegetables and fruits should be cleaned before storing them in a cool place or they can be wrapped in a wet cloth.

Milk and non-vegetarian foods should not be stored for more than a day.

Preparation of foods

- ✓ Use fresh ingredients whenever possible
- ✓ Vegetables should be washed before cutting them
- ✓ Excessive soaking or rinsing of cereals and pulses should not be done.
- ✓ Peeling of vegetable skin should be done minimally.
- ✓ Reheating the same food or refrying in the same oil should be avoided.
- ✓ Vegetables should be cut into large pieces and should be cooked with a lid.
- ✓ Draining of water in which food is cooked should be avoided.

Cooking of foods-This requires basic knowledge about foods and their combinations. Cooking is a life skill which should be acquired by all irrespective of their gender. Some of the methods of cooking are listed below:

Boiling- Boiling is quick, easy, and requires nothing but just water .Excessive water or draining of water can dissolve vitamins and minerals in some foods (especially vegetables) Excess water should not be discarded but can be used in gravies or soups.

E.g. Boiling of potatoes, vegetables and eggs

Steaming- Steaming anything from fresh vegetables or fleshy foods allows them to cook in their own juices and retain all the natural freshness and nutrients .It makes the food light, fluffy and easily digestible. Pressure cookers which are most popular are based on this method.

E.g. Idli, Dhokla, steaming of vegetables

Baking - Baking enhances the natural flavors. It requires lesser time and less monitoring. But specialized equipment like oven and knowledge of baking skills is a must.

Eg. Cakes, Biscuits, bread

Stir frying - While this method does require some oil in the kadhai, it should only be a little amount. E.g. Sautéing of the vegetables

Shallow frying- Shallow frying is cooking in minimal amount of oil with partial coverage. Food is only partly submerged in oil and it must be turned around during cooking.

E.g. Fish, meat and food like cutlets.

Deep Frying- Cooking the food submerged in oil with complete coverage. Deep fried foods are high in calories and take longer to digest but they are very tasty The high heat of the oil seals in the food's moisture and crisps up the outside, making it crunchy. Deep fried foods should be eaten only occasionally.

E.g. Poori, Pakoda, Vada, Bhajji

III. Deficiency Diseases –Anemia and Vitamin A deficiency

Good and wholesome food is needed for normal growth and development of the body. Absence of even single nutrient can interrupt in the normal body function and processes and can cause disease. The most common deficiency diseases in India are Anemia and Vitamin A deficiency.

Anemia:

Nutrients like iron and folic acid are important for hemoglobin synthesis, mental function and immunity. Deficiency of iron is called as anemia. It is common among young children and women in childbearing years. An anemic person looks pale, easily gets tired, has poor attention span and breathlessness. The nails may get thinner or spoon shaped. Iron deficiency can be prevented or treated in the following ways-

- ✓ By providing iron supplementation to affected individuals.
- ✓ Preventing anemia among pregnant women by providing foods rich in iron and folate
- ✓ Timely weaning of infants (at the end of 6 months)
- ✓ Nutrition education to mothers on rich sources of iron
- ✓ Cultivation of kitchen garden to obtain cheap sources of iron
- ✓ Cooking in iron vessels
- ✓ Including rich sources of vitamin C like lemon, amla in daily diet for better absorption of iron.

Foods rich in Iron

Liver, meat, green leafy vegetables, dried fruits like dates, raisins and cereals like flattened rice and ragi.

Vitamin A deficiency:

Many children partially or completely lose their vision due to vitamin A deficiency. Vitamin A deficiency can be easily prevented. The first sign of this deficiency is inability to see in dim light or in the dark, which is called as night blindness. Further there are changes seen in white part of the eye which results in loss of eyesight. Vitamin A deficiency can be prevented or treated by following ways:

- ✓ By providing mega dosages of vitamin A to affected children

- ✓ Preventing vitamin A deficiency among pregnant women by providing foods rich in vitamin A
- ✓ Feeding the newborn child on colostrum and continuing exclusive breast feeding up to 6 months
- ✓ Timely weaning of infants (at the end of 6 months)
- ✓ Nutrition education to mothers on rich sources of vitamin A
- ✓ Cultivation of kitchen garden to obtain cheap sources of vitamin A

Foods rich in vitamin A

Milk, eggs, liver, fish, green leafy vegetables, yellow-orange vegetables and fruits like carrots, pumpkin, mangoes, papaya, vegetable oils.

IV. Infectious water borne diseases-Typhoid

Typhoid is an acute illness associated with fever caused by the Salmonella Typhi bacteria. It can also be caused by Salmonella paratyphi, a related bacterium that usually causes a less severe illness. The bacteria are deposited in water or food by a human carrier and are then spread to other people in the area.

Typhoid is contracted by drinking or eating the bacteria in contaminated food, milk or water. People with acute illness can contaminate the surrounding water supply through stool, which contains a high concentration of the bacteria. It is more prevalent in places where hand washing is less frequent. It can also be passed on by carriers who do not know they carry the bacteria.

The two major symptoms of typhoid are fever and rash. Other symptoms can include weakness, abdominal pain, constipation, headache, diarrhea and vomiting.

Treatment

Getting vaccinated against typhoid is recommended for prevention. The only effective treatment for typhoid is antibiotics. The most commonly used are ciprofloxacin and ceftriaxone.

Other than antibiotics, it is important to rehydrate by drinking adequate water. Diet should be light to digest, high in proteins and nourishing foods.

Soups, juices, boiled eggs, steamed foods, kanjee and porridges should be given at regular intervals.

General guidelines to avoid Typhoid

- ✓ Before drinking water, ensure water is heated on a rolling boil for at least one minute before consuming.
- ✓ Be aware of eating anything that has been handled by someone else.
- ✓ Avoid eating at street food stands, and only eat food that is still hot.
- ✓ Do not have ice in drinks.
- ✓ Avoid raw fruit and vegetables; peel fruits yourself.
- ✓ Boil the milk properly before using.

V Nutrition and Hygiene during Life Cycle - Adolescence and Pregnancy

Adolescence is a period when the childhood is transformed into adulthood. It is a period of rapid physical, physiological changes and final growth spurt. If proper care and attention is not given to the nutritional needs of adolescents, it can result in various nutritional problems like weight imbalance, anemia, early osteoporosis, menstrual problems and eating disorders. Nutrition and hygiene for adolescent girls is extremely important and should not be overlooked, as it is a key to healthy motherhood and childhood ahead.

Dietary and hygiene guidelines for adolescent girls-

- ✓ Balanced diet which includes all the five food groups in correct quantities should be consumed to avoid weight imbalances.
- ✓ Empty calories from carbonated beverages and junk foods should be avoided.
- ✓ Foods which are rich in iron and calcium should be consumed to prevent anemia and early osteoporosis respectively.
- ✓ Home cooked foods and acquiring cooking skills must be encouraged Physical activity should be part of the lifestyle
- ✓ Proper menstrual hygiene and personal hygiene should be encouraged at school and home.

Pregnancy is a period when a woman makes many adjustments in her life as well as diet. Healthy eating is important during pregnancy. Good nutrition is needed to meet the added demands of pregnancy and for the growth of the fetus. The diet during pregnancy should comprise of more of tissue building and protective foods and not just energy giving foods. Around 300 calories are additionally needed daily to maintain a healthy pregnancy. These calories should come from a balanced diet of protein, fruits, vegetables, and whole grains, with sweets and fats kept to a minimum. A woman should neither eat for two nor should she eat very less in fear of having a big baby, who might be difficult to deliver.

A healthy, well-balanced diet during pregnancy can be a preventive measure for pregnancy related complications like anemia and preeclampsia. It can also be useful in minimizing problems like nausea and constipation.

The weight gained by the mother serves as a reserve of nutrients during the period of lactation. Additional nutrients would also be stored in the baby's vital organs to provide nutrition for the first six months of life.

Dietary guidelines for expectant mothers:

- ✓ Eat variety of whole grains, fruits and vegetables everyday.
- ✓ Consume at least 300 ml of milk daily
- ✓ Vary your protein sources.
- ✓ Limit foods with "empty" calories.
- ✓ Take vitamin supplements of calcium, folic acid and iron.