

FSN FORUM DISCUSSION
**FOOD SECURITY AND NUTRITION SECURITY –
 WHAT IS THE PROBLEM AND WHAT IS THE DIFFERENCE**
 FROM 1ST APRIL TO 15TH MAY

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I. GENERAL INFORMATION

Duration: 01.04.09 to 15.05.09

Facilitator: Urban Jonsson

Number of participants: 16

Number of Contributions: 16

II. INTRODUCTION OF THE TOPIC

My name is Urban Jonsson and I have worked most of my adult life (for 25 years) in Unicef. Since I retired in 2004 as regional director of Unicef, East and Southern Africa (ESARO), I have established an international consultancy group, The Owls, providing support to multilateral and bilateral agencies, governments and NGOs in the area of human rights approaches to development. During my eight years as Unicef country representative in Tanzania I was responsible for the Joint WHO/UNICEF Support Programme in Iringa Region (later re-named the Iringa Nutrition Programme), during which time a conceptual framework of the causes of child malnutrition was developed, which later became the Unicef Conceptual Framework on Nutrition (1990).

During my many years of work with nutrition problems in society I have heard many permutations of 'food' and 'nutrition' being used to describe certain tools, issues or situations, such as 'food and nutrition policies or strategies, food and nutrition security, food and nutrition surveillance, food and nutrition units, centres or sections, and of course, 'the right to food', 'the right to nutrition', and 'the right to food and nutrition'. It has never been clear if one is a part of the other. That is where the confusion starts and this confusion reflects a lack of consensus on the generic causes of malnutrition in society. The confusion is compounded by the lack of appreciation between 'the science of human nutrition' and 'the science of nutrition problems in society'.

Logically, a statement like 'A and B' assumes that A is not a part of B, or B a part of A. We normally do not say something like "oranges, apples, and fruits", or "birch, pine and trees". Many people, however, use the term 'food and nutrition', not reflecting that food could be a component of nutrition. If that were the case, correct statement would, of course, be 'nutrition, with a focus on food'; 'the role of food for good nutrition' etc. The same criticism would apply in the case where nutrition is seen as a component of food.

The confusion mentioned above explains to a large extent the **ambiguity in using the terms 'food security' and 'nutrition security'**. There is therefore an important need to 'unpack' these two concepts in such a way that they are reflecting evidence based scientific reality.

If 'food security' and 'nutrition security' are found to have different meanings, what exactly is the difference? And what are the relationships between the two? A good start is to remember the old philosophical position that "The solution lies in the problem". I therefore encourage all participants in this discussion to be very explicit about their understanding of the immediate, underlying and basic/structural/root causes of the problem of malnutrition in society.

I limit myself to the most important nutrition problem, namely young child malnutrition in developing countries.

Questions

1. Are there generic causes of young child malnutrition? If so, which are these and how are they related to each other and to the final nutritional outcome?

- Are there any *necessary* determinants of good young child nutrition? A 'necessary determinant' is a determinant that *must* be present in *all* situations where the nutritional status is adequate. If not present, malnutrition will always be present.
- Do you see any generic hierarchy of causes of young child malnutrition? A 'hierarchy of causes' means that some causes are more proximate to the nutritional outcome than others, and may themselves be caused by more distant causes in time and space.

2. Is 'nutrition security' a part of 'food security', or is 'food security' a part of 'nutrition security'? Or are they the same? Or are they totally different?

- Can you give an example of where 'food security' has been achieved, with continued young child malnutrition?
- Can you give an example of where 'nutrition security' has been achieved, with continued food insecurity?

Many thanks in advance and looking forward to your opinions,

Urban Jonsson

The Owls (former UNICEF)

III. LIST OF CONTRIBUTIONS

Contribution by Falana Adetunji, from the Federal Ministry of Health, Nigeria

The new topic introduced is very interesting and long awaited.

I am very sure that Urban Jonsson knows too well that, there is a very wide difference between Food Security and Nutrition Security. The problem lies in programmatic linkages of the two together. Food Security is a precursor for Nutrition Security. There is no way any Nation or community can be Nutrition Secured without first being Food Secured, but in most cases this simple logic often proves difficult to be logically established. The Lack of political involvement (Will) in Food and Nutrition Security programmes in most developing countries is a major problem. In other words, A Nation should strive to be food secured and thereafter map out programmes that will ensure the corresponding Nutrition Security at home/family Level. Being Food secure as a nation/state/community/family level does not translate to Nutrition Security unless appropriate programmes are put in place to address the issue of Nutrition Security.

Coming to the issue of Young Child Malnutrition, it's logical enough that a household that is Food insecure will definitely be Nutrition insecure and end up having children that are malnourished. However, there are other equally important factors such as Environment, infrastructure like Hospital and clinic especially those that provide Child Nutrition as part of their services. Also important is the issue of caregiver and knowledge in diversification of the food recipes for the child to have an adequate meal/diet containing appropriate nutrient requirements for the proper development of the child. However, for child malnutrition to be adequately addressed in developing countries, Government should see Food and Nutrition security as a

development issues that needs huge investment rather than seeing it as a merry welfare of just given food alone for survival and nothing more.

Looking at the second question, Nutrition Security can only be a subset of Food Security because, just as stated above, A nation can only be Food Secured before dreaming of Nutrition Security, while it cannot be other way round. It might not be readily remembered of a country or nation where food security has been achieved with continuous young Child malnutrition, but there is a tenable explanation for that, since being Food Secure does not translate to Nutrition security without appropriate programmes to back it up.

In other way, there is no way Nutrition Security can come to be without continued food security. simply put, the two goes together in holy wed lock.

Falana Adetunji
Nutrition Division
Department of Child Healh
Federal Ministry of Health
Abuja, Nigeria

Contribution by Kwaku Agyemang, from FAO's Sub-regional Office for Southern Africa

Dear All,

I congratulate Falana for his contribution and his conclusion that Food Security and Nutrition Security go together in a holy wedlock. The problem is that many in the food security debate and policy do not see it that way. For them food security is how many tons of cereal grains or tuber/root starch are available at household or national level. It is interesting to note that all the acceptable definitions of food security in use imply nutrition. Many recognise that nutrition can not be found just by feeding on carbohydrate-base diets. Some of the essential nutrients and micro-nutrients are easily found in animal proteins. Yet in many high level Food Security strategy documents livestock agriculture, processing and trade are starkly missing. Time after time policy and technical persons involved in fashioning Food Security strategies have be reminded that there is such link between Food Security and Nutritional Security and that the most readily source of most of the crucial nutrients should not be ignored. Reproduced below, are few paragraphs from a paper I presented in The Gambia in 2004 in which I highlighted some of these issues.

I will appreciate comments on this contribution.

Warm regards,

Kwaku Agyemang, Consultant, FAO Sub-regional Office for Southern Africa, Harare, Zimbabwe

New Dimensions in Food Security: Implications for the Sub-Region

by

Kwaku Agyemang (PhD)

Director General, ITC

New Dimensions to Food Security

In order to appreciate that the concept and practice of food security should go beyond the current understanding by some planners and donors it is instructive to revisiting the definition of “Food Security” as presented in the introductory section. Few words in the definition and concepts are revealing: Nutritious, nutrients and balances, dietary needs, active life, healthy life, synergies, complementarities of food, etc. The logical bottom line interpretation is that food security includes elements of nutrition that can not be achieved by concentrating on the classical definition of “food”. In other words “Not By Bread Alone”. If it is accepted that critical, essential amino acids - required by the body for body building and functioning can not be synthesized by the body itself, and micronutrients- needed for motor skills development, especially in children are not commonly found in crop-based diets but for which the best sources are fish, eggs, milk, meat, or foods of animal origin, then there is a justification for “Nutritional Security”. This security must be assured year round and life long, adjusted according to physiology and level of activity. However, this security can not be achieved without effort. The source of these essential amino acids and micro nutrients, that is, livestock, must be incorporated into main-streaming of food security.

Feed Security: The well being, output and quality of products of livestock largely dependent on feed availability and quality. Nations seeking nutritional security must be feed secured. For adequate supplies of products, livestock should not live on poor quality grass alone. Feeds must be from quality fodder, supplements and additives. As is the case of nutritional security, feed security for animals must be year round and life long. Feed security does not only accrue direct benefit to livestock and man, but also through income generation. Therefore, livestock feeds, processing and storage issues should be included in food security mainstreaming.

Seed Security: Seeds preserved from previous harvest are needed for planting in subsequent year(s). Any nation that does not have policies that ensure adequate seeds are available and accessible puts food security at a risk. Cereal and fodder seed security are equally important for a true comprehensive food security. Both public and private sectors have a role to play. Community based or village systems aiming at seed storage and security should be revamped and promoted.

Roles of livestock that contribute to food security.

In the light of the obvious importance of livestock products to nutritional security and employment and income aspects of livestock farming to food security the following paragraphs have been included to provide further insights into these linkages.

Livestock as a source of sustenance to man

To achieve a true food security, food should not only be available to individuals of a household, the food should be adequate and biologically balanced such that the nutrients therein, when absorbed upon digestion, would meet the maintenance and physiological requirements of the individuals. A balanced diet is one with adequate levels of energy, essential amino acids and needed micro-nutrients. Essential amino-acids are those that can not be synthesized by the body and which must be provided from ingested foods, and in ready-to-use forms. Proteins that provide a large proportion of these essential amino acids are rated as high biological value. Proteins from plant sources typically have low levels of these essential amino acids, especially lysine, tryptophan, methionine and threonine (Abassa, 1995). In several plants, at least one of these essential amino acids may be missing or present in inadequate quantities. Thus, plant-based diets must often be supplemented with these amino acids to make the diets balanced. Animal source proteins, on the other hand, are rich in these essential amino acids. Meat, milk and eggs are the major sources of animal proteins. They are used globally but the quantities available and the frequency of use vary widely around the world.

In Sub-Saharan Africa, an overwhelming majority of the human population lives on cereal and root-based diets with large carbohydrate content and low protein content. While the energy

requirement may be met from roots and tuber diets, the lack of proteins results in imbalance, and such imbalance has led to diseases, such as kwashiorkor in children. Retarded growth and development are often associated protein-energy malnutrition. The proportion of underweight (low weight for age) children in Sub-Saharan Africa as a whole, averaged 31%, but reached nearly 50% in some countries (UNICEF, 1992). Some studies have also shown that for some regions in Africa the average proportion of children with stunted growth (low height for age) was as high as 43%, while the mean proportion of growth-wasted children (low weight for height) was nearly 11% (Abassa, 1995). Morbidity and death are common outcomes of malnutrition. It is argued that some animal source proteins will greatly improve the energy-protein balance of starch-based diets characteristics of poor developing nations. The consumption of even a small amount of animal products corrects amino acid deficiencies in cereal based diets, permitting more of the total protein to be utilized (Winrock, 1992). One of the often over-looked advantages of food of animal origin is the presence in animal products of non-protein materials, such as minerals, vitamins and accessory factors that are not found in many plant materials. Micro-nutrients have been linked with the development of motor-skills in children, implying that children whose diets lack these nutrients may not do as well in school compared with those whose diets are rich in these micro-nutrients. Some studies have shown that where intakes of animal products are low, increases in meat (in particular), milk and eggs in the diets of toddlers and school children have resulted in marked improvements in growth, cognitive development, and health, due in part to the higher availability of essential amino acids, minerals and vitamins in food of animal, compared to plant, origin (CAST, 1999).

Results from field research in Africa tend to support the correlation between balanced diets (including animal proteins) and well being of children. In Ethiopia, households which adopted an agricultural technology package that included crossbred cows that produced a lot of milk, had less stunted-growth children than those households that did not adopt the technology. Furthermore, children in non-adopting households were also more prone to sickness and slightly lighter in weight than those households that adopted the technology (Gryseel, 1988; Shapiro, 1994; Abassa, 1995). In northern Nigeria, 74-85% of households who added dairy cows to their farming enterprises reported some improvement in the overall health of their children (Agyemang et al., 1999).

Notwithstanding the positive attributes of animal source proteins enumerated above, there is a minority group which canvasses the view that it is possible to consume well-balanced diets if the diet contains properly selected number of plant proteins of divergent composition (Burton, 1980). Whereas this practice is well within the reach of some people in developed countries, as evidenced by good health status of people on vegetarian diets, this cannot be said to be true in developing countries where the poor do not have the luxury to select from primary vegetables and processed imitation meats. Nutritional education is woefully lacking in developing countries and the practice of over cooking food often lead to denaturing of the little amounts of proteins that may be present, and the destruction of vitamins and other micro-nutrients.

Secondly, there are those who point to the potential health risks associated with the consumption of foods of animal origin. High levels of animal fats and their links with heart diseases has been stressed, and figures are often cited from the rich, affluent societies in the advanced countries to support the argument that livestock products are non beneficial to humans. It is most revealing, however, that the 23% of the world's population living in developed countries presently consume three to four times the meat and fish and five to six times the milk per capita as those in developing countries (Delgado, Courbois and Rosegrant, 1998). Moreover, the negative relationships reported between health of people in developed countries and consumption of animal products is often confounded with increased longevity and variation in the intake of other dietary components (CAST, 1999). The point has been made that the level of consumption of livestock products in developing countries are no where near the levels in developed countries. For example in 1993, the percentage of calories from animal products in Sub-Saharan Africa was 7%, compared with 27% for the developed world. The corresponding figures for protein percentages were 20% and 56%. It is projected that in the year 2020 the per capita meat consumption in Sub-Saharan Africa will be 11 kg/annum, compared with 114 kg/annum for the

United States of America (CAST, 1999). Lebbie (1996), argues strongly that the obvious excessive consumption of animal products by the citizenry of advanced countries and the sometimes fatal consequences, should not be used to deny nationals of third world countries from consuming very moderate amounts of these products, which have been shown at those levels, to have relatively few risks. It would appear that increases in production of meat and milk from ruminants in the developing countries, and improvements in the processing and marketing of these products, would increase their accessibility to rural and urban poor consumers. Food aid programs that serve as alternatives in providing meat and milk products to third world countries have been deemed as disincentive to local production in the long term. Moreover, there are some concerns that some of the foods made available as aid in some situations may not be culturally acceptable to the recipients (in terms of use and preparation), and often do not reach the intended target groups. In view of these concerns, donor assistance in local development of food-based enterprises is increasingly being viewed as more sustainable than food donations.

Contribution by Eva Edwards, from the National Agency for Food and Drug Administration and Control (NAFDAC), Nigeria

I must add to the contributions of Falana Adetunji on this topic. I totally agree that it is unlikely that there can be nutrition security without first tackling the issue of food security or shall I say food insecurity, adequately backed by effective programmes to ensure nutrition security. I also agree that food security does not automatically translate to nutrition security.

However are there no small measures that can be taken to move us closer to where we want to be in terms of nutrition security even in the face of food insecurity? I think mandatory fortification of some carefully chosen food vehicles consumed by a large majority of the population to deliver much needed micronutrients is one of such. I don't know if this serves as an example of sorts for Urban Jonsson's final question. I would like us to **explore/discuss/share intervention strategies to bridge the obvious gap between food security and nutrition security** as this will be of immense help to developing nations while we tackle the food insecurity challenge.

Is it possible to also extend this discussion to **linkages between food security and food safety**? Are people who are food insecure going to pay any mind to food safety? What overall effect will this have on the health, well being and indeed economy of that population? And what would be the impact of this globally? This is indeed food for thought.

Eva Edwards
Registration and Regulatory Affairs Directorate
National Agency for Food and Drug Administration and Control (NAFDAC) Lagos, Nigeria.

Contribution by Purna Chandra Wasti, from the Department of Food Technology and Quality Control, Nepal

My name is Purna Chandra Wasti, working in the sector of food safety and nutrition in Nepal. It's a great contribution of Urban Jonsson. The topic is relevant and useful for the developing countries like us.

The hierarchy of causes given in the UNICEF causal model are still relevant in the general setting. However, we can incorporate the crisis factor in it.

The causes of malnutrition are quite complicated in our region, therefore it is called South Asian Enigma. Even after addressing the causes identified, the rate of malnutrition can not be reduced below 25 % (?). There is a strong need to dig into the bottom of the problem.

Still, the UNICEF conceptual framework of malnutrition is relevant and needs to be advocated upto the grass root level. It should be understood and realized in every aspect of development.

The concept of food and nutrition security has evolved after the promotion of UNICEF framework. This concept is quite comprehensive and needs to be promoted further.

It is always a very difficult task to translate the concept into practice, I mean into planning and programs. Even the concept of food security alone has not been fully realized. In our concept the part of safety and quality including the nutritional quality are mostly missed. Food Security, in our context, the term everyone understand is the food availability. The recent food price rise has also forced us to the situation of food availability as a synonym of food security.

Food and nutrition security is the concept, (what I understand), which is the one dimension up from the food security. Therefore food security plus health is equal to Food and Nutrition Security. InWEnt – Internationale Weiterbildung und Entwicklung gGmbH Capacity Building International has published a book **Achieving Food and Nutrition Security Actions to Meet the Global Challenge** by Klaus Klennert (Editor). See http://www.inwent.org/E+Z/content/archive-eng/11-2005/media_art2.html

The concept is quite comprehensive. But the organizations and their coordinated roles are very important. As the food security (here it means mainly the production) can not meet nutrition, how we can expect to meet health. Therefore, the team work, the coordinated approaches and the integration of concepts along with the structures (organizations) and their works should be integrated and directed towards the overall goal of achieving food and nutrition security.

Local development, or Poverty Reduction Strategies could be the umbrella which could just bring all the dimensions of food and nutrition security into one programmatic goal.

Anyway the ideas shared here are worth being considered. I request the FSN members to share their experiences and ideas.

With best regards,

Purna Chandra Wasti
Senior Food Research Officer
Nutrition Program
Department of Food Technology and Quality Control
Nepal

Contribution by Gangadhara Swamy, from the Christian Children Fund, India

Dear All,

Really it is a challenge to any country to address to food security for its people and also an important thing, which should be kept in the forefront, while developing country development plan.

Next coming to the presently raised issue, **nutrition security is part and parcel of food security**. Food security is more of quantity, the total food grains available irrespective of different types of cereals, pulses and oil crops, but nutrition security is more of qualitative aspect which is essential for the healthy growth of human being.

In India, both the central and state government is supporting to ensure the food security of below poverty line (BPL) through public distribution system (PDS). In this system, every BPL family would get some quantity of rice/wheat, sugar, kerosene on monthly basis. Even though it is helping the BPL families to lessen their monthly expenditure on food commodities, they are not getting all commodities required for them. Again they are dependent on private shops for other food commodities.

As PDS is more focusing on rice and wheat, it is adversely affecting the agricultural system. Now most of the small and minor millets have vanished, which were the main crops in the dry land conditions. These crops were short duration ones and helping to mitigate the drought conditions, ensuring food security for humans and fodder security for livestock. Most of the pulse crops were and are grown in dry land conditions as a sole crop or in mixed crop system. Due to less attention towards dry land farming these are gradually getting disappeared. In my personal experience, while working in KAWAD watershed, Karnataka, had noticed important practical problems viz

1) Groundnut is a major crop grown in Bellary and Chitradurga districts, few years back pigeon pea, cowpea, castor were grown as intercrops. Crop duration of Ground nut is around 100-110 days, while for other crops it is between 150-175 days. Once the ground nut was harvested, all the remaining crops were grazed by the animals. It made farmers reluctant to take up mixed crops in the groundnut. Then the project intervened and introduced a short duration pigeon pea in that area.

Hence in watershed and sustainable agriculture development programs proper attention should be given to introduce more and more bio-diversity based on area wise history and situation.

Some suggestion to ensure food security and nutrition:

- 1) Food and Nutrition security issues should be addressed at household levels.
- 2) In PDS, along with rice/wheat other small and minor millets should be introduced.
- 3) Quality food commodities should be supplied in PDS.
- 4) Mixed cropping system in agriculture, kitchen garden at family level, school kitchen gardens could help to ensure the nutrition at some level.
- 5) Training to farmers on post harvest technology for drying, processing of grains and pulses, to minimize the storage losses.
- 6) Awareness to general public to minimize the wastage of food commodities during ceremonies and functions.

With regards

B.P.Gangadhara Swamy
Program Coordinator-Livelihood and Microfinance
CCF-INDIA

Contribution by Mahtab S. Bamji, from the Dangoria Charitable Trust, India

Food and nutrition security have some times been interchangeably used. However, nutrition security goes beyond food security. One definition for nutrition security that has been used in India by the Coalition for Sustainable Nutrition Security (Chaired by the eminent agriculture scientist Prof. MS Swaminathan) is I think comprehensive and simple. It is

"Physical, economic and social access to an age-appropriate balanced diet, safe drinking water, environmental hygiene, and primary health care for all"

to this I would add- 'awareness to utilise these'. For nutrition security there has to be Awareness about and Access to at Affordable price to a age appropriate balanced diet (which includes

cereals , millets, legumes,vegetables, fruits and animal products) clean environment and health care outreach. In the absence of clean environment, drinking water and health care outreach, it would be a case of pouring water in a leaky pot.

Stocks of food grains with Food Corporation of India has not ensured even food security, leave aside nutrition security at household and individual level. This requires decentralised planning, and empowerment of the community- a kind of Gandhian approach. Green revolution has increased the production of cereals like rice and wheat, but nutritious grains like millets and pulses have been bypassed, and their production has not kept pace with population increase in India.

Animal products- at least milk and eggs are certainly needed for ensuring good quality protein, at least for vulnerable groups like children, pregnant and lactating women. However, excessive demand for animal products where animals are fattened on food grains hurts food security. Animals like sheep and cattle that have low feed conversion ratio need 8 Kg of feed to put one Kg of live weight. Poultry and fish are better converters. Sensible choices need to be made so that precious food grains are not diverted for fattening animals and in recent times for fuel .

Mahtab S. Bamji

Contribution by Moleka Mosisi, from the African Center for Food Security , University of KwaZulu-Natal, South Africa

Given that food security is about production, access and utilisation (of safe and nutritious food), opposing food security vs nutrition is, in my opinion, confining food security to some of its component only. However, this requires some contextualisation.

The African Union through its Comprehensive Africa Agriculture Development Programme (see www.nepad-caadp.net) has identified **four food security challenges** including (1) inadequate risk management at all levels from household to regional levels, (2) inadequate food supply and marketing systems for distributing food, (3) lack of income opportunities for the vulnerable, and (4) hunger and malnutrition. To overcome these challenges, a **framework for African food security (FAFS)** has been developed with following objectives: (1) improved risk management, (2) increased supply of affordable commodities through increased production and improved market linkages; (3) Increased economic opportunities for the vulnerable, and (4) Increased quality of diets through diversification of food among the target groups.

Measurement of progress would be done through the following indicators: resilience score (based on asset); consumption and production (gifts, donations and transfers); per capita income; and dietary diversity score.

Responding to Urban's question whether there are any necessary determinants of good nutrition, I would suggest that the necessary determinant of good nutrition, in the food security context, would be **dietary diversity**. If a household/individual is not eating enough diversified safe and nutritious food, food security will not be present, regardless of the amount of food available to the household/individual. However, in my opinion, any aspect of nutrition that does not deal with good diet cannot be under the territory of food security.

Moleka Mosisi

Masters student
African Center for Food Security
University of KwaZulu-Natal (South Africa)

Contribution by Ignatius Onimawo, from the University of Agriculture, Nigeria

Dear all ,

There is actually a difference between food security and nutrition security.

Food security is mainly defined in terms of availability and access to food. Availability of food in the household or community and the access to that food by every member of the household or community at all time is what constitute food security.

Nutrition security is a natural follow up to food security. Therefore nutrition security has to do with access by every member of the household or community to adequate and safe diet that will ensure optimum growth and development. Food may be available but if not of the right quality and quantity in terms of nutrient content, would constitute nutrition insecurity. Other related issues include household food distribution among the various groups such as the under five children, school age children, pregnant and lactating mothers and the elderly. In other words even in the face of available food in the household, there could still be nutrition insecurity arising from improper distribution.

I hope I've made the difference clearer now.

Prof I A Onimawo

Contribution by Salome Yesudas, from India

Dear All ,

I strongly beleive both are crucial but they are not same in most of the cases.

Sometimes Food Security programs with good intention turn off many other more important aspects of life.

Please refer to **Alternative public distribution system (APDS) of Deccan development Society in Andhra Pradesh State of South India** which emerged as one of the best combinations of Food seciruty and nutrition security, and many more securities for people.

Cheep rice through government public distribution system PDS resulted in incresase fallow lands, loss of agriculture biodiversity, knowledge about related cultural issues and most importantly the nutritional security and many more issues.

Food seciruty programs often neglect nutritional aspects taking an excuse of dealing with emergencies. But actual pressures are different loby agencies.....,

Kindly go through APDS program details at www.ddsindia.com

Sincerely,
Mrs. Salomeyesudas

Chennai - 600 054
T.N. India

Contribution by Gladys Mugambi, from the Ministry of Public and Sanitation, Kenya

Dear All,

Food security has been discribed very well by the other contributors. In order to ensure nutrition security we have to ensure that there is adequate food and control of diseases since the two (food and disease) are the direct causes of malnutrition. Food security in many countries focuses

on ensuring that each member of the household has something to eat e.g maize, rice and beans. The foods provided do not meet all the nutrient requirements but they relieve the population from hunger, which is very important. To ensure nutrition security therefore, there should be interventions that target the vulnerable groups where by micronutrients are delivered, deworming, malaria control, prevention of diarrhoeal diseases and management of moderate and severe malnutrition.

I have just joined the discussion, I hope iam not repeating what others have said.

Gladys Mugambi,
Nutritionist,
Micronutrient Deficiency control Program coordinator
Ministry of Public and Sanitation,
Kenya

Contribution by Samir Basta

Good Questions. Quickly, here is a tentative reply :

For (1) generic causes of child malnutrition may be, a-Frequency of Feeding, b-Content of Food,(has to be age specific) & c-Hygiene .

I would add that frequent Infections, AIDS, Trauma, Loss of Apetite, and Stress , "Neglect", "Apathy", "Maternal Malnutrition & ill -health" and yes, "Amenorhea '(for breastfeeding)" are/can be determinants of child malnutrition.....

For (2), Food Security is part of Nutrition Security..

Lots of societies exist where Food Security may be present but where you find child malnutrition. That is, overall Food availability or total Calories/Protein per capita or even in a family may be OK but feeding of young children (eg ,breastfeeding) is not adequate either on a quantitative or qualitative basis. Or where they may be neglected for most of the day by absent mothers as in urban slums (or in even some "rich" societies!)..Or where chronic diseases abound..An example is Egypt..

In the last part of your questions, you ask where nutrition security has been reached with continued food insecurity..Difficult, but cases do exist where in war torn societies, mothers continued to adequately feed very young children & infants, even though overall food availability was poor or intermittent.. I saw this in parts of war-torn Yugoslavia in the early 1990's.

Perhaps more later,

Best,

Samir

Contribution by Silvia Kaufmann, from FAO Afghanistan

Dear Colleagues,

It's more than twenty years back that term 'food security' was defined and a common understanding was achieved. The conceptual framework of malnutrition was introduced shortly thereafter, which laid the basis for the development of the concept of 'nutrition security'. The acceptance of the conceptual framework by the international community was a major milestone and central to the increased recognition and integration of nutrition in development. It helped to

improve problem analysis and sectoral, or better to say inter-sectoral, responses, helped to clarify responsibilities and, to some extent, also to guide resource allocation. Simultaneously and over time, the definition of 'food security' was developed further, going beyond the pure **availability** of food, but giving more attention to a household's access to food and adding the dimension of food **utilization**.

It is right that the terms 'food security' or 'nutrition security' are sometimes used (or misused) in an inter-changeable or confusing manner. However, in practice there is a point in stating both, and through that, highlighting the perspective or the way we to look at it. Stating 'food and nutrition' as opposed to 'health and nutrition' specifies the problems and potential solutions for an adequate response more specifically.

Furthermore, 'food security' in practice, is not always understood in its comprehensive manner (as also mentioned by Kwaku Agyemang). While the term 'food security', frequently, does **not** give adequate emphasis on the importance of food for better nutrition. Often policy and decision makers give higher priority to food production for commercial interest, while small scale farmers and nutritional objectives fall behind. Which is also why comprehensive food security analyses, as the basis for proper programming, incorporate nutrition indicators. An example gives the FAO's supported FIVIMS or WFP's comprehensive food security and vulnerability analysis. Nutrition indicators are also being used in results based management introduced UN agencies since the 2000s and was also practices within GTZ's Integrated Food Security Programmes implemented in earlier years. This provides great opportunities to improve programming for better nutrition, however, the major challenge of larger scale programmes is to ensure that the programme design is well tailored to address the identified problems adequately. Multi-sectoral programme with decentralised capacities and decision making responsibility might be in the best position to address nutrition problems most effectively.

Unpacking 'food and nutrition security' - can one exist without the other? Both are closely interrelated and may appear in a vicious cycle, but of course, according to the context, at a different magnitude. It's a question of what the most prevailing problems are. Where infectious diseases are the prevailing cause of malnutrition, the addition of more food is not effective, or, vice versa, a further investment in the health sector does not help, if food insecure was the fundamental problem.

Food security is not necessarily the prerequisite for achieving nutrition security, there is a certain extent of 'elasticity' between the various causes and solutions. Nutrition insecurity jeopardises a household's resources. Malnourished individuals suffer more frequently and more severely from infectious diseases. If a farmer or a family member falls sick during the cultivation, weeding or harvest season the harvest will be diminished tremendously, with consequences on subsequent years. Nutritional insecurity can also lead to increased household expenses, for example for medical treatments or transport. Hence, nutrition insecurity increases the risk to food insecurity, but better nourished household members can more productively contribute to food security. The identification of the most prevailing problem is the basis to break the cycle in a most immediate and effective way.

A study evaluating the impact of an **Integrated Food Security Programme supported by GTZ in Northern Laos** showed that the chronic malnutrition reduced statistically significantly by 15 % over a period of four years community based interventions. Nutrition security was significantly better in households where **parents had basic education or where women's social status was higher**, regardless the household's income or food production situation (statistically controlled analysis). No other causes of malnutrition included in the multi-factorial analysis model, structured according to the conceptual framework of malnutrition, determined the nutritional status so significantly than those two. **Thus, education and social status of women, through improved 'nutrition supportive' decisions and behaviour, mitigate the negative effects of food insecurity, poverty or other factors associated to a household's location,** such as i.e remoteness and limited access to social services or markets. A substantial increase

in food production as well as cash income achieved over the four years (up to 45%, statistically significant) indicated **significant achievements in food security and poverty reduction**. However, multi-factorial analysis showed that **those two factors did not contribute to the reduction of malnutrition**. But changes explaining the statistical significant reduction in chronic malnutrition were the improved hygiene behaviour, improved access to water as well as the adoption of a less labour intensive agricultural production system.

Over the four years of programme implementation the nutritional status **improved for all income groups almost equally**, with even slightly better results among the lowest income group. Also food produced was **not associated to the nutritional status**. This, once more, shows that **nutrition security can improve even if food security and poverty continues to exist**, but wise decisions optimise the availability and use of limited resources for better nutrition (details at: <http://geb.uni-giessen.de/geb/volltexte/2009/6904/pdf/KaufmannSilvia-2009-03-03.pdf>).

Thank you for your attention, Silvia

Silvia Kaufmann

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Contribution by Claudio Schuftan from the International Consultancy Group The Owls

I think that in the introduction, Urban puts the issue convincingly on our lap. I am already a convert on the "**right to nutrition**" against what many semi-converts say that "it just does not sound so good", that "the right to food and adequate nutrition" of the olden days has a better 'ring' to it. But we simply have to, once and for all, leave the fruits out of the oranges and apples....

As for "**food security**", I think we have to put it in the context of the contextual framework of the causes of MN where it is one of 3 UL causes. Somehow, I see "nutrition security" to be more linked to the immediate causes. Although some of you may agree, I still do not see what the practical implication of this would be in terms of guiding us to use one or the other term instead of going for the use of "nutrition security" instead of "food security".

As for the Questions:

1. Are there generic causes of young child malnutrition? If so, which are these and how are they related to each other and to the final nutritional outcome? **absolutely. This is what the conceptual framework is all about!!!**

· Are there any necessary determinants of good young child nutrition? A 'necessary determinant' is a determinant that must be present in all situations where the nutritional status is adequate. If not present, malnutrition will always be present.
Yes, many, as per the conceptual framework....

· Do you see any generic hierarchy of causes of young child malnutrition? A 'hierarchy of causes' means that some causes are more proximate to the nutritional outcome than others, and may themselves be caused by more distant causes in time and space.
Yes!

2. Is 'nutrition security' a part of 'food security', or is 'food security' a part of 'nutrition security'? Or are they the same? Or are they totally different?

I would be inclined to say 'food security' is a part of 'nutrition security'

- Can you give an example of where 'food security' has been achieved, with continued young child malnutrition?

True for many children in near poor SE groups in developing countries.

- Can you give an example of where 'nutrition security' has been achieved, with continued food insecurity?

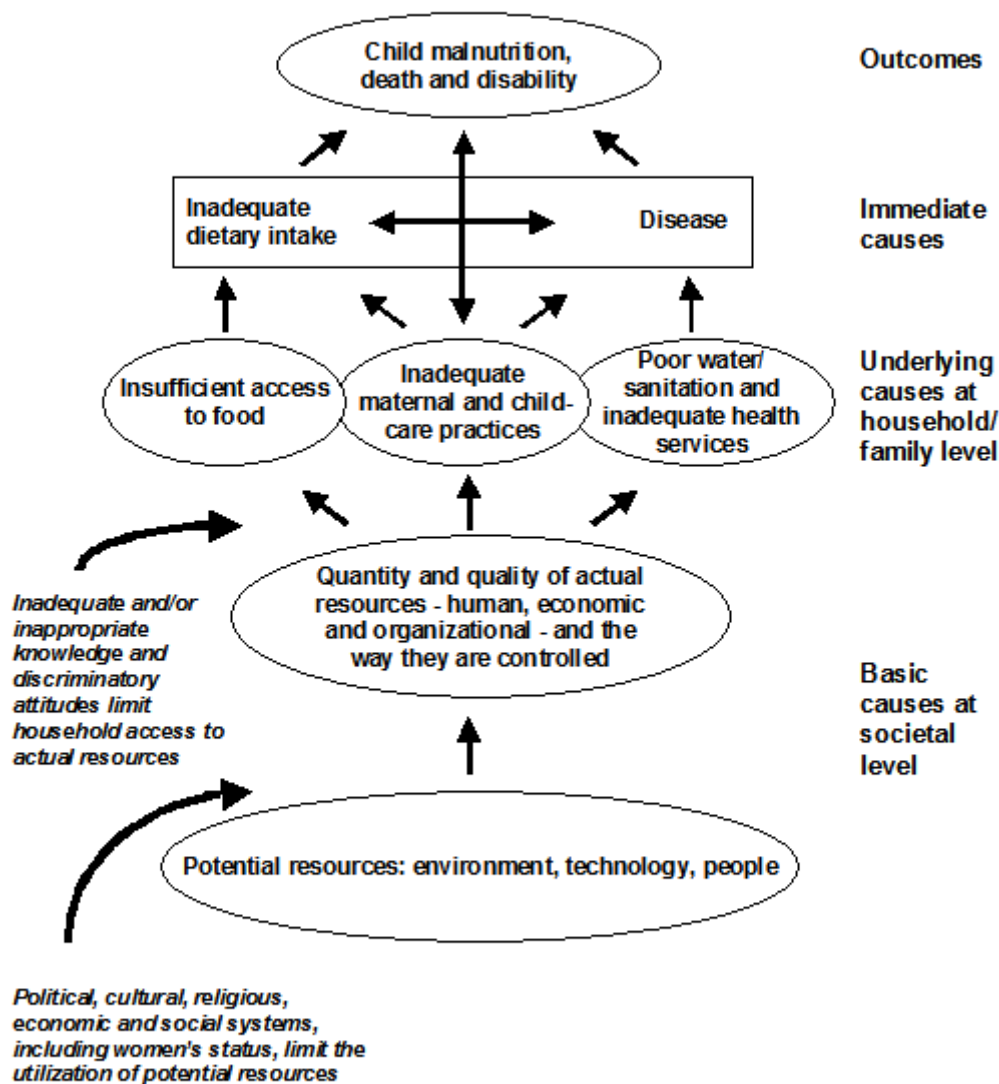
Depends if national/regional or household food insecurity. The concept of positive deviance (which I dislike) comes to mind here.

Claudio Schuftan
The Owls

UNICEF conceptual framework

(If the figure doesn't display correctly, please see Figure 1 on page 18 at http://www.tulane.edu/~internut/publications/WB_Bckgrd_Pprs/Narrative/NarrativeonePelletierfinal.doc)

Figure 1: Causes of Child Malnutrition



Source: The State of the World's Children 1998

Contribution by Urban Jonsson, from the International Consultancy Group The Owls (former UNICEF)

Dear all,

Thanks a lot for responding to this topic. I do not intend to draw conclusions here, but would like to give some comments on each of the contributions that I have received so far based on my personal understanding and perspective

Falana Adetunji

I agree that there is a big difference between food security and nutrition security; that food security is a 'precursor' of nutrition security (i.e. that there cannot be any nutrition security unless there is food security); that food security does not automatically translate into nutrition security.

I believe that the statement "Nutrition Security can only be a subset of Food Security" is not correct. It is, I think, the other way round; food security is a subset of nutrition security. This is clear from the later statement that "Food Security does not translate to Nutrition Security". In other words I believe that food security is a **necessary but not sufficient condition** of nutrition security.

To say that "the two goes together in a holy wed lock", does not explain anything and represents one of those statements that confuse rather than clarify. I believe that it may be used in a political speech, but should not be used in a serious scientific discussion.

Kwaku Agyemang

Again reference is made to the mysterious 'wed lock' explanation. I agree that "all the acceptable definitions of food security in use imply nutrition" but only in the sense that household food security means that if the household's food are consumed according to the dietary requirements of all household member their dietary/nutritional needs will be met. Also, I believe that there is nothing like 'nutritious food', only **nutritious diets**.

Purna Chandra Wasti

I agree that the UNICEF conceptual framework of the causes of malnutrition is both relevant and valid. The 'South Asian Enigma' refers to the fact that young child malnutrition is much higher in South Asia than in sub-Saharan Africa in spite of higher income, better access to health services, water etc in South Asia (first described by Prof. Ramalingaswami, John Rhode and myself 15 years ago). I do not understand the statement that "Food and nutrition security is the concept etc", when the problem is that that term continues to be used! That InWEnt continues to use this term only shows that they continue to be confused.

Eva Edwards

I agree that there cannot be any nutrition security without food security and that food security does not automatically translate to nutrition security (i.e. food security is a necessary but not sufficient condition for nutrition security).

Nutrition security requires simultaneously 'food', 'health' and 'care'. So, there is no way to achieve nutrition security without food security (at household level). I believe that 'food security' must include 'food safety'

Mahtab Bamji

I agree that "nutrition security goes beyond food security". Prof. Swaminathan's definition is almost adequate. The aspect he has left out is **adequate care of children**, which is different from 'health care'.

Gangadhara Swamy

I do not think that the statement, "nutrition security is part and parcel of food security" is correct; it is rather the other way around (see earlier comments). The original FAO definition of 'household food security' (HFS) was something like: 'available and accessible food of adequate quantity and quality, and culturally acceptable, such that if the food was equitably distributed to all staff members according to each member's need, their dietary requirement would be met'. Food

security has never been defined as a concept of quantity only. It is quite another issue that many people think so.

Salome Yesudas

I agree that many food security programmes “neglect nutritional aspects”. This is why I believe that it is so crucially important to be clear about the difference between ‘food security’ and ‘nutrition security’.

Ignatius Onimawo

I agree that “even in the face of available food in the household, there could still be nutrition insecurity”. However, let me carefully analyse some statement earlier. First, “Food may be available but if not of the rights quality and quantity in terms of nutrient content, would constitute nutrition insecurity”. Correct statement, but I believe implicitly wrong definition of household food security (HFS). In my mid HFS means that food is available in adequate quantity and of adequate quality. Second, “...household food distribution among the various groups...” HFS means that all members of the household would meet their dietary requirements **if the food were consumed according to these requirements**. I strongly believe that the process of distribution of food in the household is **not** part of HFS; it is a component of caring practices. This explains why “in the face of available food in the household, there could still be nutrition insecurity”

Moleka Mosisi

Unfortunately FAO included ‘utilisation of food’ in the changed definition of HFS before the World Food Summit. I am of the opinion that this was unfortunate and it certainly was not agreed upon by many other agencies working in the field of nutrition. At some point in time the true story of this ought to be told. I think that it was more a result of agency rivalry than about scientific conceptualization. Now when FAO has adopted the Food/Health/Care Conceptual Framework of Causality, the definition of household food security could be revised in such a way that utilisation is included in Care and Health, and not in the Food component.

As I mentioned earlier, I do not believe that the diet can be part of ‘food security’, only the food items can be. The composition of the diet or dietary diversity is a result of caring practices, within the *limitations* of possible household food in-security.

Samir Basta

Agree that food security is part of nutrition security. Extended breastfeeding to compensate for household food insecurity is very interesting. As a matter of fact, exclusive breastfeeding simultaneously meets all three conditions for good nutrition: food. Health and care!

Gladys Mugambi

It is true that food security aims at providing food for all household members. However, household food security does not ensure that each member gets what he or she needs. In addition very young children **do not eat, they are fed!** This is why caring practices are so important, including feeding practices (breastfeeding, complementary feeding, feeding frequency, feeding style, and dietary bulk.

Silvia Kaufmann

1. It is true that the definition of ‘household food security’ was agreed upon 25 years ago. It is equally true that FAO and some other food oriented organizations changed the definition after the introduction on UNICEF’s conceptual framework by including ‘utilization’. I believe that this

was extremely unfortunate and has contributed significantly to the current confusion about the logical difference between 'food security' and 'nutrition security'.

2. I agree that the use of terms such as 'food and nutrition' and 'health and nutrition' suggests likely solutions. I think that that is exactly why they are being used; and that is exactly why they are confusing and mis-leading!

3. "Food security is not necessarily the prerequisite for achieving nutrition security". That is correct if it means that nutrition insecurity can exist even if food security has been achieved. But it is equally true that nutrition security can not be achieved if food security has not been achieved. In other words, I strongly believe that **food security is a necessary but not sufficient condition for nutrition security**

4. The fact that nutrition insecurity may increase the risk of food security can best be explained by recognizing that there is a short- and a long-term feed-back from malnutrition to the capacity of providing food, health and care (through the basic cause level). For example, in several countries in the Sahel during the 1980s, per capita food production increased significantly while young child malnutrition got much worse. IFPRI, using the UNICEF Conceptual Framework showed that the reason was the fact that the increased food production was the result of increased work in the field of mothers, which reduced the feeding frequency and created additional young child malnutrition.

5. I do not understand the meaning of the sentence "nutrition security can improve even if food security and poverty continues to exist". I assume that there is a typo and the sentence should probably read "nutrition security can improve even if food *insecurity* and poverty continues to exist". If the latter, the statement can not correct in my mind, because food security, as mentioned several times earlier, I believe is a *necessary condition* for nutrition security.

Continued discussion

I believe that Question 2 has received many more comments than Question 1. This is easy to understand but very unfortunate. It is not until we have a global consensus on the causes of malnutrition that we can logically identify the relationship between 'food security' and 'nutrition security', and really answer Question 2. I therefore suggest that we focus on Question 1 for the rest of this discussion.

Contribution by Ranjani Harish, from the Madras Diabetes Research Foundation (MDRF), India

Dear Urban Jonsson,

I appreciate your well thought replies to each members responses. I may not agree with all of them but I do agree with your statement that "Food Security does not translate to Nutrition Security" and that food security is a necessary but not sufficient condition of nutrition security. To expand further on the same I believe for **food security to get translated into nutrition security** we need a few **prerequisite conditions**:

1. **Literacy/Education**: I do not want to stir up another debate on literacy and education not meaning the same thing but by putting them together what I mean is that we need populations to have some basic education in order to understand the concept of health. In order to alleviate malnutrition (child or adult) we need to work towards nutrition security and not just food security because food does not equate to nutrition!

2. **Poverty**: Education will also help to some extent decrease the vicious cycle of poverty and malnutrition. In developing countries, poverty is a huge burden. How do we expect poor people to be nutritionally secure when they cannot afford 2 basic square meals a day to satisfy hunger.

Hence, food security is also a necessary determinant for good nutrition. In my opinion, food is man's foremost basic need - undernutrition or overnutrition will begin there onwards. And for both conditions under/over nutrition - education and socioeconomic status of the people have a huge role to play.

Thanks,

Ranjani Harish
MDRF - Chennai

Contribution by Wenche Barth Eide, from the University of Oslo, Norway

I understand this important discussion is coming to an end, and I am somewhat disappointed that we haven't seen more of an avalanche of responses to Urban Jonsson's initiative and those contributions we have had. Another bit of history may be of interest towards the close, in addition to what Urban has pointed to in his summary of the discussion up to 24 April.

Urban and I have been in full consonance on the fundamental distinction between food security and nutrition security since the many years back, including when the need for a clarification of the *Household Food Security* (HFS) concept came up in international nutrition fora, especially in the SCN around 1990. Urban was still chief of nutrition in Unicef HQs in New York, while I had begun working as a nutrition adviser to the International Fund for Agriculture Development (IFAD) in Rome (from 1989 to 1994). I myself found it necessary there to introduce the HFS concept as a basis for what - in advising on government loans from an organisation dominated by agricultural economics and agronomic thinking, still could be *nutrition-relevant* development measures in that context, rather than aiming fully at nutritional health which it was not equipped to deal with to the same extent.

Building on conceptual developments regarding HFS by a group in Norway and Sri Lanka in the early 1980s (with the forerunner of the Unicef conceptual framework as part of the inspiration) I was able get colleagues in IFAD at the time to at least understand the importance of seeing Household Food Security as an undeniable condition that agricultural-oriented projects must consider as an aim if one wanted to see a nutrition-relevant outcome of agricultural development in the rural areas. I can tell you that this was hard enough as so many had a belief in an automatic trickle-down effect of more food produced or more income gained from sales of crops or animal produce (which is unfortunately still a widespread assumption among many in agriculture and rural development).

In 1990 the conceptual framework was officially launched by Unicef as a framework to direct its work with nutrition. Household food *insecurity* was as we know seen as one of the three underlying clusters of the causes of hunger and malnutrition – but, as emphasized then and now, *not by itself sufficient to reach the goal of good nutrition* (or as later termed, including in IFAD, Nutrition Security). It was at the time important to underline this within the SCN to get a broad understanding throughout the UN system and elsewhere. Urban (with Dan Toole) and I therefore together took the initiative to arrange for and support the preparation and publication (in 1992) of the book "Household Food Security – Concepts, Issues, Measurements. A Technical Review", jointly by the two UN agencies and authored by Simon Maxwell and Timothy Frankenberger invited for the purpose. (Available at <http://www.ifad.org/gender/tools/hfs/hfspub/> for the interest it may have to the members of this discussion). It demonstrated what has been said about the need to distinguish clearly between FS and NS. In IFAD at the time we also developed the HFS concept further, but clearly "stopping" at the level of the nature of the food supply and dietary diversity in the household, noting of course the need for a just distribution within the household. Confounding factors within health and sanitation were noted as necessary for the full picture, but for an agricultural approach normally beyond capacity and organisational structure.

My point with telling this story (with has other elements too but already becoming too long!) is that, while the ideal total picture about addressing ALL the causes at the same time to reach good nutrition is conceptually and practically desirable, the reality is unfortunately that development work remains to a large degree split into sectors and rather specific mandates. Thus one has in practice to tailor-make the messages to where and which ones one works with (i.a. as when working within different agricultural contexts). This is why the conceptually highly logical Unicef framework also becomes a well-founded practical framework when used in the *normative* sense: rather than operating only with the causes of malnutrition (still needed for situation analyses) one turns each cluster and the elements therein into the positive, namely as conditions for the desired goal and explore what these conditions will be like in practice within the different sectors and organizations' mandates. And then HFS and NS clearly stand out as a component (HFS) contributing to an overall desirable end (NS), respectively.

Within such an understanding it became extremely confusing, as Urban Jonsson has already underscored in his summary reply, when the FAO-initiated concept of "utilization" entered the scene later in the decade as an element of food security as such. And the present discussion has unfortunately not managed to resolve the implications of that for a consensus on how to operationalize the 1996 World Food Summit definition on food security: *"Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."* (Note that the useful 'social' was added by FAO in 2001, but nothing is there on the (bodily) processes of food/nutrient utilization.)

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