



# The Role of Nutrition Education in Agriculture, Nutrition and Food Security

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## Abstract

In order to deal with malnutrition, individuals need access to sufficient, safe and good quality food. Focussing solely on food security is unlikely to solve global malnutrition. In order to avoid a crushing economic and social burden in the next 15 to 20 years, there is need for countries to educate their people about eating the right foods and not just about eating more or less food. People need to know what constitutes a healthy diet and how to make good food choices. Nutrition education contributes to all the pillars of food and nutrition security. It is also concerned with whatever influences food consumption and dietary practices: food habits and food purchasing, food preparation, food safety and environmental conditions. Nutrition education is an essential vehicle for establishing food rights. Integrating nutrition education with agriculture will help to meet outcome goals of improved child nutritional status and dietary diversity of target populations.

**Keywords:** Malnutrition, Food security, Nutrition education, Agriculture, Nigeria.

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## INTRODUCTION

There are increasing problems of under-nutrition, deficiencies in vitamin and mineral, obesity and diet-related chronic diseases across the world. More than 900 million people are undernourished and there are approximately 170 million underweight children in the world. This has resulted to poor physical and mental development, devastating illness and death, as

well as incalculable loss of human potential and social and economic development. In order to deal with malnutrition, individuals need access to sufficient, safe and good quality food. Focussing solely on food security is unlikely to solve global malnutrition. In the same vein, improvements in food production alone do not necessarily translate to improvements in nutritional status (World Bank, 2007).

Ecker, Breisinger and Pauw (2012) reviewed the impact on malnutrition of economic development for the 2011 International Food Policy Research Institute (IFPRI) -sponsored conference “Leveraging Agriculture for Nutrition”, both through agriculture production and non-agriculture growth. They concluded that in either context, economic development has very little effect on reducing childhood malnutrition and specifically recommended additional investments and actions which include, “educational campaigns on child feeding practices (including breastfeeding), illness prevention, appropriate diets and proper hygiene.” After discussing the potential for fortification programs, micronutrient supplementation and bio-fortified foods, they further concluded that “addressing the causes of micronutrient malnutrition inevitably requires programs that support dietary diversification by providing education on nutritious, balanced diets. Without this understanding, the nutritional impact of programs that increase people’s economic access to improved nutrition will be strictly limited.” A widespread shortage exists of professionals, particularly in Africa, with knowledge and skills for implementing nutrition education interventions. An FAO assessment of training needs in various African countries found neither academic courses to prepare professionals nor the capacity in-country to teach such courses, although content is quite well-defined (FAO, 2011a).

In order to avoid a crushing economic and social burden in the next 15 to 20 years, there is need for countries to educate their people about eating the right foods and not just about eating more or less food. People need to know what constitutes a healthy diet and how to make good food choices. Promoting nutritionally adequate diets for all consumers is a major aim of FAO and is vital in the UN's overall efforts to improve the health and wellbeing of populations and foster social and economic development. According to Ammerman, Lindquist, Lohr and Hersey (2003), nutrition education is effective in modifying dietary practices that affect chronic disease. The objectives of this paper are to provide an overview of the main definitions and concept in nutrition education, comment on the need and future potential for harmonization; identify the main issues and concerns in nutrition education and communication as a strategy for promoting healthy diets and lifestyles and fostering large scale and sustained behavioural changes.

## **CONCEPT OF NUTRITION EDUCATION**

“Nutrition education” does not mean the same to all nutrition professionals. There is a fundamental distinction between education about nutrition (which is a traditional information-based study) and education in nutrition for action, which aims at practices: it has been defined as “learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviours conducive to health and well-being” (American Dietetic Association (ADA), 1996). This approach centres on people, their lifestyles, motivations and social context, and has an action-based methodology. Over the years, it has developed under various names as social marketing, behaviour change communication, community nutrition and health promotion.

Contento (2011) defined nutrition education as any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food- and nutrition-related behaviours conducive to health and well-being. Nutrition education is delivered through multiple venues and involves activities at

the individual, community, and policy levels. The main goal of nutrition education is to make people aware of what constitutes a healthy diet and ways to improve their diets and their lifestyles. This can be done through different channels, although in general this occurs within schools targeting young children, since food habits in early stages of life are said to determine practices and preferences in adulthood (Eat Well, 2011).

## **NUTRITION EDUCATION, AGRICULTURE AND FOOD SECURITY**

There is currently considerable momentum around the importance of the agriculture nutrition education as a means of improving nutritional status. A World Bank review of multiple food security programs highlighted the role of nutrition education in enhancing food security outcomes, clearly showing that food security alone does not improve nutritional status (World Bank, 2007). The evidence for this integration is so compelling that the United States Agency for International Development (USAID) initiative to reduce food insecurity and hunger, known as Feed the Future (Feed the Future, 2012), integrates nutrition education with agriculture to meet outcome goals of improved child nutritional status and dietary diversity of target populations. USAID-funded Infant and Young Child Nutrition Project (IYCN) conducted a review of agriculture projects going back forty years to determine the nutrition and food security impacts (IYCN, 2011). The review identified improvements in food security from a wide range of projects, often for the poor labourers involved as well as for the landowners. The review found that the measurable impacts on dietary diversity or micronutrient status, or anthropometric measurements of children were minimal, concluding that the improvements in food security did not translate into improved nutritional status of children.

## **THE ROLE OF NUTRITION EDUCATION**

### **Nutrition Education as a Strategy of Choice**

Nutrition education is as an essential catalyst for nutrition impact in food security, community nutrition and health interventions. It helps to improve dietary behaviour and nutrition status. It has long-term effects on the independent actions of parents and through them on the health of their children. It is practicable and sustainable. It also has very wide scope. It contributes to all the pillars of food and nutrition security, but is mainly concerned with whatever influences food consumption and dietary practices: food habits and food purchasing, food preparation, food safety and environmental conditions. Many causes of poor nutrition are attitudes and practices which can be influenced by education: food taboos, long-established dietary and snacking habits, agricultural production decisions, food distribution in the family, ideas about child feeding, misleading food advertising, ignorance of food hygiene, or negative attitudes to vegetables.

### **The Right to Food**

The need for nutrition education has been strongly reinforced by the concept of the Right to Food. The public requires information and training to recognize their food rights and to learn how to participate in decisions that affect them. Parties to the International Covenant are under an obligation to provide information and education on good diet, food safety, food-borne diseases, food labelling and processing, production and preparation; while in the school curriculum integrating agriculture, food safety, environment, nutrition and health education

builds citizens' capacity to achieve and maintain their own food security. Hence nutrition education is an essential vehicle for establishing food rights (FAO, 2011b).

## **NUTRITION EDUCATION, HEALTH SYSTEM AND SCHOOL CURRICULUM**

The health sector (public and private) is integrating nutrition education in many countries. They have mainstreamed nutrition education, often based on behaviour change theory, to the extent that it has become part of overall maternal child health education, diabetes control or weight management programs. The interventions are no longer thought of as "nutrition education" but as part of overall health education. An example of this integration in Africa is the approach known as Nutrition Assessment, Counselling and Support (NACS), which is being expanded beyond the original application in health services for HIV (Core Group, 2012). The most common method of nutrition education is counselling, but increasingly, health facility staff or community health volunteers also conduct cooking demonstrations for groups or make home visits to assist families with skills for improving food preparation. The World Health Organisation / United Nations Children's Fund (WHO/UNICEF) training package for promoting IYCF at the community level stresses counselling and hands-on learning activities to promote food-based nutrition (UNICEF, 2012).

FAO has invested considerable resources and technical assistance to integrate nutrition and health into schools to promote lifelong healthy eating, with particular accomplishments in Central America (FAO, 2010a). Many of the FAO school interventions are linked with school gardens to actively promote healthy foods and FAO has produced some excellent materials for this (FAO, 2005; FAO, 2010b). One of the challenges is getting the nutrition education and gardens incorporated into the curriculum permanently at the national level. Several child-centred NGOs are also working to institutionalize nutrition education into primary schools in various countries, most often as part of a larger health education curriculum. Save the Children has successfully used the Child-to-Child approach to mobilize youth to actively promote health and nutrition in their communities (Save the Children, 2006). The USDA supports a program called McGovern-Dole Food for Education, which specifies improved nutritional status as one of the indicators. Few countries have specific curricula or teacher training for nutrition education in schools, but most have a policy to include nutrition education. Many new programs are putting more emphasis on creating a healthy environment at the school by working in concert with officials to remove foods and drinks of low nutrient value, support vendors to offer healthy snacks, and to improve lunch menus. In designing nutrition education curricula, there is a balance between informing students as future parents and not creating frustration by giving them information they cannot act on due to family constraints, such as food insecurity. There is a need for research to show the long-term effect of nutrition education in schools on the eating behaviours of adults who received the education (USDA, 2012).

## **CONCLUSION AND RECOMMENDATIONS**

The need for effective nutrition education to achieve positive changes in family diets and in IYCF practices is more pronounced than ever. There is ample evidence that improving food security alone does not necessarily improve dietary diversity or child nutritional status. On the other hand, a review of project evaluations shows that nutritional status can be improved through nutrition education even in the absence of improvements in food security. Evidence of the synergy in combining nutrition education with food security programs is generating interest from donors and many agencies, leading to requiring child nutritional status indicators for food security programs and to the development of guidance and tools to

facilitate integration. Integration is taken to mean either closely linked parallel programs in food security and nutrition promotion, or, less often, food security program staff carrying out nutrition education activities.

Nutrition education alone or integrated into another sector must be well-planned based on behaviour change theory, formative research, and specific needs of the target population. There is a need to clearly document which institutions, agencies and organizations are engaged in promoting healthy eating and what each is doing. There is urgent need to build national-level professional capacity in nutrition education, particularly in sub-Saharan Africa.

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