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### Title

**Research report on impact of food education in nutritional status of children in University Hospital Bon Samaritain-Chad: Approach of women empower in high education in low-income countries**

### Basic information

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<b>Title of the document</b>	<b>Research report on impact of food literacy in nutritional status of children in University Hospital Bon Samaritain-Chad: Approach of women empower in high education in low-income countries</b>

### Theme

Research and knowledge production  
Higher education and the SDGs  
International cooperation to enhance synergies  
Impact on well-being of humans and sustainability of the planet

### Research report

**Research report on impact of food literacy in nutritional status of children in University Hospital Bon Samaritain-Chad: Approach of women empower in high education in low-income countries**

High- education in low-income countries is still scarce. Nevertheless, the cooperation between universities from high-income countries such as University of Lleida (Spain), who collaborate in the development programs of countries in Africa, enable low-income universities to improve their high

education. This would let students from both parties to improve their human skills and knowledge abilities specially in the area of health science. Moreover, this project is supported by the Development and Cooperation Office of University of Lleida-Spain so that this work enhance the institutional strengthen and the support to high-education to the SDGs.

Accordingly, the present project aimed to identify needs in children's household and improve the state of child malnutrition in N'Djamena (Chad) by proposing actions through the high-education of women in Chad and the implication of students from high-education in Spain. Thus, the Project would embrace the SDG1, SDG2, SDG3 and SDG4.

## **1. Context**

### **Nutritional Status in food insecurity areas**

The optimal nutritional status of the individual is essential during the first years of life (from 0 to 5 years), to ensure proper growth as well as cognitive development and prevent infectious diseases and infant mortality that continues to increase in central Africa. Populations with high rates of malnutrition need cross-disciplinary and interdisciplinary care from health professionals in order to improve their nutritional status. Thus, care in cases of malnutrition should be organized and carried out by health centers and hospitals.

Global rates of acute malnutrition in Chad have risen from 14.1% in 1996 to 15.7% in 2010. According to the WHO, values above 15% of acute malnutrition indicate a critical risk to the good health of children. On the other hand, the child population under the age of 5 has chronic malnutrition and underweight in 38.7 and 30.3% respectively, according to Chadian government values in 2010. Considering the WHO recommendations, the levels of malnutrition in Chad they warn of the importance of addressing the study and attention to nutritional status in the child population.

### **The role of food literacy in high-education health programs**

Women's education has been affirmed to contribute to 43% of the reduction child malnutrition.

Nevertheless, there is still scarce the presence of women high-education on low-income countries where they could be the linked to promote public health and reduce malnutrition.

The incidence of demographics is high because, according to the results of surveys and data records, a high risk of an increase in infant mortality in Chad can be predicted. Added to this are the many difficulties in accessing food. According to the Chadian Ministry of Health, 1 in 3 people between the ages of 0 and 5 do not have access to the minimum energy required for the proper development of the body and normal physical activity. Food insecurity in the Chadian population in 2013 was 13%.

The approach of reducing hunger should not be considered exclusively from the point of view of the supply of food to the most disadvantaged populations in economic resources, so as to allow them access to food or increase and implement crops in areas urban and rural areas, but it is urgent to consider another perspective from which action can be taken on the malnutrition of the populations that suffer from it by providing food literacy on the use and management of food resources as well as their introduction into food. during the first years of life.

The reduction of hunger should not be seen exclusively from the point of view of the supply of food to the most disadvantaged populations in economic resources, so as to allow them access to food or increase and implement crops in urban and rural areas, but it is urgent to consider another perspective from which it is possible to act on the malnutrition of the populations that suffer it by means of facilitating high qualified food literacy on the use and management of the alimentary resources as well as of the introduction of the same in the feeding during the first years. of life.

For these reasons, the Health Center Complex el Bon Samaritain University Hospital (CHU-BS) in recent years has been interested in establishing a protocol and action measures to allow the population of 0-5 years to improve their health from a good nutritional status. However, due to lack of resources and knowledge, they have not been able to approach the problem. In this way, CHU-BS considers it essential to work on the creation of a Nutrition Unit that aims to detect and care for children with malnutrition.

## **2. Methodology**

The context of food insecurity in Chad demands the creation of a Nutrition Unit within the CHU-BS consisting of a hospital and a health center. In addition, the hospital itself teaches medicine and nursing, where evaluation of the education programs with women would be performed. From here, student from University of Lleida

The following areas and main duties were performed to develop the present project:

### **AREA 1: Women in high-education**

- Establish food and nutritional educational program to ensure food literacy in women who would work in CHU-BS.

### **AREA 2: Nutritional Status of children**

- Nutrition Education in the Pediatric Service and Health Centers CHU-BS, both before and after the administration of Enriched Nutritional Supplement in children at risk of malnutrition.
- Collect samples to characterize vitaminic status

### **AREA 3: Food literacy programs for the CHU-BS**

- Staff training phase to start workshops for mothers and sisters of malnourished children in the pediatric unit.

## **3. Conclusions**

Pregnant women and children below 5 years are vulnerable population to suffer food insecurity and nutritional status deficiencies that may affect the following generations.

The food literacy program implemented in the present project enable to improve nutritional education in women in high-education enable to improve not only the nutritional education and nutritional status of their offspring but also the food literacy in patients of the CHU-BS. This could be determined as a cascade educational effect with implications for public health on Chad.

Also, the administration of Enriched Nutritional Supplement elaborated by women is been demonstrated to reduce the food insecurity and hunger in household. The women training for the elaboration of the Supplement enable to acquire also nutritional skills and food literacy to face and identify malnourished situations.

The present project demonstrates the need to qualify women to improve nutritional status. Moreover, more specific high-education in health area is needed whether improvements of hunger and well-being are demanded.