



Double fardeau nutritionnel (DFN) - Pôle francophone en Afrique

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B enin : ISBA, Universit e d'Abomey-Calavi (UAC)
Burkina Faso : IRSS, Universit e de Ouagadougou (UO)
R egion francophone ouest-africaine : HKI, OMS

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DOUBLE BURDEN OF MALNUTRITION PROJECT *Hub in French-speaking Africa*

1. Justification

Nutrition is central to development. Emerging countries are now confronted not only with undernutrition and micronutrient malnutrition, but also with nutrition-related non-communicable diseases (NCD) such as obesity, diabetes, hypertension, and cardiovascular disease. This is the « double burden of malnutrition ». The nutrition transition plays a major role in the escalation of NCD. The nutrition transition refers to progressive westernization of diet and lifestyle with globalization, urbanization, and technological and economic changes. Low-income countries of Africa are also affected, although information is scanty. Up to now, the focus has been on prominent nutritional deficiencies rather than on nutrition-related NCD. Nutrition-related NCD are no longer diseases of the affluent, and the burden increasingly falls on the poor, particularly in cities. These chronic diseases need to be prevented before the endemic spreads, with catastrophic consequences for populations and health systems. In low-income countries, resource-poor health systems are already overwhelmed with infectious diseases, which means that they would be unable to provide care for NCD. Well-trained human resources are needed for prevention at individual and community level, for field research and application of research findings, and for advocacy with decision-makers in order for appropriate policies and programs targeting both undernutrition and nutrition-related chronic diseases. This is how the Department of Nutrition, University of Montreal, is joining with institutional partners of several years to contribute to tackle the double burden of malnutrition.

2. Strategies and objectives

The goal of the project is to strengthen the capacity of French-speaking countries of West Africa to address the double burden of malnutrition. Towards this goal, the project is creating a hub on the double burden of malnutrition in Benin, with partner institutions and for the benefit of the whole region. The objectives of the hub are as follows:

1. To posit the Regional Public Health Institute (IRSP) and its institutional partners from Benin, Burkina Faso and others in French-speaking West Africa as reference for training, research, communication and advocacy on the nutrition transition and the issue of the double burden of malnutrition ;
2. To contribute to the prevention of the double nutritional burden in urban schools and communities of Cotonou and Ouagadougou;
3. To galvanize the commitment of decision-makers toward the prevention of nutrition-related chronic diseases.

Partners are involved in training of human resources, action research and other studies, as well as communication and advocacy. The strategy is to bring closer together the training, research, action and advocacy as a means of enhancing impact on health of the population, taking account of the socio-economic context, and adopting an intersectorial and eco-systemic approach.

3. Partners

In Canada, the project is driven by TRANSNUT from the Department of Nutrition, University of Montreal. TRANSNUT, a team of 10 researchers, has been a WHO Collaborating Centre on nutrition changes and development since 2003. The management of the project is in the hands of the International Health Unit (*Unité de santé internationale*) of the Faculty of Medicine and of the University of Montreal Hospital Centre (*CHUM*).

In Benin, the hub includes: The Regional Public Health Institute (*IRSP*), the main partner institution, which is part of the *Université d'Abomey-Calavi*, along with the faculties of health sciences (*FSS*) and of agriculture sciences (*FSA*); and the Institution of applied biomedical sciences (*ISBA*). Partner institutions from Burkina Faso are : The Institute for Research in Health Sciences (*IRSS*) ; the following institutions of University of Ouagadougou (*UO*): the Centre for Research in biological, food and nutrition sciences (*CRSBAN*), the Training and Research Unit in Health Sciences (*UFR/SDS*), and the High Institute of Population Sciences); and *Helen Keller International* (*HKI*), a technical NGO involved in nutrition. WHO is a special collaborator at the country and regional level (AFRO Regional Office AFRO, Inter-country Support Team [Ouagadougou] and WHO representative offices in Cotonou and Ouagadougou).

Two new partners from Mali have joined the project since July 2011; The Endocrinology Department and Service of Ouagadougou University Hospital, and The NGO *Santé Diabète* (Mali chapter) Other institutions of the West-African Region such as West-Africa Health Organization (*WAHO*) are associated with the project. Additionally, other academic institutions of the West-African region are invited to participate in specific training and advocacy activities on nutrition-related chronic diseases.

4. Project components and activities

For *institutional strengthening and human resources training*, the project is setting-up two new university training programs for the whole region at *Université d'Abomey-Calavi* in Benin: a Master's program in nutrition and health of populations at IRSP, and a professional B.Sc. program in Dietetics and Nutrition at FSS, in collaboration with FSA. Additionally, short in-service training modules on the double burden of malnutrition and on community-based management of severe malnutrition are offered to health, food and nutrition professionals. These short courses, soon to be offered on-line, are also included in the new Master's program in nutrition developed at IRSP and they

may be optional courses in other Master's programs offered in French in West Africa (public health; health and populations; food/agro-nutrition).

Regarding *research*, an important component is action-research in the school environment. The "Nutrition-Friendly School Initiative" of WHO, a framework specifically designed for the prevention of the double burden of malnutrition, is pilot-tested and evaluated for the first time in Africa, in a few primary schools of Ouagadougou and Cotonou. The approach is concerned with the school environment, the curriculum, school health and nutrition services, and parents and teachers. B.Sc. students in Dietetics and Nutrition will also do a practicum in these pilot schools. They will also get in touch with parents of pupils identified at nutritional risk in order to do a nutritional evaluation and practice nutrition counseling. Other research projects pertain to the nutrition transition, the double burden of malnutrition and nutrition-related chronic diseases in Benin and Burkina Faso. These studies provide data and tools for preventive action and advocacy.

Communication and advocacy are intended to sensitize populations, health professionals and decision makers at the international, regional and national level to the issue of the double burden of malnutrition and to the urgent need for action. Research results are disseminated in the international, regional and local scientific community, in addition to being translated back to communities. The electronic platform for the project includes a website (www.poleDFN.org) with Intranet for the partners and an electronic discussion forum with more than 100 members. Important leaders and decision-makers are associated with the project, which reinforces advocacy in favor of policy and programs to control nutrition-related chronic diseases. An advocacy tool on diabetes in sub-Saharan Africa is being developed and will be used by partners and in training programs.

5. Targets of the project

The targets are *individuals, institutions and policies*. The project reaches directly partner institutions in Benin and in Burkina Faso. It is also directed at trainers and trainees in these institutions, thereby reaching the French-speaking African community since the training programs are in-service training courses. The project also targets the urban populations of Cotonou and Ouagadougou, although less directly, *via* the results of action-research and research & development. Another means of reaching the community is through the implementation of the Nutrition-Friendly School Initiative, as its pilot-testing in the project may facilitate its implementation elsewhere in Africa with WHO support. Finally, the project intends to contribute through advocacy to policy and program changes for the prevention of the double burden of malnutrition and of nutrition-related chronic diseases, thereby benefiting the population of partner countries and even other countries of West Africa.

Women occupy a prominent place in the project, as participants as well as beneficiaries. The double burden of malnutrition affects women more than men and therefore, they have to be targeted early, namely in school. Additionally, women are central to family nutrition. Finally, the profession of nutritionist is nearly exclusively female in western countries. Through the project we intend to "feminize" it in Africa.

6. Project duration and budget

Project duration is six years beginning with the agreement with CIDA (March 26 2008-2014). The total cost of the project is estimated at more than \$Can 5 million. CIDA contributes Can\$ 2,999,116. The contribution of University of Montreal represents Can\$

1,347,976\$. The rest is the estimated in-kind contributions of the other public/private project partners (Can\$805,439).