

The nutrition-microcredit synergy: a case for multiple intervention strategies.

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The foregoing articles can be accessed at <http://www.ajfand.net/Volume12/No1/index1.html>

Introduction

Several studies have demonstrated the nutritional benefits of animal source foods (ASF), which are rich sources of bioavailable nutrients (Allen, 2003). Notably, an intervention trial in Kenya found that school children who received a daily snack prepared from maize, beans, and green vegetables plus ASF (meat or milk) had greater micronutrient (MN) intakes, cognitive test performance, and linear growth or lean mass accrual than children who received the same snack with added energy provided by vegetable oil instead of ASF (Neumann, 2007). However, for a variety of reasons, many children in lower income households in sub-Saharan Africa do not consume ASF regularly.

Using participatory research methods, investigators in Ghana found that the major constraints to including ASF in children's diets are: low income of child caregivers, limited knowledge of the nutritional value of these foods (both among caregivers and agricultural extension workers who advise on food production), cultural beliefs concerning these foods, and inequitable food distribution within the household. To address the foregoing constraints, a project entitled, "Enhancing Child Nutrition through Animal Source Management (ENAM)" was carried out from 2004-2009 with the goal of enhancing caregivers' access to and use of ASF in their children's diets by means of combined micro-enterprise development and nutrition education. In this month's edition of NNA we present several articles that describe the general methods and results of the ENAM project.

Methods

Initially, qualitative data were collected through separate sets of interviews and focus groups with child caregivers and with program managers and frontline workers in health, nutrition, and agriculture programs to identify the main reasons for low ASF intake by young children. Based on the results of these appraisals, three sets of interventions were prioritized: 1) financial, educational, and

technical support through small-scale credit organizations to enhance the income generating capacity of child caregivers (and hence their ability to purchase ASF or sell less of the foods they produced or marketed); 2) caregiver education on the benefits of ASF for their children; and 3) capacity building among nutrition and agriculture outreach workers.

Two communities in each of three ecological zones (coastal, forest and savannah) were included in the interventions, and matched sets of control communities were selected in each zone. The interventions consisted of training caregivers in income-generating activities (IGA) related to ASF production, processing or sales (fish-smoking, poultry raising, and marketing of the final food products), formation of credit and savings associations to provide capital for the IGA, and facilitation of weekly meetings of the credit associations (including nutrition education and entrepreneurship training).

Following an initial census in the 6 intervention and 6 control communities, a baseline survey was completed on household demography, livelihoods, and food security and child anthropometry and dietary intake, with a focus on ASF consumption. Self-selecting women were then enrolled in several rounds of the ENAM project. For the sake of comparison, non-participating women (child caregivers) from the intervention communities and non-intervention communities were matched with the participants, based on household wealth and primary occupation, to permit an evaluation of the program's impact.

Results and Conclusions

A total of 181 women with children 2-5 years of age participated in the intervention and evaluation. A matched group of 142 non-participants from the same communities and 287 women from non-intervention communities were also studied for comparison. In an early analysis of the program impact on IGA profitability and use of income earned by the child caregiver, the researchers found that women participating in the ENAM program reported more positive changes in their micro-enterprises (expansion, diversification and other positive changes), higher profits, and a greater amount of money saved than women who did not participate in ENAM (Homiah, 2012). Notably, participating women contributed more to household food expenditures and children's welfare (school fees, health care, and clothing) than non-participating women. Participant households also spent more on selected ASF (meat, milk, shellfish and total ASF) and reported greater household consumption of ASF.

In another set of analyses, children's dietary intake data were related to their caregiver's type of IGA (Christian, 2012). The major factors that explained children's ASF intake were the geographic region and household wealth index. After controlling for these factors, children of caregivers who were engaged in IGA related to animal production or sales consumed more ASF than children of caregivers who were engaged in other forms of IGA. It is not clear whether this was due simply to the greater accessibility of ASF in these households or greater knowledge of the nutritional value of these foods, as transmitted by the ENAM program.

Policy and Program Implications

The ENAM project provides an excellent example of the use of participatory, formative research to assist with program design. The reasons for low ASF consumption were carefully documented, and this information was used to develop specific program components to address each of the identified obstacles to ASF consumption. Moreover, the project demonstrates the importance of developing a comprehensive intervention strategy to address both income constraints and knowledge constraints simultaneously to enhance dietary quality through greater consumption of ASF. One shortcoming of the

program was the fact that the poorest women in the intervention communities were less likely to participate in the intervention, so new strategies are needed to encourage their involvement.

NNA Editors' comments*

The ENAM project has a number of features that warrant special emphasis. Firstly, the use of interdisciplinary, program-linked research was instrumental in identifying the multiple sets of economic, cultural, and knowledge constraints to greater ASF consumption, so the program could be designed to address each of these issues. Secondly, the project provides an excellent example of collaboration between the health and agriculture sectors in developing a food-based intervention to address a specific set of nutrition problems. Thirdly, as described above, the combined approach of supporting caregivers' IGA through microenterprise development and providing credit, while also offering nutrition education, is an excellent example of how to improve child feeding practices by simultaneously addressing both income constraints and lack of relevant knowledge of children's nutritional needs. Finally, each step of the intervention was carefully documented and evaluated, so that the experience gained could be used objectively for further scale-up of the program.

The ultimate nutritional objective of the ENAM project was to improve young children's dietary intake and nutritional status through enhanced dietary quality, by increasing their consumption of ASF. Although the research demonstrates modest increases in ASF consumption by children whose caregivers were engaged in IGA related to ASF production or sales, the overall impact of these changes on the children's nutritional status was not described in the current set of papers. Thus, the ultimate effectiveness and cost-effectiveness of the interventions will still need to be critically examined. Nevertheless, the increased household income and empowerment of child caregivers, and increased consumption of ASF, are in and of themselves important outcomes worthy of investment.

* These comments have been added by the editorial team and are not part of the cited publications.

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