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“Reconcile land system changes
with planetary health”

Nutrition education and school garden improve children and adolescents' diets in urban and peri-urban areas of southern Benin

SAM BODJRENOU¹, INES MLANTAHOU², FATOUMATA BARRY³, ELIE KOUKOU⁴, WALIOU AMOUSSA HOUNKPATIN⁵

¹*The Alliance of Bioversity International & CIAT, Food Environment and Consumer Behaviour, Benin*

²*University of Abomey-Calavi, Department of Human Nutrition and Food Sciences and Technology,*

³*University of Abomey-Calavi, Department of Human Nutrition and Food Sciences and Technology,*

⁴*The Alliance of Bioversity International & CIAT, Benin*

⁵*University of Abomey-Calavi, Lab. of Food Science/Human Nutrition and Food Sciences, Benin*

Abstract

This study evaluated the effect of a food and nutrition education (NE) programme including school gardens (SG) on schoolchildren knowledge, attitude and practices (KAP) in southern Benin. This investigation supports the National Integrated School Feeding programme implemented since 2017. A cluster randomised trial was implemented with a group of elementary schools as intervention group and another group as control group. After a diagnostic evaluation of the food environment of elementary schools with canteens, a participatory approach was used to design an inclusive intervention combining NE sessions and SG. Innovative tools such as posters and videos were developed and used during weekly NE sessions targeting all school actors: schoolchildren, cooks, food vendors, parents and teachers. NE sessions developed mainly dietary diversity corresponding to the main gap identified during the diagnostic. SG contributed to fruit and vegetable production and school canteens supply as well as learning platforms for schoolchildren. The intervention lasted 1.5 academic year. We evaluated KAP on dietary recommendation among 800 schoolchildren. As practices, we targeted consumption of fruits and vegetables, Dietary diversity and Dietary Species Richness.

After 1.5 years of implementation, we observed an increase of the overall knowledge of the schoolchildren among definition and roles of food groups as well as attitude among diversified diet in the intervention group compared to the control group. As for practices, 75–86 % of schoolchildren from the intervention group reported having a diversified diet after the intervention compared to only 50 % in the control group. Percentages of schoolchildren who achieved the minimum dietary diversity had decreased from baseline to endline in the control group ($p = 0.011$) whereas remained constant in the intervention group similarly for dietary species richness. In terms of food groups, fruits remained globally less consumed by schoolchildren. However, percentages of children having consumed and the diversity of fruits consumed had significantly increased in the different intervention schools.

The NE-SG programme facilitated gaining knowledge and positive attitudes as well as improving practices such as consumption of fruits and diversified/balanced diet. Increasing the duration of the intervention and intensifying the NE are essential to ensuring the sustainability of the changes initiated by this pilot.

Keywords: Attitude and Practices, dietary diversity, Dietary Species Richness, Fruits and Vegetables, knowledge, School meal