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Evaluating a Combined Nutrition Education and Homestead Gardening Intervention on Household Vitamin A Intake in Peri-Urban Bujumbura, Burundi

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Abstract

Vitamin A deficiency is a persistent public health issue in Burundi, especially in peri-urban areas where access to diverse, nutrient-rich foods is often limited. Sustainable, community-based strategies to improve dietary intake are needed. This study evaluated the effect of a combined nutrition education and homestead gardening (micro-garden) intervention on household vitamin A intake in peri-urban Bujumbura, Burundi. A quasi-experimental, pre-test/post-test design with a control group was used. Households from two comparable peri-urban communes were purposively selected, with one assigned as the intervention group (n=120) and the other as the control (n=120). The six-month intervention involved participatory nutrition education sessions and the provision of seeds and training to establish micro-gardens for growing vitamin A-rich vegetables. Dietary intake was assessed using a quantitative food frequency questionnaire at baseline and endline. Data were analysed using paired and independent t-tests. Households in the intervention group showed a statistically significant increase in mean daily vitamin A intake (from 328 µg RAE to 512 µg RAE) compared to the control group, which showed no significant change. A 56% increase in the proportion of households meeting estimated average requirements for vitamin A was observed post-intervention. The combined nutrition education and homestead gardening intervention effectively improved household vitamin A intake in this peri-urban Burundian setting. Public health programmes should consider integrating practical, household-level agricultural support with nutrition education to address micronutrient deficiencies. Scaling up requires attention to local resource availability and seasonal variations. Vitamin A deficiency, homestead gardening, nutrition education, dietary intake, Burundi, peri-urban health This

study provides evidence for an integrated, community-based approach to improving vitamin A intake in resource-constrained peri-urban environments.

Keywords: *Vitamin A deficiency, Sub-Saharan Africa, Community-based intervention, Nutrition education, Homestead food production, Dietary intake assessment, Peri-urban health*

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