



# Long-term Effectiveness of School-based Nutrition Interventions in Reducing Adolescent Malnutrition in Southern African Cities, Burkina Faso

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## Abstract

This study examines the long-term impact of school-based nutrition interventions on reducing adolescent malnutrition in Southern African cities and Burkina Faso. A longitudinal study design was employed, involving baseline surveys conducted annually for five years across 20 schools. Data were collected on dietary patterns, anthropometric measurements, and health indicators. Over the course of three years, there was a significant decline in mean Body Mass Index (BMI) scores from pre-intervention levels, with reductions exceeding 10% among those who received consistent nutritional education and supplementation. The findings suggest that sustained school-based nutrition interventions can effectively mitigate adolescent malnutrition over the long term. Schools should continue to integrate regular nutrition education programmes into their curricula alongside ongoing health check-ups, with further research prioritising community engagement for broader impact. Treatment effect was estimated with  $\text{text} \{ \text{logit} \} (\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, adolescent nutrition, intervention evaluation, longitudinal studies, malnutrition prevention, public health strategies, urban development effects*

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