



# Impact of School-Based Nutrition Programmes on Adolescent Growth and Development in Rural Sierra Leone: Trends Analysis

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## Abstract

Adolescents in rural Sierra Leone often suffer from malnutrition, leading to stunted growth and development. School-based nutrition programmes have been implemented to address these issues. Nutrition programme participation data from schools were collected over a period of five years. Weight and height measurements for participants were recorded at baseline, mid-term, and post-intervention. A significant positive trend in mean weight gain was observed across all school programmes ( $p < 0.05$ ), with an average increase of 1.2 kg per year. The analysis supports the efficacy of school-based nutrition interventions in promoting adolescent growth and development. Further longitudinal studies are recommended to track long-term effects and identify optimal programme components. The empirical specification follows  $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *African demographics, anthropometry, cohort studies, growth charts, nutritional intervention, rural development, socioeconomic indicators*

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