



Impact Evaluation of School-Based Nutrition and Physical Activity Interventions on Adolescent Girls in Ghanaian Urban Slums: A Meta-Analysis

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Abstract

Adolescent girls in Ghanaian urban slums face significant nutritional and physical activity challenges that can impact their health and development. A systematic review and meta-analysis were conducted using databases such as PubMed and Web of Science. Studies meeting inclusion criteria (randomised controlled trials) were selected and analysed using fixed-effects models with robust standard errors for meta-analytic synthesis. The analysis revealed a moderate improvement in dietary diversity among adolescent girls who participated in the interventions, with an estimated effect size of $d = 0.45$ (95% CI: 0.28 to 0.61). School-based nutrition and physical activity programmes showed promise in enhancing adolescent girls' nutritional status and health outcomes. Further research should explore long-term impacts and cost-effectiveness of these interventions, while implementing strategies to ensure sustainability and scalability.

Keywords: *African, Ghanaian, urban, slums, interventions, meta-analysis, randomized controlled*

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