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Bridging policy design and implementation gaps in school feeding programmes: Experimental evidence from Benin

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Abstract

Globally, School Feeding Programmes (SFP) are increasingly recognised as strategic entry points to improve child nutrition, educational outcomes, and sustainable food systems. In Benin, national policies promote diversified diets and local procurement within a food systems framework, yet their effective implementation at school level remains limited.

This study examines the policy–implementation gap in SFP and evaluates whether an integrated, participatory intervention can translate policy intent into measurable outcomes. A mixed-methods, end-to-end approach was applied across diverse schools' geography combining dietary assessment using Dietary Diversity Score (DDS) (n = 1,050), anthropometry, menu observations, school food environment assessment, and stakeholder analysis. Findings informed a Randomised Controlled Trial (RCT) targeting key bottlenecks across demand, supply, and enabling environments.

Baseline results revealed structural constraints within school food systems. Meals showed low DD(mean DDS: 5.8±5.4/14), with fewer than 22 % of children consuming fruits and vegetables daily. Food environments lacked diversity in 75 % of schools, and local procurement remained limited, reflecting weak integration of value chains. Undernutrition persisted (stunting 13 %, wasting 15 %, underweight 13 %), with DD significantly associated with nutritional status.

The intervention combined complementary actions across multiple leverage points. Nutrition education sessions were delivered to all school actors to improve knowledge and behaviours. School gardens were established to increase direct access to fresh commodities, while local producers received technical and organisational capacity strengthening to enhance production, aggregation, and supply to schools. In parallel, WASH infrastructure and practices were improved to strengthen the overall school food environment. This integrated design simultaneously addressed demand-side behaviours, supply-side constraints, and enabling conditions. Intervention fidelity was monitored throughout implementation to ensure consistency across study sites.

The RCT demonstrated significant improvements in children's dietary practices, particularly fruit consumption, alongside increased availability of nutrient-dense foods in schools. High engagement of teachers, communities and local producers enhanced implementation

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fidelity and sustainability, including spontaneous replication of school gardens and more consistent supply,

These findings provide robust experimental evidence that integrated, food systems-based interventions can effectively reduce the policy–implementation gap. Scaling such approaches requires strengthened governance, local value chains, and multisectoral coordination to improve nutrition outcomes and support resilient food systems.

Keywords: Benin, dietary diversity, food environment, food systems, local procurement, randomised controlled trial, school feeding programmes