

A Community-Based Participatory Approach to Dietary Sodium Reduction in High-Risk Ghanaian and Egyptian Populations: A Systematic Review for Public Health Action

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Abstract

Background: Excessive dietary sodium intake is a key modifiable risk factor for hypertension, a leading cause of cardiovascular disease in Ghana and Egypt. Community-based participatory research (CBPR) is considered a culturally appropriate strategy to enable sustainable dietary change, but its effectiveness in these specific contexts requires systematic evaluation.

Purpose and objectives: This systematic review aimed to synthesise evidence from 2021 to 2026 on the effectiveness of CBPR interventions designed to reduce dietary sodium intake among adults at high risk for hypertension in Ghanaian and Egyptian populations.

Methodology: A systematic search of electronic databases was conducted for peer-reviewed literature published between January 2021 and December 2026. Studies were included if they described a CBPR intervention targeting sodium reduction in the specified populations and reported quantitative or qualitative outcomes. Screening, data extraction, and quality assessment were performed by two independent reviewers.

Findings/Key insights: The synthesis indicates that interventions incorporating participatory menu planning, local food reformulation, and community education led to measurable reductions in reported sodium consumption and increased knowledge. A critical factor for success was the engagement of local stakeholders, including food vendors and religious leaders, in the intervention design, which improved community trust and programme adherence.

Conclusion: CBPR is an effective framework for developing contextually relevant sodium reduction strategies in these settings. Its success depends on meaningful community engagement throughout all research phases.

Recommendations: Future public health initiatives should invest in building equitable community partnerships from the outset. National health policies should integrate support for community-led monitoring and evaluation to ensure the sustainability of dietary interventions.

Key words: sodium reduction, community-based participatory research, hypertension, Ghana, Egypt, dietary intervention, public health

Contribution statement: This review consolidates contemporary evidence to guide the design of culturally resonant, community-owned public health strategies for non-communicable disease prevention in African contexts.

Keywords: *Community-based participatory research, Dietary sodium reduction, Hypertension prevention, Sub-Saharan Africa, Salt intake, Public health intervention, Systematic review*