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Food environment of public elementary school canteens in southern Benin: Implications for addressing malnutrition in schoolchildren

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Abstract

School food environment, including availability and accessibility of food, affects children's eating habits and is essential for improving the nutrition and health of children in resource-limited areas. This study aims to assess the food environment in public elementary schools with canteens in Southern Benin and its potential effects on the nutrition and health of schoolchildren, particularly regarding malnutrition.

Data were collected from 12 public schools in the main city of Southern Benin where the national school feeding programme is being implemented. This involved 853 schoolchildren, The observation method as

well as semi-structured interviews was used to collect data relating to food availability, hygiene around food prepared in the canteen as well as the preferences of these meals by schoolchildren. Key areas of focus included the diversity of food supply, food preparation, hygiene practices, and the dietary preferences of schoolchildren.

The diversity of food offerings was evaluated based on an 8-food group index, while hygiene standards were assessed using a 15-point sanitation index. Findings reveal a limited food supply, with a median diversity score of 4 out of 8, and insufficient sanitary quality, with a median hygiene index of 7 out of 15. The available foods are mainly energy-dense but deficient in micronutrients, as the canteens predominantly serve cereals, roots, tubers, and legumes, with a scarcity of fruits, leafy greens, and dairy products as well as animal proteins.

Current food environment in the public elementary school canteens does not adequately support balanced, micronutrient-rich diets, potentially exacerbating malnutrition among schoolchildren. Strategies for improving food diversity and hygiene practices are essential to enhance the nutritional impact of the school feeding program.

Keywords: Canteens program, diversity, hygiene, food environment, malnutrition, schoolchildren