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"Reconcile land system changes
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Personal food environment and dietary patterns among urban poor communities in Tanzania

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Abstract

Background: Food environments shape dietary choices through factors like accessibility, affordability, convenience, and desirability. In low-income urban areas, these factors are influenced by urbanisation and socio-economic conditions. Understanding how individuals navigate their food environment is critical to addressing nutrition challenges and informing policy. This study aimed to map the personal food environment in low-income urban communities in Dar es Salaam, Tanzania.

Methods: A cross-sectional study was conducted in Ilala Municipal Council, Dar es Salaam, one of the most urbanized and densely populated areas in Tanzania. Four wards Vingunguti, Buguruni, Ilala, and Kariakoo were purposively selected based on urban characteristics and research relevance. A total of 362 individuals from selected households participated, proportionally distributed by ward and street. Households were randomly selected using the house postcode registry. Data were collected using structured questionnaires administered through Maptionnaire, a geocoded online platform for participatory data collection. The questionnaire captured socio-demographic data and assessed the personal domain of the food environment; how individuals perceive, access, select, and consume food based on their surroundings. A Participatory Geographical Information System (PGIS) mapped and characterised the types and spatial distribution of food outlets. Data analysis will be conducted using SPSS version 23. A multivariate regression model will assess associations between key determinants such as distance to food outlets, travel time, mobility, purchasing power, and mode of transport status in low-income urban communities.

Results: A total of 362 individuals participated; 67.1 % were female, 32.4 % male, and 0.5 % undisclosed. Most had primary education (57 %), were self-employed (59.7 %), and in informal jobs (92.2 %). All purchased food from retail outlets. Open markets provided fresh produce, sundry shops supplied staples, and supermarkets were key sources of processed foods like sweet snacks and sugar-sweetened beverages.

Conclusion: These findings highlight the significant role of formal and informal food outlets in shaping urban dietary patterns and the coexistence of healthy and unhealthy

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food purchasing behaviours. Improving access to healthier options is essential to support better dietary practices.

Keywords: Dietary pattern, food environment, nutritional status, Tanzania. , urban communities