Determinants of food insecurity among tanzanian school children: A cross-sectional study of self-reported experiences

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Abstract

Tanzania ranked 94th out of 127 countries in the 2024 Global Hunger Index and 90th out of 113 countries in the 2022 Global Food Security Index, indicating a "serious" level of hunger and persistently high rates of chronic child malnutrition. Therefore, there is an urgent need for evidence-based strategies to improve child health outcomes. This study aims to identify the most vulnerable groups for targeted food security interventions by analysing key socio-economic and demographic determinants of food insecurity among school children, based on their self-reported experiences. By collecting individual-level data on household food situation directly from children, rather than from caregivers, the study addresses the underestimation of child food insecurity often observed in adult-reported data. Stratified random sampling was used to select 208 school children aged 9–12 years across seven schools in Dar es Salaam and Pwani regions, representing urban and rural areas, respectively. To capture the multidimensional nature of short- and long-term food insecurity, respondents were administered two experience-based food-access scales: the Child Food Insecurity Experiences Scale (12-month reference period) and the Child Food Security Survey Module (1-month reference period). The results show that 68 % of the surveyed children were food insecure in the short term, and 98 % had some experience of food insecurity in the long term. Moreover, short-term food insecurity was mainly driven by the lack of a balanced diet, even among children from high-income households, and the frequent consumption of cheap, low-nutrient foods. Logistic regression analysis showed that short-term food insecurity was significantly negatively associated with urban residence, household income, home ownership, and the education level of the household head. It also exhibited a non-linear relationship with household-head's age, with households led by very young or elderly individuals being more likely to have food-insecure children. In addition, rural schools often lacked the financial capacity to provide school meals, and headmasters cited low parental awareness of nutritional needs as a significant barrier to raising funds. These findings highlight the importance of integrated interventions that promote caregiver education about balanced diets and increase social support for low-income, rural households, particularly those headed by elderly or less-educated individuals.

Keywords: FIES, food security, risk factors, rural-urban disparities, school children, tanzania

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