



A Scoping Review on Diets, Fruits and Vegetables Intake and Nutritional Status in Tanzania

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Background



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- Changing lifestyles and diets, including sub-optimal fruit and vegetable intake, are impacting health and nutritional status of populations globally.
- The double burden of malnutrition and increasing diet-related non-communicable diseases are of concern in low- and middle-income countries (LMIC).
- Key barriers to increasing fruit and vegetable (F&V) intake include availability, accessibility (marginalized populations, diverse foods), affordability (low-income earners, price fluctuations), and desirability (convenience, time, image, palatability, culture).
- To address some of these challenges, it is important to gain a deeper understanding of the dynamics affecting different population groups.



Objectives of the Scoping Review

1. Characterize the diets of various population groups in Tanzania
2. Summarize available data on intake and consumption patterns of F&V, including information on socio-cultural norms and preferences in Tanzania
3. Describe the nutritional status of various population groups in Tanzania



The overarching goal was to identify gaps in evidence and data needs to better understand F&V consumption and potential areas of intervention to improve F&V intake

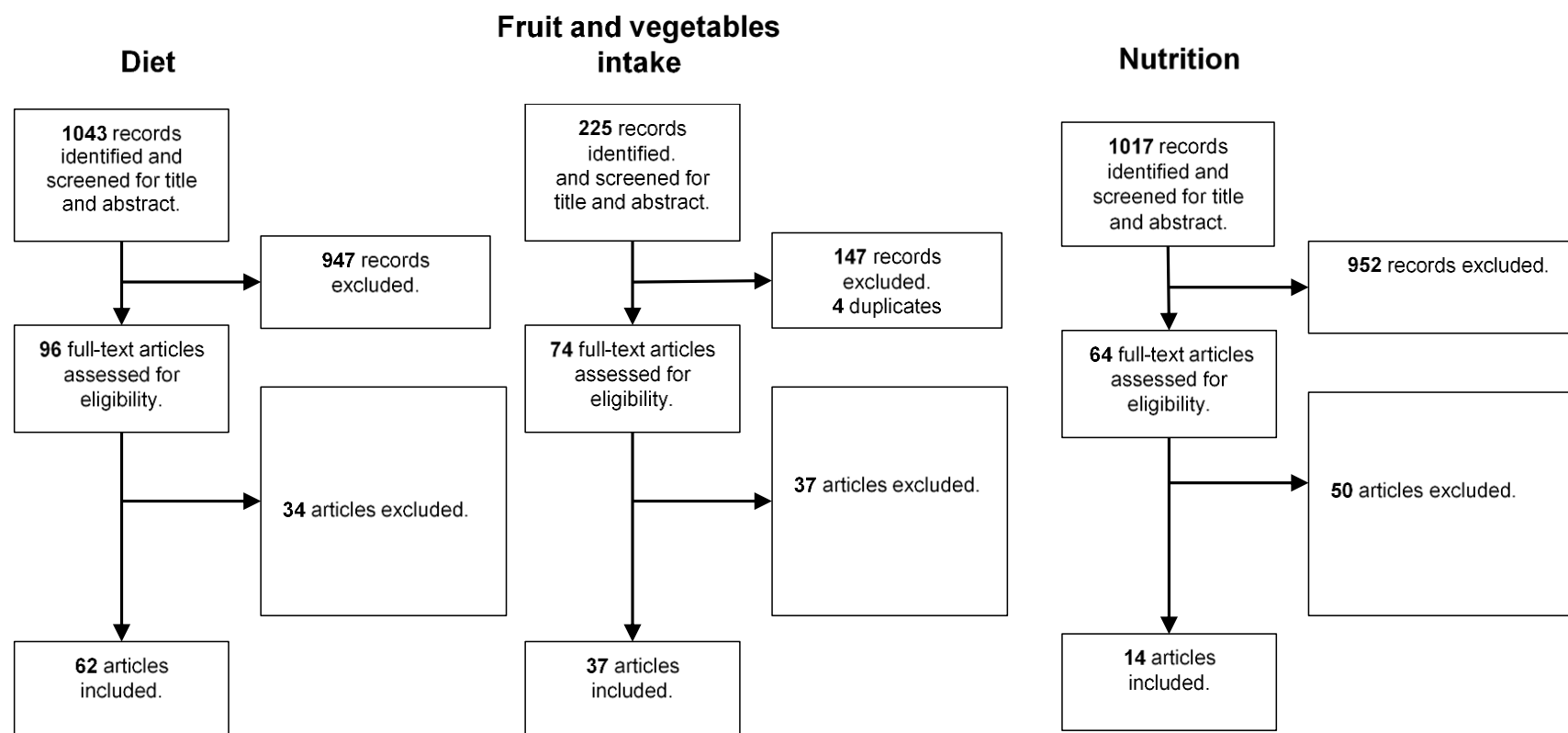
Methods



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- A protocol was developed and published on Open Science Framework <https://osf.io/5kq72>
- Three topics of interest: dietary intake, F&V intake and nutritional status
- Three separate searches conducted systematically on PubMed using pre-defined search terms.
- Eligibility criteria:
 - Study design
 - Quantitative studies, systematic reviews, experimental and quasi-experimental intervention trials, and program evaluations were eligible for both the diet and F&V review
 - Qualitative studies included for the F&V review to understand aspects of F&V consumption patterns and preferences
 - For the nutrition review, only population-representative surveys.
 - Period of interest
 - Nutrition and diet: 2012 – 2022
 - F&V: 2002 – 2022
- Analysis focused on descriptive characteristics - study design, population group, outcomes assessed and location.

PRISMA flow chart



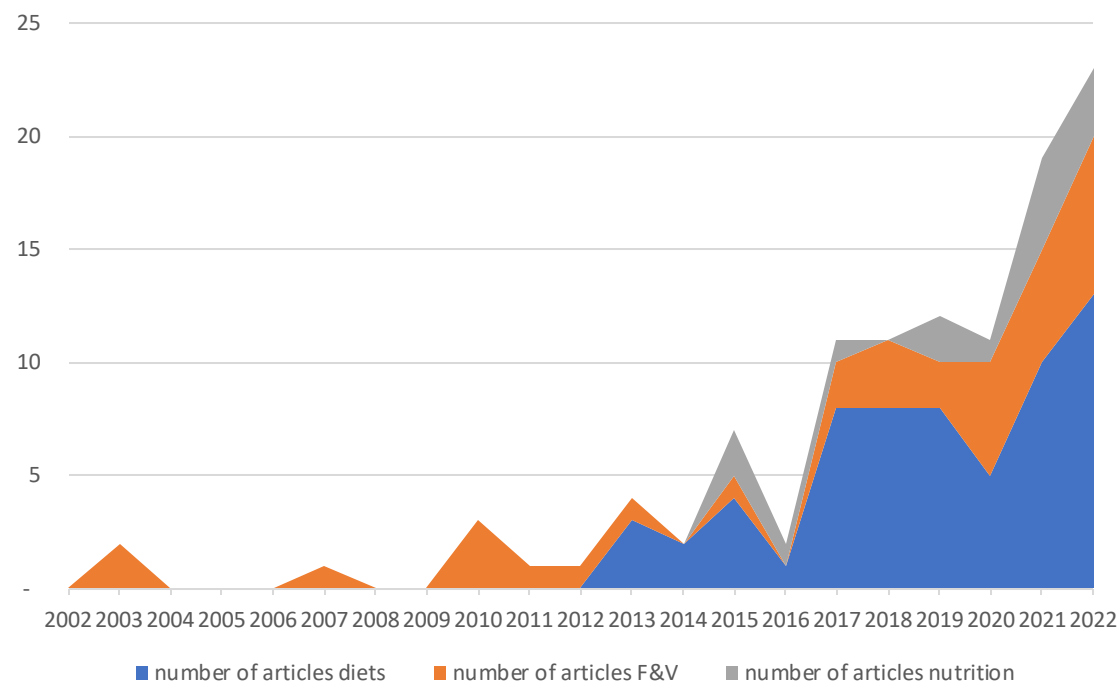
Screening process for the 3 reviews

Results

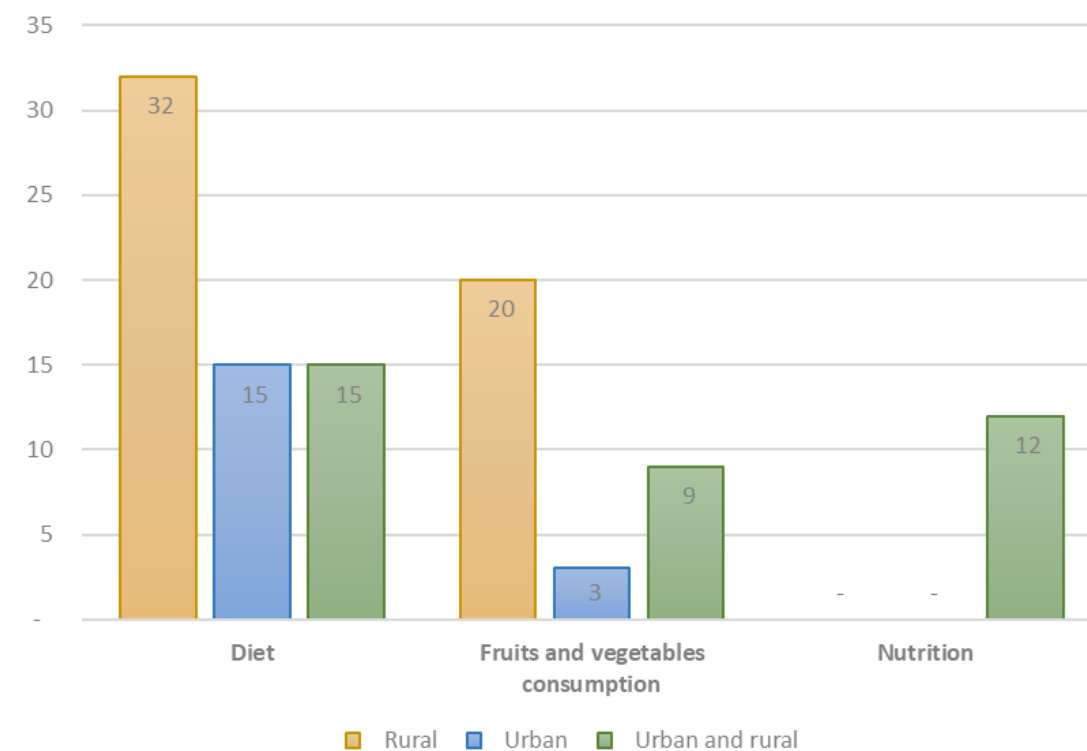


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Search results: published articles by year



Number of Studies by location



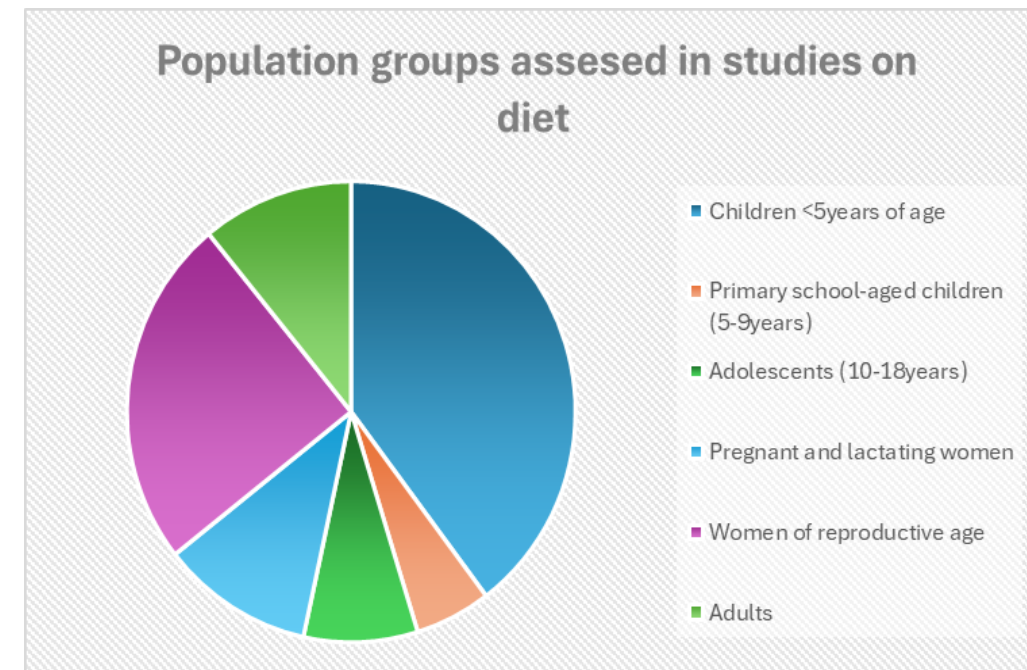
Diets



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- Except for children <5 years, predominantly smaller, heterogeneous studies (context, geography, location)
- Across all population groups assessed, diets lacked diversity and were often monotonous, carbohydrate dense.
- Sub-optimal infant and young child feeding practices:
 - Between 2004 – 2016 minimum dietary diversity worsened (46% to 30%). *18.8% in 2022 TDHS*
 - Cereal-based complementary food – mainly porridge
 - Complementary foods often given before the recommended 6 months of age

Number of articles reviewed: 62



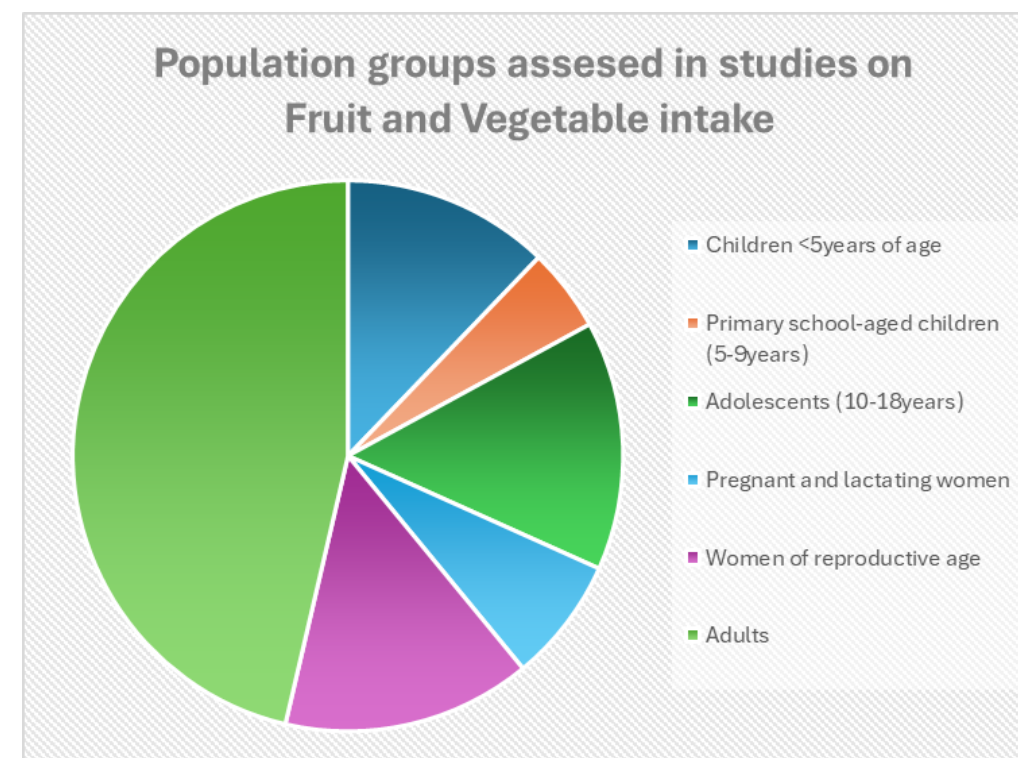
Fruit and vegetable intake



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- Majority of studies focusing on adults
- Small, non-population representative heterogenous (geography/location) studies
- Studies assessed intake based on 24hr recall (limited focus on evaluating meeting 400g recommendation)
- Reported daily F&V consumption varied (studies among adults varied between 6%-61% for previous day)
- Intake of F&V in Tanzania below recommendations across all population groups

Number of articles reviewed: 37



Additional findings on studies on fruits and vegetables



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- Decline in indigenous vegetable consumption (*small qualitative study*) due to the fads and myths surrounding them - preparation, processing techniques, palatability, negative image among consumers, and the introduction of exotic species of vegetable varieties (*Chacha 2020*)
- 16% of WRA consumed at least one portion of indigenous vegetables /day (mainly amaranth and African nightshade) (*Conti 2021*).
- Indigenous vegetable consumption improved MDD-W (*Conti 2021*).
- Home gardening has a potential to improve vitamin A-rich dark green leafy vegetable intake and MDD-W (*Blackstad 2021*)

Nutritional status



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- Only studies among women of reproductive age and children <5yrs of age identified.
- Stunting prevalence is still high despite significant decline according to studies of secondary analysis from TDHS data (50% in 1991 to 35.6% in 2016) =>30% in 2020 *varying by region and sex of children*
- Nutritional status varied by geographical location among women of reproductive age.
- Overweight and obesity significantly more prevalent in urban (23.9%) than rural areas (15.3%) -*TDHS 2010 secondary analysis study*.
- In Zanzibar, the prevalence of obesity was higher (18.8%) compared to Mainland Tanzania (13.9%) – *based on TDHS 2010 secondary analysis study*

Number of articles reviewed: 14

Conclusion



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- Diets are limited in diversity across all population groups in Tanzania.
- Fruit and vegetable intake is limited and below the recommended level of 400 g/day.
- Nutrition challenges are complex largely driven by multiple socio-demographic and economic constraints at community, household and individual level.
- Further research to assess individual dietary intake and barriers to optimal fruit and vegetable intake across all populations and particularly among adolescents and school-age children.



Thank You



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