



Munich Personal RePEc Archive

# **Urban-rural differences in health outcomes in the United Republic of Tanzania**

Ranjan, Harshali

2021

Online at <https://mpra.ub.uni-muenchen.de/118521/>  
MPRA Paper No. 118521, posted 13 Sep 2023 13:44 UTC

# Urban-rural differences in health outcomes in the United Republic of Tanzania

## INTRODUCTION

Tanzania is a developing country with a steady increase in economic growth, wealth and urbanisation. The country reached an important milestone in July 2020 when it formally graduated from low-income to lower-middle-income country following two decades of sustained growth (World Bank, 2021b). While there has been a continuous increase in urban dwellers in recent years in Tanzania, 64.77 % of its population still resided outside cities in 2020 (World Bank, 2021a). Tanzania's urban population is now projected to grow from less than 15 million people in 2012 to more than 60 million people by mid-century (Jaeger and Spiegel, 2017). However, this development has not been systematic and has been characterised by widespread informality, unequal economic growth and highly prevalent poverty. It is estimated that around 70% of the urban dwellers live in slum wards that are poorer than the surrounding rural areas (Msuya, 2021). As a result, health outcomes and access to healthcare services differ across the urban and rural geographies (Levira and Todd, 2017).

This policy brief looks at the literature analysing urban-rural difference across various health outcomes in the United Republic of Tanzania and lays out areas that need further research to be understood better.

## NEONATAL MORTALITY AND MATERNAL MORTALITY

First and most important, neonatal and maternal mortality rates are higher in urban settings than rural areas. A recent study highlighted that it was the only country in Sub Saharan Africa (SSA) where urban neonatal mortality rate (NMR) (38 per 1,000 live births) is significantly higher than rural (20 per 1,000), with largest difference during first week of life (Megan et al., 2021). Similarly, maternal mortality is also higher in urban areas (432 vs. 336 deaths per 100,000 live births) (Levira and Todd, 2017). This discrepancy could be explained in relation to the greater number of institutional deliveries in urban settings, as well as a higher number of official birth/death registrations in cities (Megan et al., 2021).

## MALNUTRITION, GROWTH IMPAIRMENTS AND FOOD HABITS

Stunting is highly prevalent in Tanzania and affects about 1 in 3 children under 5. While the prevalence of stunting has generally been reducing in the past decades, the rate of decline is much slower in rural areas compared to urban areas. In 1991–1992, stunting prevalence was 50.48% in rural area and 46.80% in urban and by 2015–2016, its prevalence had dropped to 38.26% in rural and 25.65% in urban (Zhu et al., 2021). Similarly, more rural children are underweight compared to urban children (17% vs 11%) and the country also had statistically higher number of rural children suffering from severe acute malnutrition (SAM), with 1.4% of rural children under 5 suffering from it compared to 0.8% in urban areas in 2016 (Fagbamigbe et al., 2020).

Most people in rural areas are dependent on staple foods with little diversity in diet, hence increasing the risk of insufficient intake of micronutrients. The diet in rural areas is predominantly based on starch foods and characterised by low concentration of macro and micronutrients nutrients and a low bioavailability of minerals, resulting in impaired growth, development, and body's resistance to infections. Not surprisingly, in Tanzania there is a high prevalence of vitamin and mineral deficiencies: about 59% and 34% of children under five years have iron and vitamin A deficient respectively (Mbwana et al., 2016).

Surprisingly, urban areas were not very well off in terms of nutritional deficits (including stunting, wasting and SAM) in children either - children in poor urban settings were found to have significantly higher malnutrition levels than averages in either urban or rural areas.<sup>1</sup> This is a cause for concern as nearly 70% of the urban population lived in wards that were poorer than the surrounding rural areas, challenging the frequent generalisation that equates poverty with rural areas. The main causes of the problem of hunger, food insecurity and nutrition among the urban poor are all related to inadequate quantity and quality of resources available (i.e.

---

<sup>1</sup>FAO carried out a survey among 773 families living in low-income settlements in 22 wards of Arusha, Dar es Salaam, Lindi, Mbeya, Mtwara and Mwanza. It found that the rates of stunting, underweight and wasting among children under five years were higher in these poor urban pockets than indicated through the national urban surveys such as the TDHS.

land, education, employment, income and technology) caused as a result of inadequate financial, human, physical, and social capital (Msuya, 2021).

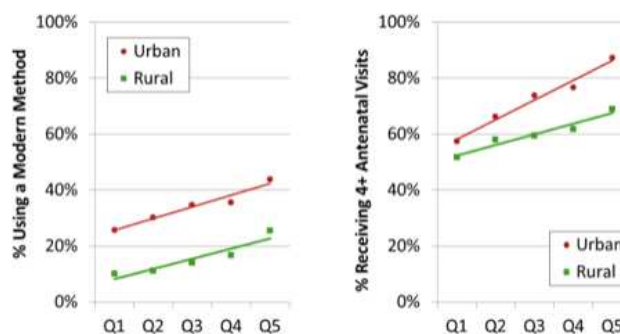
Another concerning find regarding urban food habits is that urban Tanzanians have a more activated immune system compared to their rural counterparts which can, in turn, increase the risk for lifestyle diseases (e.g. cardiovascular diseases). The difference in diet appears to explain this difference: in the cities, people eat a more western style diet, while rural areas prefer traditional diets. Metabolites derived from food have an effect on the immune system. Rural Tanzanian diet is rich in whole grains, fibre, fruits and vegetables, contains high amounts of these substances while urban diet contains more saturated fats and processed foods. As a result, rural dwellers have higher levels of flavonoids and other anti-inflammatory substances in their blood while urban dwellers had increased levels of metabolites that are involved in cholesterol metabolism. A seasonal change in the activity of the immune system was also found. In the dry season, which is the time of harvest in the study area, the urban people had a less activated immune system (Temba et al., 2021).

There is also a difference in women's nutritional status in urban and rural settings. Urban women of reproductive age (15–44 years) were more likely to be overweight/obese or anaemic compared to rural women. 36% urban women were overweight/obese compared to just 15% rural women. Similarly, 44% urban women were anaemic to 39% rural women. However, no significant differences were found among the urban and rural women in terms of nutrition behaviour that could have caused this gap (Levira and Todd, 2017).

## ACCESS TO CARE AND FACILITIES

Urban dwellers generally have better access to care and parents/caretakers in urban areas were more likely to seek professional help when their children are sick - 56% of urban caregivers responded that they prefer to seek medical help for when their children (<5 years old) are sick instead of trying home remedies compared to just 52% rural caregivers. In the context of water and sanitation in Tanzania, the country remains off track to meet the National Strategy for Growth and Poverty Reduction targets for the sectors due to lack of prioritization. Although, on average, urban areas have better access to services, the coverage is lower compared to the SSA average, it remains off target, and has not kept up with the pace of urbanization (Levira and Todd, 2017). On the other hand, rural women had a disadvantage in access to care and facilities. Contraception and access to it also has striking urban rural differences – with even the wealthiest rural women lag behind the poorest of the urban poor. Utilisation of maternal and antenatal health care services was also found to be significantly lower in rural settings than urban areas, with approximately 50%-70% women using them in rural areas compared to 60% to 90% in urban areas (*Figure 1*) (USAID, 2011).

*Figure 1: Comparison of contraceptive use with antenatal care for the last birth*

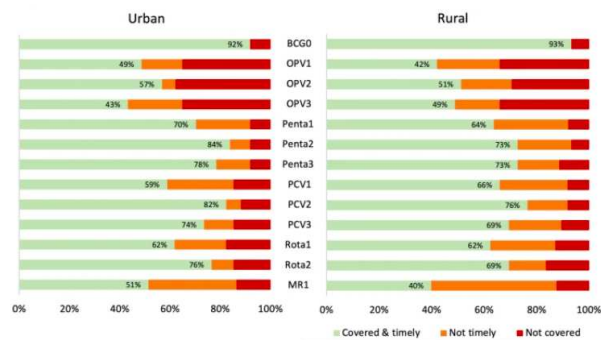


(Source: USAID, 2011)

Surprisingly, vaccine coverage and getting those vaccines on time were similar between rural and urban areas. However, these rates varied widely according to vaccine type (e.g. the BCG vaccine had a similar rate in urban and rural areas of people who were vaccinated in a timely manner at 92% and 93% respectively while the MR1 vaccine had a higher difference between urban and rural at 51% and 40% respectively) (*Figure 2*). Rural mothers are also more likely to be hesitant about vaccinations compared to urban mothers but this hesitancy is

attribute to the lack of convenience in accessing them rather than lack of confidence in the vaccine<sup>2</sup> (Vasudevan et al., 2020).

**Figure 2: Childhood vaccination coverage and timeliness for urban and rural children for vaccinations due before 12 months of age (n = 125)**



(Source: Vasudevan et al., 2020)

*Notes: Percentages are based on vaccination dates reported on government-issued vaccination cards for 37 urban and 88 rural children 12–23 months of age.*

## OBJECTIVES

Despite the already vast scope of existing research, a lot more remains to be understood about various health and nutrition outcomes and why they occur in the context of Tanzania. Health and nutrition problems occur with varying intensities across rural and urban geographies and instead of a general approach, a targeted approach for both the demographics is a better alternative.

### Possible Areas for Future Research

1. To better understand the causes and factors contributing to the urban disadvantage in neonatal and maternal mortality rates compared to rural areas
2. To understand why the rate of decline of nutrition deficiencies is much slower in comparison to urban areas
3. To understand whether urban food habits really contribute to lifestyle diseases and ways to mitigate it
4. To understand which factors are associated with the higher prevalence of overweight, obese and anaemic among urban females
5. To understand the reasons behind lesser contraceptive use by women in rural areas compared to women in urban areas
6. To understand the reasons behind significantly lower utilisation of maternal and antenatal health care services in rural settings compared to urban areas

<sup>2</sup> Vaccine hesitancy is a delay in acceptance, or refusal of vaccines despite the availability of vaccine services. The responses were measured through questionnaires during the 2020 survey conducted by (Vasudevan et al., 2020)

## BIBLIOGRAPHY

Fagbamigbe, A. F. et al. (2020) Demystifying the factors associated with rural–urban gaps in severe acute malnutrition among under-five children in low- and middle-income countries: a decomposition analysis. *Scientific Reports*. [Online] 10 (1), 1–15. [online]. Available from: <https://doi.org/10.1038/s41598-020-67570-w>.

Jaeger, J. & Spiegel, R. (2017) Harnessing Tanzania’s Explosive Urbanization Requires Central Support for Local Goals. *World Resources Institute*.

Langa, N. & Bhatta, T. (2020) The rural-urban divide in Tanzania: Residential context and socioeconomic inequalities in maternal health care utilization. *PLoS ONE*. [Online] 15 (11 November), 1–18. [online]. Available from: <http://dx.doi.org/10.1371/journal.pone.0241746>.

Levira, F. & Todd, G. (2017) Urban Health in Tanzania: Questioning the Urban Advantage. *Journal of Urban Health*. [Online]

Mbwana, H. A. et al. (2016) Determinants of household dietary practices in rural Tanzania: Implications for nutrition interventions. *Cogent Food and Agriculture*. [Online] 2 (1), 1–13. [online]. Available from: <http://dx.doi.org/10.1080/23311932.2016.1224046>.

Megan, N. et al. (2021) *Neomortality Rate in Tanzania*.

Msuya, J. (2021) Hunger , Food Security and Nutrition among City Children and Adolescents Prof . John Msuya. *Unicef Tanzania*.

Temba, G. et al. (2021) *Urban living in healthy Tanzanians is associated with an inflammatory status driven by dietary and metabolic changes*. [online]. Available from: <https://www.nature.com/articles/s41590-021-00867-8>.

USAID (2011) Urban-Rural and Poverty-Related Inequalities in Health Status : Spotlight on Tanzania. *United States Agency for International Development*. 1–2. [online]. Available from: [www.cpc.unc.edu/measure/prh/research/best-country-fact-sheets/](http://www.cpc.unc.edu/measure/prh/research/best-country-fact-sheets/).

Vasudevan, L. et al. (2020) Parental concerns and uptake of childhood vaccines in rural Tanzania – a mixed methods study. *BMC Public Health*. [Online] 20 (1), 1–11.

World Bank (2021 a) *Rural population (% of total population) - Tanzania* [online]. Available from: <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=TZ>.

World Bank (2021b) *Tanzania*

Zhu, W. et al. (2021) Urban–rural disparities in the magnitude and determinants of stunting among children under five in Tanzania: Based on Tanzania demographic and health surveys 1991–2016. *International Journal of Environmental Research and Public Health*. [Online] 18 (10).