Urban Development in Sub-Saharan Africa: Bearer ofGoods and Risks

Fahad Razak1,2*, Lisa Berkman1

1 Harvard Center for Population and Development Studies, Harvard University, Boston, Massachusetts, United States of America, 2 Li Ka Shing Knowledge Institute, St Michael’s Hospital, University of Toronto, Toronto, Canada

Sub-Saharan Africa remains the least urbanized region of the world and more than 60% of the population, 570 million people, still live in rural areas [1]. Over the next few decades Africa will be one of the most rapidly urbanizing regions [2], and with this transition is an expected rise in cardiovascular risk factors and disease (CVD) [3]. Across sub-Saharan Africa, many adults migrate back and forth from rural home communities to more urban areas for work and education; others have moved to urban areas; and in still other cases, rural communities themselves have urbanized. In this issue of PLOS Medicine, a study by Riha and colleagues is directly concerned with the latter scenario within the context of urbanizing rural Uganda [4]. As the authors aptly note, the crude dichotomy of urban-rural difference obscures the changes occurring within rural regions themselves, as characteristics of urban environments, defined as urbanicity [5], become more prominent. Urbanization is a complex worldwide phenomenon and challenges global populations to recalibrate a set of far reaching behaviors as the meaning of communities change, networks widen, and globalization influences attitudes and access to new resources. Some of these phenomena are likely to be health promoting, while others expose formerly rural populations to new risks.

Riha and colleagues’ study is the first in Sub-Saharan Africa, to our knowledge, to examine how urbanicity relates to the development of CVD risk factors in rural regions [4]. It is an important and revealing study. The population was drawn from 25 Ugandan villages that were unambiguously rural by conventional standards. A previously developed multi-country urbanicity scale was applied to score each village on seven domains meant to capture the hallmarks of urbanization: increasing population size and density, declining role of agriculture as the principal source of employment, rising education and diversity in educational achievement, increasing access to electricity and modern sanitation, and the presence of communication infrastructure [5,6]. Compared to villages in the lowest quartile of urbanicity (most rural), individuals living in villages in the highest quartile (least rural) had a 50% increase in overweight, more than a 3-fold increase in heavy drinking, and were about 20% more likely to have low physical activity levels or a diet low in fruits in vegetables. This association showed minimal attenuation despite adjustment for individual level socioeconomic status (SES) quantified through a household asset and wealth index. There was no difference in smoking prevalence or hypertension. Given the great variability among countries in sub-Saharan Africa, it is unclear how generalizable these results are beyond Uganda.

Urban-Rural Dichotomies: Too Simplest to be Meaningful?

These results suggest a much more complex story than what is typically captured through well-trodden urban-rural classifications. The current dominant urban-rural dichotomy can be traced to at least the 1940s when the United Nations began reporting population statistics using this classification scheme [7], and is perhaps a legacy of a time when differences between urban and rural areas were much more discrete. However, the current application of these definitions varies widely. In a review of United Nations data on 228 countries about 50% used a strictly administrative criterion for urbanization, while 20% used a crude criterion relying on a threshold population size and density, and others used more elaborate criteria that can capture the hallmarks of urbanization [8].


Published: July 29, 2014

Copyright: © 2014 Razak, Berkman. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Funding: LB is supported by National Institute of Health, National Institute of Aging grant 1-P01-AG041710. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

Abbreviations: CVD, cardiovascular disease; SES, socioeconomic status; LMICs, low- and middle-income countries

* Email: frazak@hsph.harvard.edu

Provenance: Commissioned; not externally peer reviewed.

Downloaded from http://www.plosmedicine.org by guest on July 29, 2014
The study of urbanization as a risk factor for non-communicable disease follows the “urban health penalty” paradigm [10], the idea that urban environments convey risk and are associated with greater rates of many diseases. But urban environments can also be the source of much benefits human wellbeing [11]. It is unlikely that access to health centers, schools, and improved sanitation themselves lead to poor health. Rather it seems most logical that unmeasured conditions associated with these indicators lead to increased cardiovascular risk. The authors have limited insight into these factors, which are perhaps related to changes in diet, easier opportunities to purchase alcohol, and less physically demanding occupations. What distinguishes features of urbanicity that have positive and negative impacts on wellbeing is far from clear. Although the stated objective of the study by Riha is to identify “potential avenues for intervention” in the urbanization process to help prevent CVD, there are few obvious targets for public health intervention.

Critically, the focus on emergence of CVD with urbanicity should not take away from the broader needs of the population being studied. For example, 80% to 85% of this rural population still have body weights in the normal to overweight range, and across all of rural Uganda prevalence of overweight exceeds overweight [9]. Even though a detectable gradient exists between elements of urbanicity and CVD risk factors, one should not interpret this as implying that population needs have now shifted towards CVD prevention. Urban development and increases in social resources related to education, disease prevention, and better opportunities for work hold important promises for LMICs still confronting the costs of poverty and lack of health protection infrastructure. A broader analysis of all sources of disease burden in this population is required to set disease prevention priorities [12].

Author Contributions

Wrote the first draft of the manuscript: FR. Contributed to the writing of the manuscript: FR LB. ICMJE criteria for authorship read and met: FR LB. Agree with manuscript results and conclusions: FR LB.

References


