

Charting a Course: Navigating Rigour and Meaning in Global Health Research

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Abstract

In the rapidly evolving landscape of global health research, the tension between scientific rigour and contextual meaning presents a critical challenge. Drawing on our work with the Global Diet and Physical Activity network, this commentary explores the complexities of conducting environmental audits for physical activity and diet in four rapidly urbanizing African cities: Yaoundé, Lagos, Cape Town, and Soweto. We illustrate the competing demands and tensions that researchers face in balancing rigour and meaning. We discuss the adaptation of internationally validated audit tools to local contexts and the importance of area-level deprivation in interpreting data. We also examine the feasibility of virtual assessment tools, emphasizing the value of local expertise. We argue for a balanced approach that marries research rigour with contextual meaning, advocating for transparency, humility, and meaningful community engagement.

Main text

In the ever-evolving field of global health research, the quest for scientific rigor often takes centre stage. Yet, we believe that as scientists we must give equal priority to ensuring our research is people and context-oriented - in other words, that our work is meaning-making. Drawing on our recent intersectional hands-on work as part of the Global Diet and Physical Activity network (GDAR), we reflect on the experience of conducting and interpreting audits of the built and food environments in four large and rapidly urbanising African cities: Yaoundé in Cameroon, Lagos in Nigeria, and Cape Town and Soweto in South Africa. In this commentary, we invoke the metaphor of a ship to illustrate the navigational perils, competing demands, and tensions that we face as global health researchers.

As researchers, we must demonstrate rigour. Within the field of global health and its intersections, we investigate phenomena that transcend national frontiers, from pandemics like COVID-19 to the impact of climate change on population health. Thus, traditional academic indicators of rigour include the development of harmonised protocols and the use of tools with proven reliability and validity that facilitate the replication of study procedures and ultimately enable comparison across diverse locations and countries.

But equally, we need to ensure our research has meaning, that it has the potential for local impact, and that it can contribute to local discourse on health, equity and environmental justice. This approach is vital, particularly in light of past unjust and extractive global health research practices, including studies conducted in low and middle-income countries without local collaborators, or where their inclusion was nominal and without recognition of “indigenous knowledge or epistemic justice”(1).

Using three examples inspired by a recent conference symposium (2), we aim to illustrate that neither research rigour nor meaning alone offer a safe haven for our metaphorical ship. Each, in isolation from the other, could lead to shipwreck. We propose a balanced approach that enables us to chart a course between these two competing priorities.

We discussed the opportunities and challenges of using internationally validated environmental audit tools in the aforementioned African cities to measure the built and food environments. It became apparent that these tools needed to be adapted and made sense of in order to be applied within these contexts. For instance, questions from the Microscale Audit of Pedestrian Streetscapes (MAPS-global) concerning traffic lanes and parking regulations were clearly designed with paved roads and regulated parking systems in mind, which is not always the case in these - and most - African cities, or indeed in many rapidly urbanising places across the Global South. Similarly, while using the Environmental Profile of Community Health (EPOCH), we faced challenges in categorising restaurants that marketed themselves as 'fast food' but served food distinctly different from multinational fast-food chains. These and other challenges created tension between the need to adhere to the prescribed tools for the sake of rigour and comparison, and the need to adapt them for the data to be meaningful to our local contexts.

We then outlined initial findings from our audits that revealed the significance of both context and scale in data interpretation. By disaggregating data first at the city level, and then at the local area level, we could begin to understand the diversity of environments within each urban setting. This was further nuanced by area-level deprivation, as defined by each country and city. While the initial harmonisation of the audit tools across the four cities allowed for comparison, some of the results were in contrast with previous international literature, with no clear disparities in the built environment between different levels of neighbourhood deprivation. In fact, in Cape Town, better scores for MAPS-global (i.e. more supportive for physical activity) were found in the community that was the most economically deprived. Conversely, audits of local food environments did show marked differences in the types of food retail outlets available on the basis of area-level deprivation. These apparent incongruencies enable us to contribute to the global conversation on urban environments, spatial deprivation, and health inequities, while at the same time identifying potential targets for local improvements to urban environments.

Lastly, we explored the feasibility and reliability of using virtual assessment tools to evaluate built environments (a cost-efficient alternative to traditional in-person assessments) in Soweto, South Africa. Despite the widespread accessibility of platforms such as Google Street View, we found

that researchers based in our study area, Soweto, who were familiar with the local community, could more reliably apply the virtual MAPS-global tool than their international counterparts, drawn from other African countries, Australia and the United States. This underscores the value of contextual familiarity in enhancing the meaningful application and rigour of research tools. To the best of our knowledge, our study is the first to explore this aspect, suggesting that failing to recognise the importance of familiarity may compromise research quality, and thereby rigour and meaningful interpretation.

As global health researchers, we should seek to balance the rigour and meaning of our research, without allowing one to eclipse the other. We now turn to our first metaphorical shipwreck, rigour without meaning. This stems from an over-reliance on the idea that measuring more precisely, in a more standardised way, in more places, on a bigger scale, will eventually reveal the 'right' answer. It also assumes - erroneously - that answer may be generalised everywhere. Conversely, our second shipwreck, meaning without rigour, could result in hyperlocal solutions that fail to contribute to broader, transnational discussions around developing healthy and equitable urban environments. It also means that solutions from elsewhere might be overlooked in favour of those more salient or palatable to local decision makers.

Our recommendation for future global health research is to chart a course that marries rigour with meaning. We suggest the key features of this are transparency in methods, humility in recognising both the contributions and the limitations of the researcher, meaningful engagement of non-academic experts with lived experience in the co-design of research tools, and a commitment to making sense of findings within the broader body of literature. While these ideas are not novel, they warrant emphasis in the current research landscape, which often favours high-income countries and perpetuates a north-to-south dynamic in global health research. Building on Lowther's (2022)(3) suggestions, we advocate for an expansion of the conventional definition of rigour, shifting towards an emphasis on the "trustworthiness" of research. This may require researchers to rely less on anchored mainstream academic paradigms, and more on indigenous "ways of knowing". Navigating a safe passage to rigour and meaning, we argue, necessitates a commitment to people and context-oriented research.

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