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The meaning of 'rural' in rural health: A review and case study from Brazil

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Health disparities between rural and urban populations are an important global health concern, although ascertaining what constitutes a rural context is a complicated undertaking. This article summarises theoretical contributions that help to explain how uncritical use of rural classifications may interfere with epidemiological data and health policies. Bonfim, a community located in Rio de Janeiro state, Brazil, illustrates the discussion. Bonfim is classified as urban by the Brazilian census, although the community contains farmland, parkland and rural social groups such as family farmers and ecotourism employees. The (mis)classification of Bonfim as urban further complicates the meaning of rural, and thus also what is meant by rural health. Researchers have developed some new rurality indexes to overcome the rural–urban dichotomy and to help understand local scale health determinants. But the obstacles for large-scale studies and government decision-making are still many. 'Rural' is an epidemiological variable that unites in a single indicator diverse life aspects relevant for health purposes. Therefore, to facilitate allocation of health resources based on objective criteria, governments and policy makers must acknowledge the difficulty of defining what rural is and work to improve the definitions they use.

Keywords: public health; rural health; health policy; measurement; nutrition

Introduction

Disparities between rural and urban populations are an important global health concern, especially considering the current commitment to reach health equality worldwide (WHO 2008). However, when the idea of 'rural health' is presented as a challenge for global health, there is no consensus on what *rural* means (Anríquez and Stamoulis 2007, UN 2008). Agricultural work, pastoral landscape and remoteness are aspects often associated with rural, but these stereotyped features fail to completely define it. For example, agricultural work is only one part of the rural contemporary economy, and the distance of rural sites to urban centres may range from just a few to many miles. Scholars have emphasised that rural, or its sociological term *rurality*, involves a diversity of social and cultural features (Uzzell 1979, Coward *et al.* 1990, Carneiro and Teixeira 2004, Moreira 2005). The major conclusion is that rural is context specific, and culturally and historically determined, and therefore a universal definition will always be problematic.

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Nevertheless, the challenges inherent to understanding the meaning of rural do not decrease the importance of this task. Rural health is considered a relevant target for health policy (Higgs 1999, Hart *et al.* 2005, MacGrail *et al.* 2005). Allocation of resources for underserved rural populations and reduction of health inequalities are examples of public health goals that can only be met using local or national context-dependent definitions of rural.

The concept of rural became a concern for public health purposes in the nineteenth century, in the context of the Sanitary Reform Movement (Schneider and Lilienfeld 2008). Before this period, when the miasmatic theory of disease causation was dominant, rural sites were perceived as having better life conditions, 'better air' and consequently better health than cities. Tuberculosis became a prototypical example of rural–urban differences in health, given that patients were frequently sent to rural areas to recover. After the reform, as microbiology and epidemiology advanced as fields of study, important health interventions also developed, and sanitary conditions started improving significantly in the cities, but not in the rural areas. The historic urban priority in health, often influenced by political factors such as the number of possible votes and rebellion control, was born in the nineteenth century and has shaped rural–urban inequalities that persist in the present (NACRHHS 2008, Schneider and Lilienfeld 2008).

Although the notion of tranquillity and proximity to nature may imply better life conditions and thus better health, present-day urbanites generally have better health than their rural counterparts (Gamm *et al.* 2003, PAHO 2005, WHO 2007, NACRHHS 2008). For example, in Western Pacific countries, infant mortality rates in rural areas are estimated to be up to eight times higher than in urban sites (WHO 2007). Rural populations in America are less served by nurses and physicians and have less access to significant primary health care (NACRHHS 2008).

There are important aspects of rural life that should be considered in health studies, such as social discrimination and access to markets and health services. However, most studies use a simplistic approach, rooted in the rural–urban dichotomy, without exploring the consequences on their study outcomes. Application of the rural–urban dichotomy in this way may interfere with policy making, as groups with different characteristics could be categorised as similar and reduce the efficiency of interventions. To avoid these risks, researchers must ask: What is the rural side of the rural–urban variable actually indexing in health studies? Which domains of rural life are most relevant to health? And, do any of those domains have universal significance?

In order to explore the literature on these questions, I will analyse the meanings that may be implicit when 'rural' is used as an epidemiological category. Next, I discuss definitions of rural that have been used in a variety of national studies. In the third section, I consider health disparities by examining risk factors of rural life that are relevant for health studies and by presenting examples of policy implications related to rural classifications.

The meaning of rural in Bonfim, Brazil

With the intention of clarifying the discussion, I draw on examples from Brazil, especially Bonfim, a community in the mountainous region of the state of Rio de Janeiro, where I conducted epidemiologic and ethnographic field work on health and

nutrition in 2008 (Lourenço 2010). Bonfim is an illustrative example for investigating the meaning of rural because, according to the local municipal law, it is defined as a 'rural–urban area with an environmental preserve', located inside the urban perimeter of Petrópolis city (see Figure 1). At the same time, the 2000 Brazilian national census labels Bonfim an urban area without any particular qualifications, despite the fact that the community has farmland and social groups including family farmers, ecotourism employees and suburbanites. It also includes a preservation area, as it borders the Brazilian Serra dos Órgãos National Park (approximately 22°27′16.24′′S; 43°06′18.67′′W).

In the early twentieth century, Bonfim was a summer refuge for wealthy people escaping the hot temperatures and infectious disease epidemics in the city of Rio de Janeiro. In the 1950s, Bonfim's farm proprietors went bankrupt and the land was occupied and planted by the farm's employees. In the 1970s, because of an economic crisis in agriculture, some families started abandoning their agricultural work and the land started being divided and sold to families coming from different regions of the state of Rio de Janeiro.

Currently, the Bonfim Farmers Association has weekly meetings to discuss agricultural work and land possession in the community. The Bonfim Rural School is also very active. Furthermore, local residents believe they live in a rural area, especially because of Bonfim's intense agricultural production. In one interview, a

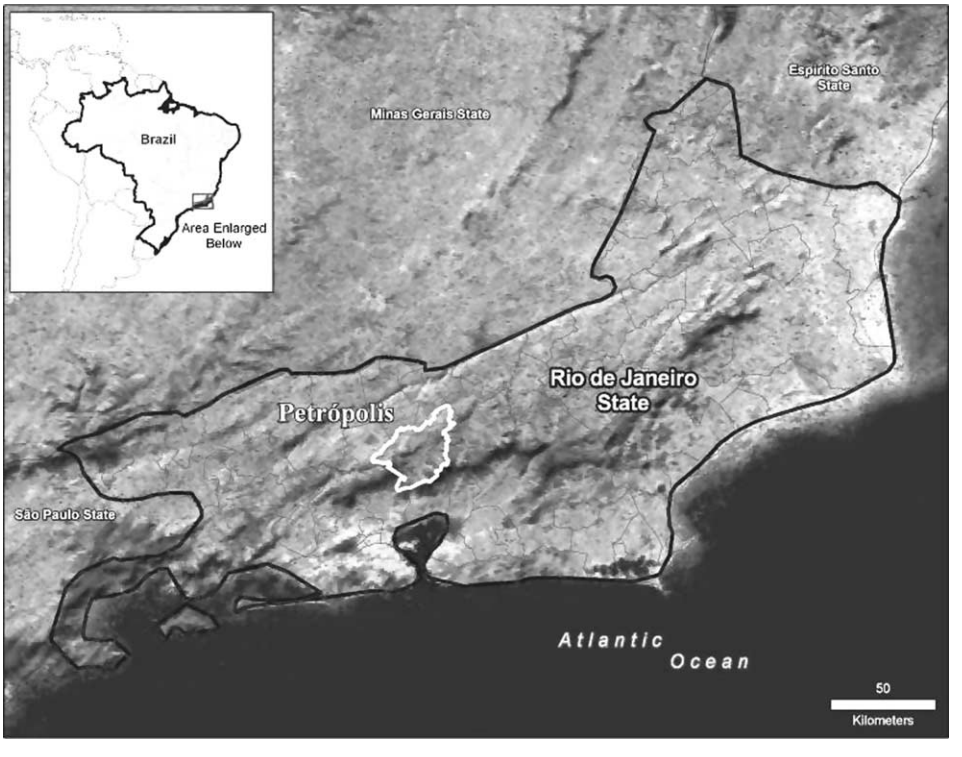

Figure 1. Location of Petrópolis city.
(By S. Hetrick, with data sources from NASA's Earth Observatory, ESRI and IBGE.)

farmer's wife also emphasised that Bonfim is rural because 'we pay rural taxes', which are usually cheaper than urban taxes.

Given the many and varied rural aspects of the community, the (mis)classification of Bonfim as urban further complicates the meaning of rural, and thus also what is meant by rural health.

Unpacking the 'rural variable'

In this section, I will consider three main categories in epidemiology – *person*, *place* and *time* – to analyse the multifaceted aspects of rurality. Although these categories may overlap, this division is being used as a device to organise pieces of information regarding the meaning of 'rural'.

The idea of 'unpacking' suggests looking at a variable beyond its surface definition in order to search for meanings that are implicit in it (Trostle 2005). Many variables that health researchers consider to be in the *person* category, such as sex and age, may represent complex processes such as social behaviour and work division that are not actually individual characteristics. With respect to *place* or *space* considering the perspective of a critical geography (Santos 2006), most studies consider health in the context of sociopolitical frontiers (neighbourhood, state, country, etc.), without exploring other features that will be unavoidably built-in when a place is defined, such as altitude and access to transportation. The notion of *time* is expressed in studies mainly to establish a specific period, such as the birth date of a cohort or a period of exposure to a risk factor. But counting, and the division of time itself, are also culturally constructed and may influence health (Vuckovic 1999, Trostle 2005).

Person

Work activities and roles played by 'rural women' in some villages and the future expectations and cosmology of 'rural youth' suggest the number of meanings that may be implicit in the variables sex and age in a rural context. Occupation is another variable often used at the person level, although it includes social status, access to health services and exposure to environmental stress. The association of a particular health profile with rural occupation may generate results that are difficult to interpret and have low comparability if the study does not discuss the background and the variability of contemporary rural work, which may include, for example, family farmers, rural producers and hired rural workers.

Pluriactivity is another challenge. Pluriactivity is when one or more members of a farming family become involved in a non-farming occupation, such as commerce or industry, in order to supplement family income, maintain agricultural work and continue living in the rural site (Eikeland 1999, Carneiro and Teixeira 2004). In Brazil, pluriactivity is becoming more and more common because agriculture can no longer offer work opportunities to all economically active people living in rural areas (Carneiro and Teixeira 2004). For example, there is a family in Bonfim in which the husband is the only member exclusively doing farm work. The wife works part-time as a cleaner, and the sons work as receptionists in a local hostel. By increasing the variability of possible occupations, pluriactivity requires even more attention by researchers when associating rural work and health.

The migratory trend called *neo-ruralism* is another relevant issue when unpacking the 'rural variable' within the person category (Giuliani 1990). Neo-rural families migrate from urban to rural areas looking for a more bucolic life, closer to nature. This trend responds to the idea that rural environments may be somehow better for health than urban contexts. For example, a professor in Bonfim said that he moved to the community with his family because he wanted to raise his children '*in a better environment*'. Let's imagine an epidemiological study that uses 'rural' or 'urban' to classify individuals, simply by the position of their residence. If one of the study's purposes is to evaluate the risk for a specific disease, in which category should the neo-rural be classified? Neo-rural families may get somewhat socially involved with the local community, but they tend not to abandon their city activities (Giuliani 1990). Thus, perhaps we should group the neo-rural with people considered urban? Answers for these questions are not readily available, but these aspects must be considered in health studies.

Place

The social and cultural changes happening in rural areas reduce the clarity of the limits of what is rural in what is labelled urban or not urban, making it more complicated to use only location to classify social spaces in contemporary societies. Neo-ruralism is an example of an urban expression in a rural area. On the other hand, urban gardens and pluriactivity may be seen as rural expressions in urban areas. In locations where the rural–urban margins are fairly porous, what kind of information would the dichotomous rural–urban variable generate?

The idea of *continuum* proposes the end of the rural–urban duality and the emergence of a rurality scale, suggesting dynamism instead of a delimited and static space (Marques 2002, Moreira 2005, Cossman *et al.* 2008). However, while the notion of *continuum* attempts to smooth out the abrupt rural–urban rupture, it suggests a linear scale that varies only in the intensity of rural and urban characteristics. Since rurality constitutes a mosaic of features, occurring along multiple dimensions, a linear scale is probably insufficient to represent it.

Unpacking rural in the place category also requires discussing the subordination of rural to urban. Rurality is rarely assessed in relation to its own characteristics. 'What is not urban' is defined as rural by exclusion, probably because a better consensus exists about the features that determine what is urban than the ones that determine what is rural. Population size and density are examples of widely used measures of what is urban, and it is well established that these characteristics are increasing worldwide. Thus, a *continuum* scale varying mostly in the level of urbanisation would not give legitimacy to expressions of rurality, suggesting that, sooner or later, the urban would dominate the rural. It is important to recognise that urban and rural zones have always had an interdependent relationship. Even though not always territorially clear, rural–urban interactions can still be perceived through social and cultural expressions, such as the presence of farmers' markets in cities or the availability of small supermarkets in rural areas.

Time

The division of time is traditionally different for rural populations because of farm work characteristics. Working time in rural areas is often extended and defined by

forecast and plantation cycles instead of weekdays and weekends, which requires extra attention when evaluating people's habits and health. The idea of 'leisure' and 'free time' is also different for farmers, given that time spent in non-working activities, such as eating or resting, is commonly short and perceived as an obligation or a transition to a new work session. One Bonfim farmer mentioned that he works in the plantations about 12 h a day, 'from Monday to Monday', stopping only to eat and sleep. About his free time, he said, laughing: 'Free time is only on Sunday evening that is for resting; [...] I have to rest.'

These time particularities are relevant when evaluating, for example, physical activity and food habits, given that non-working time is usually when people may participate in sports or other voluntary activities, increase the frequency and amount of alcohol consumption, and spend more time cooking and enjoying food. The division of time may also influence the level of education, which is usually lower in rural sites and often associated with health differentials (Gamm *et al.* 2003, Hart *et al.* 2005). Formal education, with classes during the day, often distant from people's houses, may be inappropriate for adolescents who are expected to help their families on the farm.

Longer durations of time also matter in rural health, mainly because of sociocultural transformations involving work and consumption patterns or environmental changes such as deforestation and loss of soil fertility. These transformations do not happen at the same time in all rural contexts, so caution must be exercised when grouping and analysing health information from different rural populations both within and between countries.

What is known as urban is relatively static and homogeneous, involving high population agglomerations, dense housing and buildings, and often the presence of slums. On the other hand, the characteristics of rural seem particularly fluid, expressing changes that intensified after the transition from agrarian to industrial economy. Aspects commonly related to rural life, such as remoteness and agriculture, are now together, for example, with tourism, outdoor sports, commerce and neo-ruralism. Thus, this analysis suggests looking at socially defined spaces in order to combine epidemiological with social and cultural approaches, pay attention to the local level and better understand actors and health-related processes. This analysis advocates defining rural as a multidimensional variable, associated not just with features of physical space but also with aspects of social space and identities.

Defining 'rural place' for health purposes

The purpose of unpacking is to help improve rural health studies as well as policies and interventions derived from them. Nevertheless, the gap between theory and practice has been the main obstacle preventing application of the diverse aspects of rurality in health research. In this section, I consider the solutions that different countries have proposed to overcome these obstacles.

Countries have used different criteria to define 'what is not urban' and all of them have limitations. The most frequent definitions are based either on political proclamations or on population density, though some countries define urban through the presence of infrastructure in settlements, such as paved roads, street lights, schools and medical facilities (Chomitz *et al.* 2005, UN 2008). GIS (geographic information systems) is a promising technique that has recently been

used by some countries to develop a rurality index, by merging satellite images with local census data (Krieger 2003, Anríquez and Stamoulis 2007).

Brazil follows a geopolitical method to define its rural space. For the national censuses, the country is divided into urban and rural census enumeration areas (CEAs) with respect to the administrative boundaries already delimited by the city halls. Households are classified as rural or urban given the CEA where they are located (IBGE 2003). No other criteria, such as population density or remoteness, are used to define households in Brazil. Other countries in Latin America and the Caribbean, such as Colombia, El Salvador, the Dominican Republic and Paraguay, follow a similar geopolitical method (Chomitz *et al.* 2005, UN 2008).

The main problem with this classification is that it allows very small cities and agricultural peripheries such as Bonfim to be classified as urban. Classifications may also be problematic because most city halls have the flexibility to enlarge their urban perimeter and local politicians have economic interests in this extension (Marques 2002, Veiga 2007).

Given that some countries have diverse territory, it is quite common to find regions that are defined as urban but have totally different physical and social characteristics. For example, some urban areas in the north of Brazil have neither electricity nor sewage system and paved streets, and the socioeconomic status of local families may be lower than that of families living in rural areas in other parts of the country. The classification becomes even more intricate when taking into consideration the heterogeneity of what is called 'rural Brazil', which may include populations as diverse as family farmers, crab collectors, indigenous peoples, fishing populations, *Quilombo* populations (of African ancestry) and suburbanites.

Trying to better register local singularities, the Brazilian Institute of Geography and Statistics (IBGE) established specifications for the CEAs based on local characteristics, such as remoteness from commercial centres and presence or absence of prisons, slums and indigenous villages. Nonetheless, national health publications have not used these specifications in their analyses. This is particularly relevant because IBGE constitutes the main source of social–demographic and health information in the country; hence, its information is fed to international databanks.

Many countries, such as France, Switzerland, Uganda, Nigeria, Chile, Argentina, Mexico and the United States, use methods based on population density to define their territory (Chomitz *et al.* 2005, UN 2008). Compared with geopolitical criteria, population density seems more useful, given that it combines agglomeration indicators instead of exclusively using political limits. But this scale does not include other aspects of rural expressions and also does not solve the problem of low comparability. For example, the cut-off points may vary from a cluster of 100 habitants used to define urban areas in Uganda to a cluster of 2500 habitants used to define urban areas in the United States and Mexico (Chomitz *et al.* 2005).

Another issue is that most countries use rural definitions for health purposes that were mainly created for political purposes. As a result, there are a number of rural classifications based on different criteria, not just in different countries but sometimes within the same country. For example, in the United States, two main institutions determine rural areas, the Office of Management and Budget and the Census Bureau. The two classifications based on the 2000 census were 18% discordant. Depending on how the classification is analysed, the rural population

in the United States may vary from 29 to 79 million people (Hart *et al.* 2005, NACRHHS 2008).

Defining rural using indexes

Trying to better define rurality based on local characteristics, some indices have been developed and applied in different countries (Harrington and O'donoghue 1998, Ocaña-Riola *et al.* 2006, Olatunde *et al.* 2007). Scholars have been optimistic, saying that their indexes are useful for specifying rural health issues. For example, Ocaña-Riola *et al.* (2006) found lower rates of mortality from all causes in the most rural areas compared to the more urban regions in southern Spain. Although these authors defined the rural population by residence location, their rurality index included other indicators beyond political boundaries and population density, such as percentage of elderly and percentage of people engaged in agriculture, fishing or livestock farming.

There is no perfect definition of rural for all purposes and places. The diversity of rural sites makes it plausible that health differences among rural areas may be as marked as those between rural and urban areas (Coward *et al.* 1990). Thus, determining the aspects of rural that are most relevant for the study's purpose and establishing rural definitions specific to a particular theme seem reasonable (Hart *et al.* 2005), because this allows researchers to discuss rurality and health, avoiding the crude 'rural versus urban' classification and paying more attention to rural heterogeneity. The principal remaining issue is that of low comparability because, for example, a rurality index based on distance to health care might not be interesting for research on education, making interdisciplinary studies more difficult.

Health disparities: What role does rural play?

Having unpacked and shown the multifaceted aspects of what 'rural' means, this analysis might seem to discourage the investigation of rural health. However, the issues presented also make it clear that the 'rural world' has a range of characteristics important for health studies. As with other variables in epidemiology, such as race and ethnicity (Dressler *et al.* 2005), rural is tricky and has limitations, though it unites diverse life aspects in a single indicator. That is why rural is both an important variable for health purposes and yet also difficult to use.

Rural is often correlated with other variables such as socioeconomic status and education. Thus, some argue that controlling for other variables may resolve or diminish rural–urban health disparities (Smith *et al.* 2008). There are at least three responses to this argument. First, it is important to underline the usefulness of any given health indicator. In order to reduce the rural effect, a list of factors may need to be controlled, such as socioeconomic status, ethnicity, health service availability, transportation conditions, occupation, level of education and demographic features. The main purpose of a health indicator is to simplify reality in order to facilitate health policy practices. A single indicator able to translate many aspects simultaneously is more functional than a combination of many indicators, especially because policy making is an arduous process in which simplicity is required. The second response is related to the persistence of measuring rural essentially by location. As discussed when unpacking 'place', contemporary rural–urban geographic

distinctions tend to be less evident. Thus, rural–urban health disparities will also be less clear if health studies keep using mainly location to define rural populations.

Third, more important than whether rurality per se can show health inequalities, is to consider which risk factors are relevant to rural health. While it may not be feasible to talk about 'rural health in general,' it is possible to discuss health determinants that a number of rural sites may have in common.

Determinants of rural health

Determinants of prevention and health promotion

There is widespread agreement that in most rural sites, access to health services is limited and the density of health professionals available is low (Gamm *et al.* 2003, WHO 2008), which may influence people's health. For example, women living in rural regions may not have access to prenatal care, because of the distance to a health centre and the cost or lack of transportation; or the local health service may not have a multidisciplinary team to conduct surveillance actions related to childhood health promotion, such as a children's growth and immunisation schedule.

Mortality

Most rural locations have no or very rare specialised health service and most of the medical doctors are generalists. Therefore, the number of underdiagnosed diseases tends to be higher, as well as mortality rates. The sequence no-diagnosis, no-treatment and disease aggravation, combined with a lack of health care, may form a vulnerable scenario in rural areas. For example, in their investigation of the consequences of lack of health care, Larson *et al.* (1997) found that rural residence was positively associated with post-neonatal mortality in the United States, even after adjusting for other variables such as race, maternal age, parity, marital status, maternal education and prenatal care.

Morbidity

The frequency of diseases in rural populations unquestionably varies. Recent reviews have tried to build a comprehensive description of rural–urban health morbidity in developed countries (Gamm *et al.* 2003, Smith *et al.* 2008), observing that the disparities are not uniform, varying according to the specific health problem and to where and how the study was conducted. In developing countries, the lower quality of rural health compared to urban seems more evident (PAHO 2005, WHO 2007). This is probably because the nutrition transition process happens with different patterns in developed and developing countries, which generates different profiles of infectious and chronic non-communicable diseases (Popkin and Gordon-Larsen 2004).

Explanations for rural and urban disparities seem more obvious when analysing undernutrition and infectious diseases. For example, malaria and diarrhoeal diseases are frequently more prevalent in rural sites. There are ecological causes associated with vector and parasite transmission, such as proximity to forests and sanitation. On the other hand, dengue and tuberculosis tend to be more frequent in urban

contexts, given the habits of the dengue vector (*Aedes* spp.) and the population clustering required for tuberculosis transmission. However, when investigating obesity and chronic non-communicable diseases, rural and urban inequalities are more opaque. There is a collection of health determinants difficult to identify as specifically 'rural.'

Social and economic changes that have happened in a variety of rural contexts may influence modifications in important health determinants, such as subsistence strategies and work patterns. These transformations may intensify some risk factors in rural populations, increasing their vulnerability to specific diseases. For example, it has been suggested that intrauterine malnutrition and childhood nutritional stunting may predispose to obesity and other chronic non-communicable diseases in adulthood (Godfrey and Barker 2001, Sawaya and Roberts 2003). Hence, some rural populations could be more susceptible to obesity and related diseases when exposed to risk factors such as high fat and caloric diets and a sedentary lifestyle. Amazonian indigenous and fishing populations are examples of rural groups undergoing an intense nutrition transition, associated with pervasive lifestyle changes. These populations have simultaneously experienced a high prevalence of undernutrition and infectious diseases, as well as rapid emergence of obesity and chronic non-communicable diseases, often with higher prevalence than their urban counterparts (Silva *et al.* 2006, Lourenço *et al.* 2008).

The policy implications of 'rural' health

Definitions of rural and urban also matter in decisions about health conditions of different populations. For example, the choice of reference groups for comparison and the interpretation of survey results can be problematic. This happened when preliminary results of the nutritional census in Bonfim (Lourenço 2010) were compared to southeast Brazilian national rates (IBGE 2004). The prevalence of obesity for men (7.4%) in the part of Bonfim where agriculture is the main occupation could be called lower or higher than national rates for populations defined as urban (10.3%) or as rural (7.0%). The prevalence of obesity among Bonfim women (29.1%) is more than twice the national rates for women, both for urban (13.9%) and for rural (13.0%). There is not much difference between the national rates of obesity for rural and urban women. Is this difference truly small or, as is the case with Bonfim, might other Brazilian regions perceived in 'rural–urban transition' have been poorly classified? To explore this question, it is important to take local determinants of health into consideration. Once the local determinants are understood, it may be meaningful to use rural and urban national health data as a comparison.

In addition to its usefulness for comparability, definitions of rural are politically relevant. For example, the Brazilian federal government has proposed a national health policy for rural populations (*Política Nacional de Saúde das Populações do Campo e da Floresta*), which seeks to extend health access by giving priority to rural people in the allocation of resources. But instead of defining what 'rural' means for this purpose, the policy document provides an imprecise list of eligible people that mixes job categories (e.g., family farmers, wage workers, short-term workers), work site (those who work in rural areas even if they live in settlements for homeless people or in urban areas), cultural tradition (*Quilombo* populations) and location (populations

from fishing villages and mining areas). This unfocused definition of who has priority may divide subsidies and so reduce benefits to those who really need them.

Brazil's Family Health Programme (PSF – Programa Saúde da Família), which is the main federal programme to improve publicly financed primary health care to all Brazilian families, has most of its teams working in urban areas. One of the programme's goals is to expand its coverage. The programme's evaluators recognise that it is complicated to target rural populations, given that rural and urban are 'highly imprecise concepts' and there is 'huge regional diversity' (Ministério da Saúde, Brasil 2004, p. 16). The problematic definition of what is rural in Brazil affects not only health policies but also educational policies, such as extending school bus service and Internet access to rural and remote areas. Both of these projects are now on the national agenda, with priority given to rural populations even though the definition of what is rural and who should receive benefits is not completely clear.

Conclusion

By analysing the use of the concept 'rural' and illustrating it with a Brazilian case study, this article discusses defining and interpreting rural and why thoughtless use of rural classifications may be problematic for health issues. The contemporary question is not whether the label 'rural' is still an interesting characteristic to be evaluated in health studies, but whether the information generated based on the 'rural–urban dichotomy' is still pertinent when the boundaries between rural and urban are not clear.

Some methods to overcome this dichotomy based on local indexes have been presented in the international literature. They have limitations, but nonetheless represent significant innovation. The obstacles for large-scale studies are still many. Besides, local and regional/national data may sometimes be in conflict. The development of a rurality index, combining local characteristics, is one current suggestion to discuss these possible conflicts and make comparisons between micro- and macroscale data more useful.

Governments always have to make decisions about how to allocate resources. However, older ideas about rural and urban definitions do not work as well in the present as they did in the past. Thus, unpacking what rural means has to continue in order to understand local scale determinants. When organisations recognise what is problematic about rural definitions and work to improve them, it will be possible to allocate resources based on more objective criteria.

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