Local communities, health and the sustainable development goals: the case of Ribeirão das Neves, Brazil*

Comunidades locais, saúde e os objetivos de desenvolvimento sustentável: o caso de Ribeirão das Neves, Brasil

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Resumo

A saúde integra a Agenda de Desenvolvimento Sustentável da Organização das Nações Unidas. As comunidades locais têm importante papel na definição de suas necessidades para o desenvolvimento e na discussão dos Objetivos de Desenvolvimento Sustentável pós-2015. Realizou-se uma pesquisa exploratória empregando um questionário validado em amostra de 336 domicílios caracterizados como extrema pobreza em um município brasileiro. Essa pesquisa compreendeu um estudo observacional, transversal, e a realização de entrevistas com profissionais de saúde e assistência social. O abuso de drogas e álcool foi identificado como o maior problema para obter melhorias na qualidade de vida. A prevalência por incapacidades foi 14%. A redução das taxas de óbito por crimes e a prevenção de incapacidades deveriam ser incluídas como alvo desses objetivos.

Palavras-chave: promoção da saúde; desenvolvimento sustentável; qualidade de vida; determinantes sociais da saúde; pobreza.

Abstract

Health is part of the Sustainable Development Agenda adopted by the United Nations and local communities have an important role in the definition of their own development needs and in the discussion of the post-2015 Sustainable Development Goals. A field survey using a validated questionnaire was applied to 336 extremely poor households in a Brazilian municipality. The survey was a cross-sectional and observational study and included interviews with healthcare professionals and social workers. Drug/ alcohol abuse was pointed as the major problem to obtain improvements in quality of life. The prevalence of disability was 14%. A reduction in rates of deaths caused by crimes and prevention of disabilities should be included as health targets under the SDGs.

Keywords: health promotion; sustainable development; quality of life; social determinants of health; poverty.

Introduction

The importance of sustainable development for the promotion of human health is a well-established fact. Health, in association with poverty, education and nutrition, is one of the key dimensions of human development. Also well recognized is the critical role of local level initiatives in designing and implementing local development strategies to achieve the Sustainable Development Goals (United Nations, 2014).

Latin America is characterized by a high degree of social inequality. Approximately 29% of its population is below the poverty line, 30% of the regional population do not have access to healthcare services due to lack of financial resources, and 21% do not have effective health assistance due to geographical barriers (Organización Mundial de la Salud – OMS; Banco Mundial, 2013). In Brazil, about 8.5% of the population (16.27 million people) is classified as poor (Instituto de Pesquisa Econômica Aplicada – Ipea, 2014). Although the Brazilian Constitution establishes universal access to a public and decentralized healthcare system, the effective provision of services is often hindered by lack of funding and local organizational problems.

Using empirical data collected at an extremely poor community in Brazil as a starting point, this paper aims to discuss health aspects of the Sustainable Development Goals proposed by the Open Working Group on Global Governance for Health. The authors of the present paper assume that vulnerable groups can contribute to the definition of the SDG; furthermore, they have an active role in monitoring the implementation of these goals.

Methods

This study has a qualitative-quantitative, exploratory-descriptive approach and has followed two distinct phases: an epidemiological description and a comprehensive-interpretative approach from the social sciences. This design aimed at a comprehensive understanding of the reality and quality of life of a group of families living in extreme poverty. This community is located in the municipality of Ribeirão das Neves, in the metropolitan area of Belo Horizonte, state of Minas Gerais (Southeastern Brazil). In the quantitative phase, a representative sample of 336 heads of families was investigated, whereas in the qualitative phase, 27 professionals from health and social services, as well as from the Municipal Education Department, were interviewed.

For the interpretation of primary data, the theoretical approach was the concept of health promotion from the field of Public Health. The assumption is that social and economic determinants strongly influence the health and disease patterns of a society. The health status of a community is directly linked to the economic investments that have been made to promote social and human development and to reduce social inequalities. Therefore, health promotion depends on the integration of different fields of knowledge and on an interdisciplinary professional practice supported by shared principles committed to sustainable changes in the society (Carvalho et al., 2004).

Within a cross-sectional observational approach, previously validated questionnaires were administered in September/October

2014. A stratified and proportional sample was obtained from three administrative regions of the municipality of Ribeirão das Neves, with a total number of 2,605 households. Data for the sampling were obtained from the Registry of the local Social Work Department. All the 336 individuals who were interviewed were older than 18 years and were in charge of their households. The main criterion for inclusion was a monthly per capita income of R\$77.00 (around US \$22.00) or less.

To collect additional information on local problems and to investigate the pattern of health and social interventions targeted at these households, interviews were performed with members of a multiprofessional team involved in the planning and operation of actions directed to these extremely poor communities. The number of interviews was established by the criterion of theoretical saturation, in which the continuity or interruption of the interviewing process depends on the recurrence of the themes obtained in the answers. The semi-structured interview included the following topics: health; quality of life; available public services; main problems as perceived by the families; local public policies and their effects on health and livelihoods; suggestions to improve the individuals' health status and the quality of their lives. The collected data were processed through the technique of Content Analysis, with the use of systematic procedures for the organization, coding and classification of the ideas in order to identity meaningful indicators.

The social and demographic profiles of the interviewed professionals were the following: 11 professionals worked in the Health Department, 11 in the Social Work Department,

and 5 in the Education Department. Six among them had completed High School; 22 had university degrees and, among these, 14 had postgraduate degrees. The average age of the interviewed individuals was 35 years and their age ranged from 25 to 63 years. Among them, 17 lived in municipalities located in the metropolitan area of Belo Horizonte, and 10 lived in Ribeirão das Neves.

This study is part of a research and extension project funded by Fundação de Amparo à Pesquisa do Estado de Minas Gerais (Fapemig – Minas Gerais Research Foundation). Its main objective is to assess the quality of life of the extremely poor population of the municipality of Ribeirão das Neves, Minas Gerais. All ethical requirements established by Resolution 466/2012 (National Health Council) were met. This project was approved by the Research Ethics Committee of the René Rachou Center, through Resolution no 188.866. The formal cooperation with the Municipal Departments of Health, Education and Social Work was established through an Institutional Declaration of Co-participation. All subjects participating in this study were previously informed of the aims of the interviews and their authorizations were formally obtained when they signed a consent document.

Characterization of the community

The municipality of Ribeirão das Neves (322,659 inhabitants in 2015) is part of the metropolitan area of Belo Horizonte, the capital city of Minas Gerais, in Southeastern

Brazil. This metropolitan area (about 5 million inhabitants) includes 37 municipalities, many of which have a critical shortage of public services (transportation, healthcare, social work) and a high degree of population migration from rural areas. Furthermore, Ribeirão das Neves is characterized by the presence of a state-owned prison complex with five large institutions.

The sampled community included three residential district areas in the periphery of the city and the participants in the survey were enrolled in the Brazilian Federal Program of cash transfer "Brazil Sem Miséria" (Brazil without Misery), created in 2011. Eligibility for inclusion in this program was per capita income below the "extreme poverty" line, set around US\$ 20.00 per month as of September 2015. The general social-demographic characteristics of the surveyed population were:

- Average age: 41 years and 2 months.
- Illiteracy rate: 13%.
- Average number of residents/household:
 3.92.
- Percentage of individuals born at that municipality: 6.3%.
 - 14% were handicapped.
 - Completed primary school: 58%.
- 50.6% were doing informal work (no formal employment).
- Sanitation infrastructure (piped water + effluent collection): 77% of coverage.
- About 30% have never received social benefits from the government.

Regarding the daily journey to and from the workplace, 55.2% reported a duration of more than 120 minutes. The children's daily journey from home to school and back lasted an average of 30 minutes (45.1%), from 40 to 90 minutes (36.6%) or more than 90 minutes (9.8%). Journeys to healthcare centers lasted an average of 30 minutes for 26.1% of the households and between 40-90 minutes for 48.6% of them. For about 14.3% of the households, the journey lasted more than 120 minutes.

As part of this survey, the interviewees were asked to report their perception in relation to quality and access to public services in the region, as well as to report health problems and environmental issues, overall quality of life, and priority issues for development.

A list of twenty-four types of services was presented to the interviewees and only 8.6% indicated that these services fulfill all needs of the community. Table 1 provides a summary of these services and the access to them.

As for the subjective perception of the overall quality of life in the municipality, it was rated as good by 12.5% of the households, medium by 36.9% and poor/extremely poor by 49.5%.

With regard to the perception of poverty in the community, 39.6% of the households indicated that it has decreased in recent years, 46.1% informed that it has not changed, and 13.7% reported that it has increased.

When asked to indicate the main socialenvironmental problems of the community, the following answers were obtained:

- Security / Violence issues 66.7%
- Unpaved streets 64%
- No job opportunities 47%
- No leisure areas 58.6%
- Absence of pre-primary schools 47.3%

Table 2 presents the main health problems as reported by the heads of households, whereas Table 3 presents the overall determinants of poor health as reported during the interview.

Table 1 – Physical infrastructure of services and access to them in the community

Type of service	Presence in the residential area (%)	Effective access to service (%)	
Primary School	86.9	55.0	
Healthcare Center	86.3	86.9	
Police Station	25.3	15.0	
Public Transportation	87.5	90.0	
Garbage Collection	93.5	92.0	
Green Areas	18.8	14.9	

Table 2 – Main health problems as reported by the heads of households

	Main health problem		
1st	Drug/ alcohol abuse and addiction		
2nd	High blood pressure		
3rd	Asthma / bronchitis		
4th	Dengue fever		
5th	Influenza / common cold		
6th	Diabetes		
7th	Depression		
8th	Chronic diseases in the elderly		

Table 3 – Overall determinants of poor health as reported by the heads of households

	Most important determinant of poor health		
1st	Drug/ alcohol abuse		
2nd	Poor healthcare infrastructure		
3rd	No job / income		
4th	Lack of social support		
5th	Family stress/ emotions		
6th	Security issues/ violence		
7th	Air pollution		

When asked to indicate the main priorities for the improvement in their quality of life, the following answers were obtained:

- Job / income 44.6%
- Better health 40.5%
- Education 37.8%
- Improvement in security- 44.9%
- Leisure / Culture 35.5%
- Better housing 35.1%
- Better nutrition 36.3%
- Improved urban infrastructure 33.9%
- Social support / assistance for vulnerable families 24.7%

In these communities, well-known problems associated with poverty were found, such as unemployment, poor urban infrastructure, and difficult access to public services. The notable exception was a relatively good coverage of sanitation infrastructure in the households (better than the Brazilian national average). It is important to note a strong emphasis on alcohol and drug abuse as serious problems in the community, as well as the associated problems of family stress/ disruption and violence. Also important was the typical association of a heavy burden of chronic diseases (for example, hypertension) with poverty-related infectious diseases, such as dengue fever.

The main problems mentioned during the interviews performed with the healthcare professionals serving in this community were:

- 1) deficiencies in the coverage and quality of primary healthcare strategies
- 2) lack of a comprehensive diagnosis of the priority health issues for the community
- 3) poor provision of human resources, funding and technologies
 - 4) poor infrastructure of the local services

- 5) primary care actions with poor resolution
- 6) lack of inter-sectoral policies capable of benefiting the community's health status.

Discussion

It was observed that economic, political and cultural aspects have locally influenced the health status as well as the livelihoods of the poor community investigated in the municipality of Ribeirão das Neves. A high level of social inequality and deprivation of services and material goods strongly contribute to a poor quality of life, as reported by the major part of the interviewees.

In 2011, Brazil hosted the World Conference on Social Determinants of Health, promoted by the World Health Organization. In this event, the document "Rio Political Declaration on the Social Determinants of Health" was produced. It emphasized the need for a better equity in health as a way to promote wellbeing and quality of life and, therefore, global peace and security (Organização Mundial de Saúde - OMS, 2011).

The Social Determinants of Health range from experiences in early childhood, in family life, to access to education, economic stability, employment and community interactions. Other aspects that contribute to health status are related to environmental degradation and inequalities in societies, as all these factors, in varying degrees, affect fundamental rights, citizenship, human dignity and self-esteem and can generate "worsening of the living condition and degradation of health and social protection services" (OMS, 2011).

Simultaneously with a worldwide trend to stimulate governments, institutions, professionals and the general population to develop health promotion actions by modifying the Social Determinants of Health, global movements have emerged aiming at the elimination of poverty. After the Millennium Development Goals (MDG), set to be achieved in 2015, the new document Sustainable Development Goals is promoting a global agenda through its 17 main objectives and 169 goals, including some that were not achieved by the MDG. The first objective of the SDG is the "eradication of poverty in all its dimensions, including extreme poverty", which has been considered "the greatest global challenge and an indispensable prerequisite for sustainable development" (United Nations Development Programme - UNDP; Netherlands Development Organisation - SNV, 2009; United Nations, 2014).

The Sustainable Development Goals proposed by the Open Working Group of the United Nations have raised criticism due to their general nature, to the inclusion of targets difficult to be attained, and to the lack of stakeholders' participation in the process (Horton, 2014; Brolan et al., 2014; Yamey, Sheretta and Binka, 2014). The proposed 17 goals can be classified as having predominantly an economic focus (goals 1,8,9,10,12), a social-political focus (goals 4,5,7,11,16,17) or an environmental focus (goals 6,13,14,15). Health aspects predominate in goals 2 and 3. In these, the specific targets range from aspects included in the MDG, such as reduction in mortality rates and in the incidence of specific diseases, to newly included aspects, such as the need for universal health coverage, reduction in the incidence of diseases due to environmental contaminants, and training of health professionals in developing countries (United Nations, 2014).

Some of these are difficult to tackle in most developing countries due to lack of reliable epidemiological data. This is the case of the effects of environmental pollutants, since the fraction of the disease burden or mortality attributable to these hazards is not part of the national health information systems. It would be better to set as a target a reduction in the exposure to these chemicals, which is much easier to measure.

In the specific study described here, it is noteworthy the large proportion of the community members that referred to two frequently associated problems in poor areas: drug and alcohol abuse and social violence. In an analysis of violence data from 169 countries, it was found that homicide, robbery and assault correlated with low income, while alcohol consumption was associated with assault globally (Wolf, Gray and Fazel, 2014).

Violence is widely acknowledged as being an important public health problem due to a high loss of disability-adjusted life years (Krug, Mercy and Dahlberg, 2002; WHO, 2002). If we take homicides as an example, a report has shown that Latin America is the continent with the highest homicide rates globally, reaching 28/100,000 inhabitants, compared with a global average rate of 6.7/100,000, for the year 2012 (WHO/UNDP/UNODC, 2014).

In Brazil, homicides in 2012 reached the rate of 24.3/100,000 inhabitants. For the age group 0-19 years, homicides accounted for 16.3% of the deaths, while traffic accidents

accounted for 8.1% of the total (2013) WHO/ UNDP/UNODC, 2014; Waiselfisz, 2015a).

Particularly in the municipality of Ribeirão das Neves, for the years 2010-2012, the average homicide rate for the age group 15-29 years was 79.1/100,000 inhabitants (global average: 10.9 for 2012) (Waiselfisz, 2015b).

Most poor communities in developing countries are affected by high rates of crime and violent deaths, especially among young men. Although mortality due to traffic accidents is an important item in the global health agenda – as stated in item 3.6 of the SDG –, we propose that violent deaths should also be included due to their relevance to developing countries. The new target would be "To reduce the rate of violent deaths and premature mortality due to crime".

Also important in the studied community is the observed high rate of disabilities (14%), a situation that reflects the Brazilian national rates – 29.1% for the age group 15 years and older –, as reported by the 2010 population census. The national survey included several types of disabilities, ranging from mental illnesses to visual deficiencies and physical handicaps (Instituto Brasileiro de Geografia e Estatística – IBGE, 2012).

There are many determinants of disabilities and most of them should be the concern of preventive medicine strategies at both the primary and secondary levels. The global prevalence has been estimated to be 15-19% of the world's population (WHO; World Bank, 2011).

Lower income countries have a higher disability rate than higher income countries, a factor that adds to other aspects, such as poverty and inadequate infrastructure and services, that contribute to a decreased quality of life (Gopinathan, Cuadrado, Watts et al., 2014).

In view of their high prevalence, their social and economic impacts, and their absolute numbers, a target dealing specifically with prevention of disabilities should be included in goal number 3 of the proposed SDG.

In the Open Working Group's SDG proposal, although there was a reduction in the number of goals explicitly referring to health when compared to the former MDG, some of the 17 proposed goals are directly relevant to the promotion and preservation of the human population's health. This is the case of food security and nutrition, water and sanitation, equitable education, and the end of poverty. However, several non-health sectoral policies contribute to general wellbeing and, consequently, to healthy lives: employment, adequate infrastructure, gender equality, and environmental conservation. Therefore, it is possible to say that, in general, these goals contribute to health promotion, and some adjustments to the specific health targets under goal "3" would contribute to build a stronger health agenda. As has been pointed out, health issues cannot be approached in isolation from other sectors (Gopinathan, Cuadrado, Watts et al., 2014).

Conclusion

The recently proposed SDG and their associated targets address different policy areas that affect health and also include some specific health promotion objectives.

We have used information collected from a Brazilian community living in extreme poverty to suggest the review of some health targets based on this reality and on some priorities indicated by the community's inhabitants. This was an opportunity for the participation of a vulnerable group not only in establishing its own local development needs but also in contributing to a more general discussion on the new SDG.

From the survey, we raise the following issues with regard to the health targets under SDG goal 3, "Ensure healthy lives and promote wellbeing for all at all ages":

A- Due to its difficult measurement and because it is relevant to poor communities in developing countries, the proposed health target dealing with death and illnesses caused by hazardous chemicals (3.9) could be replaced

by another one which is more relevant to that social context.

B- A reduction in the death rates caused by crimes, especially among young adults, should be included as a new target, due to the social impacts caused by social violence in poorer countries.

C- Also deserving more attention is the prevention of disabilities and an improved assistance to disabled persons in less developed countries. This entails a range of actions from primary prevention to adequate rehabilitation.

The health targets newly proposed here – reducing the number of homicides and paying attention to the disability issue - fit well some of Horton's six "dimensions of sustainability" (Horton, 2014), especially the dimensions related to "capabilities", "wellbeing", and the "strength of the civilization".

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