Original article

Active city: considerations on the healthy city

Cidade ativa: considerações sobre a cidade saudável

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Abstract

The article presents a discussion on the relationship between urban mobility and health. A qualitative methodology was used to understand perceptions and representations of the concept of active city and promotion of quality of life in the constitution of a healthy city. A content analysis of the transcripts of 31 semi-structured interviews was carried out. The planning and design of public policies have an impact on the spatial quality of cities by promoting active mobility, which plays an important role in the population's health. Integrated planning enables the development of plans focused on quality of life and urban vitality, reorienting the logic of urban mobility. Combined with urban greenery and more humanized spaces, quality of life and health promotion can be activated.

Keywords: urban mobility; public policy; healthy urban planning; human city; active mobility.

Resumo

O artigo apresenta uma discussão sobre as relações entre mobilidade urbana e saúde. Com uma metodologia qualitativa procurou-se compreender as percepções e representações acerca do conceito de cidade ativa e promoção de qualidade de vida na constituição de uma cidade saudável. Foi realizada análise de conteúdo da transcrição de 31 entrevistas semiestruturadas. O planejamento e o desenho de políticas públicas impactam na qualidade espacial das cidades incentivando a mobilidade ativa com papel importante na saúde da população. O planejamento integrado possibilita a elaboração de planos com foco na qualidade de vida e na vitalidade urbana, reorientando a lógica da mobilidade urbana. A qualidade de vida e a promoção da saúde podem ser potencializadas por meio da integração de áreas verdes urbanas e da criação de espaços mais humanizados.

Palavras-chave: *mobilidade urbana; políticas públicas; planejamento urbano saudável; cidade humana; mobilidade ativa.*

Introduction

Motor vehicles are undeniable symbols of modernity and urban commuting. Historically, urban mobility in Brazil has represented a dynamic of conflict and confrontation between the logic of democratization and that of territorial planning, commercialization and spatial segregation. The car has reshaped the urban landscape and modern lifestyles, reconfiguring human needs in such a way that what was initially configured as an instrument of freedom has, over time, become a form of subordination, conditioning and limiting the autonomy of the individual in modern society (Speck, 2016). This means of transport has become an unequivocal symbol of the type of modernization and contemporary patterns of social relations in democratic capitalist societies (Rosin and Leite, 2019). In this context, active mobility (walkability and urban cycling), with its deep vernacular roots, while promoting important urban design values and characteristics, is difficult to accept as a model of urban vitality and social justice (Fajardo, 2017).

Since the mid-twentieth century, reflecting the intense and accelerated process of urbanization and the uncontrolled growth of cities, the mobility pattern of the Brazilian population has undergone strong changes. This pattern, characterized by the intense use of private motorized transport and the reduction and deterioration of public transport, has led to a large number of externalities, such as the increase in traffic accidents with victims, urban congestion and environmental pollution (Carvalho, 2016).

The concept of the healthy city originated in Toronto, Canada, in 1983. It was presented by Leonard Duhl of the University of California, Berkeley. Since the beginning of the movement, different definitions have been proposed, but the original concept still translates the idea in a way that can be clearly understood: a city that constantly creates and/or improves its environment - social and physical - and uses the necessary resources to help citizens mutually develop all the functions of life to their full potential (Estrada, Agüero and Cuenca, 2013).

The concept was presented as a utopia to be achieved. It was linked to the idea that the health problems of the population require, a priori, the creation of a healthy and prosperous environment. As a political and civil society mobilization, the aim is to prepare and implement interconnected municipal plans in a participatory and dynamic manner, because "healthy" does not refer to an end state, but to a condition that can and should be continuously improved.

Thinking about healthier cities from the perspective of new comprehensive and intersectoral planning that promotes health and quality of life requires a reorientation of urban mobility systems and plans. In this context, active mobility is a strategy for reorienting the perverse logic that ignores the human dimension of cities. It contributes to improving urban health levels by encouraging and facilitating the adoption of more healthier lifestyles.

Public policies can consider strategies to encourage populations to adopt more active daily behaviors. By reconfiguring urban design towards environmentally sustainable mobility

practices, such as active mobility, it becomes possible to promote greater safety and better health conditions in the urban space (Gehl and Svarre, 2018). Although there is still a strong consensus around the highway paradigm in addressing urban transport problems and formulating public policy, the idea of active mobility has emerged as a form of resisting and confronting the hegemony of traditional functionalist planning.

In this context, active mobility has become a strategic issue for promoting urban quality of life (Rosin and Leite, 2019; Edwards and Tsouros, 2008). Incorporating concepts and policies with innovative potential in urban services into the urban agenda, thus impacting 'competitiveness' between cities and mitigating environmental and social problems (Cruz and Paulino, 2019). It is essential to promote the integration of active mobility services and public transport, in order to improve environmental conditions related to walkability and urban cycling.

The aim of this article was to discuss, through perceptions and representations of the issue in contemporary cities, active mobility as a component of healthy urban planning that affects the quality of life of the population.

Methodological framework

Methodology can be understood as "the way of thinking and the practice of approach to reality" (Minayo, 2002, p. 16). It includes theoretical concepts, a set of techniques and the researcher's creative potential. The social practice of the research subject is characterized by the perception of its object as the producer of a material and symbolic activity. According to this model, knowledge is constructed through the relationship of 'subject' and 'object', as a product of the productive practice of human beings as social subjects (Aviles, 1996).

The subject of social science is essentially qualitative: social reality is the dynamics of individual and collective life, with all the richness of meaning that can be derived from it. Qualitative research answers very specific questions by delving into the world of meanings of human actions and relationships. "It works with the universe of meanings, motivations, aspirations, beliefs, values and attitudes that correspond to a deeper space of relationships, processes and phenomena" (Minayo, 2002, pp. 21-22). Social research is based on social data related to the social world, which is both the result and the construction of communication processes. It involves interpreting social realities and its best-known prototype is the in-depth interview (Bauer, Gaskell and Allum, 2003).

Building a *corpus* is the principle that allows for collecting data in a systematic way. It maintains scientific rigor as a fundamental principle, although it does not follow the logic of statistical sampling. Bauer and Aarts (2003) argue that the construction of a *corpus* typifies unknown attributes. In other words, it is important for analyzing unknown realities and grasping symbolic meanings and functions. Semi-structured interviews were the main technique used to understand the subject of this study, with the aim of building a *corpus* for analysis, consisting of transcripts of verbal reports obtained in the interviews. Thirty-one people were interviewed, living in different Brazilian states (Amapá, Mato Grosso, Paraíba, Paraná and São Paulo). The transcriptions of these interviews resulted in

a *corpus* of approximately one hundred pages. The interviewees were selected using the non-probabilistic sampling technique known as "snowballing", which uses chains of reference (Vinuto, 2014).

Thus, key informants were selected who indicated new contacts after the interview, the interviews were conducted in person and online via the Zoom platform, and the process was completed based on the criterion of saturation of representations. All research participants were previously informed of the study objectives, procedures, benefits and potential risks. They all agreed to participate voluntarily and signed the Informed Consent Form (ICF). Interviews followed a script developed according to the objectives of a broader doctoral project (Chart 1), with predefined analysis categories. It is important to note that in the process of interaction in the field, other categories emerged. The data analyzed and excerpts presented relate to a thematic section of this research. The formation of this *corpus* enabled information to be extracted from different angles of the phenomenon under analysis, allowing a greater understanding and integration of the data.

The interview is understood as a relational process. It consists of a proposal for dialogue and/or conversation on a specific topic, with clear objectives (Cruz Neto, 2002; Gaskell, 2003; Nicolaci-Da-Costa, 2007; Moré, 2015). The use of interviews interested us in the way people spontaneously express themselves and talk about what is important to them, and what they think about their actions and the actions of others. The use of a semi-structured interview, which is similar to an 'informal' conversation, sought to minimize or avoid the problem that arises when the interviewee says what he or she thinks the interviewer would like to hear.

Chart 1 – Semi-structured interview guide*

Trigger questions
1. Do you usually go to public spaces like squares and parks?
2. What are the reasons why you do (or don't) to to these spaces?
3. How do you feel when you are in these spaces?
4. In your opinion, what characteristics are most attractive in these spaces?
5. Do you feel safe in these spaces? Why?
6. What would a humane city look like to you?
7. What makes a city more human-friendly?
8. Do you think cities are designed for people?
9. What do you think quality of life is?
10. What do you mean by quality of urban life, a city with quality of life?
11. In your opinion, what is the relationship between public spaces in the city and quality of life?

* The trigger questions for the interviews were drawn up in accordance with the objectives of a broader study, which resulted in a doctoral thesis, and the data analyzed in this article is a thematic section of that thesis.
Source: developed by the author, in 2020.

Chart 2 – Objectives for analyzing the corpus in qualitative research

Objectives	Reflections
To overcome uncertainty	Is what I perceive in the message really there? Is my reading valid and generalizable?
To enrich reading	How do I go beyond the immediate and spontaneous glance, which is already fruitful in itself, to achieve an understanding of meanings, the discovery of latent contents and structures?
To integrate discoveries	In a frame of reference of the social totality in which the messages are inserted, how can I integrate the discoveries, beyond appearance?

Source: developped by the author, in 2020, based on Minayo (2004).

Minayo (2004) identifies three obstacles to be overcome in the process of analysis of a research corpus: 1) the illusion of transparency, i.e. the danger of spontaneous understanding, as if reality were clearly visible to the observer; 2) succumbing to the magic of methods and techniques, which leads the researcher to forget the essential, i.e. the reliability of the meanings present in the empirical material; 3) the difficulty of combining abstract theories and concepts with the data collected in the field. To this end, the rigorous and systematic analysis sought to achieve three objectives, as explained in Chart 2.

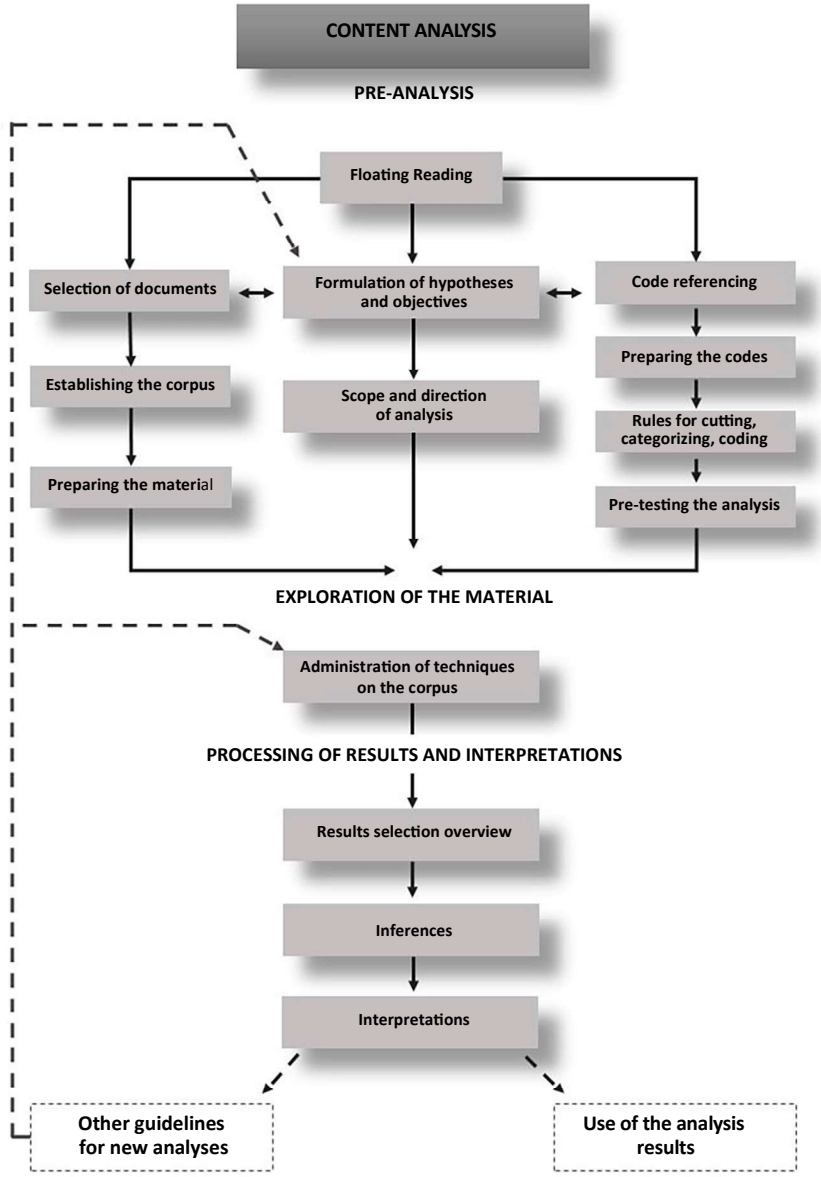
According to Bardin (2016), content analysis is the most commonly used term to describe how qualitative research data is handled; it's not a technical procedure, but a set of techniques and practices in social research. The inference that can be drawn from the analysis of the content of the research *corpus,* which provides additional information about a message or communication, is the common factor between the different techniques (Figure 1). It consists of the objective and systematic description of the content manifested in communications, facilitating their interpretation (Minayo, 2004).

For Bardin (2016, p. 48), content analysis is:

> A set of techniques for the analysis of communication in order to obtain, through systematic and objective procedures for the description of the content of messages, indicators (quantitative or not) that allow the inference of knowledge about the conditions of production/reception of these messages (inferred variables).

The aim of content analysis is the deduction of knowledge about the conditions under which communication is produced. This knowledge derived from the content can be of a psychological, sociological, historical or

Figure 1 – Stages and procedures in the development of Content Analysis

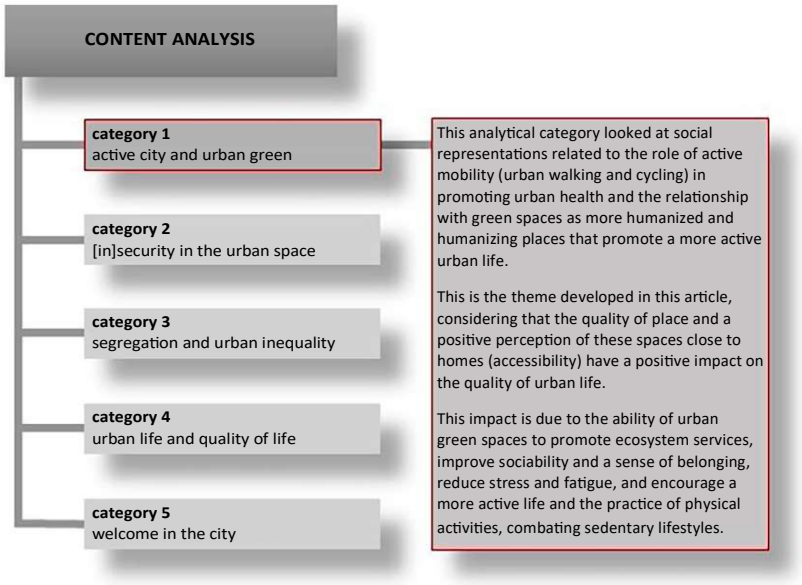


Source: Bardin, 2016.

economic nature, among others. The analyst works with indices that are carefully highlighted through more or less complex procedures. In the first stage, the description of these indices is fundamental, followed by inference as an intermediate stage. This produces a consistent interpretation as a result of the analysis process, giving meaning to the characteristics observed in the manifest content.

The webQDA software was used to help categorize and analyze the data, contributing to the rigor and quality of the analysis. The use of software to support the analysis of qualitative data is referred to in the literature as qualitative data analysis software (QDAS) or computer aided qualitative data analysis software (CAQDAS). In the case of webQDA, the functionalities of the tool are divided into three systems: 1) 'sources', corresponding to the research corpus, in this case the transcript of all the interviews; 2) 'coding', which allows the definition of categories and indicators; and 3) 'questions', which allows data to be cross-checked and systematized according to the configurations assigned in the first two systems (Souza et al., 2016). This article presents a thematic section of a doctoral thesis on the analytical category “active city and urban green” (Figure 2). Throughout the text, extracts from the interviews are presented to illustrate the analyses carried out. These are followed by identification codes to protect the anonymity of the interviewees.

Figure 2 – Analytical categories developed in the content analysis of the research corpus of the “Human City” thesis



Source: elaborated by the author, in 2020.

Active City: mobility for a healthy life

The importance of an active lifestyle for a healthy and high quality of life is widely recognized (Warburton, Nicol and Bredin, 2006; WHO, 2008; Kokkinos, 2012; Lima, Levy and Luiz, 2014; Warburton and Bredin, 2017). The presence of recreational areas, especially with qualified vegetation cover, makes spaces more attractive and improves the quality of urban life, as they provide opportunities for contact with nature, physical activity, socialization and respite from the hustle and bustle, improving physical and mental health.

> Ah, I like to go to parks, for example, because I like to exercise, and I like to do it out in the open, so that's one of the reasons that drives me, also the fact of having contact with nature, it's also important, I think it's nice, that would be it. [E-07.01]

> [...] we don't have much contact with nature, and even if it's artificial nature, the park provides a bit of that, seeing trees, the grass, seeing the sky more clearly, so that's why. [E-03.0]

> A green area, a green space, in other words, shade, a place... I'm not even talking about clean air, but a place that doesn't have visual pollution. A place that is pleasing to the eye. [...] there's a lot of green, there's a lot of trees, flowers, so it causes a feeling of well-being at that moment and that's nice, that's what I call pleasant. [E-02.03]

More important than the amount of green space per inhabitant, the quality and location of these areas are fundamental to promoting health and urban quality of life. It is important to take into account: the gap between resources and the allocation of areas, the relationship with urban density and the purpose of the space itself (Bolla and Vittadini, 2015). In addition to the amount of green space per inhabitant, in the context of humanizing cities and promoting health in urban spaces, it is essential to consider the equitable distribution of these areas close to homes. This proximity facilitates access for residents and promotes their integration into the urban fabric, encouraging practices such as walking or cycling for everyday journeys. In addition to quantity and location, the quality of these spaces plays a crucial role. They must be attractive, functional and contribute effectively to active mobility and the humanization of the urban environment.

There are many beneficial effects of physical activity on health conditions: prevention of chronic pathologies (cardiovascular diseases, strokes, diabetes, obesity, cancers, among others), reduction of the risk of dementia in the elderly and increase their level of autonomy, and a positive influence on some mental illnesses (Warburton and Bredin, 2017; Janssen and Leblanc, 2010; Kokkinos, 2012; Warburton, Nicol and Bredin, 2006). On the other hand, a sedentary lifestyle leads to a progressive decline in functional capacity in general. Thus, actions to promote this knowledge and to improve the scientific understanding of the relationship between health and physical activity have increased over time and should go beyond the practice of physical activity to address the relationship between human beings and their

physical environment, especially cities, and how this relationship can be strengthened in everyday actions (Lauria and Morgante, 2015; WHO, 2008).

Physical activity, integrated into urban life and with a view to quality of life, must be understood in a broader sense, as a reality that is part of everyday urban life, and in this way public policies can help to build and plan more active and healthy cities, not only by creating parks and green spaces, but by humanizing urban spaces.

> It is not about running on a treadmill while listening to an iPod. It is about using our bodies in our daily lives for the functions for which they were designed: walking often, running occasionally, and moving so that we exercise regularly at work, at home, when commuting, and in our leisure time. The authors go on to point out that physical activity is often simplistically perceived as a way to fight obesity, neglecting its impact on other physical diseases, but also on general wellbeing, sleep, quality of life, social relationships and even the environment (through mobility). (Lauria e Morgante, 2015, p. 10)

One third of the world's adults are physically inactive, and 5.3 million people die each year-about one in ten of all people who die each year-because of unhealthy lifestyles. This is similar to the number of deaths caused by smoking or obesity (which can also be combated by adopting a more active lifestyle). A sedentary lifestyle needs to be treated as a public health emergency and its risks highlighted, because the challenge is a global one: to make physical activity a priority not only for public health, but also for urban planning.

We should consider the idea that a healthy city is not one that has achieved some aspects of health, but one that is aware of its state of health and seeks to improve it, constantly creating opportunities in the built and social environment for the development of its citizens. World Health Organization (WHO) promotes local physical activity plans to help local governments develop programs to promote physical activity and more active lifestyles (WHO, 2008).

The Active City project aims to improve public health by encouraging people to be physically active for at least 30 minutes a day. Individuals can achieve this activity in a variety of ways: walking, cycling (or other active modes of transport), exercising, playing sports, playing in parks, gardening, climbing stairs or other enjoyable activities (Buffoli, 2014). In addition to the health benefits for the population, a city that invests in policies and programs to become an Active City can develop the following benefits:

- Savings in health and transport costs;
- Increased productivity of citizens and workers;
- Creating a more livable and attractive environment for residents, workers and tourists;
- Improved air and noise quality;
- Improved access to green spaces;
- Participatory regeneration of neighborhoods and increased social cohesion and community identity;
- Promoting and expanding social networks.

For Lauria and Morgante (2015), it is also important to quantify the economic benefits of an active lifestyle, both individual and

collective: savings for health systems in the treatment of chronic diseases resulting from sedentary lifestyles; savings in transportation, both individual and collective, with the use of active modalities (urban cycling or walking); and savings in environmental costs. Creating more active cities must guarantee and promote the construction of urban spaces of higher quality, consistent with human scale and dimension. To this end, Speck (2016) proposes some important steps: 1) put the car in its place; 2) mix urban uses; 3) adapt parking spaces; 4) allow the transport system to flourish; 5) protect pedestrians; 6) welcome bicycles; 7) create good urban spaces; 8) plant and maintain trees; 9) create pleasant and unique streetscapes; 10) set priorities, organizing which actions should be implemented first.

Public policies can be healthy by encouraging and enabling the adoption of practices that promote greater physical movement in the population's daily routine. The reconfiguration of urban design towards more active mobility has the potential to promote gains in urban safety and health (Gehl and Svarre, 2018). The excerpt below illustrates the importance of path quality and how public policy can have an impact on more active living.:

> Quality of urban life is *a city that invites you to go out*, that invites you to go everywhere so that even *the journey is something pleasurable.* Pleasurable in the sensory sense [...] every route I take, for me it's very worthwhile to walk here, now I live somewhere else, but when I had to walk 40 minutes to work, I didn't mind, I was fine, because it was nice to walk [...] the route I took, which was the furthest, which was near the river, was wonderful, so I think that's it, when the route also makes you feel, feel that pleasure of going to places. [E-08.01]

Combating the road-oriented paradigm with the promotion of active mobility and the human dimension of cities must seek to integrate it with public transport services, affecting the environmental conditions of walkability and urban cycling. The concept of walkability, which is one of the most emerging themes of the 21st century, is about the definition of attributes of the built environment that are conducive to walking, such as: accessibility, environmental comfort, attractiveness of uses, permeability of the urban fabric. Walking is the most democratic way to move around the city, and freedom of movement is inherent to the human condition. In everyday walking, pedestrians appropriate the built space and expand their perception of the urban landscape (Andrade and Linke, 2017). Another important concept is cyclability, which is related to the importance of the environment in the promotion of cycling, with cycling infrastructure being an essential factor in the promotion of this mode of transport (Lopes, 2021).

To improve the quality of urban life, investments have been made in active mobility as a practice that promotes healthier, longer and better lives. Walkable cities are a global solution to combat diseases related to sedentary lifestyles; people who live in walkable neighborhoods tend to engage in 90 minutes more of physical activity per week than those

who live in less walkable neighborhoods (Sallis et al., 2016). A walkable city or neighborhood is a dense urban environment with compact buildings with commercial activity on the first floor (active facade), wide and well-paved sidewalks, good lighting, and quality public spaces on streets protected from motorized traffic. This requires four factors: 1) destinations that are close and accessible on foot; 2) a built environment that is friendly to walking (human scale); 3) an environment capable of moderating climatic variations and providing relief from the excess of human activities; and 4) a local culture capable of increasing contact between people and creating conditions for social and economic activities (Vargas and Netto, 2017).

Promoting cycling as a mode of transport brings several benefits to cities and their citizens, such as a reduction in chronic diseases, lower rates of overweight and obesity, lower rates of mortality and road traffic injuries, and lower levels of air and noise pollution (Oja et al., 2011; Veras, Di Domenico and Marques, 2017). Although there is still a lack of consistent data on public health, urbanization, climate change and carbon emissions analysis to prove the isolated benefits of active mobility, the major global challenge at the moment is to reverse this situation and prove this causality (Tsay, 2017). Several bike-sharing policies have been implemented around the world, including in Brazil, contributing to this understanding.

A systematic review published by Wanner et al. (2012) found data suggesting an association between active mobility and higher levels of physical activity in the general population, although the data are not yet conclusive. Limited evidence was found that active mobility is associated with an increase in physical activity levels and lower body weight, but the authors note that the studies conducted to date were very heterogeneous and had cross-sectional methodological designs, which prevented definitive conclusions. In the following excerpt, the interviewee reports on the importance of bike-sharing policies and his perception of their closure in his city.

> [...] I thought it was a good idea to use the "yellow" [shared bicycle], but unfortunately it ended [...] I thought it was cool, because, for example, [...] we could have the option of taking a "yellow" here on the corner of our house, going to the park, running, taking the "yellow" and coming back, we certainly wouldn't drive, many people were going to college from there, so I think that a humanized city, investing in public transport, to avoid cars a bit... [E-01.03]

The inclusion of the bicycle as a regular mode of transport in urban commuting must be approached from the perspective of a sustainable urban mobility concept, integrated with collective modes of transport, especially high-capacity systems for long distances. From this perspective, the construction of cycle paths and lanes should be included, especially in areas of urban expansion. These structures should be networked into a cycling system that promotes and expands the provision of infrastructure and the inclusion of the concept of cycle routes, providing safer use of bicycles (Brasil, 2007). In the following

account, the interviewee sees more active mobility and the creation of spaces to support and encourage these practices as humanizing elements of the city.

> [...] about a more humane city, I think it would be a city that allows free access for people to walk, comfortably and safely, with shade, with lanes, where they can ride their bikes both for leisure and for work [E-04.02]

Cities with more cyclists are safer for both cyclists and pedestrians. A street shared with bicycles, once drivers are used to them, is a place where cars drive with more attention and care. Much has been said about the environmental or cultural conditions for the success of urban cycling, but the physical aspects of cities are the most important factors, in two ways: 1) the presence of urbanism (planning) that guarantees mixed use and urban density - with variable and interesting accessible destinations; 2) safer conditions and sufficient infrastructure (design), with streets designed to accommodate bicycles (Speck, 2016). However, a culture of active mobility must exist and be strengthened. In the following excerpt, the interviewee talks about his perception as a pedestrian in Amsterdam's public space, on the occasion of a trip.

> [...] I had heard that Amsterdam was a super friendly city, because everyone can ride a bike, and it's super cool... And when I went there, as a tourist and as a pedestrian, I found it to be a very unfriendly city, because I was almost run over by the bicycle, so I didn't think it was nice. I think all instances have to be respected... [E-03.02]

This suggests that Brazil still lacks a culture of urban cycling and coexistence between pedestrians and cyclists. This indicates the need to consider all aspects of mobility in the urban space, including education for citizens. This is because Brazil's history has been focused on cars, which has led to many problems. To make a change, people need to learn about new ways of thinking.

Since it has altered the urban landscape and lifestyles, the automobile and the way of getting around centered on it need to be reoriented to a more human scale, such as walking and cycling, with significant potential for promoting social justice (Fajardo, 2017). Different perceptions and representations link the automobile to the urban scale, sometimes from a critical perspective, and sometimes highlighting how the presence of the automobile shapes the perceptions and behaviors of urban dwellers:

> So what happens is that it [city/planning] has prioritized certain human desires, or certain desires of people, or of certain groups ... [E-06.03]

> [...] access to other parks is also easy by car [...] they are designed for cars, I think this is a general predominance in my city and in many others, they think more about the mobility of cars than of people, than of all people, and then again, designed for which people? who are the people who have cars? So that's a problem, the city is probably designed for people and by people, *more for some people*. [E-04.01]

> [...] I see my reality a lot, because of the question of comfort, because the roads aren't safe, they don't have cycle lanes, they don't have cycle paths, the question of safety, people too, *the car has a lot of preference*, the motorcycle has a lot of preference, to the detriment of the pedestrian. [E-04.03]

> Although now, in the past, traffic, which is something that can also be humanized, I think, I think now it's getting very chaotic, so at this point it's already falling short, in the past it wasn't like this, today it takes me an hour to get to work by car, before, about 10 years ago, it wasn't like this, so it's already getting bad here, it's lowering the quality of life. [E-01.05]

This analysis shows that a paradigm shift is needed, rethinking cities so that they are healthier, through a new form of comprehensive and intersectoral planning that promotes health and quality of life. This healthy urban planning must be based on the logic of reorienting urban mobility systems and plans. Active mobility is a reorientation of the perverse logic that fails to consider the human dimension of cities, helping to improve urban health levels by encouraging and facilitating the adoption of more active lifestyles. In this context, urban greenery is closely related to the promotion of more active and healthy lifestyles.

The role of urban greenery in active Mobility

There is a lot of evidence that walking and enjoying open spaces is an extremely important tool for health. However, this concept has not yet been translated into widespread social behavior or effective public policies. The results of scientific research on lifestyles are widely disseminated in the media, even in simple and straightforward ways. A large part of the population knows that a healthy lifestyle (adequate nutrition and regular physical activity) improves health, but good communication and awareness raising are not always sufficient to induce the spread of good practices. Cultural factors, local environmental conditions, lack of free time, among others, influence the ability to adopt good behaviors. The provision of pleasant, safe and aesthetically pleasing places remains a low-cost, simple and effective formula to facilitate and promote healthy choices for a more active life (Lauria and Morgante, 2015).

Important population-based studies conducted in Tokyo, Japan (Takano, Nakamura and Watanabe, 2002) and the Netherlands

(Maas et al., 2009) provide relevant evidence on the relationship between urban green spaces and health (Chart 3). An active lifestyle has a direct impact on physical health, but also promotes psychological well-being and social relationships. Choosing a healthy lifestyle should not only be an individual responsibility, but should also be shared by the community, through public policies that promote the appropriate structuring of the territory and the social fabric for a level of daily physical activity. In this respect, the role of urban green spaces is fundamental, as they have a positive impact on health in a number of ways: by encouraging an active lifestyle, by allowing people to meet and socialize, and by mitigating the effects of environmental pollution (noise and air).

In fact, the presence of adequate green spaces close to homes – in the neighborhood – can influence longevity through a health--protective function, especially for the most socially and economically vulnerable groups, especially because of the cost and difficulty of accessing private sports or leisure facilities. We can see this in the extracts:

Chart 3 – Relationships between the proximity of residential green areas and the health of the population

TAKANO, T.; NAKAMURA, K.; WATANABE, M. (2002). Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces. Journal of Epidemiology and Community Health, United Kingdom, v. 56, pp. 913-918.
This study evaluated the associations between the presence of green areas near homes and the survival of thousands of elderly people in Tokyo. The main premise of the research was that a sedentary lifestyle was a central risk factor for morbidity and premature mortality, and for reduced physical functionality in the older population. Associations were found between longevity and the environmental conditions of the home. By means of a longitudinal cohort study and taking into account multiple variables relating to physical, economic and social reality, the effects of green spaces as a support for promoting the health of elderly citizens in densely populated urban areas were evaluated. According to the authors, there was a positive correlation between 5-year survival in relation to the amount of space available for walking, the availability of parks and tree-lined paths near the home and the amount of time the home was exposed to the sun.
MAAS, J.; VERHEIJ, R. A.; VRIES, S.; SPREEUWENBERG, P.; SHELLEVIS, F. G.; GROENEWEGEN, P. P. (2009). Morbidity is related to a green living environment. Journal of Epidemiology and Community Health, United Kingdom, v. 63, n. 12, pp. 967-973.
In this study, an important part of the Dutch population (population monitored by primary care physicians) was considered, based on information from the health system and the territorial determinants of health monitored by the system. Data on some chronic diseases and some environmental characteristics were cross-referenced, especially the presence of green spaces within a radius of 1 km to 3 km from the residential area (verified by postal code). The results of the study showed a strong relationship between green space and health in several chronic diseases in those individuals who lived less than 1 km away from parks or green areas: coronary heart disease (angina and heart attacks); skeletal disorders; anxiety and depression; respiratory and urinary tract infections; headaches and vertigo; diabetes. Although the study did not consider small green spaces, the importance of objectively relating certain parameters remains, especially as it is very representative of the local population (approximately 345,000 individuals).

Source: developed by the author, in 2020.

> [...] and also having recreational spaces *that everyone could access,* that weren't so restricted. We think that in the outskirts there aren't as many spaces as in the more affluent places, with people who have better financial conditions. So it would have to be for everyone, not just a segment of the population. [E-03.01]

> [...] but there's a lack of parks on the outskirts, there's a lack of more parks, there should be a lot more, given the size of the city, the number of inhabitants. [E-04.01]

> In the suburbs, people don't even have trees in the street, it's more arid, there's no places for them to gather, so I think there's a lot missing... [E-03.02]

To promote an active lifestyle in people's daily lives, it is necessary to activate an integrated system of pedestrian and bicycle routes, integrated with public transport, and a system of safe and attractive green spaces, with open spaces of different sizes and multifunctionality. Green spaces must also have a good territorial layout, availability, accessibility and connectivity to ensure enjoyment between the different scales.

Outdoor public spaces such as parks, small squares and other community spaces are important for the quality of urban life (Nucci and Cavalheiro, 1998; Costa and Ferreira, 2009; Pina, 2011; Londe and Mendes, 2014; Larson, Jennings and Cloutier, 2016; Scheuer, 2016). In many cities, these spaces are subject to different interests, often private and contested. If the goal is to achieve a qualified and healthy environment, it is necessary that these spaces do not have a single purpose, but different purposes, with an integrated and coordinated approach. The many functions of these public spaces, related to human activities and the physical environment, overlap in order to achieve a healthy urban environment, and it is necessary to recognize these functions and the different organizations involved that must work in harmony. These open spaces require a coherent strategy between organizations if they are to play a key role in protecting and promoting the health of the population. There are many ways in which people can enjoy contact with the elements of nature in green spaces, whether through leisure, social or cultural activities, or physical exercise, but especially in the context of more active mobility (Santana et al., 2007).

If we understand the city as a system, we must consider that the components that make it up – social, economic, cultural and environmental – are integrated for the benefit of citizenship and quality of life. In this way, the population, brought together and settled as a society, would seek to satisfy the needs of living together, providing goods and services that improve their living conditions, as a result of a harmonious relationship between man and his environment (Benavides, 2011).

> [...] nature itself, I think there has to be a lot of nature, there has to be little asphalt, little asphalt and more grass, but land, trees, and there have to be courts too, green areas, equipped courts [...] [E-02.01]

> [...] because we want to be closer to nature, because we're in the city, so... it's like an escape to nature, the more trees there are, the more care, the cleaner... [E-01.01]

In this context, green areas contribute to the quality of urban life, not only by improving the environment and the ecological balance, but also through social development that benefits the well-being and the physical and mental health of the population. In this way, they provide the conditions for [re]bringing man closer to nature, with structural conditions that favor the practice of physical and recreational activities, as well as more active mobility. If they have adequate infrastructure, environmental quality and safety, among other positive factors, they can be attractive areas for the population, with a positive impact on the quality of life (Londe and Mendes, 2014). Different perceptions relate the practice of physical activity in parks and green spaces as beneficial.

> In order to have quality of life, a lot still needs to happen. [green spaces] also, also, because people come here to walk, sometimes they don't have access to a gym, but they can come here, walk, have quality of life. [E-01.02]

> [...] I think it's very much related to quality of life, both physical and mental, because these are spaces for exercising the body in different ways... [E-05.01]

> [...] in order to improve quality of life and have leisure options, and as I say, everyone has leisure, some like running, others like walking, others like skateboarding... [E-01.03]

> It's very good, it increases your quality of life, you go out, breathe the fresh air, do some physical activity, get some sun, socialize with your family, your family rides bikes... [E-01.05]

According to Santana et al. (2007), the survey of urban planners in cities participating in the European Network of Healthy Cities shows that accessibility to green spaces varies from country to country. However, one measure that can be used as a basic criterion for checking the availability of spaces is the distance between these spaces and where users live. In Brussels, Copenhagen and Glasgow, 100% of residents can reach a green space within a 15-minute walk, while in other cities this percentage is much lower: in Bratislava and Kiev, for example, only 47% of residents can do the same. Unfortunately, in the Brazilian reality, access to green spaces is still not perceived as being so close and accessible to everyone.

> For me, yes, I live near a park, and access to other parks is also easy by car, but I understand that there are few parks in the city, that they aren't on the outskirts, they don't serve the entire population, we see the lack of public spaces here when we see the movement at weekends, the amount of people there are, people really do go, and they make journeys to get to the park, because it's not near everyone's house. So, I think that the parks that exist are well located, but there are a lack of parks on the outskirts, there are a lack of more parks, there should be a lot more, given the size of the city, the number of inhabitants. [E-04.01]

> [...] I think it's wonderful, especially the fact that you have the woods and parks so close to the center, so close to us, that we don't have to take a car to walk somewhere, we can leave the house walking, that's everything to me... [...] you have to take a car to go there and then walk, and not here, here you can walk, because it's so close, and if you live somewhere else there's another forest, there's another trail very close by, in the city itself... [E-08.01]

Green space policies should aim to create an urban green network, accessible to all residents, that can be organized around wooded areas and water bodies to allow the city to breathe and for biotic and abiotic flows to occur, contributing to increasing urban biodiversity. This should be complemented by a network of squares and other outdoor facilities throughout the city, creating a system of open spaces (Tardin, 2008; Schlee et al., 2009; Macedo et al., 2009). It is important to note that the functions of health, well-being and quality of life merge with those of water management, pollution reduction, climate change mitigation, recreation, urban food and fuel production, CO2 sequestration and support of biodiversity/habitat for animal species (Barton and Tsourou, 2004).

Final considerations

Addressing the underlying logic of urban production and the challenges of sustainability, urban mobility, health promotion, and urban design constitutes a complex undertaking necessitating systemic, innovative, and integrated approaches. The discussion presented, based on the analysis of social perceptions and representations of the contemporary city, identified the need to outline public policies focused on active mobility (walkability and cyclability) as part of health promotion in the urban space. To this end, Healthy Urban Planning, as an integrated way of designing plans with a focus on quality of life and activating urban vitality, is presented as a strategy for building a healthy city.

Thinking about healthier cities must include a reorientation of urban mobility systems and plans. Active mobility is a reorientation of the perverse logic of road-based urbanism, which ignores the human dimension of cities. By pursuing these objectives, it helps to improve levels of physical activity and, consequently, urban health, by

encouraging and facilitating the adoption of more active lifestyles. Urban green spaces are closely linked to the promotion of healthier lifestyles and healthier cities.

In order to promote an active lifestyle among the general population, it is essential to establish a comprehensive network of pedestrian and cyclist routes that are integrated with public transportation systems. Additionally, the creation of safe and appealing green spaces, encompassing diverse sized open areas, is crucial. Green spaces must also have a good territorial layout, availability, accessibility and connectivity to ensure flow between the different scales. Further studies, preferably population-based, are needed to measure and establish correlations between urban design and urban health indicators, contributing to the understanding of the role of public policies for active mobility and health promotion.

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