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## A project partnership between Brazil and the United Kingdom discusses health

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The study investigated the impact of physical activities on middle and lower-class communities

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Riding a bike through the city can be just a leisure weekend activity, however, this practice can be included in the daily routine as a means of transportation, and even replace cars. With that in mind, a group of Brazilian and British researchers tried to identify the relationship between physical activities and the daily routines of the middle and lower-class populations in both countries. The project was a partnership between four universities: Universidade Federal do Rio Grande do Sul (UFRGS), Universidade Federal de Santa Catarina (UFSC), Universidade de Brasília (UnB), and the Oxford Brookes University. The project was funded by the Newton Fund – a British government initiative to promote research, science and technology with partner countries – and by the FAP-DF (Fundação de Apoio à Pesquisa do Distrito Federal), a Brazilian institution with a similar goal of promoting

The study is the result of a 2015 international collaborative research funding call, made by the Newton Fund, to be used in projects between Brazil and the United Kingdom. The inspiration came from the Healthy Cities movement,



Healthy urban mobility is the use of non-motorized means, such as bicycle or on foot, - Picture: Ramon Moser/UFRGS' archive

created by the World Health Organization (WHO) in 1978, which aims to understand how the urban environment affects the health of the population and improves their quality of life.

The cities where the universities are located were the ones chosen for the study: Brasília (the Brazilian capital city), Florianópolis, Porto Alegre (capital cities of the two southernmost states of Brazil) and Oxford (in the south of England). The researchers chose three neighborhoods in each Brazilian city and two in the English one. The neighborhoods were selected for their demographic differences and for the obstacles imposed on mobility; however, they all resembled each other in terms of location: they were located close to the city's downtown. In Porto Alegre, Menino Deus, Vila Tronco and Vila Cruzeiro were the researched neighborhoods; the first is a middle-class neighborhood, and the others are considered to be culturally and socioeconomically segregated.

Healthy urban mobility is considered to be made by non-motorized means, for example by bicycle or on foot, and as part of day-to-day travel. Therefore, the use of cars would not suit the concept, since it does not bring benefits to the user's health. "But we later realized that, especially for the elderly and people with disabilities, having more mobility, whether active or motorized, is enough to improve the quality of life," explains Júlio Vargas, one of the authors of the study, and a professor at UFRGS' Department of Architecture.

To guide the stages of the study, the group used a mixed-method approach – which can be summed up in the combination of the qualitative method and the quantitative method – along with the active participation of the community and project managers. The research was divided into five components, considering the areas of expertise of the team members: urban planning, transport studies, public health, and environmental psychology.

For the spatial mapping and geoprocessing, an analysis of the configuration of the streets, the infrastructure, and the availability of public transportation was made. A survey was designed to collect data from residents – quality of life and lifestyle, monthly income, neighborhood perception, physical activities – and applied at random addresses. At the end, about 1100 samples were collected in each Brazilian neighborhood and 272 in the British one. In the interviews, carried out with a total of 99 participants, a timeline was requested, covering the trajectories – changes in residence, education, work – carried out throughout life. For the escorted journey, another 99 people agreed to transit, be it on foot or by bicycle, while being recorded. The local community also engaged in the study through other activities, such as the production of videos concerning the situation of mobility in Oxford, and the making of a "string of wishes" (varal dos desejos) in the capital, Brasília. The results collected by the four teams were subsequently added to the material used for publishing and theoretical production.

Each researcher was in charge of collecting data from their city, to which they had the option to assemble a work team to assist them. "A very clear difference emerged between me and my other colleagues, who are already seniors. They are all members of their universities postgraduate departments. So, in Brasília and Florianópolis, the research was very much tied to the deadlines of master's and doctoral students. Because I am not so involved with the postgraduate department, I had more freedom to assemble my team for the project. Then I took students from architecture and urbanism, environmental engineering, geography, psychology and public health. I went after UFRGS' students with different profiles who could be part of a multidisciplinary team," says Professor Júlio Vargas, who chose a diverse team to cover different areas of the research.

In the Brazilian cities, mainly Porto Alegre – where the professor is stationed –, it was found that the precariousness of public transportation services, combined with the high prices of tickets, compels residents of low-income communities to practice forced mobility. Thus, walking becomes the only option for these people, since they do not have a car and cannot pay for the bus fare. The survey also pointed out that the lack of security, greenery, and infrastructure on the streets is an obstacle to the adoption of a healthy urban mobility.

Other factors that hinder mobility also appeared in the results obtained in the four cities: lack of bike lanes, poor street lighting, public safety issues, and the lack of sidewalks maintenance. In Brazil, problems such as the intense traffic of cars at high speed, and the use of sidewalks as parking spaces were also noted. These issues make it impossible for residents to walk around comfortably, not to mention the high crime rate.

According to the professor, before improving the quality of sidewalks, it is necessary to consider them as part of the city through the regularization and formalization of the situation of the residents and the neighborhood itself. He highlights the physical differences between well-maintained middle-class and low-income neighborhoods, usually located on steep slopes, without regular water, electricity and basic sanitation services. These difficulties end up compromising more than the lack of greenery and good quality sidewalks.

The daily practice of mobility can also help prevent chronic non-communicable diseases, such as cardiovascular diseases. However, mobility exercise alone – without proper changes in eating habits, reduction of alcohol intake and smoking – may not enough to meet any of the expected results. This was one of the research's main findings: the high consumption of alcohol. Florianópolis had the largest number of alcohol consumers, 71%, while Oxford had the lowest, with 39.8%. As for the practice of physical activities, in the four cities, around 20% to 25% of the interviewees said they exercised regularly. In addition, it was assessed whether residents had health problems – the highest rate was hypertension in Florianópolis, with 38.9% – or overweight – of which Porto Alegre and Oxford had close numbers, with 40.7% and 40.6%, respectively. According to Júlio, physical activity ends up being part of the daily routine of a large part of the population of low-income communities, however, it comes with culturally constructed bad eating habits.

Despite the positive outcome of the project, the teams faced some cultural barriers, such as the lack of resources, which made it impossible to gather information from a third neighborhood in Oxford and forced the British team to use a method of delivering questionnaires and collecting data, unlike the mixed approach used in the other investigated cities. Still in Oxford, residents were reluctant to allow the researchers to measure their waist circumference, a data component which ended up being left out. In addition, there, the number of people interviewed was lower, since many residents found the questions invasive and claimed to be overwhelmed with other surveys carried out by the local city hall.

The study lasted three years and researchers are now in the stage of writing scientific articles. "To continue research at this level, we are going to have to go after funding. The work is over, the scientific repercussion continues through the publishing of articles, but for for the investigation to be further expanded we need new funding," he explains. Field work counted on the participation of governmental and civil society entities, such as NGOs, residents' associations and an organic fair. The results and other materials were published on a website created for the project, in the press, and in booklets distributed at events held at the City Council of Porto Alegre, at the Center for Improvement of the Câmara dos Deputados (Brazilian House of Representatives), in Brasília, and at the University of Oxford.

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