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A Geographical Method for Assessing Social Distancing as a Preliminary Tool for Implementation Planning. A Case Study: Chapinero, Bogota

[Método geográfico para la evaluación del distanciamiento social como una herramienta preliminar para la planificación de la implementación. Caso de estudio: Chapinero, Bogotá]

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Abstract

Due to the COVID-19 pandemic, rethinking lifestyle and quality of life through the appropriate use of public space is necessary. This study aims to verify the measures of social distancing in Chapinero Centro, which, according to the mobility survey 2019 of Bogota, has an average of 4,633 trips on foot between 10 and 20 minutes according to the travel patterns in the areas of transportation analysis studied. Despite having great social and economic dynamics, this area has small sidewalks that hinder compliance with social distancing, which is necessary to mitigate the coronavirus pandemic. Therefore, geographic analysis of this area was performed using data provided by the vulnerability map of the Coronavirus web in Colombia by the National Planning Department, the Institute for Health Technology Assessment, and the National Administrative Department of Statistics. This geographic analysis made it possible to calculate the variables of population indicator per block, maximum population per sidewalk, and the criterion of compliance with social distancing. When developing the vulnerability and social distancing maps, it became evident that 37% of the sidewalks do not comply with the 2 meters of social distancing. This finding led us to propose extending them to 3.5 meters and reducing this same value in the vehicular space to design an effective social distancing map. We concluded that the widening of the sidewalks allows flexible use of the streets oriented to a healthy distance, which could be complemented with an accessibility study and a study of vehicular traffic to measure the impact of this intervention. © 2022, Pontificia Universidad Javeriana. All rights reserved.

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coronavirus; Pedestrian mobility; social distancing

Indexed keywords

Engineering controlled terms

Pavements

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Abstract

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