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Spatial index of urban environment for health

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Works for me

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ABSTRACT

Purpose: The objective was to design an urban index for the identification of urban environment propensity for physical activity (PA).

Methods

Geographic contextualization

Determine social and demographical features. For the present study, the municipality of Jataí is located in the southwest region of the state of Goiás, Brazil, has an area of 7,174.225 km², and an estimated population in 2017 of 98,128 people (IBGE, 2017). Its relief is flat and mildly undulating, with an altimetric variation between 500 and 1,100 m. Depicted localization area Figure.

Data sampling

Determine the local. For the present study, field data collection was carried out in urban public environments that showed the highest attendance rates of PA practitioners and with suitable structures such as walking/running tracks and outdoor gyms.

To identify the spatial urban health index (SUHI), data on demographic, environmental, and urban structure were collected. For the present study were consider number of residents (IBGE, 2011), parameters regarding road connectivity and land use and vegetation cover (SIEG, 2018), and the urban area slope parameter generated by the Shuttle Radar Topography Mission (MDE – SRTM), with a spatial resolution of 30 m (EMBRAPA, 1979).

Use GIS. For the presente study, a geographic database was prepared with GIS ArcGis 10.5.1 (ESRI v. 2018) for the composition of the physical and demographic analysis parameters and mapping of the SUHI by using the weighted multi-criteria overlay method.

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

David M. Oliveira, Mara L. Marques, Daniel dos Santos, Maria Claudia B. Spexoto, Giovanna B. Togashi, Danilo A. Massini, Dalton M. Pessoa Filho. Spatial index relating urban environment to health lifestyle and obesity risk in men and women from different age groups. Plos One. 2020

ATTACHMENTS

[Paper_parks_Methods.pdf](#)

GUIDELINES

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Use GIS. For the presente study, a geographic database was prepared with GIS ArcGis 10.5.1 (ESRI v. 2018) for the composition of the physical and demographic analysis parameters (Table 1) and mapping of the SUHI by using the weighted multi-criteria overlay method (Equation 1), which allowed to obtain a representativeness index (km²), classified by applying the quantile method, into four gradation levels ranging from unfavorable to very favorable to PA

MATERIALS TEXT

Number of people per sector
Urban green space per people
Relief



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