

Investigating the association between streetscapes and mental health in zhanjiang, China: using baidu street view images and deep learning

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Statement of the Problem: Mental health is one of the main factors that significantly affect one's life. Previous studies suggest that streets are the main activity space for urban residents and have important impacts on human mental health. Existing studies, however, have not fully examined the relationships between streetscape characteristics and people's mental health on a street level. This study thus aims to explore the spatial patterns of urban streetscape features and their associations with residents' mental health by age and sex in Zhanjiang, China.

Methodology & Theoretical Orientation: Using Baidu Street View (BSV) images and deep learning, we extracted the Green View Index (GVI) and the street enclosure to represent two physical features of the streetscapes. Global Moran's I and hotspot analysis methods were used to examine the spatial distributions of streetscape features.

Findings: Both GVI and street enclosure tend to cluster, but show almost opposite spatial distributions. The Results of Pearson's correlation analysis show that residents' mental health does not correlate with GVI, but it has a significant positive correlation with the street enclosure, especially for men aged 31 to 70 and women over 70-year-old. These findings emphasize the important effects of streetscapes on human health and provide useful information for urban planning.

Biography

Anjing Zhang is interested in evaluating and promoting the mental health from the prospective of geography. Her findings on the relationship of streetscape and human mental health provide new insights for mental health improvement. Her work is based on the previous studies (Li, et al., 2018). Her findings are useful for the urban space design and mental health.