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Spatial Differentiation of Elderly Care Facilities in Mountainous Cities: A Case Study of Chongqing

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Abstract : In this study, a web crawler was used to collect POI sample data from 38 districts and counties of Chongqing in 2022, and ArcGIS was combined to coordinate and projection conversion and realize data visualization. Nuclear density analysis and spatial correlation analysis were used to explore the spatial distribution characteristics of elderly care facilities in Chongqing, and K mean cluster analysis was carried out with GeoDa to study the spatial concentration degree of elderly care resources in 38 districts and counties. Finally, the driving force of spatial differentiation of elderly care facilities in various districts and counties of Chongqing is studied by using the method of geographic detector. The results show that: (1) In terms of spatial distribution structure, the distribution of elderly care facilities in Chongqing is unbalanced, showing a distribution pattern of 'large dispersion and small agglomeration' and the asymmetric pattern of 'west dense and east sparse, north dense and south sparse' is prominent. (2) In terms of the spatial matching between elderly care resources and the elderly population, there is a weak coordination between the input of elderly care resources and the distribution of the elderly population at the county level in Chongqing. (2) In terms of the spatial matching between elderly care resources and the elderly population, there is a weak coordination between the input of elderly care resources and the distribution of the elderly population at the county level in Chongqing. (3) The analysis of the results of the geographical detector shows that the single factor influence is mainly the number of elderly population, public financial revenue and district and county GDP. The high single factor influence is mainly caused by the elderly population, public financial income and district and county GDP. The influence of each influence factor on the spatial distribution of elderly care facilities is not simply superimposed but has a nonlinear enhancement effect or double factor enhancement. It is necessary to strengthen the synergistic effect of two factors and promote the synergistic effect of multiple factors.

Keywords : aging, elderly care facilities, spatial differentiation, geographical detector, driving force analysis, Mountain city
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