

43.人居环境与宜居韧性城市

Supply-demand matching assessment of the public service facilities in 15-minute community life circle based on residents' behaviors (顾及居民行为需求的 15 分钟社区生活圈公共服务设施供需匹配分析)

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摘要：15-minute community life circle focuses on residents' daily needs and aligns with “people-oriented” planning. However, the personalized needs of residents have been ignored in literatures, resulting in the mismatch between the supply and demand of public service facilities (PSFs) as well as the unfair supply of different population groups among communities. Based on community life circle, we proposed a multi-group huff three-step floating catchment area (MGH3SFCA) model to evaluate the supply-demand matching levels of PSFs for different age groups in Nanjing, China. The results showed that the supply-demand between PSFs and different age groups was relatively mismatched in the main urban area of Nanjing, and medical care facilities were seriously inadequate to fulfill the needs of any age group. Comprehensive accessibility varied depending on the frequency of visits to PSFs for each age group. Although age groups had a similar spatial pattern of comprehensive accessibility at community and building scales, the service coverage rate of PSFs was larger at the building scale, and the assessment of supply-demand matching of PSFs at the building scale was more accurate and reliable. The findings would provide important decision-making support for the targeted allocation of PSFs in 15-minute community life circle. (“15 分钟社区生活圈”关注居民的日常需求，符合“以人为本”的规划要求。然而，现有研究忽略了不同居民群体的异质性需求，导致公共服务设施供需错位和不同群体不公平供给等现实问题。基于社区生活圈，本研究提出了多人群哈夫三步移动搜寻法，分别评价南京市主城区社区尺度和建筑尺度下不同年龄群体的公共服务设施供需匹配水平。结果表明：南京市主城区公共服务设施与居民群体之间存在供需错配的问题，医疗卫生设施无法满足任一群体的需求。综合设施可达性因不同年龄群体访问设施的频率而异。尽管在社区和建筑尺度下，综合设施可达性呈现出相似的空间格局，但建筑尺度下计算得到的公共服务设施服务覆盖率更大，评价结果更加准确可靠。研究成果可为精准配置 15 分钟社区生活圈的公共服务设施提供决策依据。)(创新点： 1、研究视角：相较于传统关注设施本身的研究，本研究不仅将社区生活圈理念引入设施可达性评价，还考虑了不同居民群体对各类公共服务设施的实际需求，更符合以人为本规划的要求。 2、研究数据：相较于传统以行政区划或人口格网为对象开展的研究，本研究以精细的住宅楼为对象开展设施可达性评价，评价结果更加科学准确。 3、研究方法：基于人口异质性，通过细化人口群体，对传统 2SFCA 中只考虑单一人口群体进行了修正。)

关键词：Community life circle (社区生活圈); Public service facility (公共服务设施); Behavioral demand (行为需求); Two-step floating catchment area (两步移动搜寻法)

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