

Assessing Public Open Spaces Availability and Distribution in a Socially Challenged City: A Case Study of Riyadh, Saudi Arabia

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Abstract : Public Open Space (POS) availability and distribution among urban communities have a central role to promote community health. However, growing health challenges in a city would raise attention to the planning quality of these community's assets. This research aims to measure the existing availability and distribution equity of POS in the context of Saudi Arabia using Riyadh city as a case study. The methodology for the POS availability was by calculating the total POS with respect to the population total (m²/inhabitant). All POS were mapped using geographical information systems (GIS), and the total area availability of POS was compared to global, regional, and local standards. To evaluate the significant differences in POS availability across low, medium, and high-income Riyadh neighborhoods, we used a One-way ANOVA analysis of covariance to test the differences. The results are as follows; POS availability was lower than global standards. Riyadh has only 1.40m² per capita of POS. Spatial equity of the availability were significantly different among Riyadh neighborhoods based on socioeconomic status. The future development of POS should be focused on increasing general POS availability and should be given priority to those low-income and unhealthy communities. Accessibility indicators of POS should be considered in future studies.

Keywords : open spaces availability, open spaces distribution, spatial equity, healthy city, Riyadh City

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