

Relationship between the Trust for Public Land ParkScore and Obesity Related Disease Prevalence

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ABSTRACT

Public parks provide a place for all citizens to be physically active, and research has shown that access to public parks increases community levels of physical activity. The Trust for Public Land (TPL) developed a ParkScore (PS) that assesses the quality of a park system. The purpose of this study was to determine if there was a relationship between the TPL PS and obesity and obesity related disease prevalence in the U.S. Data for disease prevalence were acquired from the Behavioral Risk Factor Surveillance System (BRFSS). Park quality was assessed using the TPL PS. Any city that shared a county with one or more cities on the PS list was excluded from analysis. Pearson- correlation statistical analyses were used to determine the relationship between PS and disease prevalence data. PS was moderately correlated with obesity prevalence ($r_{(62)} = -0.641$, $p < 0.001$), type 2 diabetes prevalence ($r_{(62)} = -0.579$, $p < 0.001$), and leisure time physical inactivity levels ($r_{(62)} = -0.523$, $p < 0.001$). Leisure-time physical inactivity was strongly correlated with both type 2 diabetes and obesity prevalence ($r_{(62)} = 0.846$, $p < 0.001$; $r_{(62)} = 0.710$, $p < 0.001$, respectively). This study complements past research on community health and is one of the first to show the relationship between community health indicators and a wider encompassing park quality measurement. Within this subset of cities, as park quality increased, obesity, type 2 diabetes, and leisure-time physical inactivity prevalence decreased. Increasing the overall quality of parks in communities that have high prevalences of physical inactivity could reduce deaths due to complications of obesity and type 2 diabetes. Future studies should examine other possible influential factors of obesity and obesity related diseases and how they relate to the quality of parks.