

Abstract

Park accessibility is important for city planners because the accessibility of parks can impact people throughout the community. Youth park accessibility is especially important, as parks positively impact physical, emotional, and social development. This study uses dasymetric mapping of census block group population data to estimate segments of youth population at each residential parcel, and then associates those segments with age-appropriate active play features at each park. Network analysis connects parcels to parks and their amenities, providing a more precise accessibility rating at the city-level than studies based solely on geodesic buffers from park centroids.

This study shows that while Alexandria, Virginia has many parks throughout the city, the distribution of age-appropriate active play features is not uniform. Most children in Alexandria have access to at least one active-play park. Only 132 parcels have zero access to age-appropriate, active-play parks, a rate of less than one-hundredth of a percent. There are areas for improvement, but the City of Alexandria has done an excellent job ensuring children have access to active play parks. For other cities, this sort of accessibility analysis could help planners to target areas to increase funding for fitness amenities and programs within parks, establish new parks, or add pedestrian paths to improve walkability to existing park resources.