

An Environmental Justice and Public Health Analysis of Park Use in South Phoenix

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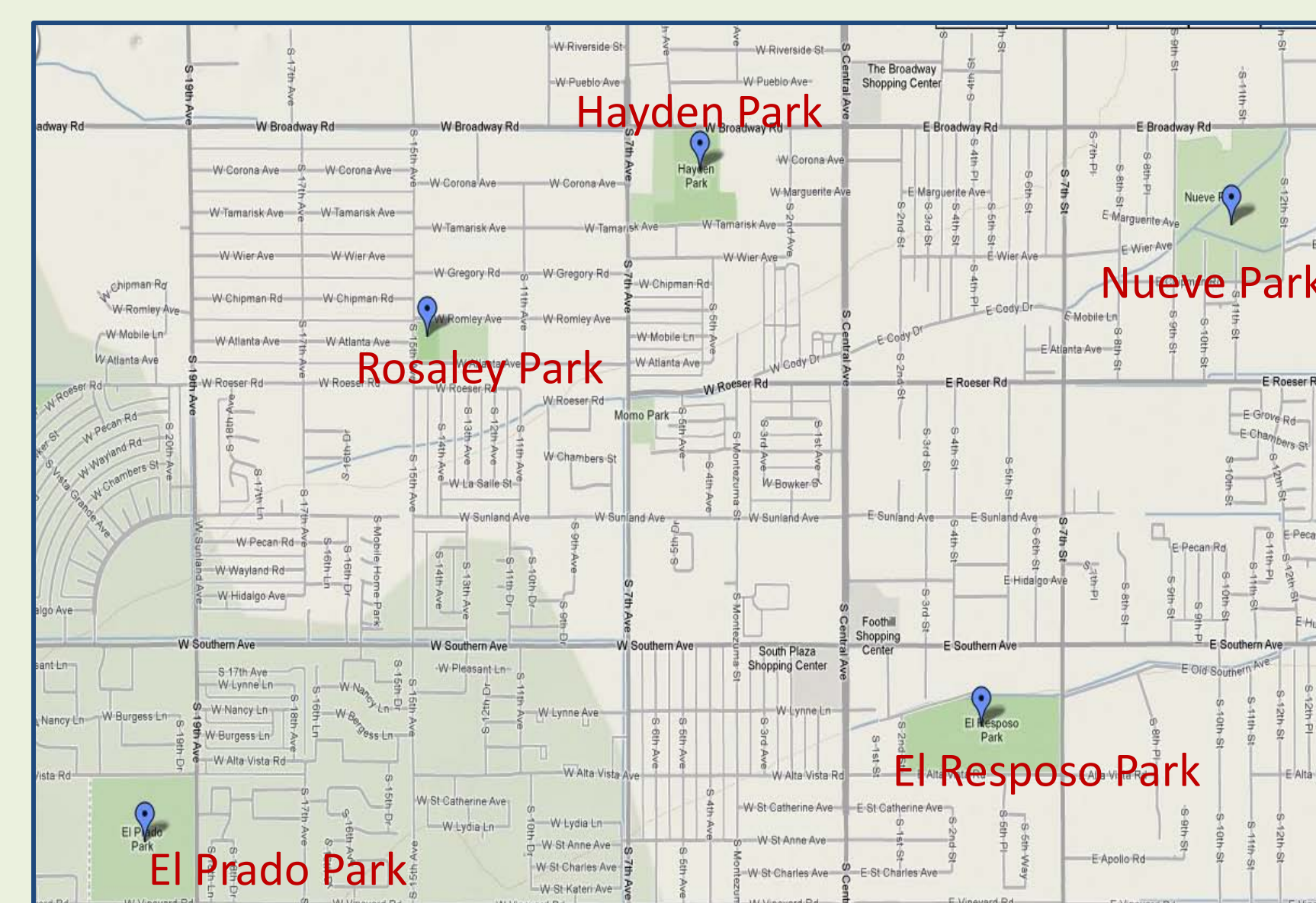
Introduction

This study investigates park use in South Phoenix from a public health and environmental justice perspective. Our research is responding to the need for future outlined by Cutts et al. (2009). A history of discriminatory practices has resulted in a concentration of low-income, minority populations in South Phoenix, Arizona who face a number of environmental injustices and health challenges. Cutts et al. (2009) found that low-income and minority populations in Phoenix actually have better access to parks than more affluent, white neighborhoods, and that their neighborhoods are highly walkable as well. However, contrary to previous research that shows a relationship between higher rates of physical activity and lower rates of obesity in walkable neighborhoods located within a quarter-mile of a park, Cutts et al. (2009) demonstrated that Phoenix minority populations do not appear to receive the same health and quality of life benefits commonly associated with living in close proximity to parks.

Our study set out to provide on-the-ground, quantitative and qualitative data about how people use parks in South Phoenix. We hypothesized that park quality and other characteristics of the built and social environment may deter local residents from using their neighborhood parks, thereby negating any positive health effects related to access.

To explore these issues, observational and statistical methods were conducted to examine the following questions in Phoenix, Arizona:

- 1) Who is using public parks in South Phoenix and how are they using them?;
- 2) What are the built characteristics of public parks in South Phoenix?;
- 3) What is the relationship between park use, the characteristics of park users, and the physical environment of South Phoenix, and does enhanced understanding of these relationships help explain some of the unusual public health findings demonstrated by Cutts et al. (2009)?;
- 4) Do patterns of park use and characteristics of the built environment limit park utilization, making this an environmental justice issue?



Methods

- Social and environmental characteristics of five urban parks in southern Phoenix
- SOPARC McKenzie and Cohen (2006).
- Data on both park users and park physical characteristics recorded



Results and Analysis

All of the observed South Phoenix parks are conducive to both active and leisurely activities, and are consistently maintained. However, some park features better promote physical activity than others.

Contrary to our hypothesis, an analysis of the physical characteristics of the five parks in the study area suggests that the parks are conducive to a number of leisurely and active forms of public activity. All of the parks have play structures for children and open green space, and four out of five have equipment for structured activity, such as soccer goals, basketball hoops, or tennis courts. Two of the parks, El Reposo and Roesley, featured paved walking tracks used by walkers and joggers. The presence of these tracks appeared to promote non-sedentary behavior at these parks, with over 57% of all park users engaging in walking activities. These two parks also had the lowest incidence of sedentary behavior among park visitors.

The majority of park visitors do not attend parks to engage in vigorous exercise.

We observed only 14% of all park users engaging in vigorous activities such as biking, jogging, and playing sports, while 41% walked and 44% engaged in sedentary activities such as sitting, lying down, or standing still. However, the majority of vigorously active visitors were children. Similarly to Chiesura (2004), we found adults to be less likely to be active than children; over 56% of all adult visitors were sedentary, approximately 38% were walking, and only 6% were vigorously active while visiting the South Phoenix parks.

Park users of different ethnicities demonstrate differential patterns of park use.

The South Phoenix parks observed had predominantly Latino users; 76% of all observed park users were Latino, 13% were Black, and just under 11% were White. While our sample of white and black park users is somewhat limited, our data confirms past findings and suggests differences in the ways that individuals of different ethnic groups generally use park space. While our findings were based solely on observational data, they may indicate a cultural preference for sedentary activity among Latino park users.

Table 1: Activity level by ethnicity

	Sedentary	Walking	Vigorous
Latino	47%	38%	15%
Black	34%	53%	13%
White	39%	52%	9%

Table 2: Adult activity level by

	Sedentary	Walking	Vigorous
Latino	61%	34%	5%
Black	51%	41%	8%
White	33%	59%	8%

Disparities in park quality may suggest an environmental justice issue.

While all of the parks in South Phoenix Three of the parks we observed were clean, well maintained, and featured some equipment for structured activities, the three parks located in the areas with the greatest concentrations of Latino residents displayed various disamenities not shared by the other parks. Roesley lacks a bathroom or water fountain and picnic benches; Hayden is located adjacent to pre-made cement part factory that emits a strong odor and is very load; Nueve park is next to an expansive junkyard, and feral dogs were observed in the park during all observation periods. El Prado and El Reposo parks, on the other hand, are the largest parks and have the greatest number and assortment of amenities, and are located in neighborhoods with lower proportions of minority residents.

Conclusion

In contrast to our initial predictions about negative park attributes, our preliminary findings suggest that parks in South Phoenix are generally conducive to both leisurely and active park use. All of the parks have play structures for children, and include some kinds of open green space for miscellaneous activity. Our findings also suggest that the presence of particular built environment characteristics affects the kinds of activities that people engage in at each park. Considering the high prevalence of obesity among Latino residents in Phoenix (Brewis et al. 2008), this finding may inform future park design by suggesting particular built characteristics that can make parks more conducive to exercise and thus facilitate healthy behaviors in low-income, minority neighborhoods.

In regard to future research, our study could be improved in regard to data collection, methodology, and theoretical considerations. We would like to supplement our quantitative data by conducting surveys and brief interviews with park users. Survey of parks users could clarify how people perceive parks, perceived obstacles to park use, and why they value parks. Furthermore, in order to strengthen our distributional analysis of environmental benefits and inequities in South Phoenix, our study would benefit from comparative analysis with park and park use in more affluent areas.

References

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