

# Disparities in park quality and pedestrian streetscape environments

*Two new studies shed light on how to make neighborhoods more physical activity-friendly for all people, regardless of income or race*

## Key findings:

- Sometimes parks and streetscapes were higher quality in low-income or high-minority areas
- Patterns of disparities varied by region, so local data are needed

## Introduction

Low-income and minority populations suffer disproportionately high rates of chronic disease. Accordingly, national and international authorities have made the elimination of health disparities a priority. Many factors can contribute to health disparities, including disparities in the quality of neighborhood environments. For example, having a neighborhood park and pedestrian-friendly streets may impact opportunities to engage in physical activity – a behavior that can reduce risk of chronic disease.

Research on how neighborhood environments relate to physical activity has typically focused on overall community design, like the number of intersections or distance to the nearest park. Most studies have not evaluated community features in greater detail, like whether parks had physical activity facilities, or if intersections had safe, marked crosswalks. To address this research gap and improve our understanding of health disparities, two recent

publications examined whether park quality and pedestrian streetscapes varied based on neighborhood income or racial/ethnic composition. As compared to changing overall community design, such as the layout of roads, improving the quality of parks and pedestrian streetscapes may provide a more feasible and affordable approach to creating activity-friendly environments.

Both studies found evidence of disparities, where physical activity environments were less favorable in low-income and high-minority neighborhoods. Surprisingly, both studies also found evidence of “equitable differences” – instances where park quality and streetscape features were *better* in low-income and high-minority neighborhoods. The results of these studies provide important information for local policy makers, planners, and community groups interested in making targeted changes to increase physical activity opportunities for all residents.



Disparities in Park Quality	Disparities in Pedestrian Streetscapes
<p><u>Aim</u></p> <ul style="list-style-type: none"> <li>To examine the relation of neighborhood income and racial/ethnic composition, and their interactions, with various aspects of observed park quality</li> </ul>	<p><u>Aim</u></p> <ul style="list-style-type: none"> <li>To determine whether streetscape features, like sidewalk quality and landscaping, vary based on neighborhood income and racial/ethnic composition</li> </ul>
<p><u>Methods</u></p> <ul style="list-style-type: none"> <li>Qualities of 543 parks were assessed using a standardized audit tool                             <ul style="list-style-type: none"> <li>2 locations: Baltimore, MD and Seattle, WA regions</li> </ul> </li> <li>Explored 7 park quality characteristics                             <ul style="list-style-type: none"> <li>E.g., quality of trails, open space, physical activity facilities, amenities</li> </ul> </li> <li>Assessed relation of the 7 park characteristics with neighborhood income and race/ethnicity</li> </ul>	<p><u>Methods</u></p> <ul style="list-style-type: none"> <li>Researchers assessed pedestrian features along 2217 routes using the Microscale Audit of Pedestrian Streetscapes (MAPS tool)                             <ul style="list-style-type: none"> <li>3 locations: San Diego, Baltimore, and Seattle regions</li> </ul> </li> <li>Assessed streetscape characteristics                             <ul style="list-style-type: none"> <li>E.g., sidewalks, crosswalks, intersections, public transit, aesthetic and social features like graffiti</li> <li>Assessed relation of streetscape features with neighborhood income and race/ethnicity</li> </ul> </li> </ul>
<p><u>Selected Results by Region</u></p> <p>SEATTLE REGION:</p> <ul style="list-style-type: none"> <li>Significantly higher quality parks were found in low-income areas for 3 park quality scores: sports facilities, physical activity facilities, and total amenities</li> </ul> <p>BALTIMORE REGION</p> <ul style="list-style-type: none"> <li>High-minority areas had lower open space quality scores</li> <li>Significant interactions for 2 scores: Amenities total and physical activity facilities quality                             <ul style="list-style-type: none"> <li>The greatest disparities were among high-minority neighborhoods, where high-income was associated with better quality parks, compared to low-income</li> </ul> </li> </ul>	<p><u>Selected Results</u></p> <ul style="list-style-type: none"> <li>The pattern of disparities varied greatly between regions and within regions (residential versus mixed-use neighborhoods)</li> <li>E.g., in the Seattle region, more disparities occurred in residential neighborhoods. In San Diego and Baltimore regions, disparities occurred equally in residential and mixed-use neighborhoods</li> <li>San Diego’s high-income, mostly White neighborhoods had fewer and worse quality sidewalks. In contrast, Seattle’s low-income neighborhoods had fewer and worse quality sidewalks</li> </ul>
<p><u>Conclusion</u></p> <ul style="list-style-type: none"> <li>Baltimore findings were mostly in the expected direction, indicating disparities in park quality by neighborhood racial/ethnic composition</li> <li>Seattle region showed evidence of “equitable differences”                             <ul style="list-style-type: none"> <li>Possible explanation is a county ordinance to improve the equity in parks across neighborhoods</li> </ul> </li> <li>Differences by region emphasize differences in local community dynamics                             <ul style="list-style-type: none"> <li>Policies, funding, and citizen involvement related to park planning and governance may be effective in correcting disparities</li> </ul> </li> </ul>	<p><u>Conclusion</u></p> <ul style="list-style-type: none"> <li>Despite regional differences, patterns emerged:</li> <li>Across all three cities, there were 19 significant disparities: pedestrian features that were worse in low-income and/or high-minority neighborhoods                             <ul style="list-style-type: none"> <li>Low-income and minority neighborhoods had worse aesthetic and social features (e.g., graffiti, litter, broken windows, fewer trees)</li> </ul> </li> <li>Across all three regions, there were 23 significant “equitable differences”: pedestrian features were worse in high-income and/or mostly White neighborhoods                             <ul style="list-style-type: none"> <li>High-income/White neighborhoods generally had worse crosswalks, intersections, and sidewalks</li> </ul> </li> </ul>
<p><b>Reference:</b> Engelberg, J.K., Conway, T.L., Geremia, C., Cain, K.L., Saelens, B.E., Glanz, K., Frank, L.D., Sallis, J.F. (2016). <i>Socioeconomic and Race/Ethnic Disparities in Observed Park Quality</i>. <i>BMC Public Health</i>, 16:395.</p>	<p><b>Reference:</b> Thornton, C., Conway, T., Cain, K., Gavand, K., Saelens, B., Frank, L., Geremia, C., Glanz, K., King, A. &amp; Sallis, J. F. (2016). <i>Disparities in Pedestrian Streetscape Environments by Income and Race/Ethnicity</i>. <i>SSM-Population Health</i>, 2, 206-216.</p>

## Conclusions & Recommendations

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- Park and streetscape features are changeable and offer a feasible and affordable approach to creating activity-friendly environments.
  - Both studies found evidence of “disparities” (pedestrian features that were worse in low-income and/or high-minority neighborhoods) and “equitable differences” (pedestrian features that were worse in high-income and/or mostly White neighborhoods).
  - The park and streetscape features that exhibited disparities varied greatly between regions.
  - The different patterns found across regions suggest that local policies, practices, and funding priorities can be effective. Disparities in physical activity environments are *not* inevitable. They are due to local decision-making.
  - Given the differences found between regions, **local audits are recommended to evaluate differences between neighborhoods and determine how to best allocate resources.**
  - Information from audits can help local policy makers, planners, and community groups to identify disparities, make targeted changes, and increase physical activity opportunities for all residents, regardless of race, ethnicity, or income.
  - Community groups are encouraged to work with government agencies to document quality of physical activity environments in their neighborhoods and use local data to develop plans for improvement.
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 *Socioeconomic and Race/Ethnic Disparities in Observed Park Quality.*  
<https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-016-3055-4>

 *Disparities in Pedestrian Streetscape Environments by Income and Race/Ethnicity:*  
<http://www.sciencedirect.com/science/article/pii/S2352827316300039>

### For more information:

To access the audit tools used in these studies, or obtain guidance on conducting audits in your community, please visit: <http://activelivingresearch.org> or <http://sallis.ucsd.edu/>

